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RECENT ARCHAEOLOGICAL RESEARCH IN THE LAKE PYHÄJÄRVI MICRO-REGION, KARELIAN ISTHMUS, RUSSIA: THE MULTI-PERIOD SITE OF PYHÄJÄRVI KUNNIANNIEMI AND SOME EARLY COMBED WARE PERIOD FINDS

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Since 2005 the Lake Pyhäjärvi–Ozero Otradnoe-project has studied the past of the former municipality of Pyhäjärvi (Ru. Plodovoe) and its surroundings in the Karelian Isthmus (Russia) as a part of the continuing research co-operation between the Department of Archaeology, University of Helsinki and the researchers of the Russian Academy of Sciences (see e.g. Lavento 2008; Nordqvist et al. 2009a: 28). Studies have focused on the Stone Age and Early Metal Period of the so-called Lake Pyhäjärvi (Ru.

ozero Otradnoe) micro-region resulting in a radical evolution of knowledge regarding its prehistory, while comprehensive analyses of the archaeological and palaeoenvironmental data are still underway (Fig. 1).

In this note we first describe briefly the archaeological work carried out in the study area, and then focus on the deeply stratified multi-period dwelling site of Pyhäjärvi Kunnianniemi (Ru. Komsomol'skoe 3) (Fig. 1:1). A detailed discussion is given on some unanticipated finds

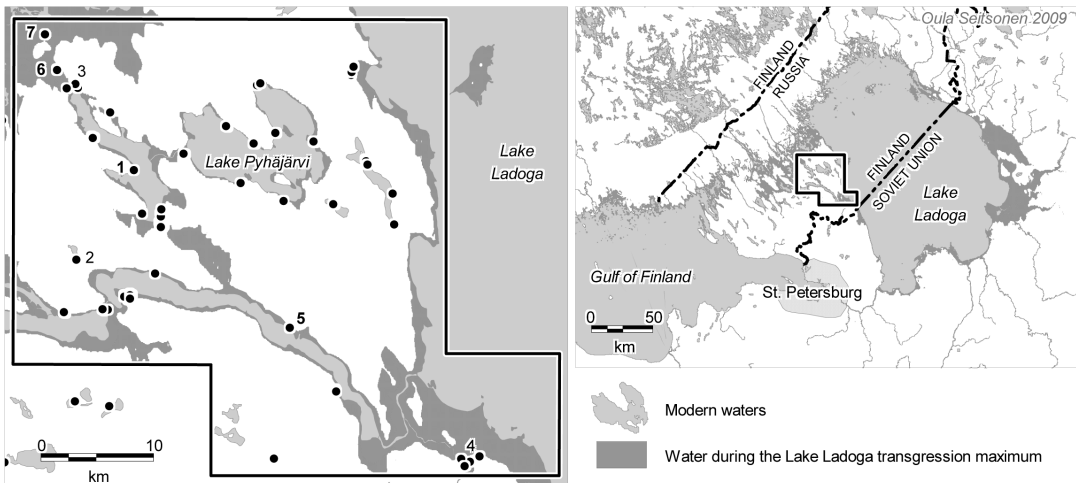


Fig. 1. Location of the Lake Pyhäjärvi micro-region, the Stone Age and Early Metal Period sites (as in December 2008), and a water level reconstruction during the Lake Ladoga transgression maximum, ca. 1350 cal. BC (Lake Ladoga catchment based on the gradient of 2.5 cm/km [Saarnisto & Siiräinen 1970], shore of the Gulf of Finland based on the gradient of 5 cm/km [cf. Jussila & Kriiska 2004; Miettinen 2002]).

connected to the Early Combed Ware period (henceforth CW1) at the site, namely a large amber pendant and the remains of a timber construction. A more comprehensive study of the Kunnianniemi excavations as well as other related archaeological and environmental studies will be published elsewhere.

STONE AGE RESEARCH IN THE LAKE PYHÄJÄRVI MICRO-REGION

Before the project, only seven Stone Age dwelling sites were known from the area, and only two of these had been recognized by Finnish archaeologists before World War II. The Kiviniemi Valkjärvi site (Fig. 1:2) in Sakkola (Ru. Gromovo) was studied by Aarne Europaeus in 1929 (Europaeus 1929), while the Pyhäjärvi Konnitsa Äijö site (Fig. 1:3) was excavated by Sakari Pälsi in 1936 (e.g., Nordqvist 2006: 195–6; Nordqvist & Seitsonen 2008: 18–9; Siiriäinen et al. 2008: 20). Nevertheless, the Pyhäjärvi and Sakkola municipalities that form the main part of the study area together with the Metsäpirtti (Ru. Zaporozhskoe) municipality, provided the second highest amount of Stone Age stray finds before the war. Only the intensively studied municipalities of Kaukola (Ru. Sevast'janovo) and Räisälä (Ru. Mel'nikov) yielded more finds to the collections of the National Museum of Finland (e.g., Uino 2003; Nordqvist 2005: 53, 121).

