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MEDIEVAL EUROPE 2012 HELSINKI

RURAL STRATEGIES IN THE NORTHERN SPHERE -TEEMANUMERO

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SUOMEN KESKIAJAN ARKEOLOGIAN SEURA
SÄLLSKAPET FÖR MEDELTIDSARKEOLOGI I FINLAND

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SKAS
1-2 2013

Georg Haggrén

PÄÄKIRJOITUS

MEDIEVAL EUROPE 2012 HELSINKI
MEDIEVAL ARCHAEOLOGY TODAY – KESKIAJAN ARKEOLOGIA TÄNÄÄN

The 5th International Conference of Medieval and Later Archaeology "Medieval Europe 2012 Helsinki" took place between 29th August and 1st September 2012 as a part of the 18th Annual Meeting of The European Association of Archaeologists (EAA). One of the nine medieval sessions was "Rural Strategies in the Northern sphere". It was organized by Lena Beronius Jörpeland, Ulrika Rosendahl and Katalin Schmidt Sabo. SKAS is proud to publish the majority of the papers presented in this session.

Kesän 2012 lopussa eurooppalaiset arkeologit, keskiajan arkeologit mukaan lukien kokoontuivat Helsinkiin EAAn (The European Association of Archaeologists) vuosittaiseen konferenssiin, jonka osana järjestettiin Medieval Europe 2012 Helsinki -konferenssi. Viiden vuoden välein järjestetty Medieval Europe ja EAAn vuosittainen konferenssi on perinteisesti pidetty käytännössä saman aikaisesti kesän ja syksyn taitteessa. Näihin yliopistojen lukukausien alle ajoittuviin viikkoihin osuu muutoinkin konferenssien ruuhka. Yhteisen konferenssin avulla tätä ruuhkaa saatiin helpotettua vuonna 2012.

Medieval Europe -konferenssien sarja oli vaarassa katketa 2010-luvun alkaessa. Yhteistyössä EAAn kanssa varmistui Medieval Europe -konferenssien tulevaisuus. Yhdistämällä voimavarat muiden eurooppalaisten arkeologien kanssa keskiajan arkeologit saivat jälleen mahdollisuuden kokoontua, vaikkakin tällä kertaa paikkaan, joka Reykjavikin ohella on ainoa Euroopan pääkaupunki, joka on perustettu vasta keskiajan jälkeen. Vironniemi, jolle nykyinen Helsinki siirrettiin 1640-luvulla, oli keskiajalla tuulen pieksämä asumaton niemi. Paljon on muuttunut noista päivistä. Nyt Senaatintorin historialliseen miljööseen sijoittuva Aleksanterin yliopisto tarjosi toimivat ja jopa näyttävät puitteet konferenssille. Tästä keskiajan arkeologien on hyvä jatkaa eteenpäin.

Keskiajan arkeologian näkyvyys ja asema on nyt vahvempi kuin Helsingin konferenssia edeltäneenä epätietoisuuden aikana. Seuraava Medieval Europe -konferenssi järjestetään jo vuonna 2014 Istanbulissa, jälleen osana EAAn vuosikokousta.

Antoisimmatkin konferenssisessiot ja -esitelmät uhkaavat unohtua, jos niitä ei julkaista. Helsingissä lauantaina 1.8.2012 järjestetyn keskiajan pohjoismaista maaseutua käsittelevän session esitelmistä pääosa julkaistaan tässä SKAS-lehden numerossa. Osa muista Medieval Europe -konferenssin sessiosta on julkaistu toisilla foorumeilla. ◆

Elisabeth Holmqvist-Saukkonen, Andreas Koivisto & Riikka Väisänen

REDWARES FROM GUBBACKA'S MEDIEVAL VILLAGE

REGIONAL AND INTER-REGIONAL VIEWS ON CERAMIC NETWORKS AND TECHNOLOGY (SEM-EDX)

ABSTRACT

Redwares from Gubbacka's medieval village: regional and inter-regional views on ceramic networks and technology (SEM-EDX)

Lead-glazed 14th–16th century redware pottery from the medieval village of Gubbacka, Finland, was examined with scanning electron microscopy (SEM) with energy dispersive X-ray spectrometry (EDX) for technological (e.g., temper and glaze composition) and elemental characterisation of the ceramic paste (matrix), linked with the original clay source. Comparative ceramics were examined from another Finnish site, Mankby, and Tallinn, Estonia. The ceramic matrix data indicate two chemical groups, formed by the Gubbacka and Tallinn sherds. The results bring to light versatile "local" manufacture and early stages of glazed pottery technology in the vicinity of Gubbacka. Furthermore, the data indicates inter-regional contacts, illustrated by most likely sea-borne pottery imports to Gubbacka, evidence that is in concordance with historical information.

INTRODUCTION AND AIMS

This study examines medieval red earthenware pottery and its possible implications for the contact networks of the inhabitants of the medieval village of Gubbacka, located in the present-day Vantaa, had with the Baltic region and Central Europe. Redware pottery sherds were examined by using scanning electron microscope with an X-ray microanalysis system (SEM-EDX) analysis. SEM is a powerful analytical technique that can be employed to characterise ceramic microstructure, technologies and glaze and to identify ceramic objects originating from different sources. The particular advantage of this technique is that it can be used for elemental analysis of the ceramic body (matrix), mineral particles and the glaze as separate phases in the ceramic cross-section (see, e.g., Maniatis and Tite 1981; Freestone and Middleton 1987; Tite 2008: 218; Martinón-Torres and Rehren 2009; Polvorinos et al. 2011; Cantisani et al. 2012; Montana et al. 2012). As a result, these ceramic data can be used to identify ceramic technologies and to interpret contact and trade networks of the communities in question.

The technological attributes of ceramic artefacts hold a key role also from the prov-

enance perspective – given that the potters processed their raw materials, e.g., by levigating the clay and adding tempers, very rarely a correspondence can be found between archaeological ceramics and geological clay sources (Sillar and Tite 2000; Buxeda i Garrigós et al. 2003; Tite 2008: 223–225). Hence, our provenance interpretations are primarily based on the categorisation of different ceramic technologies and the chemical fingerprint of specific clay recipes used in pottery manufacture. In this respect, the clay body elemental composition determinable by SEM apart from added temper materials is crucial as it is regarded to link more directly to the actual geological material source, indicative of different manufacturing traditions.

Our primary focus was to view whether ceramic data can reveal additional information regarding the trade contacts of the inhabitants of the Gubbacka village and in a wider perspective, examine the question of redware manufacture in the regional context of Gubbacka, the southern coast of Finland. Another interesting question is how the ceramic data correlate with the historical sources. We analysed altogether 20 redware ceramic vessels from the late 14th–16th century contexts, including ten ceramic sherds from Gubbacka and comparative materials from two other sites – five sherds from the medieval Hanseatic city of Tallinn and five sherds from another rural medieval village site, Mankby, situated in present-day Espoo in Finland, ca. 35 km to the west of the Gubbacka site (Fig. 1).

Our main research goals were as follows: 1. To distinguish pottery of different clay body/matrix compositions among the analysed samples from Gubbacka, Mankby and Tallinn by performing SEM-EDX analysis, indicating ceramics originating from different sources; 2. To examine whether the analytical data provide any indication of redware manufacture in the regional context of the southern coast of Finland; 3. To examine material links between the Finnish assemblages and the Tallinn samples, i.e., to identify possible imports to Gubbacka and Mankby; 4. To form a focused view on the redwares in the specific regional context by comparative examination of the Gubbacka and Mankby redwares to distinguish whether they can be linked with the same site of production. This paper presents the results of our pilot study, hoped to be expanded in the future by an increased number of samples from relevant sites.

Fig. 1: A map showing the locations of the sites where ceramics were sampled: Gubbacka, Mankby and Tallinn.

The SEM-EDX-analysis was part of a medieval history project of Vantaa, funded by the EU Central Baltic Interreg IV A -Programme and Vantaa City Museum.

THE GUBBACKA SITE

The medieval village site of Gubbacka has been archaeologically investigated in the 21st century during the years 2002–2003 and 2008–2010 (Koivisto et al. 2010). The finds from Gubbacka include a large number of redware pottery sherds, which represent the majority of ceramic finds of the site. The finds date mainly to the 15th and 16th centuries. Gubbacka is situated on a small hill, near the area of the present-day port of Helsinki in the area of the Vuosaari district. In the medieval times, a strait of the sea was located at the foot of the Gubbacka hill, providing access by boat to the open sea.

Over 20 remains of different structures have been located in Gubbacka so far, all situated south of the main village road. During early medieval times, probably sometime during the 12th century, the village of Gubbacka was inhabited by Swedish settlers. During the medieval times, the village belonged to the Helsinga parish. As Finland was part of Sweden until the early 19th century, contacts to Stockholm, the capital of Sweden, were lively throughout the medieval and early modern times, at least on the official level.

On the local level, the nearest big town from Gubbacka's perspective was Tallinn, situated only 90 km south of the village, on the other side of the Gulf of Finland, in present-day Estonia, only a day's journey away by boat. According to the historical sources, contacts between the inhabitants of the Helsinga parish and Tallinn were very active between the 14th and 16th centuries, and probably also earlier (Salminen 2012). Therefore, it is probable that the first redware pottery arrived to Gubbacka via Tallinn.

REDWARE POTTERY

On the whole, our picture of the redware pottery found on the northern shores of the Baltic Sea is fairly vague, and no detailed studies have been carried out on the subject. The production of lead-glazed red earthenware pottery started in Central Europe (especially in the Low Countries) sometime during the 12th century, and the production further developed and spread to southern Scandinavia and the south-eastern coast of the Baltic Sea during the 13th and 14th centuries. The first redware vessels that reached the Nordic areas were imports from Central Europe. During the 15th century the production of redware ceramics slowly spread towards the north. It has been suggested that the first craftsmen to produce redwares in the north were most likely specialists from Central Europe, and they probably combined the production of both vessels and stove-tiles (e.g., Davey & Hodges 1983; Elfwendahl 1999; Gaimster 1999).

According to historical written sources, the first mention of a potter's workshop in Stockholm is from the year 1479 (Johansson 2007). Archaeological evidence suggests that redware pottery was produced in Tallinn already in the 13th century, but there is no direct evidence of medieval redware production in the form of kilns or production waste of workshops before the early modern age, although there are mentions of potters in the historical sources from the 14th and 15th centuries onwards (Russow 2007). In Turku, the first mention of ceramic production is from the middle of the 16th century. **Aki Pihlman** (1989) states that redware production could

have been possible already during the 15th century in Turku, as the amount of redware vessels increases strikingly during that time. However, the first actual archaeological evidence of red earthenware production dates to the end of the 16th century or the beginning of the 17th century (Tulkki 2003). The situation in other parts of Finland is even more poorly known.

Redware pottery was the most common ceramic type in West and North Europe from the medieval period onwards, yet its popularity and numerous workshops involved in its manufacture also make it a complex archaeological material. Different production sites appear to have manufactured seemingly very similar products, and compositional analyses are required in order to identify products from different workshops with any certainty. Similar vessel shapes and decoration techniques were also used over a long period of time, which makes chronological assignments of the objects challenging (see, e.g., Gaimster 2007; Niukkanen 2000, 2007).

The majority of the sherds (Fig. 2) selected for the analysis represent red earthenware tripod cooking pots or pipkins – it was our primary focus to concentrate on this type and functional category. The two exceptions are one floor tile fragment from Tallinn, and one very coarse sherd from Gubbacka which resembles Iron Age pottery, but has been dated to the 15th century with thermoluminescence (Hel-TLO 4208). Most of the analysed sherds date to the 15th and 16th centuries – the Tallinn sherds possibly being slightly older, dating to the end of the 14th century or to the first half of the 15th century (Kadakas, personal communication, 12.4.2012).

Fig. 2: Examples of analysed redware sherds, from top left: V1 (Gubbacka, KM2008043:49); V4 (Gubbacka, KM2009083:122); V6 (Gubbacka, KM2010077:26); V7 (Gubbacka, KM 2010077:181); V8 (Gubbacka, KM2010077: 233); V15 (Mankby, KM2011014: 187), V16 (Tallinn AI7032:1557) and V17 (Tallinn AI7032:1623).

METHODOLOGY

Regardless of the frequency of redware pottery in archaeological contexts, rather few archaeometric studies have taken on the subject. Previous analytical studies of redwares recovered in Finnish contexts employed not SEM but another method, proton induced X-ray emission (PIXE). PIXE has great advantages in trace elemental concentration determinations compared to SEM which only enables compositional determination of major and minor elemental concentrations. In addition to great analytical accuracy, PIXE's advantage is that it can be performed non-destructively on an artefact, yet this also has disadvantages particularly in its application to ceramic materials (see Rye and Duerden 1982; Grave et al. 2005; Leon et al. 2012).

PIXE is a bulk method which excludes the possibility to examine the heterogeneity of the ceramic fabric, technological aspects apart from bulk composition and, crucially, elemental analysis of the ceramic body (for a PIXE application to analyse the coating and ceramic fabric separately, see Leon et al. 2012). Surface measurements and inhomogenised samples also bear a risk of surface contamination and burial condition effects (see Rye and Duerden 1982; Schwedt et al. 2004). Hence, ideally, one's analytical approach on ceramics should include both SEM and a bulk chemical method for homogenised samples (e.g., PIXE, XRF, ICP-OES/MS, NAA) for determination of both structural and trace elemental compositions applied on an adequate number of samples (see, e.g., Cantisani et al. 2012; Holmqvist-Saukkonen 2010, 2012; Holmqvist-Saukkonen and Martinón-Torres 2011; Polvorinos et al. 2011; Polvorinos del Rio and Castaign 2010).

Wahlberg's (2000) PIXE-analysis of redwares from western Finland (Laukko Manor, Kuusisto Bishop's Castle and Turku) also included three clay samples (from the Laukko and Kuusisto areas and Germany), yet in addition to data compatibility issues derived from the use of another analytical method, his ceramic samples were mainly bricks and roof-tiles and not vessels (apart from one). Regrettably, he does not present the complete set of concentration data in tabulated form, and merely gives the concentrations of few indicative trace elements disconnected from the sample information. This largely prevents any comparative data analysis and evaluation of the results. Wahlberg (2000: 126–129) concludes that although the results were 'somewhat contradictory' and there were no adequate matches between the analysed clay and artefact sample compositions (which is unsurprising for the reasons given above), most of the analysed bricks and tiles are, however, likely to be of domestic manufacture. Interestingly, the results of the only analysed redware vessel fragment may indicate an imported status (Wahlberg 2000: 126–129).

There is another unpublished PIXE-analysis conducted on redware pottery from Herttoniemi, Helsinki, where apparently there was a redware workshop in the 18th century (Rönkkö 2012). These materials are chronologically unrelated to our study, added to the fact that the elemental concentrations were basically undeterminable due to the Pb-matrix deriving from the lead-glaze of the analysed sherds (see Rönkkö 2012: 61–67). These issues underline the importance of careful selection of the analytical method with regard to the nature of the samples in question, and exemplifies the worthiness of invasive sampling especially with this kind of ceramic objects that have a layered, glazed structure, added to the complex mineralogical effects in ceramic samples.

For the reasons described above, we chose the SEM-EDX method as the most suitable

for our research needs. In our study, SEM-EDX-analysis was performed on 20 redware pottery samples prepared as cross-sections in polished blocks. The analytical specimens were cut with a Buehler diamond saw perpendicular to the glazed surface, mounted in resin blocks, polished with diamond paste (down to 0.5 µm grain size) and carbon coated to eliminate charging effects. High-resolution field emission scanning electron microscope (Hitachi S-4800 FE-SEM) based at the Laboratory of Inorganic Chemistry, University of Helsinki, was used for backscatter (BSE) and secondary electron (SE) imaging of the ceramic cross-sections in order to observe the ceramic microstructure, grain size, surface treatment and mineral composition. These features were documented by micrographs taken with different magnifications. For elemental analysis, the SEM was equipped with an Oxford Instruments 350 INCA energy-dispersive X-ray microanalysis system (SEM-EDX).

Our compositional groups are based on the ceramic body/matrix elemental composition, determined by SEM-EDX analysis of three areas of 250 x 250 µm size (equivalent to an image of the body area at 500× magnification), selected by avoiding large mineral particles that were probed separately. The semi-quantitative measurements were obtained under the following conditions: work-

	Sample		Site	Na_2O %	MgO %	Al_2O_3 %	SiO_2 %	P_2O_5 %	K_2O %	CaO %	TiO_2 %	FeO %
Group 1a	V1	KM2008043:49	G	0,71	1,83	16,58	67,23	0,55	3,89	0,78	0,89	7,53
	V5	KM2009083:138	G	1,09	1,84	14,22	69,14	0,43	3,34	1,25	0,93	7,77
	V6	KM2010077:26	G	0,71	2,01	16,12	66,51	0,58	3,97	1,37	0,98	7,75
Group 1b	V16	AI7032:1557	T	0,71	1,43	13,84	72,25	0,48	3,31	1,65	0,89	5,44
	V17	AI7032:1623	T	0,75	1,77	13,99	69,19	0,44	3,56	2,15	1,19	6,96
	V19	AI7032:1625	T	0,78	1,68	14,49	70,58	0,37	3,77	1,71	0,71	5,90
	V20	AI7032:1175	T	0,77	1,85	13,83	71,00	0,50	3,57	1,52	0,90	6,05
Group 2a	V2	KM2008043:86	G	0,66	1,74	17,12	62,43	1,23	3,94	1,11	1,21	10,57
	V3	KM2008043:94	G	0,93	2,04	17,70	59,84	3,22	4,24	1,18	1,09	9,76
	V4	KM2009083:122	G	0,77	1,74	17,38	63,57	1,33	4,01	0,83	1,05	9,32
	V7	KM2010077:181	G	1,04	1,79	18,94	62,90	1,53	4,03	1,03	1,18	7,56
	V9	KM2010077:240	G	0,63	1,32	15,35	63,10	4,76	3,58	1,49	0,87	8,90
	V12	KM2008044:376	M	1,20	2,04	18,80	63,31	0,50	4,30	1,02	1,02	7,82
Group 2b	V11	KM2008044:277	M	1,60	2,34	17,05	62,87	0,95	4,82	1,96	0,88	7,55
	V13	KM2008044:401	M	1,38	3,31	17,55	64,30	0,70	3,99	1,27	0,82	6,67
	V14	KM2009032:35	M	1,41	2,70	16,37	63,79	0,98	4,98	1,26	0,83	7,69
	V15	KM2011014:187	M	1,49	2,40	15,79	63,34	0,80	5,08	1,30	0,92	8,88
	V8	KM2010077:233	G	0,58	1,20	11,18	75,90	1,07	3,06	0,73	0,73	5,56
	V10	KM2010077:255	G	0,63	1,38	12,82	73,27	0,75	3,49	0,90	0,80	5,97
	V18	AI7032:1623	T	1,01	1,87	13,80	71,03	1,08	2,86	3,21	0,69	4,45

Table 1. Chemical compositions (SEM-EDX) of the clay bodies (matrices) in oxide wt%.
G = Gubbacka, T = Tallinn, M = Mankby.

ing-distance 15 mm; accelerating voltage 20 kV; process time 5, equivalent of detector deadtime of ca. 30%; time of acquisition 180 s. The three measurements were checked for consistency, recalculated by stoichiometry as oxides by the Oxford INCA software and reported as average weight percent values of oxides (Table 1). These data were subjected to statistical analyses, principal component analysis (PCA) and cluster analysis (CA) that are the most commonly used statistical methods for multivariable data in ceramic compositional studies (Baxter 1994, 2001; P2O5 was excluded from the statistical analysis due to possible burial contamination, see, e.g., Schwedt et al. 2004). With regard to the glazed surfaces on the sampled ceramics, SEM was employed to measure the thickness of the glaze layer, the size and frequency of bubbles, cracks, and inclusions. Furthermore, SEM-EDX was performed to obtain the chemical composition of the glaze.

RESULTS

The elemental data obtained by SEM-EDX of the clay bodies of the ceramic samples indicate two major compositional groups in the sample set (Table 1), yet both can also be seen as divided into two subgroups (group 1a–b and 2a–b in Fig. 3). One of these groups (1b) is formed by the samples from Tallinn (four of five Tallinn samples belong to this group, Figs. 2–4). The second main group is formed by Finnish samples (2a–b), which appear to form two subgroups that mainly correlate positively with the find locations (Gubbacka and Mankby). The compositional groups are identifiable in the elemental concentration data of the clay bodies and illustrated in the CA dendrogram and the PCA graph (Figs. 3–4), however, all in all there is fairly limited variation in the characteristics of the samples. All of the analysed ceramics are of non-calcareous clay (CaO < 3.2 wt%, which may indicate a non-Tallinn source for the so-called Tallinn group), differentiated mainly by the MgO, Al2O3, SiO2 and FeO concentrations.

Three sherds recovered at Gubbacka (group 1a, samples V1, V5 and V6) show similar clay body concentrations with the Tallinn sample group (1b), suggesting that they may be imports from the same area or workshop. In addition, two other samples analysed from Gubbacka (samples V8 and V10) are similar to each other but do not cluster with any other samples in the data set. The concentrations of these samples differentiate them from the suspected Finnish group, although this does not necessary mean they were not manufactured elsewhere in Finland, e.g., in Turku, given the relative similarity of all of the samples. It is particularly interesting, however, that samples V8 and V10 were suggested to be of German origin by their appearance (Russow, personal communication, 16.3.2011), although this hypothesis of their source cannot be confirmed at the moment. One of the Tallinn samples (V18) is an outlier in the data set, which can be explained by the fact that it is the only floor tile among the analysed samples, and thus can be expected to vary in composition due to different material sources and processing in tile manufacture.

In general, the ceramic cross-sections showed dominant quartz, plagioclase and K-feldspars that were uniformly distributed throughout the ceramic fabric and often had a bimodal grain-size (typically < 50 um and 100–300 um), which together with the occurrence of angularly shaped larger grains suggest excessive tempering. In addition, the clay minerals included common mica (biotite and muscovite), occasional garnet group minerals, apatite, and rare titanite, ilmenite, zircon, rutile and iron oxides.

The glaze layer thicknesses measured by SEM in the cross sections vary between 100–300 µm. All the analysed glazes were transparent, very high-lead glazes, although the Pb-content of the glazes varies greatly between the analysed samples. This suggests that the potters did not have a standardised recipe for the glazes. High-lead glazes are typically applied on coarse wares for their relatively easy application to obtain a water resistant surface and to enhance the outlook of the vessels (Tite 2011: 331). The glaze is applied on a Fe-rich reddish slip layer (Fig. 5), that continues to cover the unglazed ex-

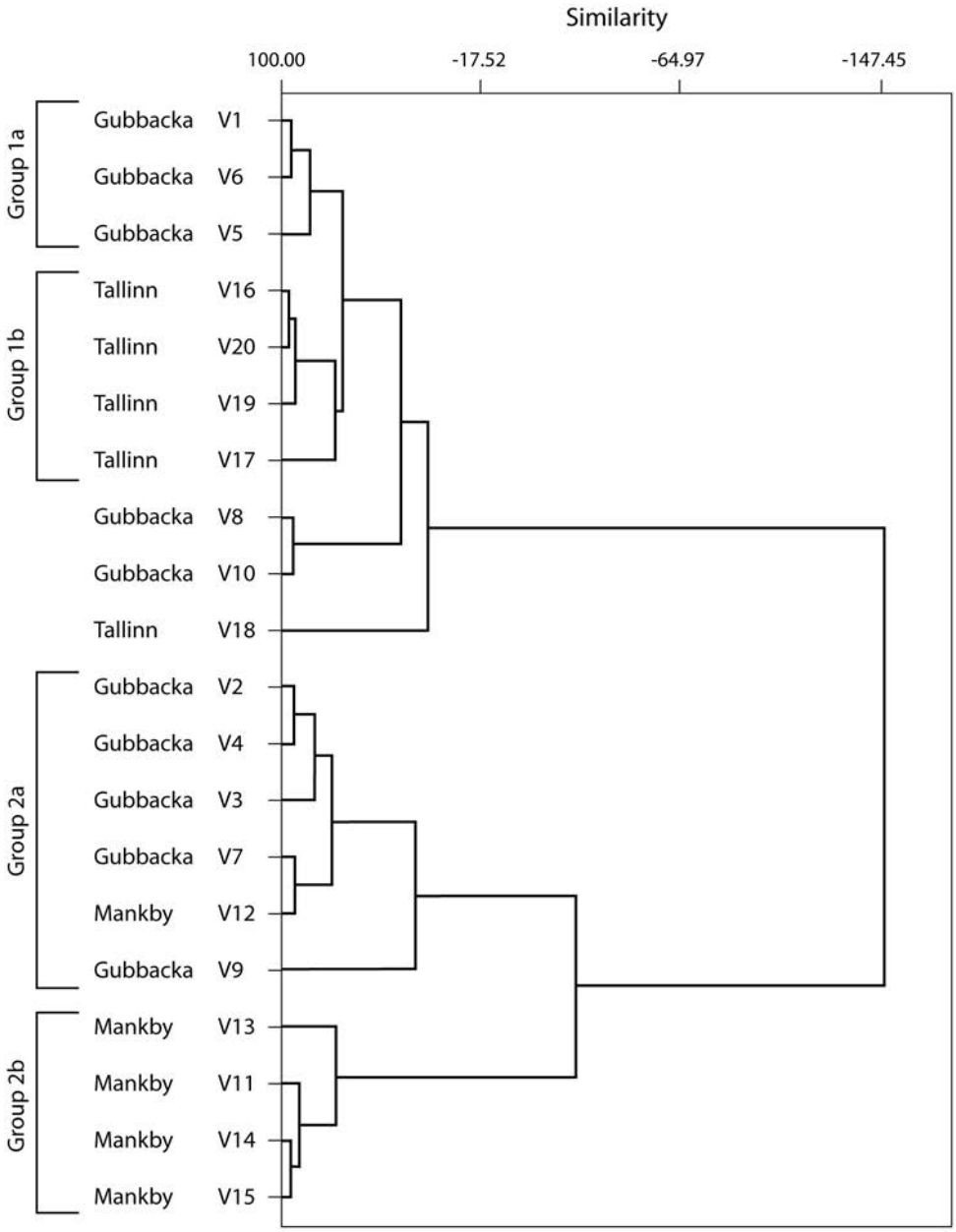

Fig. 3: Cluster analysis dendrogram of the elemental concentrations (SEM-EDX) of the ceramic bodies.

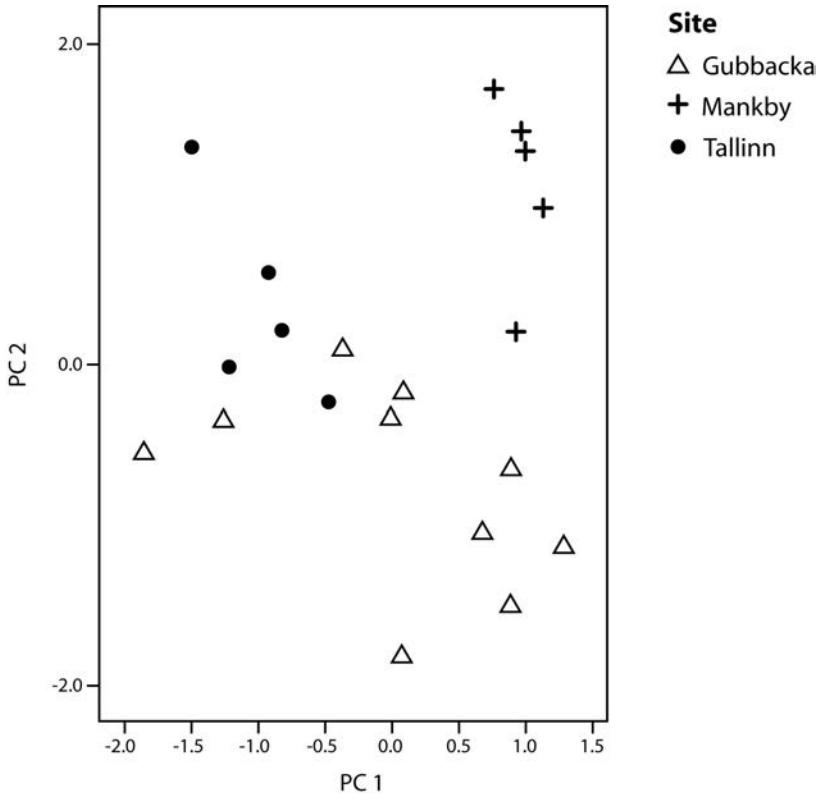

Fig. 4: PCA plot of the elemental concentrations (SEM-EDX) of the ceramic bodies.

terior and handles of the vessel. The so-called Tallinn group samples (samples 15–17, 19–20) show relatively thinner (80–200 µm) high-lead glaze (PbO 48–51 wt%, apart from sample 17 with glaze PbO of 25 wt%). Similarly, the samples from Gubbacka that are treated as tentatively imported (V5–6, V8, V10) based on the clay body composition have similar glaze characteristics (PbO 38–56 wt%, excluding V1 with glaze PbO level at 67 wt%). The glazes of V8 and V10 are notably smooth and thin at ca. 80–150 µm, whereas the glazed samples belonging to the suspected Finnish group (samples V2, V4, V9, V11) show thicker (200–300 µm) and uneven glazes and higher lead content (PbO 52–67 wt%). Cracks and bubbles are also frequent in the glazes, as are relatively large quartz and feldspar grains that in some cases break through the glaze surface (Fig. 5). While bubbles are encountered also in the thinner glazes, the occurrence of large, frequent mineral inclusions, on the other hand, appears to correlate positively with the thickness of the glaze. The variation between the glaze technologies may be indicative of chronological differences.

CONCLUSIONS

To conclude, the analytical results indicate ceramics from different workshops in our restricted sample. Based on the clay body elemental concentrations determined by the SEM-EDX-analysis, our sample assemblage appears to divide into three separate groups that primarily seem to correlate positively with their archeological contexts, added by few outliers. The first group is formed by the

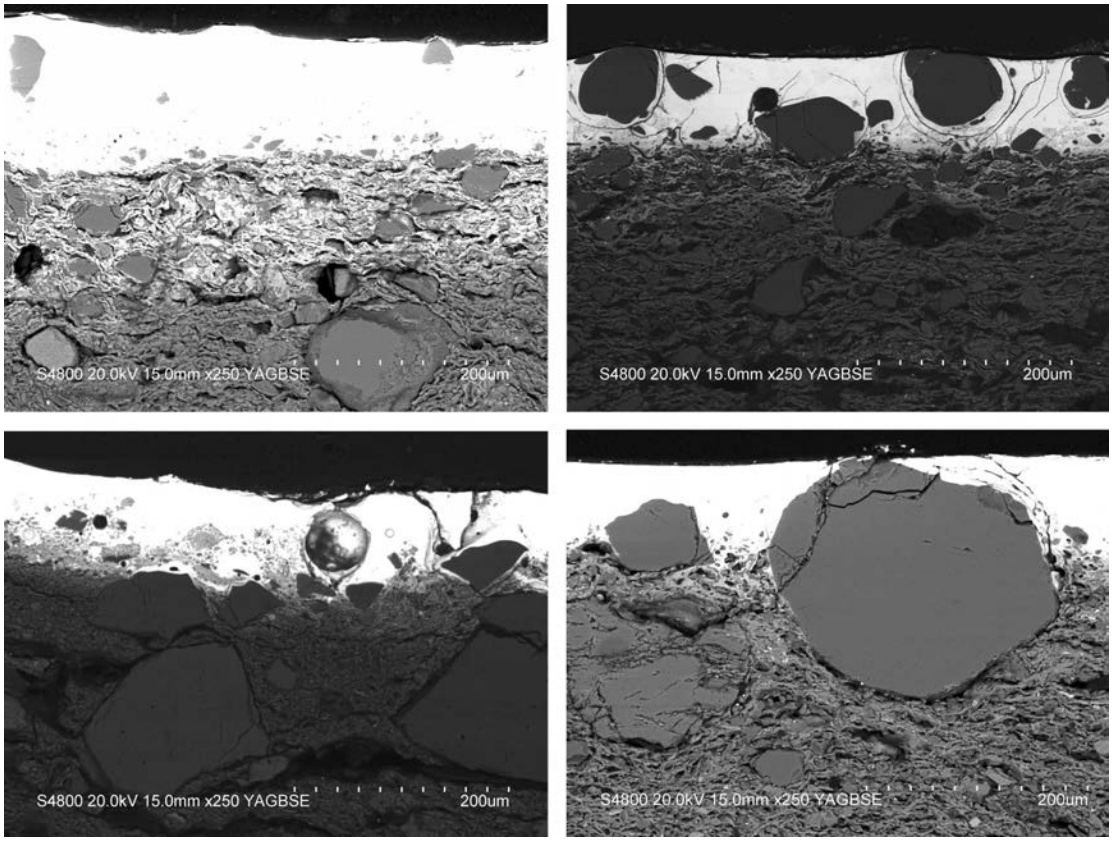

Fig. 5. SEM-BSE micrographs of cross-sections of redware pottery showing high-lead glaze applied on a Fe-rich slip layer on the ceramic fabric. Top left: V4 (Gubbacka, group 2a); top right: V6 (Gubbacka, group 1a); bottom left: V15 (Mankby, group 2b); bottom right: V17 (Tallinn, group 1b). The micrographs on the left (suspected regional group 2) display uneven glazed surfaces, and the ones on the right (possible imports, group 1) extensive quartz tempering in the glaze.

Tallinn sherds, added by a group of samples from Gubbacka, which may share a common source. We cannot specify this manufacturing source at this point, although we may speculate – based on the appearance of the sherds, their compositional dissimilarity with the Finnish sherds, and the historical records of the Hansatic trade routes – that

they may originate from Germany, elsewhere in Central Europe or the Southern coast of the Baltic Sea where several production centres existed during Middle Age.

The route of the possible imports is another question that remains, whether they arrived in Gubbacka directly, or more possibly via Tallinn or even Stockholm. Future comparative analysis with a wider sample may shed more light on the origin of these vessels. Our next aim is to expand our analytical comparisons to include redwares from Turku, and other locations in Finland that may have had redware production.

Our data show that the majority of the Finnish samples fall into the same compositional main group, although this group is fairly heterogeneous in terms of typology. The samples from the two Finnish sites, Gubbacka and Mankby, however, also show some extent of compositional variation. Thus, whether one or more workshops were involved in

their manufacture cannot be distinguished based on this data set, but it seems probable that there was redware manufacture somewhere in the regional context of Gubbacka and Mankby, the southern coast of Finland. The typological heterogeneity of the tentative Finnish-origin group, contrasted by the common compositional characteristics within this group, speaks for manufacture on a relatively local level, taking into account the presence of fairly coarse, unglazed, and presumably regionally manufactured artefacts – it seems unlikely that this variety of pottery was imported over considerable distances. If we accept the so-called Finnish group as regionally manufactured, that would mean that there was redware manufacture somewhere on the southern coast of Finland in the 15th–16th centuries, which would be a parallel finding to that of Wahlberg's (2000) on redware tile manufacture. Taking into account the issues related to the glazing technology particularly evident in this 'regional' group, we might, in fact, be looking at the outcomes of potters practicing on how to apply glazes on their earthenwares. The suspected imports present in the Gubbacka assemblage, may, on the other hand, have acted as advocates of this technological development in this regional context.

SEM-EDX proved a very useful technique for obtaining both technological and elemental concentration data on the analysed ceramics, and the compositional groups indicated by the clay body (matrix) analysis correspond well with the typological assignments of the selected ceramics – sherds identified as exotic in the macroscopic examination proved to be outliers in the data set, whereas the coarsest domestic vessels belong to the presumably relatively local main group. Similarly to the findings of others (e.g., Cruz Zuluaga et al. 2011) our results illustrate the usefulness of SEM-EDX ceramic matrix analysis in provenance studies, particularly in the cases of coarse and heterogeneous ceramic fabrics. The ability of this analytical technique to analyse the clay body composition by carefully avoiding the tempering materials and contamination from surface treatment, such as Pb-absorption from the high-lead glaze coating, proved to be a successful approach with these coarse pots in order to distinguish compositional groups among the analysed sample set.

This paper presented the results of our pilot project, although it should be noted that our interpretations are affected by the fairly limited number of samples analysed in this study. Hopefully, further analysis with a larger sample will be carried out in the near future to build a more comprehensive and detailed picture of the redware pottery industries and exchange systems in the Baltic Sea region. ◆

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NEW RADIOCARBON DATES FOR A MEDIEVAL OVEN WITH BOTANICAL REMAINS FROM THE HAMLET OF GUBBACKA, VANTAA, SOUTHERN FINLAND

ABSTRACT

New radiocarbon dates for a Medieval Oven with botanical remains from the hamlet of Gubbacka, in Vantaa, southern Finland

Archaeological excavations were conducted at the Medieval hamlet of Vantaa Gubbacka in southern Finland. In addition to various other features, a U-shaped ca. 3 x 3 meter oven and an adjacent pit were excavated. Soil samples were gathered from these and studied with archaeobotanical and charcoal analytical methods. Results show cultivation of (hulled) barley, rye, bread-/club wheat and possibly oat on manured soils. Rye and barley grains and burned bone from the oven were AMS-dated to the first half of the 15th century. Charcoal from the same context was dated to the 13th-14th century. Pine, birch, juniper and alder were used for firewood, and proposedly collected from the surroundings of the village.

INTRODUCTION

Thus far, only a few AMS-dated rural medieval archaeobotanical assemblages have been studied in Finland. This paper presents and discusses an oven and a pit dated to the Middle Ages and containing relatively rich AMS-dated archaeobotanical remains.

The site of Gubbacka is situated in Vantaa, southern Finland. Both rescue and research excavations have been conducted at the site. This paper discusses the results gained during the research excavations of 2010. The archaeobotanical results have also been discussed in the previous publications related to Gubbacka (Vanhanen 2012b; 2011a; 2010). In this paper, **Tiina Mikkanen** discusses the oven construction and **Santeri Vanhanen** presents the archaeobotanical material. Previous reports are recommended for the complete results of the archaeobotanical and wood analyses (Vanhanen 2011b; 2009; 2008; Lempiäinen 2003). For an overview of the site, please refer to **Andreas Koivisto's** article (Koivisto 2012).

The rural medieval hamlet of Gubbacka was situated on a southward-sloping sandy hill. A main road ran through the hamlet and buildings were located on both sides of the road. The place was settled from the end of the 10th century until the beginning of the 17th century (Koivisto 2012; 2011).

Excavated structures in Gubbacka consist mainly of the remains of dwellings with large ovens. Also the remains of a smithy, a dung heap, a clearance cairn, and various pits have been found. According to the archaeological, archaeobotanical, and osteological

material, subsistence in the hamlet was based on agriculture, hunting, fishing, and gathering.

THE CONTEXT OF THE ARCHAEOBOTANICAL FINDS

The archaeobotanical material covered in this paper has been obtained from an oven (R401) and a pit connected to it (Ku413). Large ovens made of stones are characteristic of rural medieval sites in Finland, and they are often visible on the ground even before excavations.

Eight ovens and one smithy were excavated in Gubbacka during 2003 and from 2008 to 2010. Five of them were U-shaped stone ovens, a type that most likely spread to Finland with Swedish immigrants during the Middle Ages. The large oven bases were constructed inside houses using stones that were often set together with sand and clay as mortar. Some ovens were built with

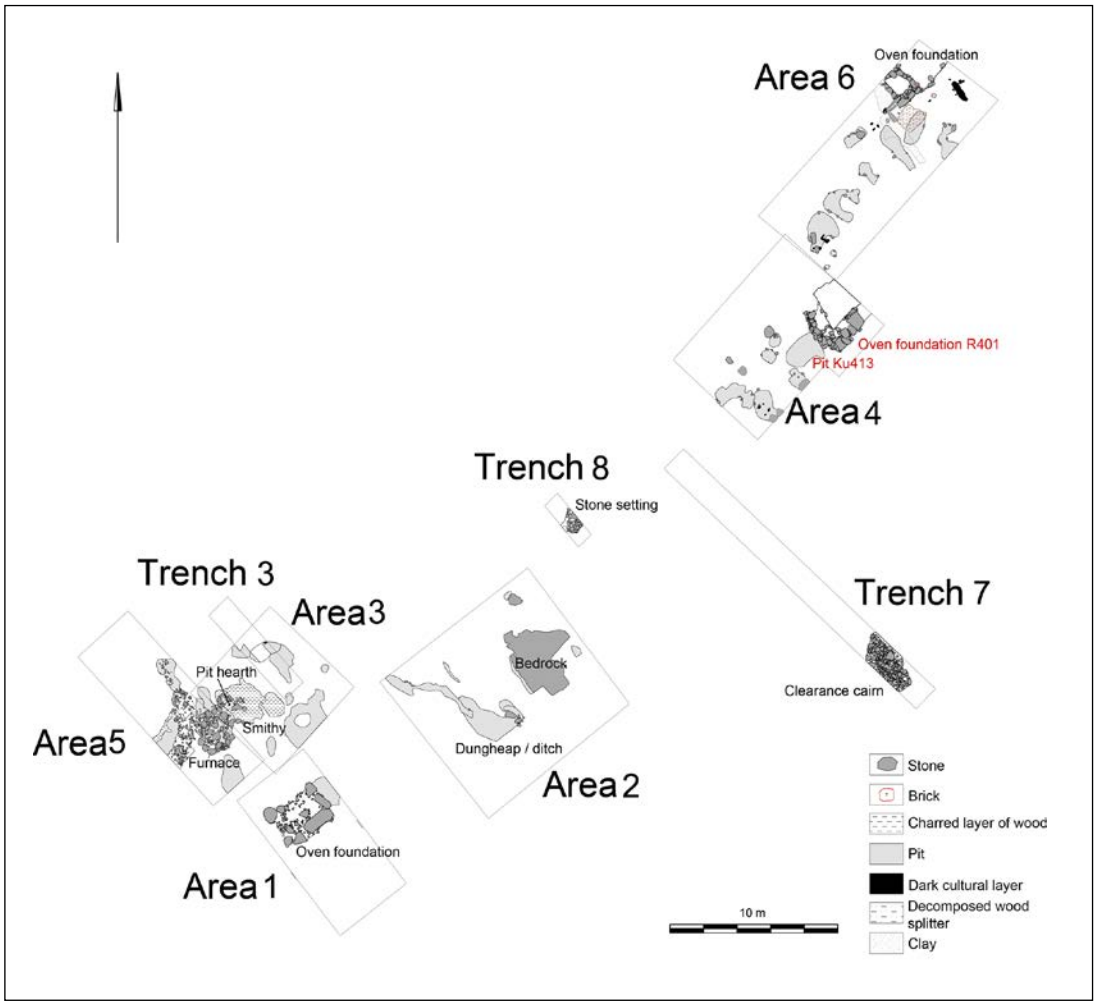

Figure 1. Structures excavated in Gubbacka. The material of this paper comes from structures marked in red. The hamlet extends beyond the excavated areas. A medieval road runs from SW to NE through excavation areas 5 and 3. (Map by Riikka Väisänen.)

lime mortar and clay, and the upper parts occasionally only with clay. (Suhonen 2004; Koivisto 2008–2010.) The surface of the oven might have been coated using clay reinforced with organic additives such as straw (Kolehmainen & Laine 1981:21). This is supported by several plant impressions found in the burned clays of the Gubbacka ovens (Suhonen 2004).