Two more sites, Vjun 1 and 2 (Fig. 1:4) were found and investigated by Russian researchers in 1961–62 in Metsäpirtti (Rudenko 1970). In 2003 Sergej Lisitsyn and Stanislav Bel'skij from the Russian Academy of Sciences (St. Petersburg) visited the southern part of the micro-region during a rescue survey, and located a new Stone Age site, Sakkola Portovoe (Fig. 1:5) (Gerasimov et al. 2003: 47). A short reconnaissance was made into the area the following year by two of the present authors (O.S. & D.G.) and Sanna Seitsonen (née Puttonen). This trip, carried out alongside the intensive surveys conducted in the Kaukola and Räisälä municipalities (e.g. Gerasimov et al. 2006; Lavento et al. 2006; Halinen & Mökkönen, this volume), was motivated by earlier research in addition to the large white spot on the archaeological distribution map. The few hours' long reconnaissance resulted in finding of two previously unknown

Stone Age sites (Fig. 1:6-7). Thus the study area seemed to have potential for more profound Stone Age studies.

The project was launched in earnest with an intensive survey in 2005 (Seitsonen et al. 2005; Gerasimov et al. 2007), and was continued the following year with test excavations, supplementary surveys and limnological sampling (Nordqvist & Seitsonen 2006a; 2006b; Gerasimov et al. 2007). In 2007 studies were continued at the Pyhäjärvi Kunnianniemi site that had been test excavated in the preceding summer (Gerasimov et al. 2008). In the fall 2008, a short supplementary survey was carried out in previously scantily studied southern part of the micro-region (Nordqvist et al. 2009b). To date, the number of Stone Age and Early Metal Period sites known from the study area is 52, and eight of these have been excavated.

THE MULTI-PERIOD DWELLING SITE OF PYHÄJÄRVI KUNNIANNIEMI

The Pyhäjärvi Kunnianniemi site was found during the first survey in 2005, located in the end of a cape protruding from the western shore of Lake Kiimajärvi (Ru. ozero Komsomol'skoe) (Figs. 1–2). The site was anticipated to be a small, single-occupation site dating to the Late Neolithic or Early Metal Period. As only a few sites of such date had been studied in the Karelian Isthmus (e.g. Nordqvist & Lavento 2008: 147–9), the Kunnianniemi site was included in the excavation schedule for the next summer.

Contrary to the expectations, the site turned out to be the most thrilling of all the six sites test-excavated in 2006 – nearly three meters thick archaeological deposit with four distinctive cultural layers (CL1–4) was unearthed in the trench 1 (Fig. 2–3). The cultural layers had been sealed by transgression layers (TL1–3) connected to the fluctuations of the Lake Ladoga (cf. Takala & Sirviö 2003; Fig. 1). Based on radiometric dates and the find material, the sequence extends from the Late Mesolithic (Hela-1842: 7195 ± 45 BP; CL1a) to the Early Metal Period (Le-8021: 1720 ± 40 BP; CL4). In the context of the Karelian Isthmus and the areas nearby, the Kunnianniemi site is relatively unique, not only because of the thickness of its deposits, but also due to sealed find contexts

resulting in excellent stratigraphic control. This feature has been missing from many other multi-layered sites studied in the Karelian Isthmus (see, e.g., Gerasimov et al. 2003: 21–2; Takala & Sirviö 2003: 70–1; Mökkönen et al. 2007: 22).

The upper part of the lowermost cultural layer (CL1b) dates to the CW1 period, based both on the ceramic finds (Fig. 4) and an AMS-date obtained from charred crust on a ceramic sherd (Hela-1817: 5635 ± 45 BP). The lower part of this layer (C1a, see above) is Late Mesolithic

in date. Based on the stratigraphy and the vertical distribution of the finds, no hiatus seems to be connected to the appearance of ceramics at the site (see also Takala & Sirviö 2003: 62, 70). Continuity is also apparent feature in the lithic technology over the Mesolithic–Neolithic transition, and possibly in the population base as well. Thus, the ceramic manufacture was likely adopted by the Mesolithic inhabitants of the site, as often previously presented (e.g., Luho 1948: 38–9; Kivikoski 1961: 33; Edgren

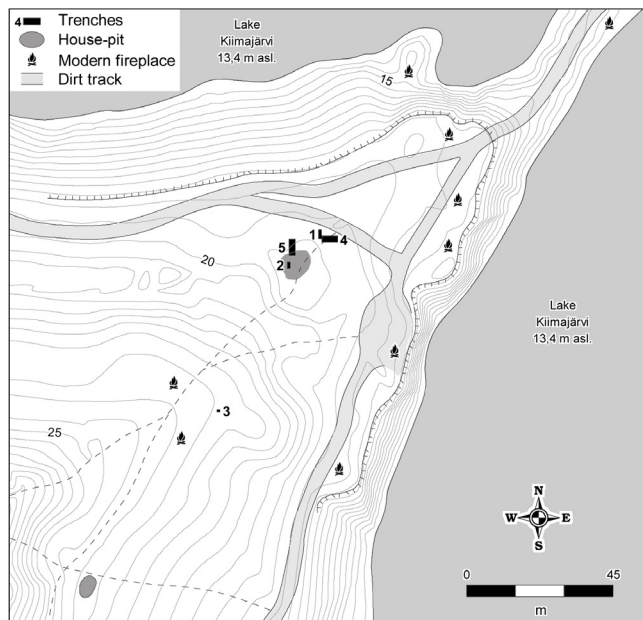


Fig. 2. General map of the Pyhäjärvi Kunnianniemi site. Drawn by O. Seitsonen & S. Vornanen.