Some of the ovens were surrounded by a log framework made of pine or spruce. Stone constructions standing in front of the ovens might have been used as grates or cooking places. Hot charcoal or ashes from inside the oven could have been placed into the grate, where food was roasted or cooked. Food was cooked in either tripod redware jars (cooking pots) or in copper pots hanging above the grate. (Koivisto 2012; Tevali 2010:67–84.)

During the Middle Ages, ovens were rarely built in the middle of the room; they were more likely to be located in a corner of the house (Kykyri 1989:124; 2003:112–113). No signs of preserved wall structures were found in the excavated area. However, in this case, the wall might have passed close to the oven's southern wall, as that back wall is thicker and built solidly of big flat stones. A solidly built back wall in an oven enables a more efficient draft and keeps the building wall cooler (Lavi 2005:148; Vuolle-Apiala 2011:24).

R401 was an U-shaped oven with the opening facing northwards. It measured ca. 3 x 3 meters. In general, all the Gubbacka ovens were built on a layer of sand brought there to level the slope. This oven was similarly built on top of a layer consisting of sand mixed with stones and gravel (Y406). The inside of the oven was excavated only partly in order to gain good stratigraphical control. (Koivisto 2008:8–9; 2010:6–9; 2011:15.)

Figure 2. Oven R401 during the excavations. View towards the north. (Photo by Andreas Koivisto.)

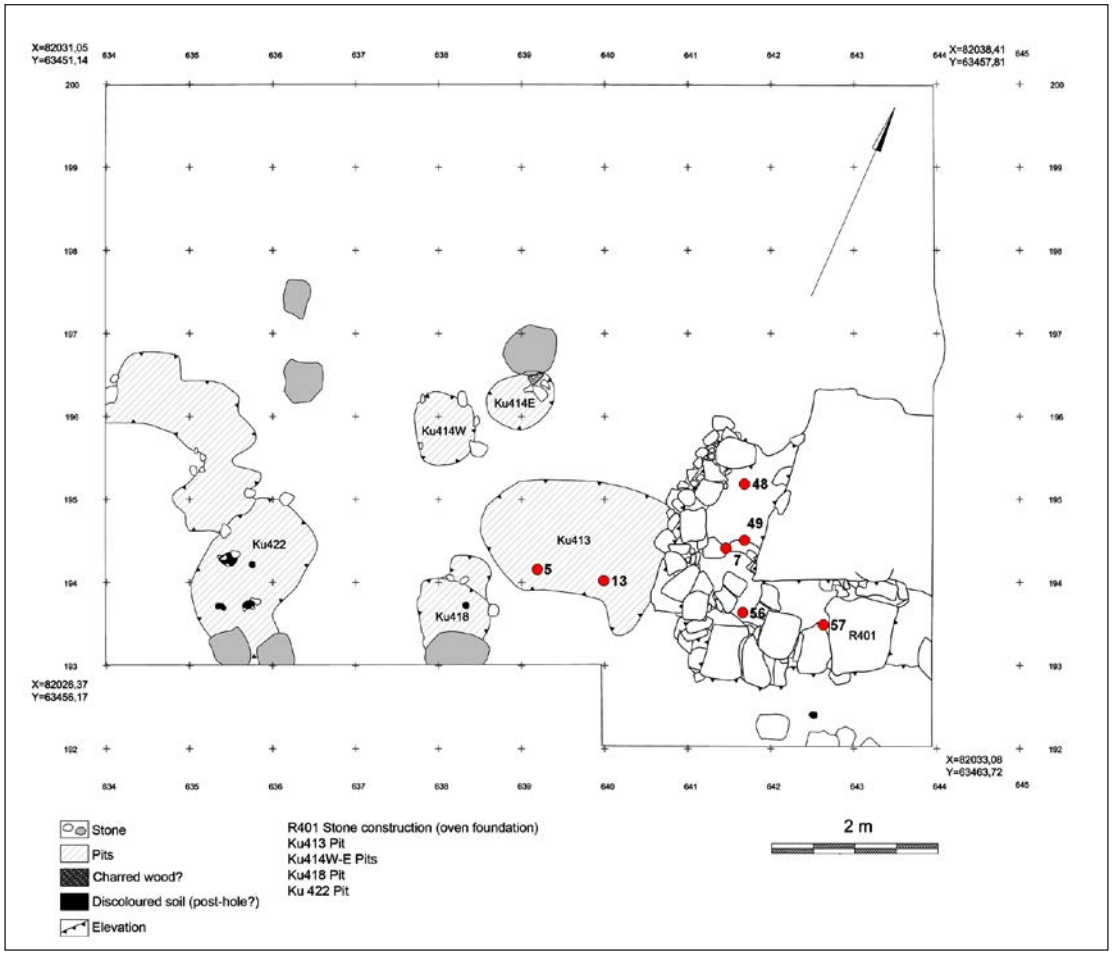

Figure 3. Map of excavation area 4 with oven R401, pit Ku413, and sampling points (red). (Map by Riikka Väisänen, Tuuli Heinonen & Santeri Vanhanen.)

The topmost layer of 10 to 20 cm (Y404) covering the oven was excavated in 2009. It consisted of a dense mixture of sand and clay with plenty of burned clay lumps. Multiple twig and finger impressions were found in the burned clay. (Koivisto 2009:109, 113.) The clay most likely comes from the upper parts of the oven. Underneath this top layer was stratigraphic unit Y410 that contained a) the oven construction made of split and natural stones measuring from 10 to 60 cm, and b) a clay layer in the middle of that construction with the top 5 cm consisting of burned clay and the lower part of dense unburned clay. The clay in the middle could have formed a grate enabling the use of the oven for cooking and possibly bread baking (Vestbö-Franzen 2011:110). Some flint flakes were found in the northern part of this unit, where the mouth of the oven is located. Also an iron knife, shards of redware, and bones were found in this unit. (Koivisto 2009:20; 2011:15.)

A compact layer (Y420) consisting of clay mixed with sand was found below unit Y410. The unit was covered with fist-sized stones. A fragment of an iron artefact and some bones were found in this layer. (Koivisto 2010:15.) Rye grain from the unit was dated to the first half of the 15th century. The fire modification

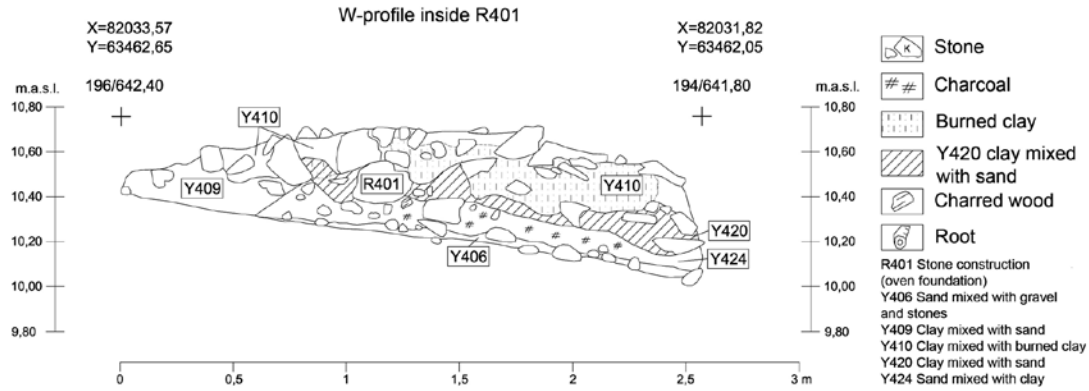

Figure 4. The W profile inside oven R401. (Map by Elina Terävä and Riikka Väisänen.)

of undetermined bones found in soil samples in this layer varied from unburned bones to bones burned at a temperature higher than 1000 °C (Kivikero 2011a). Layer Y420 most likely formed the foundation for the furnace.

A pit of 2.5 m by 1.5 m (Ku413) was located immediately to the west of the oven. Its depth was roughly 0.5 m, and it appeared to be lined with burned clay. It reached slightly below the oven's western edge and was possibly used as a storage pit or a cooking pit. Unit Y409 surrounded the base of the oven. It was composed of black clay mixed with sand and could be connected to the foundation of the oven. This unit filled the pit, and burned clay and cut-up stones were also found here. The stones were probably from the oven. Some fragments of iron artefacts and nails were found in the pit, as well as a flint flake and slipping stones. (Koivisto 2011:12.)

Bones from pit Ku413 consisted of cattle (*Bos taurus*) and possible domestic pig (*Sus domesticus*?). Soil samples were water-sieved, with a mesh of 1.5 mm. From this heavy fraction, some fish bones were found in pit Ku413 (Teleostei). Bones in the pit varied from unburned bones to bones burned at high temperatures (over 1000°C). (Kivikero 2011b; 2011a.)

Oven R401 and pit Ku413 seem to overlie an older settlement phase. Unit Y424 is located inside the oven underneath units Y410 and Y420. It consisted of black sand mixed with clay, and it also contained a lot of soot and charcoal. A charcoal piece from this unit was dated to the 13th/14th centuries and a grain of hulled barley was dated to the 15th century (Koivisto 2011:15; 2012: 275). As there were clear signs of fire in this unit (fire-cracked stones, pieces of charcoal and burned sand), it might have been a fireplace already during the older settlement, and the new oven (R401) was built on top of it later. Mammal and fish (*Cyprinidae, Percidae, Teleostei*) bones were found in a water-sieved soil sample taken from the unit. The fire modification of the bones varied from unburned bone to bone burned at more than 1000 °C. (Kivikero 2011b.)

METHODS

Seven samples, accounting for 15.4 liters of soil, were studied from the oven and the adjacent pit. They were all flotated using a 0.25 mm sieve and the remaining heavy fraction was water-sieved with a 1.5 mm sieve. The

SAMPLE NR.	7	48	49	56	57	5	13	
EXCAVATION AREA	4	4	4	4	4	4	4	
R/KU (STRUCTURE/PIT)	401	401	401	401	401	413	413	
Y (EXCAVATION UNIT)	420	424	424	424	424	409	409	
SAMPLE VOLYME (l)	2,1	2,3	2,5	2	1,6	2,4	2,5	15,4
LIGHT FRACTION VOLUME (ml)	60	30	125	20	20	70	300	625
HEAVY FRACTION VOLUME (ml)	150	200	250	140	150	140	170	1200
CHARCOAL (0-3)	1	3	3	2	2	3	3	
INSECTS (0-3)	1			1		1		
CEREALS (sum)								63
oat (Avena sp.)		1	2		1	1		5
hulled barley (Hordeum vulgare var. vulgare)			2					2
barley (Hordeum vulgare)			2					2
barley (Hordeum vulgare) frag.	1							1
rye (Secale cereale)	1		6					7
rye (Secale cereale) frag.	1	1	11	2		3		18
bread/club wheat (Triticum aestivum s.l.)			1	1				2
cereal (Cerealia)	2	1					1	4
cereal (Cerealia) frag.			15			7		22
ARABLE WEEDS (sum)								7
fat-hen (Chenopodium album)		1		1				2
false cleavers (Galium spurium)		1						1
corn spurrey (Spergula arvensis)					1			1
tufted vetch (Vicia cracca)	1		1					2
smooth tare (Vicia tetrasperma)	1							1
MEADOW AND WETLAND PLANTS (sum)								5
sedge (Carex sp.)			2					2
spike-rush (Eleocharis sp.)				2				2
raspberry (Rubus idaeus)		1						1
OTHER PLANTS (sum)								22
Galium sp.			1					1
grass (Poaceae)	1					2		3
Rumex sp.?			2					2
ivy-leaved speedwell? (Veronica hederifolia?)	1							1
Vicia sp.			5					5
indet.		2	5	1	2			10
sum of all seeds								97
Norway spruce (Picea abies) needle			3	4		59		66
under this point 1=presence								
bark					1			1
branches		1	1	1	1	1		5
burned clay	1		1	1	1		1	5
flint				1				1
metal		1			1			2
small metal ball		1				1		2
unburned bone			1					1
burned bone			1	1	1			3

Table 1. Charred archaeobotanical material from oven R401 and pit Ku413.
Soil samples in the oven are taken from units Y420 and Y424 and soil samples from the pit from unit Y409.

amount of light fraction was 625 ml, and the heavy fraction accounted for 1200 ml. The flotated material was studied using a stereo microscope, and 27 pieces of charcoal were identified with a reflected light microscope. Plant macrofossil remains were identified using reference literature (Cappers et al. 2006) and the reference collection at the Botanic Garden of the Finnish Museum of Natural History. Charcoal was identified using reference literature (Fagerstedt et al. 2004) and with the kind help of **Ph.D. Tuuli Timonen** from the Botanic Garden of the Finnish Museum of Natural History.

Only charred remains are discussed here, because uncharred material usually does not survive in the thin cultural layers of rural sites.

RESULTS

The samples gathered from the oven and the adjacent ditch contained a relatively rich charred archaeobotanical material. It consisted of 97 seeds or grains and 66 Norway spruce (*Picea abies*) needle fragments. Plant remains were grouped as cereals (63 remains), arable weeds (7), meadow and wetland plants (5), and other plants (22). Cereals were clearly the most dominant group, and the number of remains from other plant groups is quite small.

Four different cereal crops were identified: rye (*Secale cereale*, 25 grains or grain fragments), barley (*Hordeum vulgare*, 5), oat (*Avena* sp., 5), and bread/club wheat (*Triticum aestivum* s.l., 2). Two barley remains were identified as hulled barley (*Hordeum vulgare* var. *vulgare*). One of the barley grains was sprouted. No remains of oat floret bases were found, thus making it impossible to determine whether it was cultivated (*Avena sativa*) or wild oat (*A. fatua/strigosa*). The small amount of wheat remains made it impossible to determine whether it was bread or club wheat (*Triticum aestivum/compactum*).

Arable weeds consisted of fat-hen (*Chenopodium album*, *2* seeds), false cleavers (*Galium spurium*, 1), corn spurrey (*Spergula arvensis*, 1), tufted vetch (*Vicia cracca*, 1), and smooth tare (*Vicia tetrasperma*, 1).

Meadow and wetland plants consisted of sedges (*Carex* sp., 2 seeds), spike rushes (*Eleocharis* sp., 2), and raspberry (*Rubus idaeus*, 1).

Charcoal fragments were identified from two soil samples taken from the oven. A total of 20 fragments were identified from sample 49 and 7 fragments from sample 56. Charcoal in the samples consisted of pine (*Pinus sylvestris*, 10 fragments), birch (*Betula* sp., 10), juniper (*Juniperus communis*, 6), and alder (*Alnus* sp., 1). According to ring curvature and other characteristics (Marguerie & Hunot 2007), at least branches and possibly also stems were used as firewood in the oven. A part of the firewood has been infected by fungi and a part bears marks of insect degradation.

DISCUSSION & CONCLUSIONS

Three radiocarbon datings were obtained from oven R401 and one from ditch Ku413. Rye (*Secale cereale*, Y420) and hulled barley (*Hordeum vulgare* var. *vulgare*, Y424) from the oven date to the first half of the 15th century, as does a burned bone from the ditch (Y409). The dated cereal grains from superimposed layers have roughly similar datings, which suggests that the material in these layers has the same origin. A piece of charcoal from the oven (Y424) has a similar dating to the other dated charcoal pieces from pits excavated in the vicinity of the oven. All these

pieces of charcoal are dated to the last half of the 13th century or to the 14th century, making them older than the dated cereals and burned bone. Old wood could have been used as firewood, but the older dating could also originate from the structures situated below the 15th-century oven. It is also possible that the charred archaeobotanical material has fallen on top of the older fireplace.

Archaeobotanical material in the samples is similar, but not identical. All samples from the oven contain cereals, arable weeds, and meadow and wetland plants, but the amount and presence of different species differs between the samples. It seems that the oven has been used on various occasions and the archaeobotanical material has accumulated during that time. It seems possible that the ditch was filled with material from the oven.

The material in the oven and the ditch represents almost pure cereal grains with only a few arable weeds and no remains of crop processing. It seems possible that cereal processing was carried out in other buildings and only processed cereals were taken into the dwellings.

According to the material found in the oven, it seems that at least three crops were cultivated in Gubbacka during the 15th century: rye, bread or club wheat, and hulled barley. According to the charred grains, it is not certain whether oat was cultivated or whether it grew as an arable weed. However, it should be noted that oat was commonly used for taxes and fodder in the 16th century (e.g., Vilkuna 2003) and remains of cultivated oat have been found in Häme Castle (Onnela 2003). Therefore oat was very probably cultivated also during the 15th century. In this material, rye is clearly dominant, but it should be kept in mind that the majority of the grains derive from a single sample. During the Late Iron Age, assemblages where the major component is rye are rather uncommon, as rye cultivation only seems to begin during the Late Iron Age (Vanhanen 2012a). The importance of rye seems to have become more pronounced during the Middle Ages.

A sample rich in charred archaeobotanical material containing more than 26,000 charred plant remains, dating to 1425–1523/1573–1629 cal AD (68,2% probability, 415 ± 85 BP, Hela-269) has been studied in Häme Castle. Here the percentages of the identified cereal crops were the following: barley 67 %, oat 32 %, rye 0,7 %, and bread wheat 0,09 %. According to the author, the archaeobotanical material may derive from a granary or grain store destroyed by fire. The proportion of weeds and ruderals is only 4 %. Oat was identified as cultivated oat (*Avena sativa*). This material consisting mostly of barley and small oat grains is interpreted as stored feed grain for horses or cattle. (Onnela 2003.)

The above-mentioned archaeobotanical assemblage from Häme Castle is contradictory to 16th-century historical sources, which imply that rye was clearly the most abundant crop, whereas barley was cultivated in smaller quantities. The cultivation of wheat and oat was of minor importance. (Vilkuna 2003: 46–47.) Many medieval archaeobotanical assemblages in Finland contain all the four main crops, namely barley, rye, oat, and wheat, of which rye and barley were the most common crops (Lempiäinen 2007). Usually only small quantities of charred cereal grains have been found at rural medieval sites in Finland. Barley, rye, oat, and wheat have also been found at the site of Hanko Gunnarsängen in southern Finland (Jansson et al. 2010).

The arable weed material is very limited and thus should not be over-interpreted. Fathen (*Chenopodium album*) and smooth tare (*Vicia tetrasperma*) are nitrophilous weeds, which can indicate manuring. Smooth tare and false cleavers (*Galium spurium*) thrive on basic soils, as opposed to corn spurrey

(*Spergula arvensis*), which thrives on poor acidic soils. Tufted vetch (*Vicia cracca*) tends to grow in ruderal areas and meadows. (Korsmo 1926; Hämet-Ahti et al. 1998.)

Firewood used in the oven was most probably gathered in the surrounding area. Pine and spruce have been used for buildings in Gubbacka and in medieval Turku (Vanhanen 2012b; Kykyri 1989). Only small amounts of wood remains have been identified, so the use of other species should not be ruled out. The tree flora found in the charcoal analysis represents the relatively poor growing conditions in the surroundings of the site. Juniper could have profited from the opening of the landscape caused by clearing the area for pastures and fields.

In addition to the tree species found in oven R401, charcoal of pine (*Pinus sylvestris*), aspen (*Populus tremula*), and *Salix* sp. has been found in other structures in Gubbacka (Vanhanen 2012b). All of these represent species that could have been growing in the vicinity of the hamlet. One hearth from the smithy contained only branchwood of pine, which could have been chosen in order to gain intense heat. It is not clear whether charcoal was used at this time in Finland, though it was used during the 16th century in Häme Castle, where a charcoal maker was hired (Vilkuna 2003:35).

Plant material from other ovens and buildings interpreted as dwellings was similar to the material found in oven R401. Also finds from these other structures contained cereals, weeds, and meadow and wetland plants. A different kind of material consisting mostly of ruderal plants was found in the smithy, where the plants could have been charred during smithery activities. (Vanhanen 2012b.)

According to the material gained from oven R401 and the adjacent ditch Ku413, crop cultivation in the medieval hamlet of Gubbacka was diverse. AMS-dated rye, hulled barley, and burned bone date to the first half of the 15th century, thus suggesting a dating for the cereal material found in the oven. According to this material, rye was the main crop and bread/club wheat, hulled barley, and oat were cultivated in minor proportions. The amount of arable weeds is small, but it suggests that the fields were manured. Charred archaeobotanical material also suggests that crop processing was conducted in another space. Firewood for the oven seems to have been gathered in the surroundings of the hamlet. Pine and spruce were used for both firewood and construction. ◆

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Lena Beronius Jörpeland & Linda Qviström

EARLY MODERN LANDSCAPING

A WATERMILL SITE IN UPPLAND, SWEDEN

ABSTRACT

Early modern landscaping: a water-mill site in Uppland, Sweden

In this paper we present an excavation of an early modern domestic mill site in Rasbo, northeast of Uppsala in Sweden, in its regional context. The results from the excavation have made it clear that the entire islet where the mills stood was man made. The dating of the first known construction phase goes back to the mid-16th century, which corresponds well with the earliest mention of a mill belonging to the village, in 1561. Flooding and sedimentation gradually altered and enlarged the artificial islet. Several generations of watermills were built and destroyed, leaving varying degrees of evidence behind.