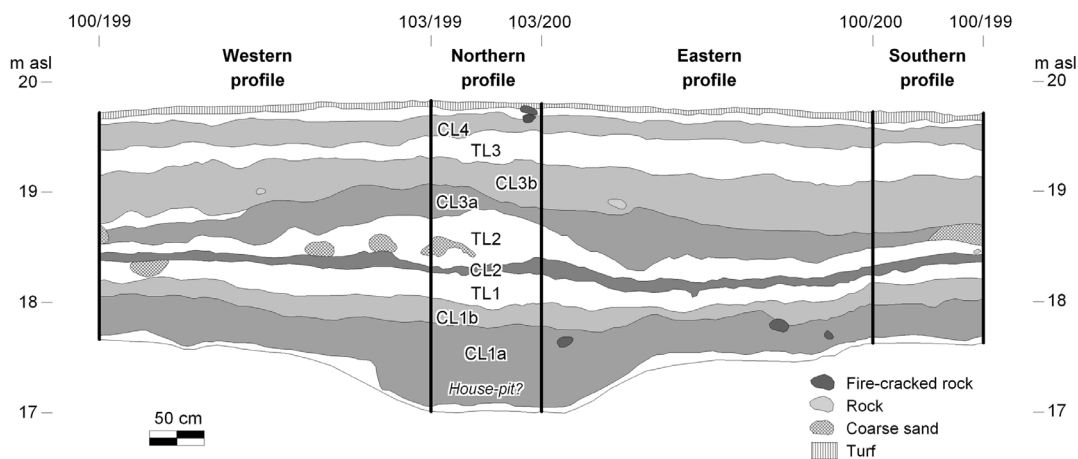


Fig. 3. Simplified profiles of the trench 1 (cultural layers with different shades of grey). Similar stratigraphy, with minor differences in details, applies also to the trenches 4 and 5.

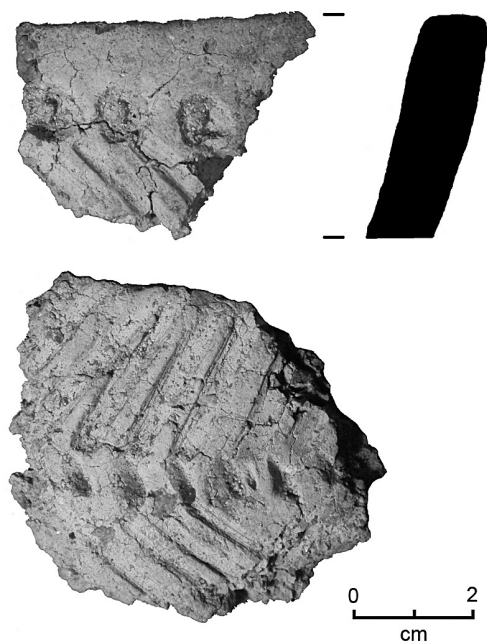


Fig. 4. Early Combed Ware from the layer CL1b, trench 5 at the Kunnianniemi site (photographs: K. Nordqvist 2008).

1984: 27–8; Huurre 2003: 187). Next, some of the most interesting and unexpected finds and observations made in the CW1 cultural layer are presented.

EARLY COMBED WARE AMBER PENDANT

”How was it, when the chief’s younger wife Hilla lost another of her amber beads --- Hilla was relatively careless female and trusted in her good looks, as the beautiful-faced and empty-headed women have done since the beginning of time ---“¹ (Pälsi 1958: 169; translation by the authors)

A large and thick amber pendant (Fig. 5) was unearthed from the layer CL1b of trench 4 in 2007. The ca. 73 x 49 x 14 mm pendant is roughly oval in shape and puffy in the profile, and has two parallel holes drilled through its narrower end. Its shape resembles the so-called “tongue shaped” pendants commonly connected to the Typical Combed Ware period (henceforth CW2) (e.g., Torvinen 1979: 73–4; Katiskoski 2004: 104), although this pendant is a bit larger and thicker (cf. Torvinen 1979: Kuva 4 g–h;

5 a–d). The pendant was broken into several pieces, which can be refitted and at the moment it is being restored at the conservation laboratory of Kunstkamera Museum in St. Petersburg.

Amber pendants found in Finland, Karelian Isthmus, Republic of Karelia and Estonia date usually to the CW2 or the following Late Neolithic period (e.g. Torvinen 1979: 73–4; Kriiska & Tvauri 2002: 65–7; Huurre 2003: 217; Žul’nikov 2008: 5–7). However, amber pendants have occasionally been unearthed also from Mesolithic contexts, one example of which is the Mesolithic layer at the Juoksemajärvi Westend site (Ru. Bol’šoe Zavetnoe 4) in Räisälä. The pendant found there has been described as ‘tooth shaped’, and it differs from the subsequent Neolithic pendant types (Timofeev et al. 2004: 97; Halinen et al. 2008: 242).