On a very local level - the area of the mill site – the effect of these changes was dramatic. A completely new islet was created, a new component in the landscape. It was first used as a mill site and later for grazing and cultivation, activities that would not have been possible if the mill site had not been established in the first place. On a larger scale the effects were less drastic. As seems to have been the case for many mill sites in the region, there were no permanent reservoirs. Instead there seem to have been temporary embankments, which meant that the meadows north of the mill site were flooded. This can be seen on contemporary maps, and elsewhere the flooded areas remained productive which implies a symbiotic relationship with the regular agricultural cycle.

INTRODUCTION

The aim of this paper is to present an excavation of an early modern mill site that took place some years ago in the parish of Rasbo, northeast of Uppsala. The excavation was one of several which were carried out in connection with a major road project. This mill is one of very few such sites to be excavated in Sweden and the first in the county of Uppland. (Fig. 1.)

BACKGROUND – WATERMILLS IN SWEDEN

Watermill research in archaeology, particularly through excavation, has played a rather modest role in Sweden. There is, however, an increased awareness of the importance of water mills in relation to economical and social strategies during the medieval period (see for example Carelli 2001:89).

Previous research has established that the use of water power for milling purposes in Scandinavia probably emerged during the 12th or early 13th centuries. However, the general consensus is that the origin of watermills in Scandinavia is still quite unknown, as are how and exactly when the power of water came into use in a more advanced technological sense. The earliest examples of archaeological structures can be dated to the 12th century in Denmark (Fischer 2004:107). In Sweden, early medieval examples are yet to be located. The oldest written evidence is from the monastery of Riseberga dated AD 1180-1202 (Thun 1982:131). From that time onwards, watermills occur fairly frequently both in city archives and in written documents connected to the nobility. It seems reasonable to suggest that the period of the 12-13th century saw the emergence of watermills for milling grain.

Questions concerning the development of water milling have interested technological and industrial researchers. One of the most frequent questions concerns the two types of mills based on the construction of the wheel and the way in which the power of water is used. In the first type of mill, a horizontal wheel is situated directly underneath the mill house. This type is generally considered to be suitable for small streams and brooks. The second type has a vertical wheel situated at the side of the mill house and is generally considered to be of a higher technological level and therefore requiring more effort and capital. Previously the smaller horizontal wheel mills were thought to be older, but nowadays there is a general agreement that the two types were probably always contemporary. Furthermore, research has been focused on whether the vertical wheels were over-, breast- or undershot, which tells

Fig 1. An aerial view of the mill site. The Lejsta river runs behind the trees and the dried-out river channel can be seen to the right. The former island in the centre is the investigated area. (Photo by Hawkeye.)

us how the water stream was controlled and transported into the wheel.

Apart from the actual site, the surrounding landscape must be taken into account in the study of mills. How is the water supplied? Are there visible remains of a millpond, sluices or remains of the race? Are there channels or constructions for the spillway?

THE MILLS AT VÄSTERSTA AND LUNDBY

The mill islet presented here belonged to the farms of Västersta and Lundby.

The first mill in Västersta was mentioned in 1561. It is possible that this mill was situated on the islet, but there are at least two other options; one just south of the excavated site and another further downstream, on the border with the next village. By this time there were five farms in Västersta and one in Lundby. The latter was owned by the church in 1548, and we know from an 18th-century map that the land used to belong to the vicarage (LMV B50-31:2). It is possible that the present location of the Lundby farm has something to do with the mill, as discussed later. In 1632 the vicar in Rasbo is said to have owned a mill with a horizontal wheel, possibly the one by Lundby. (Fig. 2.)

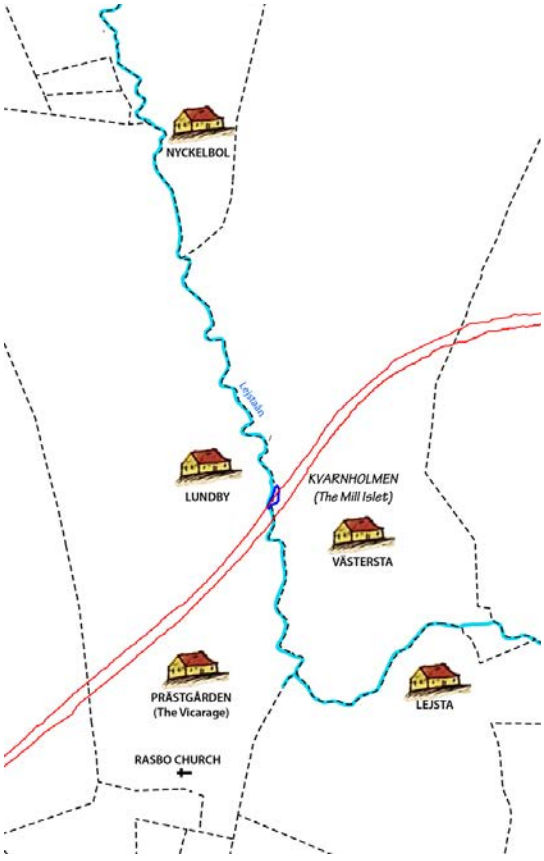

Fig. 2. On this map the excavated islet is coloured in red. From at least the 1640s it was divided between Lundby and Västersta.

The earliest map of Västersta is from 1641, and in the gloss it specifies that three of the farms have watermills usable during spring and autumn. Only one of them is said to be up and running, the other two being deserted according to the map. The functioning mill is said to have a vertical wheel. On the map, this mill is situated on our site. This is almost certainly one of the mill places that were excavated, and might be the same one mentioned in 1561.

THE ARCHAEOLOGICAL PROJECT

The aim of the archaeological project was to understand the site of the watermill and its significance during the early modern period. The project dealt with three spatial levels: the site of the mill and the mill islet; the local environment, the farms in the vicinity; and a wider geographical context, the watermill landscape in the area of Rasbo.

Several questions were formulated at the start of the excavation. Were there any remains of the actual mill house – or houses – or other constructional remains? What was their chronology? Was it possible to identify milling activities in the archaeological material? Finally questions concerning owner-

ship were also identified as important, along with evidence of cooperation and relations between farms and villages that worked the same watercourse.

The project was consciously interdisciplinary, with three main components:

1. The *excavation and archaeological fieldwork*
2. An extended *historical study of the written sources* on watermills in the parish of Rasbo. As part of the project, historian Henrik Ågren carried out a comprehensive study of the mills in the region of Rasbo from the 16th to the 18th centuries. Along with the written sources a *study of the historical maps* of Rasbo was conducted by **Linda Qviström**.
3. A *geological survey and analysis* of samples during the excavation by palaeoecologist and quaternary geologist **Jonas Bergman**, in order to establish geological processes of the streaming water and land use on the islet.

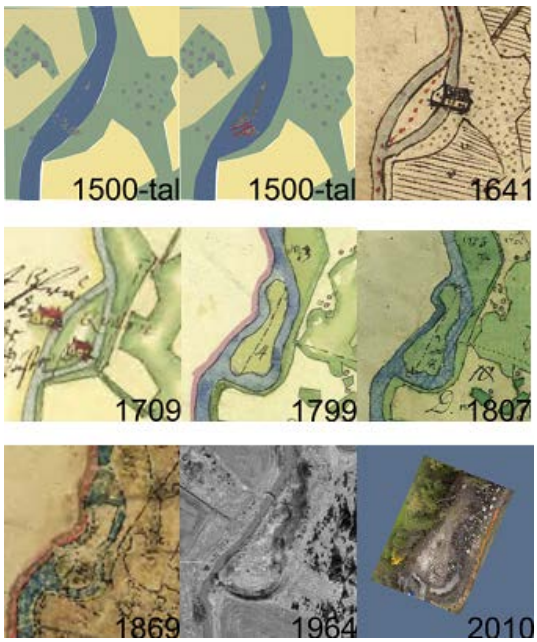

Fig 3. The first two figures represent simplified reconstructions of the site in the 16th century. In the following images we see maps from the mid-17th century onwards. The changing shape of the island is clearly visible.

Further analysis was conducted on the zooarchaeological material, millstone fragments and botanical samples. Finally an archaeological field survey, both in the vicinity of the mill islet but also in the parish of Rasbo, was conducted. The aim of the field survey was, together with the analysis of maps and the written sources, to generate a new and comprehensive understanding of this rural society in regional terms. The aim was also to develop methods for dealing with watermills in contract archaeology. One of several problematic themes is, for example, how to identify watermill sites according to their layout and position in the landscape.

THE EXCAVATION – THE FORMATION OF AN ISLET

During the latter part of the excavation it became clear that most of the mill islet had been constructed to utilise the potential of the water stream, building on existing moraine. This triggered sedimentation processes. In the analysis of the archaeological material, ten different phases of land use have been identified on the mill islet. The most recent phase was seen as the remains of mid-20th-century dredging. The earliest phases were identified as predating the watermill activities, with three moraine formations situated in the middle of Lejsta River. These were occupied for milling purposes during the middle or latter part of the 16th century and the islet started to form. (Fig. 3.)

At the time of the excavation the original eastern channel had been cut off from the Lejsta River and was now more or less dried out.

REMAINS OF THE MILLS

In the excavation, constructional remains were found both in the southern part and the northern part of the islet. In the south, a stone-clad channel had been constructed and was interpreted as the site for the water wheel (Fig. 4). Wooden remains, probably from the mill house or connected to the wheel, were documented in the channel. A construction element, more than one meter long and 25 centimetres broad, was found alongside the wheel pit (Fig. 4) and interpreted as a part of some sort of mechanism for holding the water wheel.

Dendrochronology indicates the pine tree from which this element was made was cut down some time after 1689, probably around the year 1700. This date suggests that the site was probably in use across two or more phases of the mill. When the moraine formations were occupied, extensive works were being conducted in the area north of and between them. This was probably done to enlarge the area and make an islet accessible for the milling activities. Constructional elements for building the islet included both stone cists and poles of wood, layers of timber cuttings, and wooden fundaments. It was also obvious that flooding and successive sedimentation played an important role in the forthcoming altering of the islet.

On the islet there are remains of at least two more mill structures. The one in the northern part is not excavated and still remains (Fig. 5), with a square stone foundation with a wheel pit along the southern side.

Between the northern and southern mill sites in the eastern part of the islet there were visible remains of a stone channel that may

Fig 4. The southern channel, interpreted as a wheel pit. Photo by Linda Qviström, Upplandsmuseet. The smaller picture is of a wooden construction detail, of pine, dated to around 1700 AD. (Photo by Bengt Backlund, Upplandsmuseet.)

Fig. 5. The stone foundation of the northern mill. (Photo by Linda Qviström, Upplandsmuseet.)

have been a place for a water wheel. Unfortunately both the river and the eastern channel had been dredged, leaving no traces of stone foundations or mill structures.

THE FINDS AND DATING OF THE MILLING ACTIVITIES

The finds from the earliest phases consisted mostly of ceramic shards (redware), iron objects and animal bones. More specific evidence for milling activities was limited and consisted mainly of millstone fragments. (Fig. 6.) Ten were retrieved at the excavation, probably representing around 3–4 millstones. At least two had a diameter of 90 centimetres and were around 5–7 centimetres in thickness. These fragments can be connected to the southern mill site and most of them were from phases 2 and 3, the earliest use of the mills.

The erection of the first mill took probably place around the middle or the second half of the 16th century. Thereafter follow several periods of milling activities. It is not possible to state how many mills were in action at the same time, or indeed how many were situated on the islet. According to written sources, it seems that the watermill period ended somewhere in the middle of the 18th century and the mill islet was then used for other purposes.

THE MILLS OF RASBO IN THE 17TH CENTURY

The excavated mill site was one of many in 17th-century Rasbo. More than thirty vil-

Fig. 6. The first millstone fragment was found by visiting colleagues from Helsinki. Photo by Linda Qviström, Upplandsmuseet.

lages, which is almost every fourth village in Rasbo, had at least one mill at some point during the period. This might sound like a lot, but in fact most of the mills seem to have had a rather short life span. The majority of the recorded mills only occur in the land registers for the first part of the 17th century. By the end of the period, the number of mills had decreased drastically (Ågren, forthcoming). **Pia Nilsson** has showed in her thesis that the spread of the mills in the mid-17th century was uneven. In some regions there were clearly more mills than in others. Generally speaking, there were more mills in the areas that produced less grain. In her study, based on maps from the period, Rasbo does not appear as one of the more mill-intensive areas in Uppland. The regions of Tierp and Alunda had the highest number of mills (Nilsson 2010:78, 114, 141 f).

The relative proportion of water- and windmills also varied between different regions. In Uppland, watermills were the dominating type in the 17th century, with an exception for Alunda with its high number of windmills. In Rasbo, both categories existed, but the watermills were far more frequent (Nilsson 2010:142, 226 f).

Most of the mills in Rasbo were owned by farmers. It is possible that some of them were owned collectively, but most commonly they belonged to one farm (Ågren, forthcoming). The official policy in Sweden from the 15th century onwards was to restrict private mills, in particular ones owned by farmers. This campaign accelerated in the 17th century. Although it was not actually illegal for the farmers to own mills, they were more or less forced to bring their grain to the official mills, "tullkvarnar", where they had to pay to get their harvests processed. The principle was that if the farmers' mills didn't disturb any neighbours and were sufficiently far away from any official "tullkvarn" they could be allowed to stand. Under no circumstances were the farmers allowed to use their mills commercially (Ek 1962:35 ff; Nilsson 2010:31 f; Ågren, forthcoming). In 1627 all of the farm-owned mills in Rasbo were prohibited. In practice some of them seem to have survived – the records are by no means clear and complete – but there are remarkably fewer mills in the land registers from the time after the regulation. In the 1660s there were only five mills owned by farmers still registered, and in 1725 just one of these was left (Ågren, forthcoming).

There were four "tullkvarnar" in Rasbo in the 17th century, all owned or controlled by the nobility. Apart from these, at least two of the manors in the area - Årby and Lund - owned mills for their own use. The commercial mill that paid the largest amount of tax and thus probably had the largest business was Skällerö, followed by the mills of Visteby. The other two "tullkvarnar" were situated in Edshammar and Söderby. In Rasbo these "tullkvarnar" are the only ones to be mentioned in medieval written sources. Edshammar belonged to the archbishop of Uppsala. A miller's farm, "Mølnarebodhum", is mentioned in 1344 and a sawmill in 1527.

In Söderby at least one mill belonged to the nobility during the late Middle Ages, the first record is from 1368. In the years 1375/76, mills belonging to Uppsala cathedral (Uppsala domkyrkas fabricia) are mentioned. The mills in Visteby and Skällerö were owned by the nobility during the late Middle Ages (DMS 1982:246 f, 248 f, 253, 281 f).

Visteby was in some ways different from the other "tullkvarnar" in the area. The mills here were owned or leased by the nobility but were located in, or rather next to, the village of Visteby. There were between five and six contemporary mills in Visteby, and the mill farms themselves were situated along the river, which is only 3.5 km long and stretches between two natural lakes. The mill farms formed their own, unofficial village, which was occasionally referred to as "Visteby kvarnar" – the mills of Visteby – to distinguish the place from the main village. The mill farms had their own plots next to the farms, not in the same fields as the other farmers of Visteby (LMV 03-rao-7, A17:106-07; Ågren, forthcoming). There seems to have been more than one mill in Visteby already in the late Middle Ages. The ones that are mentioned, the first in 1349, all belong to the nobility. Not until 1566 do the first two mills belonging to the crown appear (DMS 1982:281 f). In several places along the river there are traces that are probably the remains of other mill sites than the ones surveyed in the 1640s. Most of them are probably from before this time.

In the land register from the 17th century, the mills are usually referred to as "skvaltkvarnar" or "skvaltor" – mills with horizontal wheels. The term doesn't always describe a technical construction, and is sometimes used as a synonym for "small mill" (Ågren, forthcoming). The mill in Västersta was one of two farmers' mills on the maps from the 1640s to be described as having a vertical wheel, and in this case the distinction probably had to do with the actual construction. Most of the villages in Rasbo were surveyed by this time, and from the comments we know that the farmers' mills were usually used twice a year, in the autumn and spring.

Apart from the flour mills there are records of saw mills from the 17th century in Rasbo. On the maps from the 1640s, sawmills are mentioned in several places. There were three in Visteby. We have not been able to find any firm evidence that the excavated mill site was used for other purposes than flour milling, although a small amount of smithying slag found on the site suggests a

Fig 7. Three different kinds of watermill sites in Rasbo on contemporary maps from 1641-42. Left, a small mil, owned by the farmer in Lillvreta; centre, the mill between Lundby and Västersta; right, the commercial mills of Visteby.

possible, temporary use of the water power for a hammer. (Fig. 7.)

Our sites' position in the mill landscape of 17th-century Rasbo may have been somewhere in between the small, farm-owned mills and the large, commercial ones. There are several arguments supporting this. Firstly, one of the mills is said to have a vertical wheel. The small mills were usually described as having horizontal wheels, although it's not always clear if this describes the technical construction or simply means "small mill". In either case, the mention of a vertical wheel distinguishes our mill from the other, farmer-owned mills. Secondly, the mill site has been planned and substantial, resource-demanding construction work has been carried out on the site, which has held at least two contemporary mills. Another argument is that this mill was amongst the ones whose owners in the mid-17th century were accused of letting others use it, and in this way threatening the business in Visteby. Furthermore, the mill site was not only owned by farmers. Lundby belonged to the vicarage, and it seems likely that the priest's mill that is mentioned in the land registers was located in Lundby, as there are no other obvious options, if it was a watermill, within the borders of the vicarage. The priest's ownership might also be one reason for "our" mill site to survive into the 18th century, at a time when the farm-owned mills had disappeared from the records.

EARLY MODERN LANDSCAPING

As we have already pointed out, there seem to have been mills running by the excavated site starting from the middle of the 16th century for about two centuries onwards. At the time when the mill site was built up, the impact on the landscape was significant. The artificial islet in the middle of the stream changed this particular part of the land completely. It also had long-term effects. Once the island was there, the stream brought new material, particularly when flooded. With time the island was enlarged, which, while the mills were still there, probably meant that channels and wheel pits had to be dug out over and over again and that the mills had to be moved. The human landscapers and nature itself together created this new and continuously altering part of the landscape.

A side effect of the new, created environment seems to have been that the place could be used for fishing. Sticks along the ridge of the watercourse by the mill site have been interpreted as reinforcement of the banks, but they could also have been used as fishing implements. There are several other examples of the combination of milling and fishing. One example is seen on a depiction on a map from Isättra, in the southeastern part of Uppland (Nilsson 2010:87 f). Also in Edshammar, in the district of Rasbo, fishing has taken place by the mill (LMV B40-7:1). Another example where fishing is mentioned in connection with a mill is in Skebo, on the east coast of Uppland (DMS 1972:139).

The land formation process continued after the watermill period. At first, the former mill site was used for grazing. Sometime before 1869, the eastern part of the islet, the land belonging to the village of Västersta, was cultivated. By the middle of the 20th century, the entire island was used for pasture. Throughout this period, the islet continued to grow, alter, and to change form. The drainage in the middle of the 20th century put an end to the process. It left one dried-out channel, and the former islet was no longer surrounded by water and could not be flooded to the same extent as before. Sometime during the 1970s, the land stopped being used for pasture and started to become overgrown.

Today a new road crosses the former islet that would not have existed at all if a mill site had not been built on this spot nearly five hundred years ago.

The flooding not only shaped the landscape and meant that the mills were regularly under threat of destruction. It also provided water power, which could be used for milling. The mills are said to have been used twice a year, during spring and autumn. The timing was largely dependent on the flood, which made it possible to run the wheels without having to create big water reserves. There are no traces of any ponds or embankments further upstream from the excavated mill site, and from the other farm mills in the area this seem to have been a general pattern. Instead, temporary ponds were used. We can see this on several of the maps from the 17th and 18th centuries. The most obvious example comes from the mill by the Jobsbyn farm, where the embankment is marked on the map. At the same time, the pond area is used for grazing, and it is said to give a quite good harvest (LMV 03-ral-16, 1697).

From a simple landscape model we can reconstruct what effects a temporary pond would have had at our mill site. It seems that it would have affected the grazing areas belonging to the mill owners themselves. A temporary flooding would also not have been a disadvantage, and would have had a rather positive effect on the harvest. However, there is a written complaint from 1642, from the owner of the manor of Årby, 4.5 kilometres north of Västersta/Lundby. He claims that the embankments by Västersta had a negative impact on the land as well as on the fishing in the Lejsta River (Eriksson 1993:236).

The lack of permanent millponds may partly have been an effect of the official regulations. The laws stressed that the mills should not disturb anyone else. The temporary ponds also meant that the land could still be used for grazing. Apart from this, it would also have meant a big investment for the farmers to construct permanent millponds, an investment that they might have been prepared to make if they could use their mills commercially and if they knew that their mills would not be rejected in a few years. Upon this, we can only speculate.

THE SOCIAL LANDSCAPE

Concerning the physical landscape, we can conclude that the milling had an immense effect locally, while the overall impact on the landscape seems to have been quite modest. The impact on the social landscape is more difficult to detect.

At least since 1640s, the mill site has been divided between the village of Västersta and the farm of Lundby. On the maps, the border between Västersta and Lundby runs straight across the islet. We have no archaeological evidence for any physical demarcation of the boundaries until after the mill period. In the 18th century, when the land was used for grazing, a fence was put up along the border.

It is obviously difficult to discuss the relations between the mill-owning neighbours based on the archaeological record, but the fact that the mills seem to have coexisted in the same place over the centuries and the lack of a physical demarcation of the boundaries might at least suggest that the mills did not cause many major conflicts. Henrik Ågren, who carried out the archive study within the project, has not found any records of conflicts between the mill-owning farmers and their neighbours in the region (Ågren, forthcoming). The conflicts located all arose from complaints from the owners of the official "tullkvarnar". There is one conflict in particular that is of interest for us, as it possibly concerns the excavated mill site. In the

Fig 8. In the parish church of Rasbo, there is an unusual epitaph from the 1670s, made in memory of Per Matsson Gym. He was the owner of a farm in Nyckelbol, the village next to Västersta, and of a watermill in Västersta. It is likely that his mill was situated on the excavated site. This is the only known picture of a mill-owning farmer from 17th-century Rasbo. (Photo by Bengt Backlund, Upplandsmuseet.)

1660s, there were complaints from the mill owners of Visteby. They claimed that farmer **Mickel Matsson** of Västersta let other farmers use his mill, and thereby decreased the income for the mills of Visteby. None of the neighbours wanted to testify against Mickel Matsson, who was allowed to keep his mill, as long as he promised to use it only for his own needs (Ågren, forthcoming).

THE FOUNDATION OF THE MILL SITE AND OF LUNDBY

We now return to the ratter difficult question of ownership. Who initiated the mill site between Västersta and Lundby in the mid-16th century?

The dating of the construction phase coincides quite well with the first mention of a mill in Västersta. However, we don't know for sure whether the mill mentioned in 1561 was placed here, as there are other possible locations along the Lejsta River. The archaeological evidence gives us no reason to interpret more strongly in favour of either Lundby or Västersta as the initiator of the building of a mill site. (Fig. 8.)

The location of the Lundby farm next to the river is somewhat unusual for its area and time. Farms and villages in Uppland were, as we know from the earliest maps of the region, usually situated on the moraine hills, surrounded by the infields.

By the time the mill site was initiated, the Lundby farm was owned by the vicarage. On

a map from 1702, it is said that Lundby was originally a part of the vicarage (LMV B50-31:2). It is possible that the new farm was established along with the mill and that the location was determined by this. If this was the case, it also suggests that the farmer of Lundby functioned as a miller.

In other words, we cannot tell who initiated the mill site between Lundby and Västersta, but we suggest that the location of the Lundby farm was a consequence of the mill. (That Lundby possibly was the name of the village that once formed the land of the vicarage is a completely different story.)

The location of the mill site itself was probably dictated by natural conditions. It is situated where the river meets a ridge of moraine. A crossing (Lundbyvadet) over the Lejsta River is mentioned, probably located in the same place for the same reason. ◆

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Ulrika Rosendahl

SETTLEMENT AND STRATEGIES IN A COLONIZED AREA

UNDERSTANDING THE SETTLEMENT STRUCTURE IN THE PARISH OF MEDIEVAL ESPOO

ABSTRACT

Settlement and Strategies in a Colonized Area – understanding the Settlement structure in Medieval Espoo parish

The medieval parish Espoo in southern Finland was colonized from Sweden during the 13th century. The study of this settlement has formerly been regarded as problematic, because of the lack of written sources on the colonization process and the confrontation between settlers and an existing Finnish-speaking settlement in the area. This paper aims to present how new views on the settlement can be found, using archaeology and landscape studies. The new approach challenges old understandings on the settlement pattern, and aims to draw emphasis away from simplistic national state-oriented explanations on the process. Instead, the focus lies on understanding the regional differences in strategies of settlement, and the level of communication between language groups within the medieval peasantry.

Rural studies in archaeology have introduced a lot of new ideas related to old subjects. One example is the medieval colonization and settlement of the coastal areas of Finland. This topic was, at some point in the mid-20th century, more or less left open by medievalists due to the lack of written sources. During the last decade, it has attracted new interest among archaeologists, thanks to interesting projects and fresh research topics[1].

Finland was included in the Swedish kingdom from the beginning of the medieval period, and the coastal areas were inhabited by a Swedish-speaking population. However, the nature of this process is not very well known. Nevertheless, by combining the sparse written sources with archaeological data, landscape analyses, and place name studies, we can shed some light on the settlement history and try to find new ways of understanding the development and structures of medieval rural society.

This paper focuses on one single region, the administrational parish of Espoo in the medieval period. The area also includes the eastern parts of the church parish of Kirkkonummi. The study is part of an excavation project in a well-preserved medieval village,

[1] The most recently published projects include the SEAS and VMA projects at the University of Helsinki (Lavento 2011) and the PAVAMAB project at the Vantaa city museum (Poutanen 2011).

Mankby, situated in Espoo. The excavations of the project have been conducted by a group of archaeologists from the University of Helsinki from 2010 to 2013. From 2007 to 2009, our previous project dug at the same site in cooperation with the Espoo city museum. The fieldwork of these projects has clarified many issues related to the nature of the medieval village. The aim of this paper is, however, to look at the landscape surrounding the village on a larger scale and to understand the settlement patterns in the area.

CHALLENGING THE EMPTINESS

The Swedish name for the region where Espoo is located is Nyland, literally New Land, from the viewpoint of the settlers who colonized the area in the beginning of the 13th century, at the point in history when the kingdom of Sweden was emerging. The area was also "new" in the sense that it had not been central in any way during the Iron Age. In fact, not a single clear Late Iron Age site has been found in Espoo – yet. The area has been thought to have been used only sporadically by people from the central areas in inland Finland, called Häme. However, this is only the traditional view. The idea of a totally uninhabited landscape has, for some time now, been questioned, but it is only during the last couple of years that we have finally obtained enough facts to revise this view.

The most convincing evidence is Teija Alenius' study on pollen analysis (Alenius 2011). She has shown that by the year 1000, there is a remarkable opening of the landscape and an introduction of cereals in the pollen material. The fields of at least southern Espoo must have been opened by that time. The pollen evidence leaves no room for explaining the phenomena as being brought about by sporadic slash-and burn-cultivation; the settlement must have been permanent by this time.

Place name studies have also contributed to the revision. Even though the place names of the area are mainly Swedish in the southern part of the parish, Saulo Kepsu has found in the material a strong presence of Finnish place names and place names of Finnish origin. The Finnish names are not only names of natural places, as was formerly thought. Closer studies of historical names have shown that names with a Finnish origin have been used for fields, meadows, settlements, and border markers. (Kepsu 2008; 15, 135–148). The region seems much more bilingual than implied by the traditional view, and thus, a more diverse ethnic picture is emerging.

Finally, we have three stray finds dating to the Iron Age from the area, found by amateur metal detectorists in 2012. The finds consist of a bird-shaped brooch from the Migration Period (AD 400–550) found at Bemböle Fallåker (KM 39283) and a bird-shaped pendant from the Viking Age (AD 800–1050) found at Vanttila, Bensuls (KM 39147: 1). The third find is a chain holder from Bemböle Kyrkäng (KM 39146), dated to AD 1050–1150. Anna Wessman, archaeologist at the Espoo city museum, has also recently revised the material from the medieval village excavation in Kauklahti (excavated in 2003 by Haggrén et al/The National Board of Antiquities) and identified a formerly unidentified horse-shaped pendant, dated to AD 1050–1150, in the material. (KM 2003111:275). The context of the find can be regarded as secondary. These finds strongly indicate that the absence of Iron Age sites is most probably to be explained by a lack of research rather than a lack of actual Iron Age activity. All the finds mentioned above are typical burial finds when found in context, and thus, their presence strongly indicates a local Iron Age settlement. (Fig 1)

Fig. 1. New finds from the Iron Age have shed new light on the settlement history of the area. Bird shaped brooch from the migration period, a bird shape pendant from the Viking age and a chain holder from AD 1050–1150 represents finds older than the colonisation process. (Photos by Anna Wessman, Espoo City Museum.)

FINDING SETTLEMENT CHANGE IN TAX RECORDS

Working with the material from Espoo and its medieval settlement has raised a lot of interesting research topics, but in this paper I mainly concentrate on the strategies of settlement. By this I mean not only the colonizing process, but also the more long-term medieval settlement development in the area.

The area of the study, the parish of Espoo, was by the late Middle Ages inhabited almost solely by freeholding peasants who paid their taxes directly to the crown with no lords involved in the landowning. This has provided good royal tax records from 1540 onwards, which can be used as source material in studying the settlement. The parish is large; it has over 100 villages and hamlets. It is also large geographically; the distance from south to north is over 30 kilometres. Compared to the sparse population in the Late Iron Age, Espoo is quite densely populated by the end of the Middle Ages. Practically all arable areas were used for peasant settlement: mostly small villages and hamlets, some individual farms, and a couple of slightly bigger villages consisting of 8–12 farms. (Fig 2)

If we examine the settlement names, we can draw a rough language border from the east to the west. The Finnish settlement names are situated to the north of the line, while the Swedish names are to the south. Linguists who have studied the place names and dialects of the Swedish-speaking areas in Finland agree that the Swedish names have medieval roots at the earliest, and do not date back as far as the Viking age or earlier times (Huldén 2002, 2001, Ivars 2002). This conclusion is in line with the idea of a Swedish colonization in the 13th century.

Otherwise, when we look at the villages evenly spread over the map, they tell us little about the nature of the settlement. One way of creating a more nuanced map is to define the size of the settlements (Fig 3). Bigger settlement units may indicate old settlement or areas that are central in some other sense. By looking at the size of the villages, it is easy to outline an area with bigger villages in the river valley that stretches from northeast to southwest. Another area with seemingly big villages is the northern lake area around Lake Enäjärvi. Compared to these areas, the coastal region, for example, seems to have very small settlement units.

However, more historical depth is needed to support this view, because the size of the settlement units gives us only the situation right after the medieval period, from 1540 onwards. During the Middle Ages, tax records were not kept in the same detail as in the 16th century, and comprehensive information on the settlement structure at that time is impossible to acquire. However, the source material from the 1540s can, to some extent, be used retrospectively.

One way of doing this is to study the amount of tax that the village, as a taxation unit, paid. During the Middle Ages, the tax rates were not dynamically adjusted according to the number of persons be-

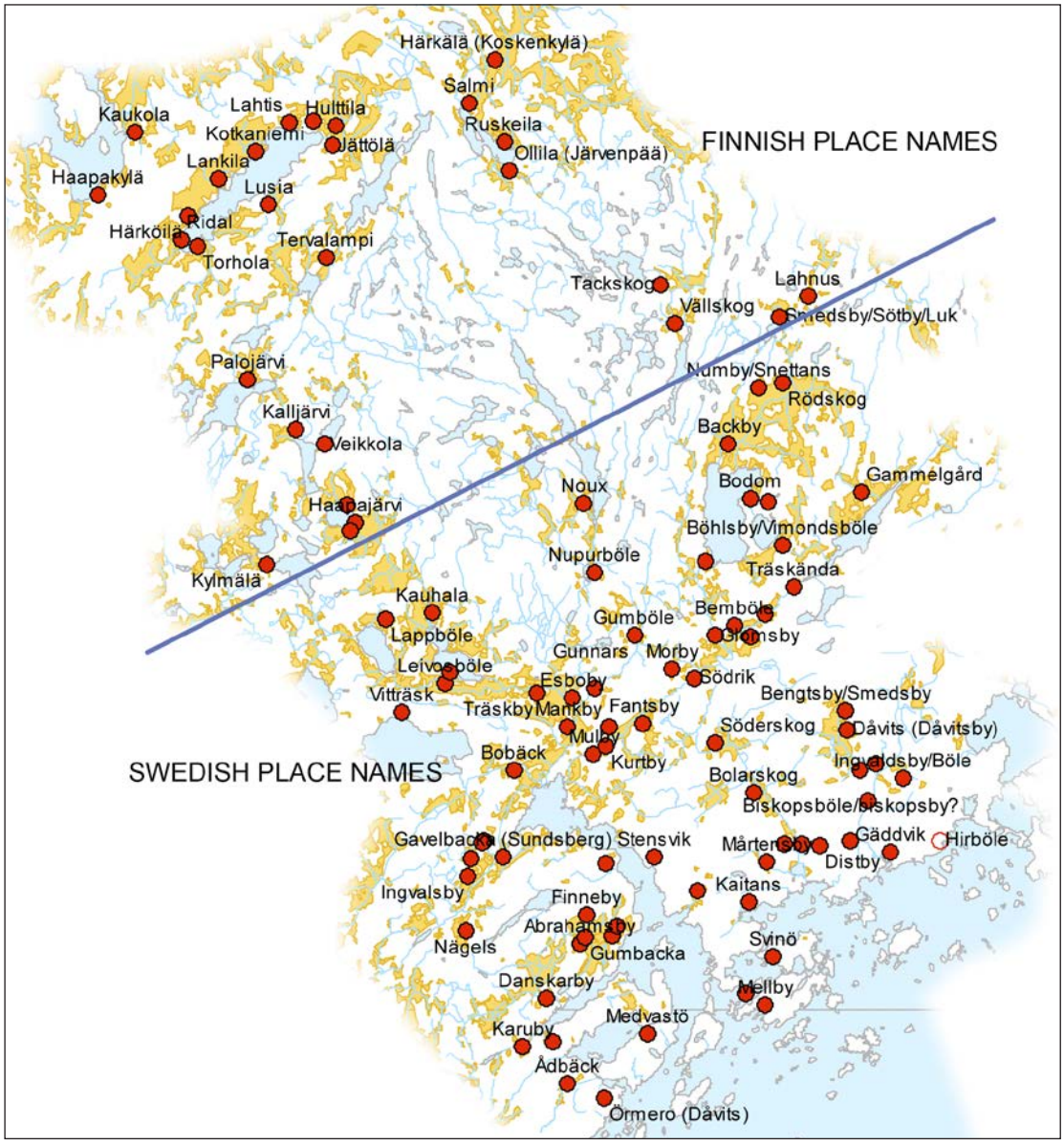

Fig 2. The medieval parish of Espoo consisted of over one hundred villages and hamlets. To the south, the settlement names are in Swedish, to the north in Finnish. (Map by Ulrika Rosendahl.)

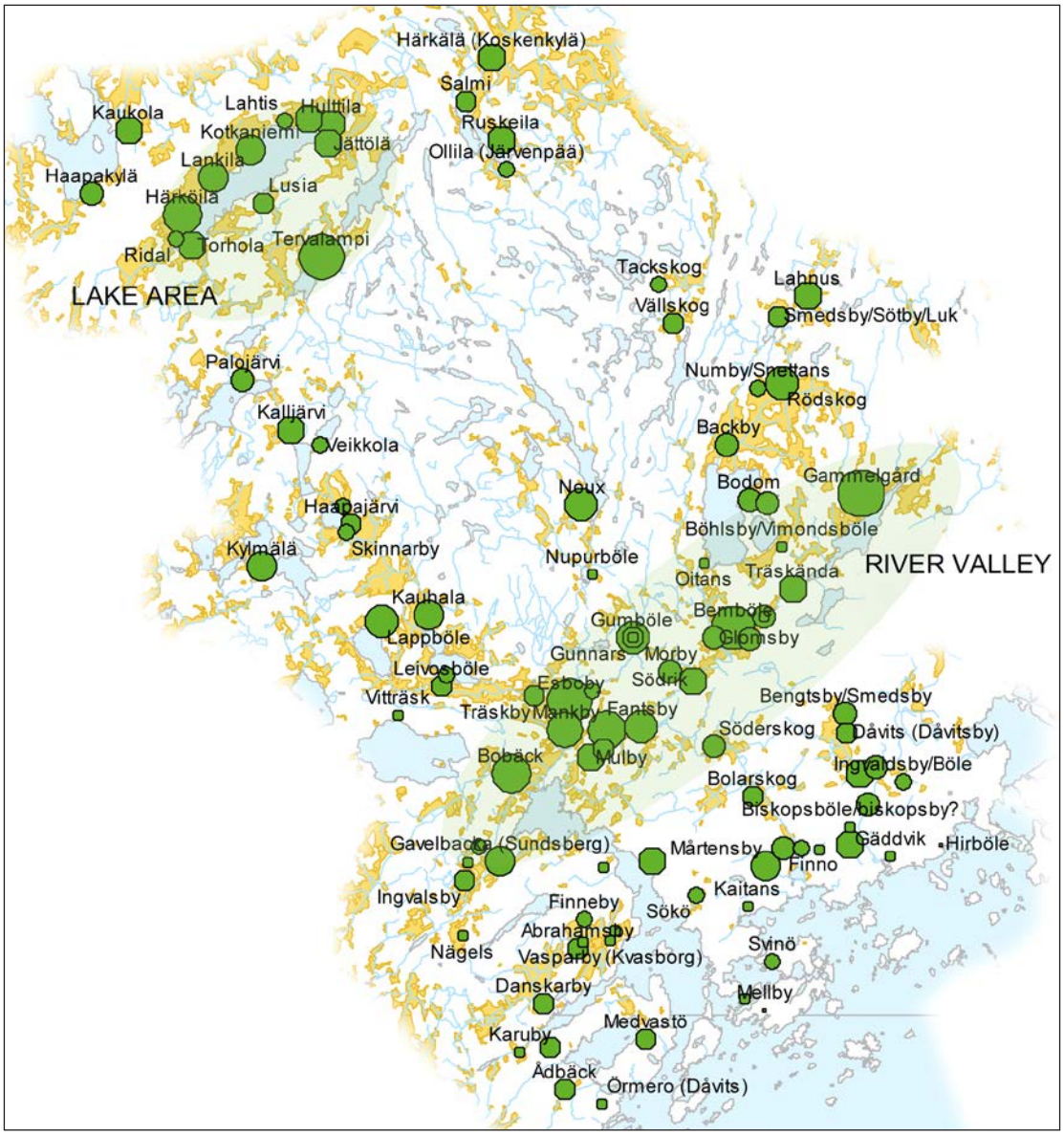

Fig 3. In comparing the size of the late medieval villages, two areas stand out with big settlements: the river valley in the south and the lake area in the north. (Map by Ulrika Rosendahl.)

longing to the unit. Because of this, units that used to be big in, for example, the 14th century, paid more tax per capita two hundred years later than units that used to be small but had grown in that time (Haggrén 2008; 52).

This gives us an idea of how the settlement size developed during the Middle Ages. If these factors are taken into account, the role of the central river valley region is more emphasized, whereas the northern lake area no longer seems to be as important. (Fig 4) This leads to the conclusion that the lake area can be interpreted as an area where the population grew only during the last centuries of the Middle Ages and not as the oldest settlement, despite the Finnish place names in the north.

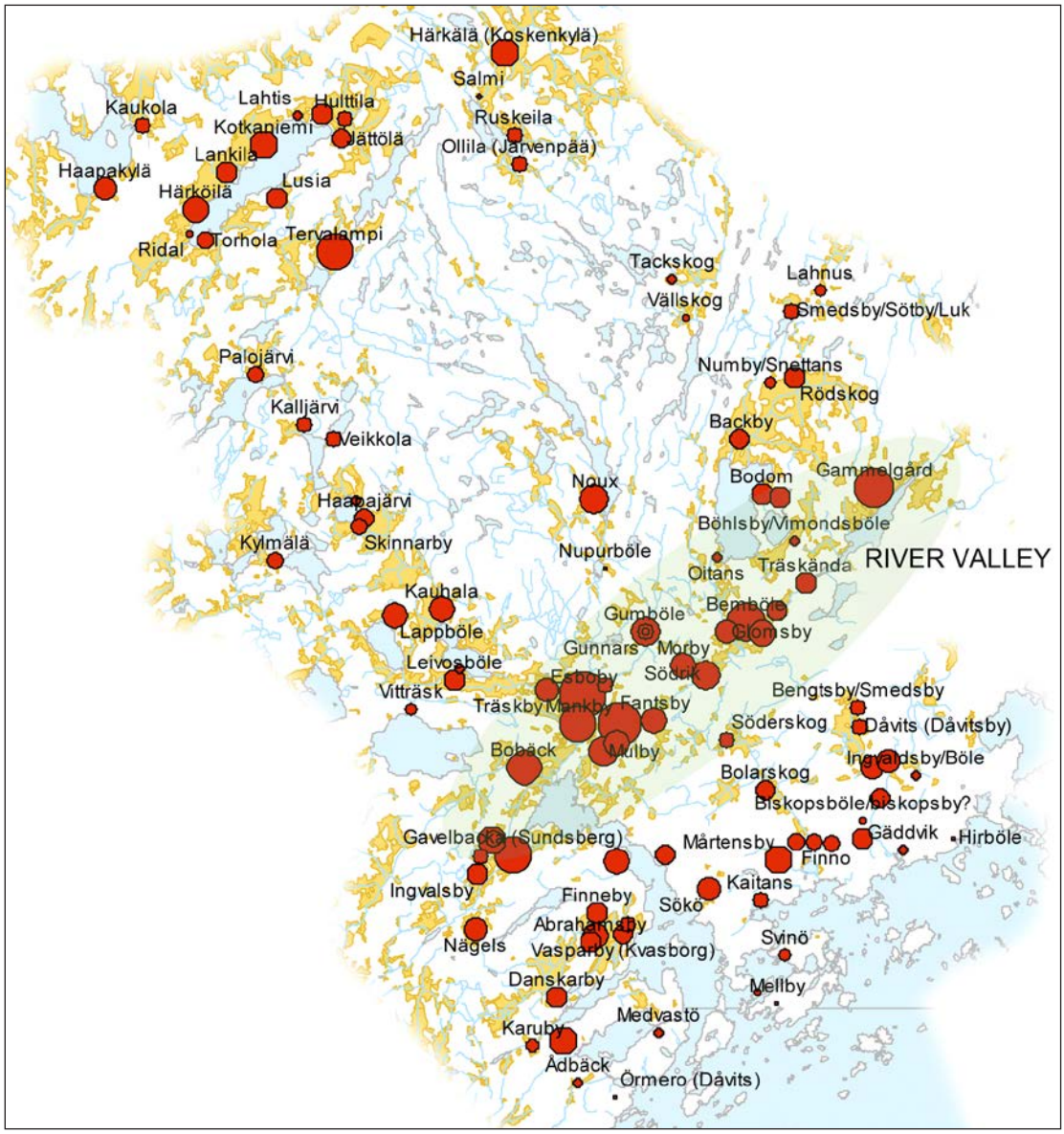

Fig 4. Taking into consideration the amount of tax paid by the villages, the river valley seems more central than the lake area. This may reflect an older settlement. (Map by Ulrika Rosendahl.)