To our knowledge, altogether 23 pieces of Stone Age amber have been found from the Karelian Isthmus. Twelve were unearthed before World War II (Äyräpää 1945), while the rest are quite recent finds: six pieces from Muolaa Telkkälä (Ru. Silino) and Heinjoki Latukangas I (Ru. Veščevo 1) (see Takala & Sirviö 2003: 64, 67), two pendants from Räisälä Juoksemajärvi Westend (Halinen et al. 2008: 242–3) and three pendants from Pyhäjärvi Kunnianniemi – the other two pendants pertain to the Late Neolithic context. However, only the amber pendant from Kunnianniemi is unquestionably dated to the CW1 period.

EARLY COMBED WARE TIMBER STRUCTURES

“The sharp and angular border of the sooty soil in the N-edge is explained only by assuming, that at least at this side there was a frame made of straight timber at the time of the formation of the sooty soil, which has prevented the spread of the soot.” (Pälsi 1920: 45; translation by the authors)²

An unexpected construction – the remains of a partly preserved timber structure (Fig. 6) – was unearthed in 2007 in trench 5, under the transgression sand (T1) deposit covering the cultural layer CL1b. While the actual timbers had not preserved, their shapes could be seen as hard charcoaly “casts” under the transgression layer and small fragments of charred wood were found inside them.

The original extent or the form of the structure could not be clarified from the narrow trench. Nevertheless, a corner formed by four timbers, two on top of each other on both sides (Figs. 6–7), was observed. The structure continued outside the trench in west, while the southern reach was disturbed by a Late Neolithic house-pit dug through earlier layers. As the area bordered by the timbers had not been dug deeper than its surroundings, the structure does not seem to have been connected to a contemporary pit feature of any kind.

At this point it is not possible to offer a definite interpretation for these timber remains, as they may equally pertain to the corner of a level-ground dwelling or some other wooden structure of unknown function. The question might be resolved by opening a larger excavation area, although the thick deposits above the CW1 structure imply time consuming and costly excavations.

Formerly, only a few fragmentary remains of wooden Stone Age structures have been found from the Karelian Isthmus, possibly due to deficiencies in the excavation methodology during the early 20th century, and the limited number of large-scale excavations conducted

in the area in the 21st century. So far, the only intentional and full excavation of a house-pit in the Karelian Isthmus using modern excavation methodology was carried out in 2002 at the Räsälä Juoksemajärvi Westend multi-period site³. There, charred remains of worked wood were also found connected to the Mesolithic horizon and some others to the later period of use (Halinen et al. 2008: 241, 243). Still, the researchers of the early 20th century had already put forward hypotheses concerning the existence of timber corners and structures at Stone Age sites, although no preserved timbers remains were found (Pälsi 1920: 45).

In Finland Stone Age timber structures are almost exclusively connected to the house-pits and dated to the Late Neolithic period, although timber remains have occasionally been encountered also in prehistoric hunting pits (e.g., Halinen 2006: 31). Thus, house-pits with a timber foundation are often proposed to have come into use during the Late Neolithic, after the CW2 period (e.g. Katiskoski 2002: 199; Leskinen 2002: 167). Still, the knowledge regarding dwellings pre-dating the CW2 period is meagre (Pesonen 2002: 29), although house-pits dating to the Mesolithic period have also been reported (e.g. Miettinen



Fig. 5. Early Combed Ware amber pendant. Left: In situ in the trench 4; Right: In the conservation laboratory of Kunstkamera Museum (photographs: K. Nordqvist 2007 and O. Seitsonen 2008).

1998: 19–24; Mökkönen et al. 2007: 14). In the Karelian Isthmus, the house-pit studied at the Juoksemajärvi Westend site might date to the CW1 period, but it may as well date to the Late Neolithic period (Halinen et al. 2008: 244, 249).

At the Kunnianniemi site, traces of several dwelling depressions have also been found. The construction of above-mentioned probable Late Neolithic house-pit, which disturbed the earlier timber structure, took advantage of a large natural depression. However, the first phase of utilization of this depression might date to the CW1 period, judging from some CW1 sherds encountered in the lowermost excavation levels of the trench 2 located in the middle of it (see Fig. 2). Consequently, the aforementioned CW1 timbers may also be somehow connected to this structure or building phase. In addition, the edge of still another probable, possibly Mesolithic, house-pit was probably revealed in the lowermost cultural layer of the trench 1 (see Fig. 3). These hypotheses can only be verified with further excavations.

If deriving from a level-ground dwelling, the closest analogies for the Kunnianniemi timber structure can be pointed out from the Karelian Republic. According to Žul'nikov (2003), dwellings were founded there on a timber frame placed on the level-ground both

during the Late Mesolithic and the CW1 periods. Although neither Mesolithic nor CW1 timber structures have been preserved as such in the Karelian Republic, quadrilateral stains in soil have recurrently been interpreted as originating from level-ground dwellings with a timber foundation (Žul'nikov 2003: 46–8). This connection could offer support for the presented hypothesis of the origins of the CW1 in the Lake Onega region (e.g. Carpelan et al. 2008: 194).