One of the rare medieval written sources that do shed light on medieval taxation is also helpful; we have a list of the central Bol villages that were responsible tax-collecting units in 1451 (Finlands Medeltidsurkunder nr. 2898). This list can be used to retrospectively identify central places in the area. Saulo Kepsu has drawn similar conclusions in his research (Kepsu 2010; 15–18). The dating of the Bol system is unclear, but the list from 1451 is most probably written evidence of a system that has been in use for a longer time, and the villages that were chosen to be Bol villages might have been central places in the local community even before taxation was standardized.

When the Bol villages are placed on the map (Fig 5.), a general picture of the struc-

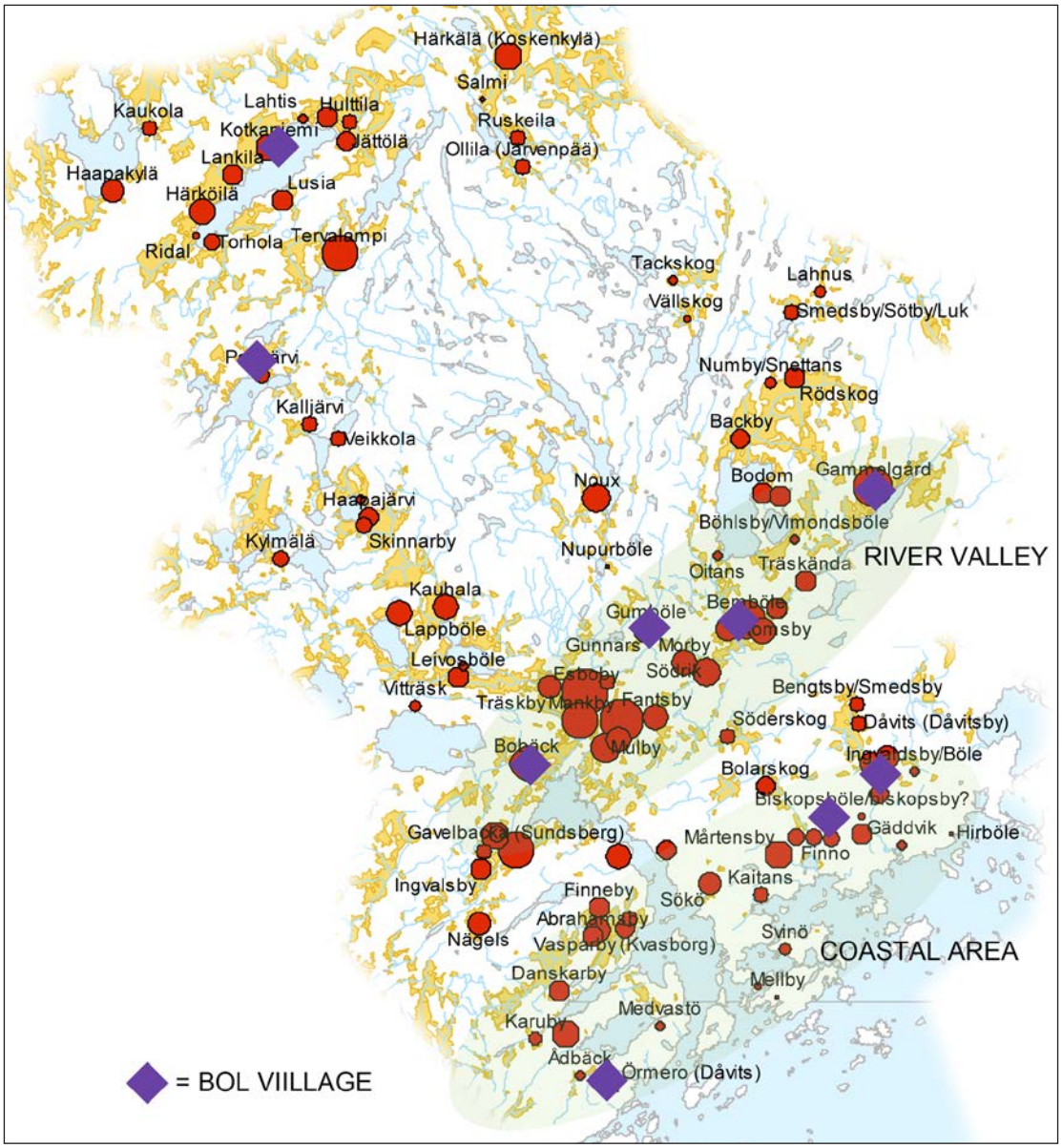

Fig 5. Bol villages mentioned in a source from 1451 show that these central places were most densely located in the river valley or by the coast. (Map by Ulrika Rosendahl.)

ture of the settlement can be drawn. Again, the river valley area shows the largest number of Bol villages and is clearly central for the settlement. In addition to the large number of Bol villages, the river valley is also the location of the parish church, which was founded around 1350. The role of the lake settlement continues to decline, with only two Bol villages in the considerable area, which must reflect a meagre population by the time the taxation system was developed.

Furthermore, in this map, the coastal settlement starts to seem interesting. Here, several Bol villages can be located in an area that has seemed quite peripheral in the light of the other sources. There is a particu-

larly interesting Bol village in the southernmost part of the area, but the actual village, Örmerö, has more or less vanished during the Middle Ages. Only one farm remains, namely Dåvits, which paid quite a modest tax. But could the fact that this tiny settlement unit is a Bol village in its own right reflect some kind of "past glory", or at least indicate that the coastal settlement has been more central for the settlement development in the area than one would think from analysing the 16th-century tax material in retrospect?

STRATEGIES OF SETTLEMENT

When we compare this settlement to the language border, we see that it correlates quite well with the lake area. The most central, and therefore, it can be argued, oldest settlement, seems to be on the "Swedish side", just like the theory of the New Land implied. But is this really the case? If we add the few pieces of archaeological material that date prior to the Swedish colonists to this retrospective picture gained from historical sources, we might obtain some more clues, even though the material does not cover the studied area completely.

All the Late Iron Age stray finds are found in the river valley, which we have already considered to be central and which can thus be assumed to have been well established in the landscape. The pollen analysis that dated the field use to the year 1000 was carried out in Hannusjärvi in the coastal area. This gives us all the more reason not to leave out the coastal area when we try to detect the earliest settlement.

But why are all these implications of early activity, dated to a time prior to the colonization, on the southern side of the language border? They seem to imply that the land was not new, that there was a Finnish-speaking population in the area when the Swedish settlers arrived. But the question is: what happened to the Finnish population? Did it leave traces in the settlement, or did it just disappear when the colonists arrived?

If we compare these three areas that we have outlined, we can see that their settlement strategies are somewhat different. The lake area that seems to have a growing population towards the end of the Middle Ages has modest field resources, but might be making use of the vast forest areas in its vicinity. Lakes certainly provide fish, an important resource. However, since none of these villages has been excavated, we have few archaeological facts to refer to.

The river valley seems to be an area where the village system, probably introduced from Sweden, seems to prosper during the Middle Ages. The settlement shows big villages that acquire surplus from their excellent fields. Here we have two excavated villages, Köklax (fi Kauklahti) and Mankby, that have shown that the surplus was used to import goods and that the peasants most probably traded with Tallinn themselves (Haggrén 2005, Rosendahl 2011; 191–195, Haggren, Rosendahl, Terävä 2011).

The coastal settlement units are quite small, but there are some indications that the settlement had declined by the time we see them in written sources. The coastal settlement could earlier have prospered from trade, in addition to the obvious seal hunting and fishery. Agriculture was less important; the more maritime the environment, the smaller the fields usually became.

If the comparison is supplemented with observations related to the language situation, the lake area is obviously Finnish. According to Saulo Kepsu, there is great similarity in place names between northern Espoo and the neighbouring parish in the north, Vihti (Kepsu 2008; 137–138), which could indicate that

inhabitants arrived from that direction. The river valley is mostly Swedish, according to the place names, and in many cases it can be argued that the colonists on a local scale actually settled on some "New Land", that is, areas without former settlement. However, Finnish place names are heavily present beneath the Swedish surface, especially in the bigger settlement units like Kauklahti and Bemböle (Kepsu 2008; 137). The fact that the Finnish language was adapted to Swedish tells us that there was a Finnish presence in the central river valley landscape and that any new settlers must have been at least aware of this.

In the coastal area, the Finnish names are preserved in an otherwise Swedish environment (Kepsu 2008; 137). Here, the idea of a bilingual population or a population that changes language over time could be a more accurate interpretation of the material than explaining the settlement only with migration from Sweden. The preservation of the Finnish language in a quite unmodified form suggests that the words have had meaning for the people using the fields. Among linguists, the idea of language change is widely accepted as an explanation for the adoption of the Swedish language on the Finnish coast (Huldén 2002; 74, 78). According to this, the existence of different language groups has not necessarily been caused only by a large migration, but by a language change from Finnish to Swedish during the time of Swedish rule.

In addition to the place name material, we have an archaeological site in the coastal area that surprised us when it was found in 2006. It is a Christian village cemetery in one of the coastal villages in Espoo, Finnå (Kivikero 2011; 47–51, Rosendahl 2011; 195–197). Over forty graves were found, and the cemetery seemed to have been in use over a long period. The preservation was poor, but we managed to carry out radiocarbon dating that indicated dates in the 15th century or even later. These were obviously Christian graves, but dug next to the village instead of next to the parish church. Village cemeteries from Christian periods are rare in Sweden. As for Finland, they have been poorly known and investigated until recently, but in a Finnish inland context, the idea of a cemetery located far from the church is in no sense unique (Ruohonen 2005). Also rural Estonia has a long tradition of village cemeteries (Valk 1999).

Could the cemetery found in Finnå be seen as an amalgamation between the language groups that inhabited the area? That even though the language used at this point in history must have been more or less Swedish, the people had rituals originating from Finnish customs? This would mean that a hybrid culture had emerged during the Middle Ages, formed by both colonists and the people of the earlier settlement, those who opened the landscape for cultivation at the beginning of the second millennium.

CONCLUSION

Can we obtain a more diverse picture of the colonizing process of Espoo and Uusimaa? The theory of Swedish newcomers coming to an empty "New land" definitely has to be revised. But just adding a static "original" Finnish settlement is not enough. The Finnish settlement did not only represent an ahistorical original settlement. Both the Finnish and the Swedish settlement continued to change during the Middle Ages and also merged to some extent.

By combining written sources with methods of landscape studies, it can be made clear that the older Finnish settlement has not just disappeared in Espoo and that it did influence the settlement structure even after the Swedish colonization. Still, the different

areas have different strategies of using the landscape. The parish of Espoo is a vast area with different sorts of resources in the maritime coastal region, the agrarian river valley, and the more forest-oriented lake area. The density of settlement in these areas has varied, and the general population pressure has forced the settlement to either seek new areas or abandon areas that were no longer needed.

At least older historical research on the subject has failed to see that language groups mixed and communicated. We can no longer view people or groups of people as static ethnic entities. Language change and bilingualism are very plausible explanations for how people coped with the change that was originally caused by increasing population and migration movements that occurred at the time on a European level. ◆

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A MEDIEVAL LANDSCAPE OF POWER AND INTERACTION

THE CASTLE OF RASEBORG AND THE PEASANTS OF THE CASTLE PROVINCE

ABSTRACT

A medieval landscape of power and interaction – The Castle of Raseborg and the peasants of the castle province

In the Late Middle Ages, the administrative, military and also economical center for Western Uusimaa was the castle of Raseborg, founded in the 1370s. The castle and its castellan controlled a castle province consisting of eight parishes. The castle was surrounded by three zones of the landscape of power: the vicinity of the castle, the rest of the properties of the castle estate, and the peasants' settlements of the entire castle province. However, this was not a landscape of feudal exploitation. On the contrary, the freeholders or free peasants in their villages were able to imitate the material culture of the castle and of Hanseatic towns like Tallinn.

In the Late Middle Ages, Sweden, including Finland, had a well-organized administration – at least in theory. Sweden was divided into several castle provinces. Each of them had a royal castle that operated as an administrative center of the province. (Fig. 1)

Especially in the north and east, vast areas had been integrated under the Swedish Crown during the 13th and early 14th centuries. Some of these areas, such as large parts of the Province of Uusimaa (Sw. Nyland; En. "New Land"), were colonized areas with only a sparse permanent settlement before this time. Uusimaa was organized as a province in the early 14th century at the latest. In the late 14th century, Uusimaa was divided into two castle provinces, Borgå län (Fi. Porvoon lääni) in the east and Raseborgs län (Fi. Raaseporin lääni) in the west. (Haggrén 2011b.)

The castle of Raseborg (Fi. Raasepori) was founded around 1375. It was intended as the center of Western Uusimaa, that is, the Castle Province of Raseborg (Sw. Raseborgs län, Fi. Raaseporin linnalääni), the southernmost castle province in Finland. From now on there were five large castles, royal castles indeed, in southern Finland. Three of them, the castles of Turku (Sw. Åbo slott), Häme (Sw. Tavastehus slott), and Viipuri (Sw. Viborgs slott), were founded already in the 13th century, while Kastelholm on the Åland Islands (Fi Ahvenanmaa) was established more or less simultaneously with Raseborg.

The castle of Raseborg was not only a military stronghold or an administrative center. Indeed, it soon became an aristocratic

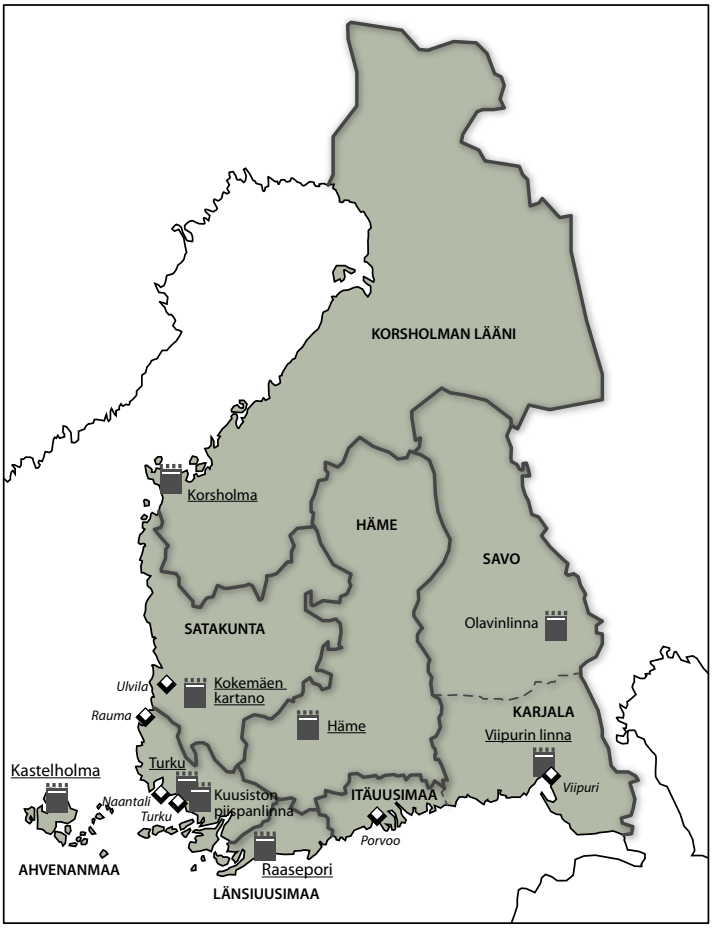

Fig. 1 The castle provinces in Finland in the 15th century. (Map by Maija Holappa.)

residence for the castellans who were usually members of the Swedish aristocracy. The first castellan was **Tord Röriksson Bonde**, who dated a charter in Raseborg in 1378. In the 1460s, the former king of Sweden, **Karl Knutsson Bonde**, resided in the castle for some years before he became the sovereign for the third time. During the following decades, Raseborg was occupied by several powerful castellans, such as **Laurens Axelsson Tott**, **Nils Eskilsson Banér**, and **Erik Fleming**. (Drake 1994,8; Hartman 1896.) These aristocrats belonged simultaneously to the Privy Council of Sweden (Gillingstam 2009).

In 1540, King Gustaf Vasa set the castle of Raseborg under the direct administration of the crown. In those days the castle was in bad condition and it had lost much of its former importance. Ten years later, the administrative center was transferred to Helsinki, where a new royal manor, as well as a town, were founded in 1550. Some years later, the old castle was abandoned and was never settled again.

THREE ZONES IN THE LANDSCAPE OF POWER

From its foundation in the 1370s, the castle of Raseborg was the administrative and military center of Western Uusimaa. The name of the Castle Province of Raseborg characterizes the castle's role as the heart or core of the province. A landscape of power, the power of the Swedish Crown, was spread out from this center. (cfr. Mogren 2000.) (Fig. 2)

This landscape of power around Raseborg can be divided into three zones.

1. The innermost zone consisted of activity areas from which one could (almost) see the castle or the center of the landed estate of Raseborg, the manor of Raseborg.

Fig. 2. The castle of Raseborg. (Photo by Georg Haggrén.)

2. The middle zone consisted of tenant farms, fisheries, mills, and other properties belonging to the castle estate.
3. The third zone was formed by the castle province of Raseborg, which covered a large coastal area divided into eight parishes.

THE INNERMOST ZONE OF POWER

The castle of Raseborg was built on a rocky island, and it ruled – or shadowed – its nearest surroundings by virtue of its very existence. The mighty castle's hold over the landscape was completed by the existence of the manor of Raseborg on a small hill about one kilometer from the castle. The manor was surrounded by the fields and meadows of the estate. Together the castle and the manor formed both the landed property of Raseborg and the cameral village of Raseborg. (Fig. 3)

The research project "Raseborg through the Ages" was conducted in 2008–2009 by the University of Helsinki and the Provincial Museum of Western Uusimaa together with the Summer University of Hanko. The research was focused on the surroundings of the castle or the innermost zone of the landscape of power around Raseborg. Extensive field surveys and mappings, several prospecting methods, and archival studies were used before and during the two field seasons. After the initial work, trial excavations were carried out on four sites: 1. Bastuåkern in Snappertuna Church Village, 2. the Slottsmalmen and 3. Grönborg areas east of the castle, and 4. the site of the manor of Raseborg. (Haggrén, Jansson, Holappa & Knuutinen 2009, Knuutinen 2012a, idem 2012b.)

The chapel of Snappertuna, as well as the hamlet of Snappertuna itself, are located less than a kilometer north of the castle. Historical documents concerning the hamlet of Snappertuna are scarce, and actually the oldest surviving written source mentioning the name Snappertuna is from 1540. In the middle of the 15th century, the hamlet was owned by Karl Knutsson Bonde, who resided in the castle. During the 19th and 20th centuries, Snappertuna has aroused interest because it has been suggested as the probable location of the near-mythical town of Raseborg, which was sometimes also called Tuna in later writings. The borough has been mentioned in some medieval sources and in 1451 the town actually paid small taxes. (Haggrén & Jansson 2012, 66–68.)

The hypothesis that Snappertuna was the place of a borough related to the castle had never been archaeologically tested before the "Raseborg through the Ages" project. Beginning from the 18th century, some indications of house foundations in the area can be found in documents, where several ruins scattered

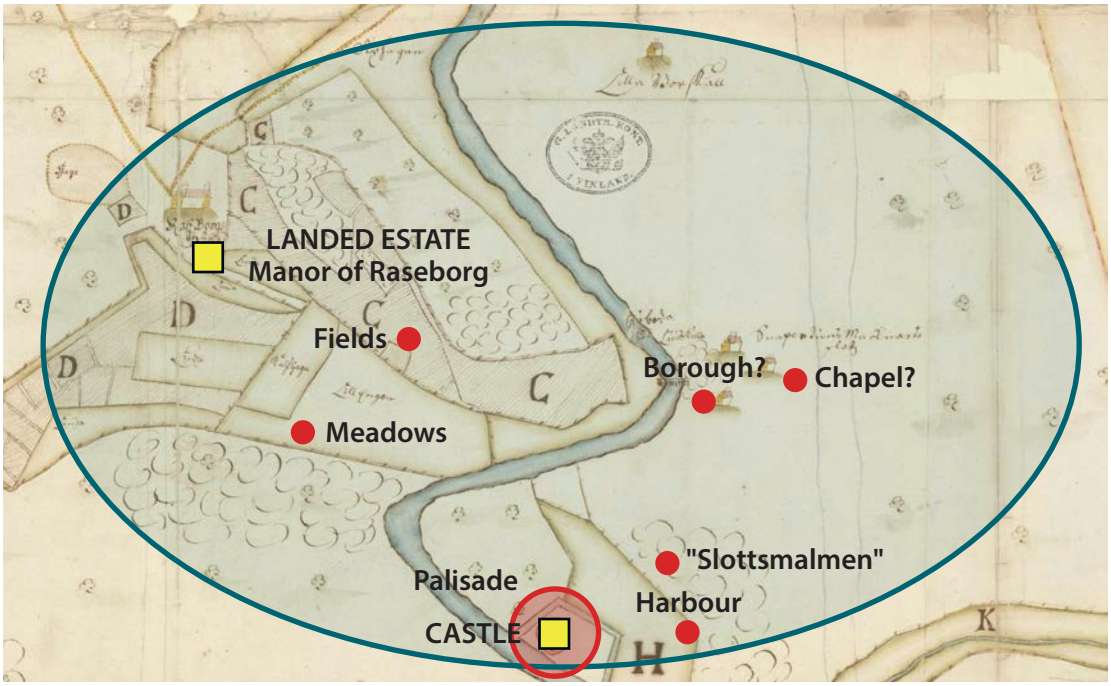

Fig. 3. The innermost zone of the landscape of power visualized on the oldest map representing the estate of Raseborg (1682). (Finnish National Archives)

on the fields of the parsonage in Snappertuna are mentioned. The ruins are described as the remains of the township of Raseborg. Furthermore, a couple of medieval finds, such as a shard of Bohemian glass, were found in the field called Bastuåkern between the parsonage and the King's river in the early 21st century. Several test trenches were made here in 2008 and two foundations of buildings were unearthed. (Haggrén & Jansson 2012, 66–68.)