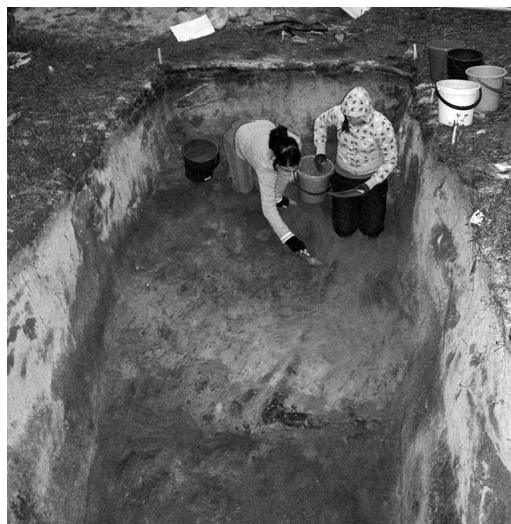


Fig. 6. Johanna Stenberg and Sarita Sandell revealing the remains of a CW1 timber structure in the trench 5 (photograph: O. Seitsonen 2007).

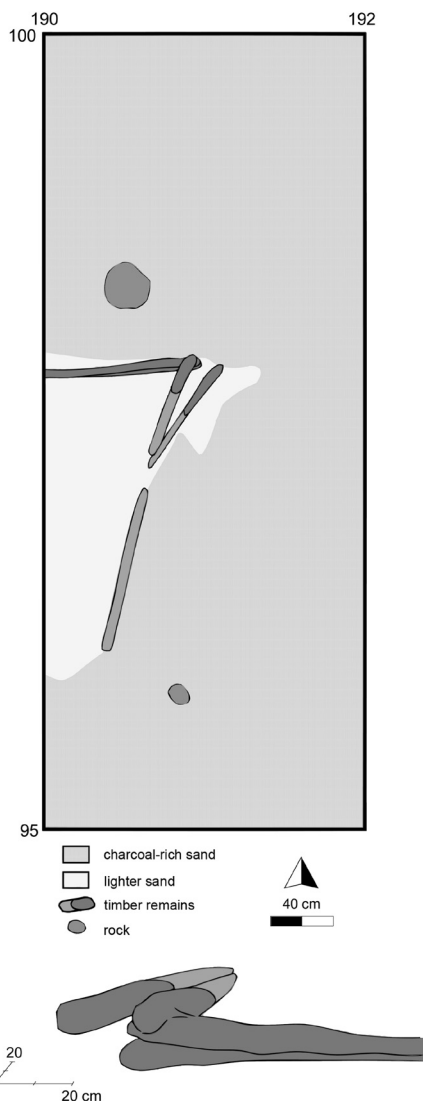


Fig. 7. Details of the timber structure in the trench 5. Top: plan view; Bottom: perspective view from north (drawings: K. Nordqvist & O. Seitsonen 2007).

When thinking of the general development of the dwelling types, it would be strange if house-pits were not dug in the Karelian Isthmus during the CW1 period, since they were in use both earlier in the Mesolithic and later on from the CW2 period onwards (e.g. Mökkönen et al. 2006: 117–8; 2007: 19–20). More probably, the lack of dwellings attributable to the CW1 period is simply an illusion resulting from the history of archaeological research in the area. Thus, the identification of the Kunnianniemi timbers as remains of a level-ground dwelling is only a preliminary working hypothesis – a small fraction of the structure has been revealed and the supporting evidence, like stained soil or the distribution of finds is equally scarce. But if proven to be correct, it will present a new and interesting form of a Stone Age dwelling, previously unknown to the Karelian Isthmus.

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NOTES

¹ ”Kuinkas kävi silloinkin, kun päällikön nuorempi vaimo Hilla kadotti toisen meripihkahelmensä --- Hilla oli koko lailla huolimaton naisihminen ja luotti hyvään näköönsä, niin kuin koreanaamaiset ja tyhjöpäiset naisihmiset ovat maailmansivu tehneet---” (Pälsi 1958: 169).

² ”Nokialueen jyrkkä ja kulmikas raja N-laidalla on selitettävissä vain otaksumalla, että ainakin tällä taholla on nokimaan syntymisen aikana ollut suorista puista tehty kehys, mikä on estänyt noen leviämisen.” (Pälsi 1920: 45).

³ In addition, the nearly canonised Räisälä Pitkäjärvi dwelling, studied by Sakari Pälsi in 1915, seems to have been a Late Neolithic house-pit (Seitsonen 2006).

REFERENCES

Unpublished sources

- Europaeus, A. 1929. *Kivikautisten saviastian palain löytöpaikka Valkjärven rannalla Sakkolan pitäjässä, Kiviniemen kasarmialueella*. Research report. National Board of Antiquities, Helsinki.
- Nordqvist, K. 2005. *Picked Up on the Fields. A Study on the History, Contents and Representativity of Stone Age finds from Kaukola and Räisälä Parishes*. M.A. thesis, Department of Archaeology, University of Helsinki.
- Nordqvist, K. & Seitsonen, O. 2006a. *Archaeological Observations in the Pyhäjärvi Area on the Karelian Isthmus 17.–28.07.2006*. Research report. Department of Archaeology, University of Helsinki.
- Nordqvist, K. & Seitsonen, O. 2006b. *Arkeologiset tutkimukset Pyhäjärvellä 2005–2006*. Poster presented at the annual field work presentation days in 2006 organized by the National Board of Antiquities.
- Nordqvist, K., Seitsonen, O., Gerasimov, D. & Kunnas, O. 2009b. *Archaeological survey on the Karelian Isthmus 07.–12.10.2008*. Research report, Department of Archaeology, University of Helsinki.
- Seitsonen, O., Nordqvist, K., Puttonen, S. & Kunnas, O. 2005. *Archaeological Survey in the Lake Pyhäjärvi Area on the Karelian Isthmus, 5.–12.8.2005*. Research report. Department of Archaeology, University of Helsinki.

Literature

- Carpelan, C., Uino, P. & Gerasimov, D.V. 2008. Archaeology in the former municipality of Johannes. In M. Lavento (ed.), *Karelian Isthmus. Stone Age studies in 1998–2003*. Iskos 16: 185–214. The Finnish Antiquarian Society, Helsinki.
- Edgren, T. 1984. Kivikausi. In Y. Blomstedt et al. (eds.), *Suomen historia 1*: 8–97. Weilin+Göös, Espoo.
- Gerasimov, D.V., Lisicyn, S.N. & Timofeev, V.I. 2003. *Materialy k arheologičeskoj karte Karel'skogo perešejka (Leningradskaja oblast'). Pamjatniki kamennogo veka i perioda rannego*

- metalla*. Rossijskaja Akademija Nauk, Sankt-Peterburg.
- Gerasimov, D.V., Lavento, M., Mekkonen, T., Nordkvist, K., Puttonen, S., Seitsonen, O. & Halinen, P. 2006. Arheologičeskie izyskanija goda 2005 po kamennomu veku – epohe rannego metalla v severo-vostočnoj časti Karel'skogo perešejka. *Radlovskie čtenija* 2006: 247–53. Rossijskaja Akademija Nauk, Sankt-Peterburg.
- Gerasimov, D.V., Nordkvist, K., Seitsonen, O. & Subetto, D.A. 2007. Kompleksnoe izučenie pamjatnikov kamennogo veka v mikroregione Otradnoe na Karel'skom perešejke. Predvaritel'nye itogi i perspektivy issledovanij. *Polevye issledovanija MAË RAN* 2007: 79–103. Rossijskaja Akademija Nauk, Sankt-Peterburg.
- Gerasimov, D.V., Seitsonen, O. & Nordkvist, K. 2008. "Beregovaja hronologija" i istorija Ladogi v svete rezul'tatov raskopok arheologičeskoe kompleksa Komsomol'skoe 3 v 2007 g. *Radlovskie sbornik. Naučnye issledovanija i muzejnye proektu MAË RAN v 2007 g.*: 188–92. Rossijskaja Akademija Nauk, Sankt-Peterburg.
- Halinen, P. 2006. Esihistoriallinen kuoppa-pyynti: aktiivinen peuranpuyntimenetelmä Pohjois-Fennoskandiassa. In M. Suhonen (ed.), *Arkeologian lumoa synkkyteen. Artikkeleita Christian Carpelanin juhla-päiväksi*: 27–44. Institute for Cultural Research, Archaeology, Helsinki.
- Halinen, P., Seitsonen, O., Seitsonen, S. & Nordqvist, K. 2008. Excavations at the Juoksemajärvi Westend Stone Age dwelling site in 2002. In M. Lavento (ed.), *Karelian Isthmus. Stone Age studies in 1998–2003*: 235–65. Iskos 16. The Finnish Antiquarian Society, Helsinki.
- Huurre, M. 2003. Viipurin läänin kivikausi. In M. Saarnisto (ed.), *Karjalan synty. Viipurin läänin historia* 1: 151–244. Karjalaisen Kulttuurin Edistämissäätiö, Karjalan Kirjapaino Oy/Karjala-lehti, s.l.
- Jussila, T. & Kriiska, A. 2004. Shore displacement chronology of the Estonian Stone Age. *Estonian Journal of Archaeology* 8(1): 3–32.
- Katiskoski, K. 2002. The semisubterranean dwelling at Kärmelahti in Puumala, Savo Province, Eastern Finland. In H. Ranta (ed.), *Huts and Houses. Stone Age and Early Metal Age Buildings in Finland*: 171–200. National Board of Antiquities, Helsinki.
- Katiskoski, K. 2004. The cemetery and the dwelling site Vaateranta in Taipalsaari, southeastern Finland. *Suomen Museo* 2003: 81–125.
- Kivikoski, E. 1961. Suomen esihistoria. In J. Jaakkola (ed.), *Suomen historia* I. WSOY, Porvoo.
- Kriiska, A. & Tvauri, A. 2002. *Eesti muinais-aeg*. Avita, Tallinn.
- Lavento, M. (ed.) 2008. *Karelian Isthmus. Stone Age studies in 1998–2003*. Iskos 16. The Finnish Antiquarian Society, Helsinki.
- Lavento, M., Halinen, P. & Mökkönen, T. 2006. Subsistence strategies and changes of communities between 9000–1 BC: an archaeological intensive-investigation in the western part of Lake Ladoga, Karelian Isthmus. In V.-P. Herva (ed.), *People, Material Culture and Environment in the North. Proceedings of the 22nd Nordic Archaeological Conference, University of Oulu, 18–23 August 2004*: 120–30. Studia Humaniora Ouluensia 1. University of Oulu, Oulu.
- Leskinen, S. 2002. The Late Neolithic house at Rusavierto. In H. Ranta (ed.), *Huts and Houses. Stone Age and Early Metal Age Buildings in Finland*: 147–70. National Board of Antiquities, Helsinki.
- Luhio, V. 1948. *Suomen kivikauden pääpiirteet*. Otava, Helsinki.
- Miettinen, A. 2002. *Relative sea level changes in the Eastern part of the Gulf of Finland during the last 8000 years*. Annales Academiae Scientiarum Fennicae A III, Geologica-Geographica 162. Finnish Academy of Sciences and Letters, Helsinki.
- Miettinen, T. 1998. *Kymenlaakson esihistoriaa*. Kymenlaakson maakuntamuseon julkaisuja 26. Painokotka, Kotka.
- Mökkönen, T., Lavento, M. & Halinen, P. 2006. Neolithic sites in various environments on the Karelian Isthmus. Kaukola-Räisälä project's survey in 2004. In A.N. Kirpičnikov, E.N. Nosov & A.I. Saksa (eds.), *Slavs, Finns and Ougrien. The Zones of Contact and Cooperation*: 112–29. Russian Academy of Sciences, St. Petersburg.
- Mökkönen, T., Nordqvist, K. & Bel'skij, S. 2007. The Rupunkangas 1a site in the archipelago of ancient Lake Ladoga: a housepit with several rebuilding phases. *Fennoscandia archaeologica* 24: 3–28.
- Nordqvist, K. 2006. Konnitsan kylän kivikausi. In T. Luukkanen & E. Näriäinen (ed.), *Kotikylämme Konnitsa* 2: 190–8. Ykkös-Offset, Vaasa.
- Nordqvist, K. & Lavento, M. 2008. Archaeo-