In the lowest part of Bastuåkern, a surprising find was made when an ancient channel filled with gyttja was revealed. It seems that the medieval settlement or trading site has been located at the end of a shallow bay connected to the present King's river that runs towards the castle and out into the Gulf of Finland. The find material, mainly found in close vicinity to the two house foundations or the waterfront of the channel, consisted mostly of German stoneware, as well as shards of Bohemian glass vessels. A couple of medieval coins were found too. The discovery of the channel and the house foundations, as well as the fact that the find material consists mostly of imported goods, suggest that in the late Middle Ages this area could have been a nodal point in a network of trade. (Haggrén & Jansson 2012, 68.) (Fig. 4.)

The agricultural center of the castle household was the landed estate of Raseborg. Its center, the manorial site itself, was located on the slopes of a small hill one kilometer from the castle. The surviving records of the castle reveal that in the 1540s, the livestock of the estate consisted of dozens of cows and sheep, as well as some other domestic animals. The manorial site and its buildings were surrounded by fields and meadows. This open landscape has a long continuity from the Middle Ages and is rather well preserved even today. Some structures, for example, a medieval or early modern stone cellar, and some traces

Fig. 4. In the Church village of Snappertuna an ancient channel filled with gyttja was found in 2008. (Photo by Georg Haggrén.)

Fig.5 The site of the manor of Raseborg. (Photo by Georg Haggrén.)

of medieval activities were found during the surveys in 2008 and 2009. For example, during the field walking near the plot of the manor, a shard of a stoneware jug originating from Siegburg in Germany was found. However, large-scale construction works and massive earth moving during the 18th and 19th centuries make it difficult to find and reconstruct the medieval activity areas of the manor. (Haggrén, Jansson, Holappa & Knuutinen 2009.) (Fig. 5.)

Today the castle is in the middle of a dry lowland area, but during the centuries, land uplift has changed the environment here. In the Middle Ages, the castle rose upon a steep cliff surrounded by a shallow bay called the Sound of Raseborg. During the 14th and 15th centuries, while it was in use, the castle was isolated from the mainland. Today, tourists can approach the castle from the west over the former sea bottom, but in the Middle Ages, the entrance was from the east, a fact proved during the research project.

In 2008 and 2009, several structures connected to the route and the original access between the mainland and the castle island were located. About 100 m east of the castle, on a field called Slottsmalmen, the heavy foundations of a jetty and an embankment or a road heading from the mainland to the castle were found. On both sides of the embankment, both domestic and construction waste was carried here from the castle, but the uppermost layers, structures, and finds under the topsoil were connected to activities of the Slottsmalmen area itself. (Fig. 6.) The finds included plenty of bone material, including fish bones, as well as waste from industrial processes like smithery, brick and lime production, and pot making. The embankment led from the shore over to a hill called Häggkullen, where the heavy foundations of a masonry cellar were found. (Haggrén, Jansson, Holappa & Knuutinen 2009; Knuutinen 2012.)

Behind a rocky hill north of Slottmalmen, there is a lowland area called the field of Grönborg. Medieval activities were located also in this area. Two wells were found here already in the 1960s. During the fieldwork of 2009, a couple of house foundations and a water pit filled with timber were uncovered.

From Slottsmalmen and the westernmost part of Grönborg, some crossbow bolts, lead bullets, and cannonballs were found. They might indicate warfare and a siege of the castle. Furthermore, along the shoreline of

the Slottsmalmen area, there are some stone structures that can probably be connected to the boat harbor of the castle. From this site, it is about 1.5 kilometers to the mouth of the River Raseborg or King's river, the former Sound of Raseborg.

A large amount of finds and structures dating to the Middle Ages was found in the surroundings of the chapel and the settlement in Snappertuna, the environs of the manor of Raseborg, and the Slottsmalmen and Grönborg areas east of the castle. Together they reflect different kinds of activities connected to the castle. In contradiction to these three or four areas with indications of lots of activities during the 180 years when the castle was occupied, large areas between them lack any traces of medieval activities.

THE MIDDLE ZONE

The middle zone of the landscape of power around the castle of Raseborg was under the direct control of the castle and the castellan. In addition to the near vicinity of the castle, several production sites and activity areas, as well as tenant farms, belonged to the castle household or the landed property of the castle. The Sound of Raseborg was so shallow that the castle was forced to keep a harbor in front of the estuary of the sound – or the River Raseborg as it is called today. In the estuary of the sound, rocks blocked the channel so that only smaller boats were able to make the last two kilometers to the castle. In modern times, some of these rocks have been blasted away. Before this, all larger ships, such as medieval cogs, were forced to anchor in deeper waters in front of the estuary. On the island of Prästholmen on the western shore of the river mouth, a group of rock carvings made in the late 15th century were found in the late 1970s. These carvings were

Fig. 6. Domestic and construction waste layers on the southern side of the embankment on Slottsmalmen revealed during the excavations in 2009. (Photo by Georg Haggrén.)

Fig. 7. The site of a stone cellar or a masonry building on Häggkullen before the excavation. (Photo by Georg Haggrén.)

located close to the shoreline. They consisted of the coats of arms of several noblemen and women with a close connection to the castle. The harbor of the castle was probably near this site. (Drake 1991, 125–127; Nummela, Sarvas & Taavitsainen 1979.) (Fig. 8)

The castle household and the small garrison in the castle consumed large amounts of bread and flour. Quite naturally the castle had a mill just a couple of kilometers upstream along the King's river. The mill was located in a place called Huskvarna, literally "the Mill of the Castle". However, the water-

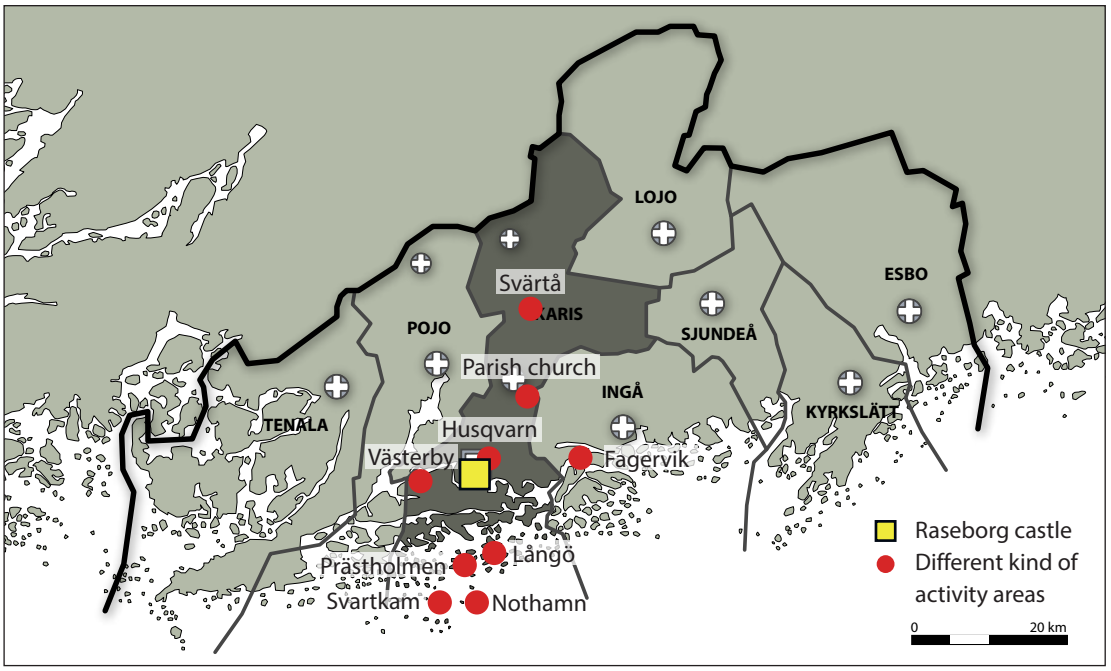

Fig. 8. The middle zone of the landscape of power. (Map by Maija Holappa.)

fall here has always been low, and it seems that the castle had rights to two other, much better mill sites. One of them was in Svartå (Fi. Mustio) in the northern part of the parish of Karis (Fi. Karjaa), while the other was in Fagervik about ten kilometers east of the castle. In addition to this, at least in the middle of the 16th century, some iron production related to the castle was carried out, first on Eric Fleming's and after him the crown's own initiative. For example, a forge hammer is mentioned in the records of the castle from the 1540s. (Haggrén, Heinonen & Terävä 2007) (Fig. 9)

The crown – and the castle – had nine tenant farms in the parish of Karis. Some of the tenants were ordinary peasants living in hamlets some kilometers away from the castle, but some were fishermen living in the archipelago. There was a special bailiff (Sw. skärifogde) in the castle who controlled these fishermen and collected taxes from the archipelago. One of these fishermen's settlements, Nothamn, was deserted in the 17th century. The plot of the hamlet was found in the early 21st century when the site was surveyed. In addition to tenant farms, a deserted medieval hamlet called Västerby belonged to the castle. It was mainly used as meadows and pastureland. (Fig. 10)

The castle belonged to the parish of Karis, and most probably the parish church was more or less controlled by the castellans of Raseborg. The first churches were made of timber, but in the late 15th century, a stone church was built here. According to an mural painting on the wall, the church was finished in 1470. The presence of the former castellans is visible in the church even today. Some of the surviving inventories in the church have been donated by the castellans of Raseborg. One them is a sculpture of St Bridget, the patroness of the church, made in Lübeck in the late 1470s and donated to the church by Laurens Axelsson Tott and his wife Katarina Nipertz. (Hiekkanen 2007, 434–437). (Fig. 11, 12)

THE OUTER ZONE – THE CASTLE PROVINCE OF RASEBORG

The outer or third zone of power around the Castle of Raseborg consisted of the whole castle province or the western half of the former Province of Uusimaa (Sw. Nyland). This castle province covered a coastal area of about 120 km and reached 40–50 km inland. On a modern map, the former castle province is located between the modern town of Hanko in the west and the capital of Finland, Helsinki, in the east. (Fig. 13)

During the late Middle Ages, eight administrative parishes belonged to the castle province. Beginning from the west, they were

Fig. 9 Huskvarn, the site of the mill of the castle. (Photo by Georg Haggrén.)

Fig. 10. The site of the deserted fishermen's hamlet called Nothamn. (Photo by Georg Haggrén.)

Fig 11. The stone church of Karis. (Photo by Georg Haggrén.)

Fig. 12. A mural painting showing the year 1470 (MCDLXX). Foto Georg Haggrén.

Tenala (Fi. Tenhola), Pojo (Fi Pohja), Karis (Fi Karjaa), Ingå (Fi Inkoo), Lojo (Fi Lohja), Sjundeå (Fi. Siuntio), Kyrkslätt (Fi Kirkkonummi), and Esbo (Fi Espoo). In 1550, there were about 2600 peasant households in nearly 900 hamlets and villages in these parishes. (Haggrén 2011a, 164.)

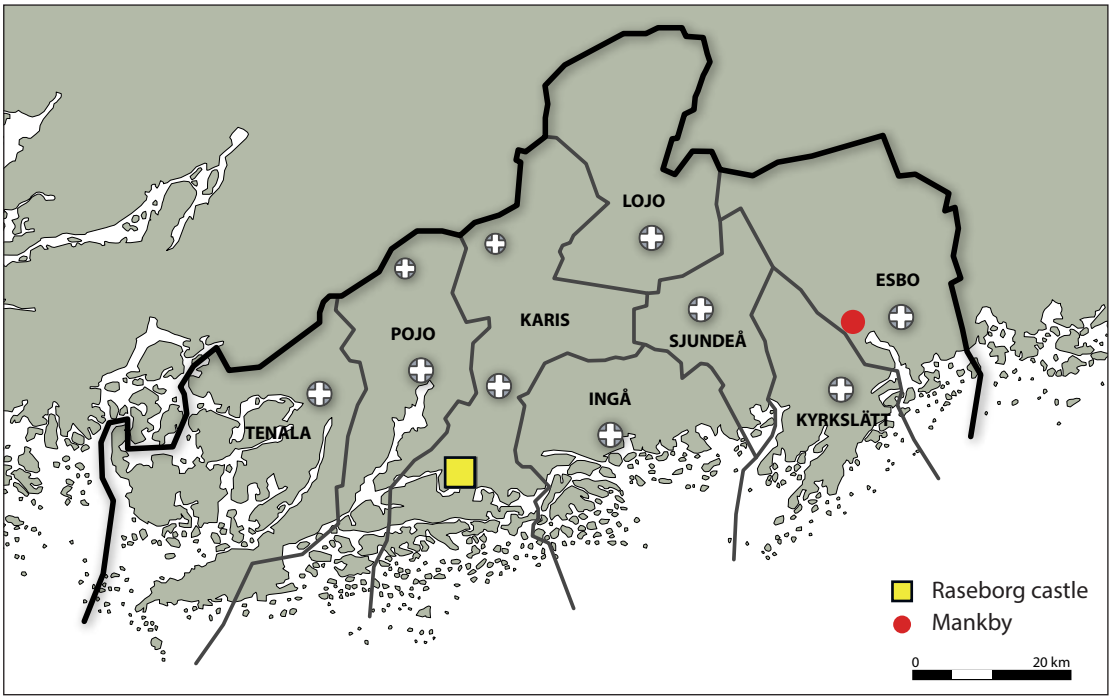

Fig. 13 The Castle Province of Raseborg., the outer zone of the power. Maija Holappa.

More than 90 % of the peasants in Uusimaa were freeholders without any feudal ties. However, they had several duties towards the crown and its local representative, the castle and castellan of Raseborg. The freeholders, or all the peasants apart from tenants living on farms owned by the nobility, were organized under the control of the castle. In the late 14th century, when the castle was founded, the peasants were obliged to bring materials and help in the construction works. In a medieval castle, the building and construction activities continued almost every year. If there were no larger construction works, the buildings always needed maintenance. As late as in the 1540s, each of the parishes sent a carpenter to the castle annually. The peasants probably also paid their taxes directly to the castle. The peasants were also obliged to provide statute labor for the castle. The nearest parishes took part in the agriculture and fishing under the castle household several times a year. Furthermore, each parish had to take care of the haymaking on one of the meadows belonging to the castle. For example, the peasants from Esbo parish were responsible for a meadow called Stubbängen, located a couple of kilometers east of the castle. Because of the work duties, annual tax payments, and transporting parcels, the castle became familiar to peasants in every corner of the castle province. (Fig 14)

One of the villages in the castle province was Mankby in the western part of the parish of Esbo. Mankby, with its 8 medieval farms, was in Finnish terms a large hamlet, more like a village. It was abandoned in 1556, almost at the same time as the castle of Raseborg. In the same year, the village was laid under a new royal demesne or manor called Esbo kungsgård (Fi Espoon kuninkaankartano), and the peasants were forced to leave their farms. Soon afterwards the entire village plot in Mankby was abandoned.

In 2007, a research project was started in Mankby. During the first season, the site

was surveyed and mapped. After that, fieldwork and excavations have been carried out on the site every year. The research has been conducted by the University of Helsinki, The City Museum of Espoo, and the Summer University of Hanko.

In Finnish terms, Mankby is an exceptionally well-preserved deserted medieval village site. More than 20 house foundations and fireplaces, as well as several roads, are still visible on the terrain, and the village plan of the early 16th century can be reconstructed. Mankby is not a typical deserted settlement, not just any poor hamlet in a marginal area. It was a wealthy village in a good location with plenty of natural resources. (Haggrén, Holappa, Knuutinen & Rosendahl 2010.) (Fig 15)

On the grounds of the historical sources, we know that there was a lot of interaction between the peasants and the castle. When comparing archaeological find material, we can find many similarities in the material culture of the castle and the peasant farms. The castle, possibly together with the little borough in its vicinity, was the economic center of the province. Another economic center for the peasants in Uusimaa was one of the large Hanseatic towns in the Eastern Baltic area, Tallinn, or Reval as it was called in those days. Even though it was located on the other side of the Gulf of Finland, Tallinn played an important role in the economy of the peasants in medieval Uusimaa. For the inhabitants of the Castle Province of Raseborg, Tallinn was much more important than Turku (Sw. Åbo), the largest town in Medieval Finland, or tiny Porvoo (Sw. Borgå), the only town with formal privileges in Uusimaa. From Mankby it took a day or two to get to Tallinn. Turku was much further away, and it took several days to get there.

The castle household, as well as the Hanseatic merchants in Tallinn, transferred all over the castle province not only traded

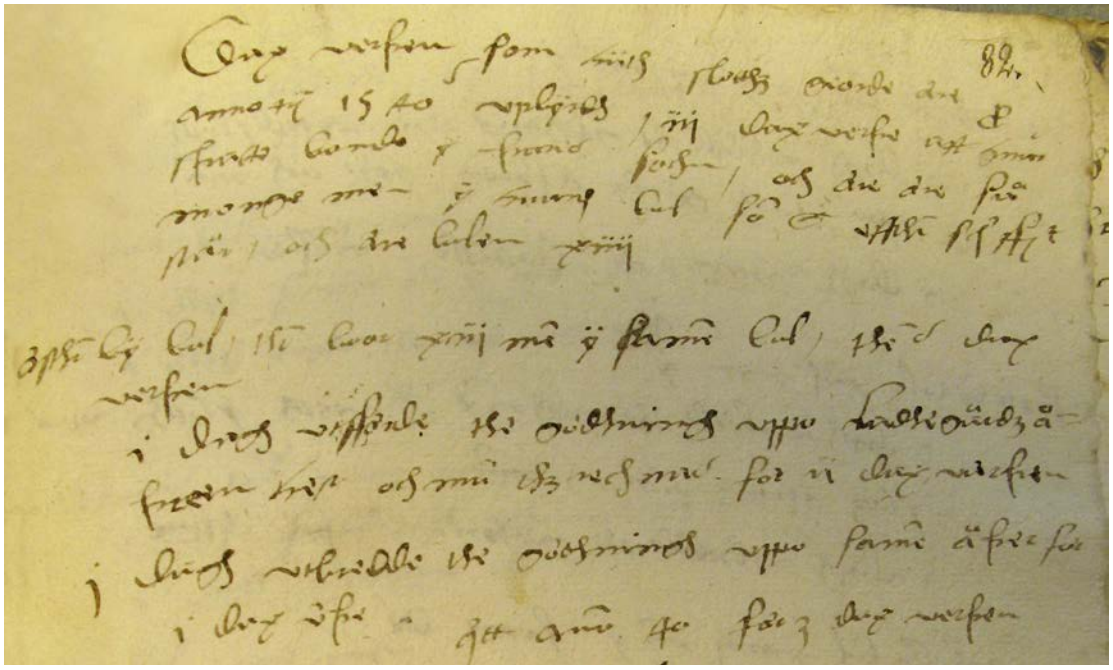

Fig. 14. The records of the castle from the year 1540 show how the peasants of Österby bol in the parish of Karis have manured a field called Ladugårdsåkern near the manor of Raseborg. (Finnish National Archives. Photo by Elina Terävä.)

Fig. 15. A house foundation with a ruin of a fire place on the plot of the village of Mankby. (Photo by Georg Haggrén.)

Figs. 16 and 17. German stone ware, mostly from Siegburg in Rheinland, found from Slottsmalmen in Raseborg and from Mankby. (Photos by Georg Haggrén.)

wares but also a new kind of material culture, and probably immaterial culture too. All this is visible in the find material from Raseborg and the village of Mankby.

In the archaeological find material from both Raseborg and Mankby, there are imported ceramics, such as German stoneware, and Bohemian glass vessels. There are also different kinds of industrial or craftsmen's products, such as table knives and metal vessels, like tripods made of bronze, as well as keys and padlocks made in some Hanseatic towns. The castle and the collection of taxes have played an important role in the monetarization process in the whole castle province. The coin finds from both sites illustrate this phenomenon. Horse furniture has usually been interpreted as part of a noble context, but there are several finds belonging to this category even from Mankby. The early industrial processes in the castle province concentrated on the inner and middle zones of power, but at least smithing and milling have taken place in the villages too. Agriculture and fishing had a fundamental importance for the peasants, but these activities were connected to the castle household as well.