- logical survey in Kaukola and Räisälä in 1999 and a study of environmental settings of the Stone Age dwelling sites in the area. In M. Lavento (ed.), *Karelian Isthmus. Stone Age studies in 1998–2003*: 140–63. Iskos 16. The Finnish Antiquarian Society, Helsinki.
- Nordqvist, K. & Seitsonen, O. 2008. Seitsemän vuosikymmenen takaisia kenttätöyökiireitä: Sakari Pälsin kesämatka 1936. *Muinaistutkija* 3/2008: 13–29.
- Nordqvist, K., Seitsonen, O. & Lavento, M. 2009a. Waterways and the Stone Age and Early Metal Period studies on the Karelian Isthmus – The Pre-World War II studies and the research carried out by the University of Helsinki in 1998–2006. *Quaternary International* 203(1–2): 25–32.
- Pälsi, S. 1920. Riukjärven ja Piiskunsalmen kivikautiset asuinpaikat Kaukolassa. *Suomen Muinaismuistoyhdistyksen Aikakauskirja XXVIII* (1):1–180. The Finnish Antiquarian Society, Helsinki.
- Pälsi, S. 1958: Kova mies ja nimetön. In *S. Pälsi: Valitut teokset*: 155–336. Otava, Helsinki.
- Pesonen, P. 2002. Semisubterranean houses in Finland – a review. In H. Ranta (ed.), *Huts and Houses. Stone Age and Early Metal Age Buildings in Finland*: 9–41. National Board of Antiquities, Helsinki.
- Rudenko, S.I. 1970. Opyt primenenija metodov estestvennyh nauk k issledovaniju neo-litičeskih pamjatnikov. *Doklady otdelenij i komissij Geografičeskogo obščestva SSSR. Byp* 15: 38–59. Leningrad.
- Saarnisto, M. & Siiriäinen, A. 1970. Laatokan transgressioraja. *Suomen Museo* 1970: 10–22.
- Seitsonen, O. 2006. Räisälä Pitkäjärvi revisited – new interpretations of the dwelling remains. *Arkeologipäivät 2005*: 138–45. The Archaeological Society of Finland, Helsinki.
- Siiriäinen, A., Halinen, P., Carpelan, C., Uino, P., Lavento, M. & Kirkinen, T. 2008: An archaeological reconnaissance trip to the Karelian Isthmus; Excursion diary 28 September–2 October 1998. In M. Lavento (ed.), *Karelian Isthmus. Stone Age studies in 1998–2003*: 9–25. Iskos 16. The Finnish Antiquarian Society, Helsinki.
- Takala, H. & Sirviö, T. 2003. Muolaa – a multi-period dwelling site on the Karelian Isthmus. *Fennoscandia archaeologica* 20: 55–77.
- Timofeev, V.I., Zaitseva, G.I., Lavento, M., Dolukhanov, P. & Halinen, P. 2004. The radiocarbon datings of the Stone Age – Early Metal Period on the Karelian Isthmus. *Geochronometria* 23: 93–9.
- Torvinen, M. 1979. Liedon Kukkarkosken kivikautinen kalmisto. *Suomen Museo* 1978: 37–80.
- Uino, P. 2003. Kunnittainen katsaus luovutetun Karjalan muinaisjäänöksiin, arkeologisiin tutkimuksiin ja löytöihin. In M. Saarnisto (ed.), *Karjalan synty. Viipurin läänin historia* 1: 505–11. Karjalaisen Kulttuurin Edistämissäätiö, Karjalan Kirjapaino Oy/Karjala-lehti, s.l.
- Žul'nikov, A.M. 2003: *Drevnie žilišča Karelii. Karel'skij gosudarstvennyj muzej, Petrozavodsk.*
- Žul'nikov, A.M. 2008: Exchange of amber in northern Europe in the III millennium BC. *Estonian Journal of Archaeology* 12(1): 3–15.
- Äyräpää, A. 1945. Die Verbreitung des Bernsteins in kammkeramischen Gebiet. *Suomen Muinaismuistoyhdistyksen aikakauskirja XLV*: 10–25. The Finnish Antiquarian Society, Helsinki.