On the grounds of the large material resulting from the excavations, we can compare the find material from Raseborg to that from the village of Mankby. (Table 1.) This comparison based on different activity categories reveals more similarities than differences. Only two categories, administration and leisure, are not clearly represented in the material from Mankby. With their direct contacts over the sea, the inhabitants of Mankby were able to follow the material culture of the Hanseatic world. This was also the case with Hanko, another medieval village in the castle province of Raseborg (cf. Jansson, Haggrén, Mannermaa & Tenhunen 2010). The peasants continuously acquired new influences and ideas not only from the merchants in Tallinn but also when they were obliged to visit the castle or work for the castle estate. There were lots of similarities in the material culture of the freeholder peasants, the peo-

		Raseborg	Mankby
1	Handicraft (slag, tools etc.)	●	●
2	Trade	●	●
3	Home furnishing	●	●
4	House keeping, table manners and cooking	●	●
5	Clothing and personal adornment	●	●
6	Building activity	●	●
7	Riding equipment	●	●
8	Hunting and fishing	●	●
9	Agriculture	●	●
10	Religious or popular belief	●	●
11	Military objects	●	●
12	Administration	●	
13	Leisure	●	

Table 1. Archaeological finds related to different activity categories in Raseborg and Mankby.

ple living in the castle of Raseborg, and the townspeople in Tallinn. (Fig. 16, 17)

The free peasants had a relatively high standard of living and a rich material culture. Eva Svensson has lately (2008) obtained results that are in many ways similar when analyzing hamlets and castles in Värmland, a "marginal" province in Western Sweden, in the 12th to 14th centuries. Not surprisingly, the find material in the castles was often more sophisticated and exclusive than among the peasants. However, the material culture in the villages and hamlets was not exceedingly humble and modest. When we compare the results of Svensson's analysis to the Castle Province of Raseborg, one of the main differences is that the archaeological material from a prosperous coastal settlement like Mankby shows that the freeholders there could afford and were able to get different kinds of imported wares. In their own households, the peasants in Mankby were able to imitate the material culture of both the castle of Raseborg and the merchant's houses in Tallinn. ◆

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Georg Haggrén

MEDIEVAL EUROPE 2012 HELSINKI JA MEDIEVAL EUROPE RESEARCH COMMITTEE (MERC)

Kansainvälinen keskiajan arkeologian konferenssi Medieval Europe järjestettiin ensi kerran Yorkissa Englannissa vuonna 1992. Sitä seurasi viiden vuoden välein kolme suurta konferenssia Medieval Europe 1997 Brugge, Medieval Europe 2002 Basel ja Medieval Europe 2007 Paris. Kaksi ensimmäistä olivat sekä taloudellisesti että sisällöllisesti menestyksiä. Erityisesti Bruggen konferenssia on kiitelty sen innostavasta ilmapiiristä. Baselin konferenssi, toi saksankieliset tutkijat mukaan toimintaan. Pariisin konferenssi oli osanottajaluvultaan suurin, mutta jäi hyvin ranskalaispainotteiseksi.

Pariisin vuoden 2007 konferenssin jälkeen Medieval Europe –konferenssien perinne melkein katkesi. Syystä tai toisesta viestikapula, jota oli aluksi tarjottu italialaisille, oli kadota kokonaan. Konferenssien taustalla ei ollut varsinaista organisaatiota vaan ainoastaan tutkijoiden verkosto. Moni kantoi huolta konferenssien tulevaisuudesta, mutta vuoden 2012 lähestyessä Medieval Archaeology Research Conference (MERC) -sarjan jatkosta ei ollut tietoa. Tällöin professori **Martin Carver** aloitti neuvottelut The European Association of Archaeologists (EAA) -järjestön ja sen puheenjohtajan Friedrich Lüthin kanssa. Ratkaisuksi löytyi MERC-konferenssin järjestäminen osana EAA:n The 18th Annual Meeting of The European Association of Archaeologists -konferenssia Helsingissä. Konferenssin suomalaiselle järjestelykomitealle

tämä ehdotus sopi. MERCin osuuden järjestelyistä vastasivat **Georg Haggrén**, **Ulrika Rosendahl** ja **Kari Uotila**.

Medieval Europe 2012 Helsinki -konferenssin järjestelyt saatiin käyntiin hyvin nopealla aikataululla syksyllä 2011. Itse

konferenssi järjestettiin 29.8.–1.9.2012 suunnitelman mukaisesti osana EAA:n vuosikonferenssia. Mukana oli noin 310 osallistujaa yhteensä 30 maasta eli noin neljännes koko EAA-konferenssiin osallistuneista. Jo ennen konferenssia ohjelmassa oli **Erki Russowin** johdolla kahden päivän ekskursio Tallinnassa ja Pohjois-Virossa, joissa on paljon keskiajalta säilynyttä nähtävää ja tutkittavaa.

Itse konferenssi alkoi keskiviikkona 29.8. Martin Carverin johdolla avoimella kokouksella, jossa valittiin MERC-komitea, jonka vastuulle tuli Medieval Europe -konferenssien jatko ja keskiajan arkeologien yhteistyön lisääminen tulevaisuudessa. Komitean puheenjohtajaksi valittiin professori **Anders Andrén** Tukholman yliopistosta ja jäseniksi 15 edustajaa eri puolilta Eurooppaa. Jo tällöin todettiin, että Medieval Europe –konferensseilla on tarvetta ja niitä pyritään järjestämään myös jatkossa.

Perjantaina 31.8. MERCillä oli oma vastaanotto Helsingin kaupunginmuseon tiloissa Karamzinin huvilan juhlavissa puitteissa. Vastaanoton yhteydessä tiedotettiin Medieval Europe -konferenssien jatkumisesta, MERC-komitean työn käynnistymisestä sekä MERCin ja EAAn välisestä alustavasta sopimuksesta, jonka mukaan toiminta tapahtuu osana EAAn organisaatiota. Lauantaina 1.9. MERCillä oli illallinen, jota SKAS puheenjohtajansa **Janne Harjulan** johdolla isännöi.

MEDIEVAL EUROPE 2012 HELSINKI -SESSIOT

Konferenssin tieteellinen ohjelma alkoi torstaina 30.8. neljästä key note -esitelmästä koostuvalla laajalla sessiolla, jossa keskityttiin muutamiin 2010-luvun ajankohtaisiin teemoihin.

- Anders Andren: Medieval Archaeology in the Baltic area;
- Rainer Schreg: Archaeological approaches to medieval ecosystems;
- Armand Baeriswyl: Digging in towns: What shall we do with 10000 small excavations a year;
- Christer Westerdahl: The Maritime Middle Ages, 2012.

Key note- session jälkeen ohjelma jatkui yhdeksän muun session muodossa aina lauantaihin 1.9. asti.

1. Baltic Urbanism
2. Beyond the Frontiers of Medieval Europe
3. Coastal and Maritime Archaeology of Medieval Europe, c. AD 600–1500: The Dynamics of Liminality and Connectivity
4. Famine, Murrain, and Plague: The 14th Century in Bioarchaeological Perspective
5. Life in the City: Environmental and Artefactual Approaches to Urban Europe in the Middle Ages
6. New Directions in Medieval Landscape Archaeology
7. Rural Strategies in the Northern sphere
8. Symbols and Signs of Belief in Graves at the Transition from Pre-Christian to Christian Times
9. Utilization of Brick in the Medieval Period – Production, Construction, Destruction

MEDIEVAL EUROPE RESEARCH CONGRESS (MERC) COMMITTEE

MERC-komitea kokoontui ensi kerran talvella 2013 Tukholmassa, jolloin järjestäytymisen

ohella hahmoteltiin toiminnan suuntaviivoja ja Medieval Europe -konferenssien jatkoa. Työtä jatkettiin syyskuussa EAAn vuosikokouksen yhteydessä Pilsenissä. Professori Andrén joutui kesällä 2014 uusien tehtävien vuoksi vetäytymään puheenjohtajuudesta ja komiteasta. Uudeksi puheenjohtajaksi valittiin Pilsenissä professori (emer.) Martin Carver. Sihteerinä toimii **Sally Foster** Skotlannista, rahastonhoitajana **Katarina Predovnik** Sloveniasta ja varapuheenjohtajana belgialainen **Dries Tys**. Pohjoismaita komiteassa edustavat **Gitte Hansen** Bergenistä, **Orri Vésteinsson** Reykjavikista sekä Georg Haggrén Helsingistä. Toimikaudet ovat kolmivuotisia.

Komitean työ on vasta alussa, ja itse asiassa se saattoi kunnolla alkaa vasta, kun EAAn kanssa oli tehty muodollinen sopimus ja liittyminen osaksi EAAta oli varmistunut. Käytännön haasteena oli se, että MERCistä tuli EAAn ensimmäinen pysyvä komitea, mikä vaati myös EAAn sääntöjen uudistamista. MERCin omien sääntöjen valmistelu on yhä kesken.

MEDIEVAL EUROPE –KONFERENSSIT

Helsingin jälkeen tarkoitus oli jatkaa Medieval Europe -konferensseja neljän vuoden välein, mutta pian nousi esiin toiveita tiheämmästä aikataulusta. Pilsenissä päätettiin, että Medieval Europe -konferenssit ovat jatkossa vuosittain osana EAAn vuosikokouksia. Tarvittaessa järjestetään neljän, viiden vuoden välein tavanomaista laajempi konferenssi. Niinpä seuraava Medieval Europe -konferenssi järjestetään jo vuonna 2014 Istanbulissa. Konferenssista tullee huomattavan laaja, sillä keskiaikaa sivuavia hyväksyttyjä sessioita on yli 20.

Jatkossa MERCin toiminnan painopiste on Medieval Europe –konferenssien järjestämisessä, mutta samalla pyritään lisäämään yhteistyötä keskiajan arkeologian tutkijoiden välillä. MERCin tärkein informaatiokanava on tällä hetkellä facebook-sivu. ◆

https://www.facebook.com/pages/Medieval-Europe-MERC/315973758505173?fref=ts

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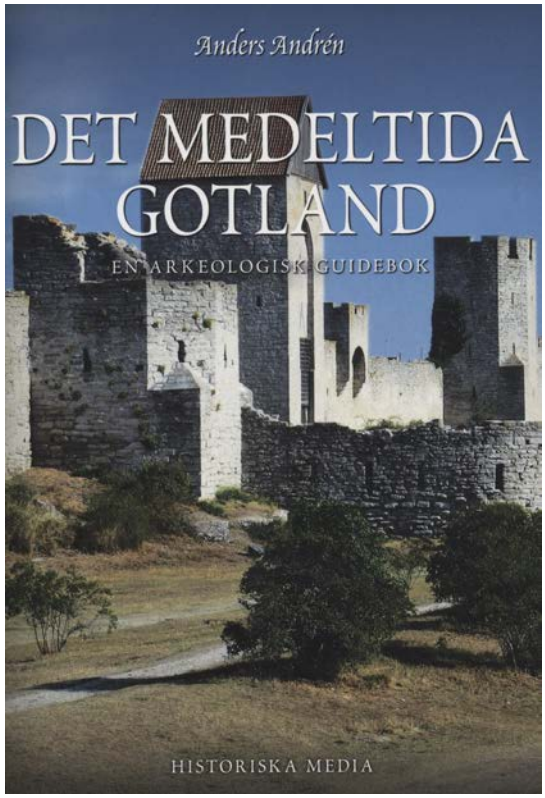
KESKIAIKAINEN GOTLANTI – TÄNÄÄN

Anders Andrén: Det medeltida Gotland. En arkeologisk guidebok. Historiska media. Lund 2011. 247 s.



Ruotsalaisen kustantajan Historiska Median historiasta ja kulttuurimatkailusta kiinnostuneille harrastajille suuntaama sarja on ehtinyt jo valtaosaan naapurimme maakuntia. Nyt on vuorossa Itämeren ulapan suurin saari Gotlanti. Sitä käsittelevän osan tekstistä kuten myös valtaosasta kuvitusta vastaa Ruotsin keskiajan arkeologian vahvimpiin asiantuntijoihin kuuluva **Anders Andrén**, joka on vuodesta 2005 toiminut arkeologian professorina Tukholman yliopistossa.

Andrén ei ole tyytynyt kirjoittamaan Gotlannin keskiaikaa käsittelevää teosta vasemmalla kädellä vaan on perusteellisesti perehtynyt saareen, sen menneisyyteen ja muinaisjäännöksiin. Tämän työn tuloksena teos tarjoaa mm. uusia tutkimustuloksia ja näkemyksiä saaren ainoan kaupungin Visbyn ja sitä ympäröivien talonpoikien hallitsemien käräjäkuntien välisistä suhteista. Samalla teos tarjoaa dendrokronologisen ajoitusten ryydittämän yleiskuvan erityisesti keskiaikaisesta kivirakentamisesta siellä, missä Pohjoismaissa erityisesti 1200-luvulla eniten kivestä rakennettiin.

Gotlannista ja Visbystä kehittyi 1100- ja 1200-luvuilla Itämeren johtava kauppakeskus ja samalla myös vasta muodostumassa olevan kauppiaitten yhteenliittymän, saksalaisen Hansan keskus. Pohjalla oli jo vauras viikinkiaikainen perinne. Varhaiskeskiajalla Gotlanti oli idän ja lännen välisen kaupan tärkein etappi Itämerellä. Saaren maaseudulla vauraus konkretisoitui kivirakentamisena ja niin myös Visbyssä. Kaupunkiin rakennettiin vuosien 1225 ja 1345 välillä satoja kivitaloja, joista peräti 120 on kokonaan tai osittain säilynyt. Vauraimmat talot, joissa saattoi olla jopa viisi maanpäällistä kerrosta, olivat

1200-luvulla vailla vertaa lähes kaikkialla Alppien pohjoispuolisissa kaupungeissa. Sellaiselle rakennukselle kuin noin vuonna 1290 rakennetulle Gamla Apoteketille on vaikea löytää aikalaistaan vastinetta koko Itämeren alueelta.

Gotlannin kukoistus taittui 1300-luvun puolivälissä. Muutokset hansakaupassa, musta surma ja **Valdemar Atterdagin** johtamien tanskalaisten valloitus vuonna 1361 jättivät vääjäämättä jälkensä. Visbyn kaupunginmuurien ulkopuolella tanskalaisia vastaan käydyssä taistelussa kärsitty tappio oli saaren vauraille talonpojille kirjaimellinen suonenisku, jonka myötä heidän asemansa heikkeni. Uudessa poliittisessa tilanteessa ja keskellä valtataistelujen vuoksi levotonta Itämerta Visbyn kauppiaat eivät hekään enää menestyneet kuin ennen. Keskiajan arkeologialle Korsbetningenin joukkohaudat ja niiden vainajat ase- ja suojavarusteineen ovat sen sijaan ainutlaatuisen arvokas tutkimuskohde.

Keskiajan lopulla Gotlanti tai Visby eivät enää olleet sellaisia edelläkävijöitä kuin ne olivat olleet ennen 1300-luvun puoliväliä. Tultaessa 1500-luvule kaupunki oli jo alkanut vääjäämättä rappeutua. Keskiajalla Visbyssä oli ollut peräti 16 kirkkoa. Reformaation jälkeen niistä jäi käyttöön vain yksi, Sta Maria. Loput jäivät raunioitumaan. Kuvaavaa kaupungin taloudelliselle kehitykselle oli, että monet kirkoista saivat hiljaa rappeutua ilman, että niitä hyödynnettiin uusiin rakennushankkeisiin. Sama koskee monia profaaneja rakennuksia, monessa tapauksessa vanha sai kelvata eikä tilalle rakennettu uutta. Kiitos tämän Visbyssä on Ruotsin parhaiten säilynyt keskiaikainen kaupunkimiljöö, jonka kaiken kukkuraksi rajaa yksi Euroopan parhaiten säilyneistä kaupunginmuureista.

Det medeltida Sverige -sarjan teosten asu ja rakenne on hyvin yhtenäinen, mikä helpottaa tiedon etsintää, mutta rajoittaa kirjoittajan vapautta ja tuo jonkin verran toistoa eri maakuntia koskeviin kirjoihin. Muihin maakuntiin verrattuna Gotlanti on hyvin omaleimainen ja jopa sen yhteiskuntarakenne on muista poikkeava. Varsinaista rälssiähän ei saarella ollut.

Kirjan kuvitus on rikas, ja Gotlannissa riittää kuvattavaa. Sisäkansista löytyy Gotlannin kartta, johon on merkitty esitellyt kohteet. Suurimpia puutteita on Visbyn kaupunkia koskevan kartta-aineiston kohdalla. Sivulta 69 löytyy hyvä kartta keskiaikaisesta asemaakaavasta, kaupunginmuurista ja kirkkojen sijainnista. Sen sijaan kaupungin keskiaikaisia profaaneja rakennuksia ei ole eritelty kartalla – tai paremminkin kartan selityksissä. Kartalla ei myöskään ole kadunnimiä, jotka helpottaisivat kaupungin hahmottamista ja kuvattujen kohteiden paikantamista.

Gotlannin historiasta ja keskiajalta säilyneistä raunioista ja rakennuksista kiinnostuneelle turistille Det Medeltida Gotland on matkaoppaana *must*. Teoksella on myös paljon käyttöä käsikirjana tutkijan kirjahyllyssä. ◆

Suomen keskiajan arkeologian seura
– Sällskapet för medeltidsarkeologi i Finland ry

YHDISTYKSEN SÄÄNTÖMÄÄRÄINEN

KEVÄTKOKOUS

Aika: torstai 27.3.2014 klo 17.15
Paikka: Tieteiden talo, Sali 104, Kirkkokatu 6, Helsinki

Kokouksessa käsitellään seuraavat asiat:

1. Kokouksen avaus
2. Valitaan kokouksen puheenjohtaja, sihteeri, kaksi pöytäkirjantarkastajaa ja kaksi ääntenlaskijaa
3. Kokouksen laillisuuden ja päätösvaltaisuuden toteaminen
4. Kokouksen asialistan hyväksyminen
5. Esitetään johtokunnan kertomus edellisen vuoden toiminnasta, tilit ja tilintarkastajien lausunto.
6. Vahvistetaan tilinpäätös ja päätetään vastuuvapauden myöntämisestä tilivelvollisille.
7. Käsitellään muut kokoukselle tehdyt esitykset, jotka on jätetty kirjallisina yhdistyksen johtokunnalle kolme viikkoa ennen kokouspäivää.
8. Kokouksen päättäminen

Suomen keskiajan arkeologian seuran järjestämä
KAIKILLE AVOIN ESITELMÄTILAISUUS
torstaina 27.3.2014 klo 18.15
Tieteiden talossa (Sali 104), Kirkkokatu 6, Helsinki

FM Juha Ruohonen Turun yliopistosta pitää esitelmän otsikolla:
"Ravattulan varhaiskeskiaikainen kirkkorakennus arkeologisena kohteena"

CASTELLA MARIS BALTICI XII

KONFERENSSI PUOLASSA TOUKOKUUSSA 2014

Castella Maris Baltici XII -konferenssi järjestetään vuonna 2014
Puolan Łódźissa toukokuun viimeisellä viikolla.

Konferenssin teema on:

"THE CASTLE AS A RESIDENCE"

Konferenssissa esitelmän tai posterin pitämiseen kiinnostuneita pyydetään ilmoittautumaan Kari Uotilalle (kari.uotila@kolumbus.fi) tai Tarja Knuutiselle (tarja.knuutinen@helsinki.fi) 15.2.2014 mennessä. Viestiin tulee liittää esitelmän tai posterin otsikko sekä lyhyt teksti englanniksi tai saksaksi.

Seminaariin on mahdollista osallistua myös ilman omaa esitelmää tai posteria. Kiinnostuneita pyydetään ottamaan yhteyttä Kari Uotilaan tai Tarja Knuutiseen 15.2.2014 mennessä.

Konferenssin ohjelma sekä tarkemmat tiedot käytännön järjestelyistä julkaistaan esitelmien varmistumisen jälkeen. Konferenssin kesto on tavallisesti ollut noin 4–5 päivää ja ohjelma sisältänee aiempien vuosien mukaisesti esitelmiä (arviolta 20 englannin- tai saksankielistä esitystä) sekä matkoja läheisiin linnakohteisiin.

Järjestäjien tiedotteen mukaan majoituksen ja ateriat sisältävä konferenssimaksu ei nouse yli 400 €.

Alkuperäinen tiedote:
Castella Maris Baltici XII in Poland in Lodz in the last week of May 2014.
The cost of the conference with a covering accommodation and meals will not exceed 400 €.
Accurate data and program pass after establishing a list of papers.
The theme of the conference is "The Castle as a residence."

Kazimierz Pospieszny and Aleksander Andrzejewski (marylka@uni.lodz.pl)

SKAS

SUOMEN KESKIAJAN ARKEOLOGIAN SEURA
SÄLLSKAPET FÖR MEDELTIDSARKEOLOGI I FINLAND

Suomen keskiajan arkeologian seura – Sällskapet för medeltidsarkeologi i Finland ry. on toiminut keskiajan ja uuden ajan arkeologian tutkimuksen edistämiseksi vuodesta 1990 ja on Tieteellisten seurain valtuuskunnan jäsen.

Seuran tarkoituksena on edistää keskiajan ja uuden ajan arkeologian tutkimusta ja korkeakouluopetusta. Seura järjestää seminaareja, vierailuluentoja, opintomatkoja ulkomaille ja kotimaahan, ottaa kantaa ajankohtaisiin arkeologisiin kysymyksiin ja harjoittaa julkaisutoimintaa.

Seuran jäseneksi otetaan keskiajan ja uuden ajan arkeologiasta kiinnostuneita henkilöitä. Jäseneksi voi ilmoittautua kirjallisesti seuran osoitteeseen (SKAS, c/o Arkeologia, Henrikinkatu 2, 20014 Turun yliopisto.) tai sähköpostilla seuran puheenjohtajalle (yhteystiedot alla).

Jäsenmaksu vuonna 2013 on 24 € vuodessa, opiskelijoilta 18 € ja perheiltä 34 €. Erikseen tilattuna lehden vuosikerta on 22 €.

Osoitteenmuutoksista pyydetään ilmoittamaan seuran sihteerille (yhteystiedot alla).

Seuran kotisivut ovat osoitteessa: http://org.utu.fi/muut/skas

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