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EXCAVATIONS AT II HAMINA DISCONTINUED CEMETERY – PRELIMINARY RESULTS AND IMPLICATIONS

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MEDIEVAL TRADING PLACE

Ii Hamina is a medieval trading place in the mouth of the Ii River, located approximately 30 km north from the city of Oulu (Fig. 1). The district is today an extremely tightly built residential area known as the old Hamina of Ii. Possibly as early as in the 13th century the area was an important center of trade, and in 1531 it gained the status of an official market place – one among the four in Northern Ostrobothnia (Virkkunen 1953: 31; Luukko 1954: 481; Elo et al. 1998: 25). The oldest reference to the settlement and parish in Ii dates to 1374, but the chapel church had been established a bit earlier in the middle of the 14th century (Elo et al. 1998: 15, 22, 25).

The trading area is said to have been first located on an island opposite the present-day Ii Hamina. During the 16th century the trading place was transferred to the mainland (Elo et al. 1998: 28). The first church on the mainland had undoubtedly been built by the 1580s on the northern side of Hamina (Elo et al. 1998: 28–9), although the time of construction can be as early as the turn of the 16th century (Vahtola 1994: 208). It has also been suggested that the cemetery may have been located on the mainland before the actual church or chapel was built there (Ahmavaara 1910: 60–2).

SKELETAL REMAINS FROM II HAMINA CHURCHYARD

In the summer of 2009 the municipality of Ii began to renew the sewage and water pipelines

in Ii Hamina street areas. Archaeological excavations, carried out by the National Board of Antiquities between May and June 2009 (Kallio-Seppä forthcoming), were required prior to the engineering project. As the former pipework had been installed in the 1960s, human remains from the old discontinued Ii Hamina cemetery had been found. Many inhabitants in Ii Hamina could still recall how “There were human skulls, arms and leg bones... Skulls had holes on the forehead and the wives thought that they had been shot.” (Karpinen 1990, our translation).

A six-week long archaeological excavation was carried out in the intersection of Yläkatu and Alakatu streets in the center of Ii Hamina. The excavations revealed a substantial amount of human remains consisting of *in situ* burials as well as disarticulated bones representing several comingled individuals from a “Bone pit”, the

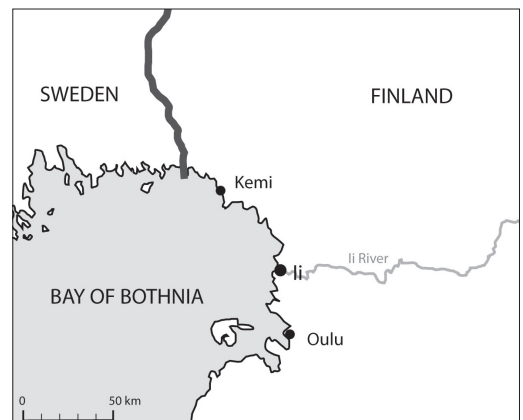


Fig. 1. The location of Ii Hamina in the Bay of Bothnia.



Fig. 2. The Bone pit contained well preserved human bones (photograph: NBA/Dept. of Monuments and Sites, T. Kallio-Seppä).

diameter of which was 1.9 meters (Fig. 2). More than 70 individual burials were documented and about 65 were archaeologically excavated (Fig. 3).

PRELIMINARY REPORT OF HUMAN REMAINS FROM II HAMINA

Age and sex determination

Anthropological age and sex estimations were determined according to traditional osteological guidelines, as those presented for example in Bass 1986 [1971]. Sex determination was mostly based on the morphological features of the skull, because there were not many preserved pelvic bones. Skeletal traits used for sex determination in medieval population should be calibrated for the population for which they are used. It is possible that the guidelines for modern samples can introduce systematic bias to the classification of individuals as general robusticity may change between populations. In the case of medieval Hamina, females were more likely to display greater robusticity than modern day females whereby these females are likely to be classified as males.

Age was assessed crudely in 4 categories for the Bone pit material as preservation did not allow for more accurate age determination. For *in situ* burials we relied on just three age categories: juvenile, subadult and adult. This classification procedure was based on poorer preservation and smaller case number of *in situ* individuals.

In situ burials

Sex and age was determined for all the *in situ* burials. This work was difficult, occasionally even impossible as the skeletal remains were poorly preserved. 38 burials and bones from 11 secondary placements contained bone remains that were preserved well enough for further analyzes (Table 1). The age estimation was done of bone remains and in some cases by the size of the burials.

The preservation of the total excavated skeletal population was so poor that sex could be determined for only less than half of the individuals. Of these sex determined individuals, two thirds were females (Table 2).

Table 1. Age distribution of individuals in in situ -burials.

Category	Juvenile	Subadult	Adult
Age	0-15	15-25	>25
N	15	14	27

Table 2. Sex distribution of individuals in in situ -burials and in the Bone Pit.

	Male	Female	Total
in situ -burials	13	21	34
"Bone Pit"	62	67	129

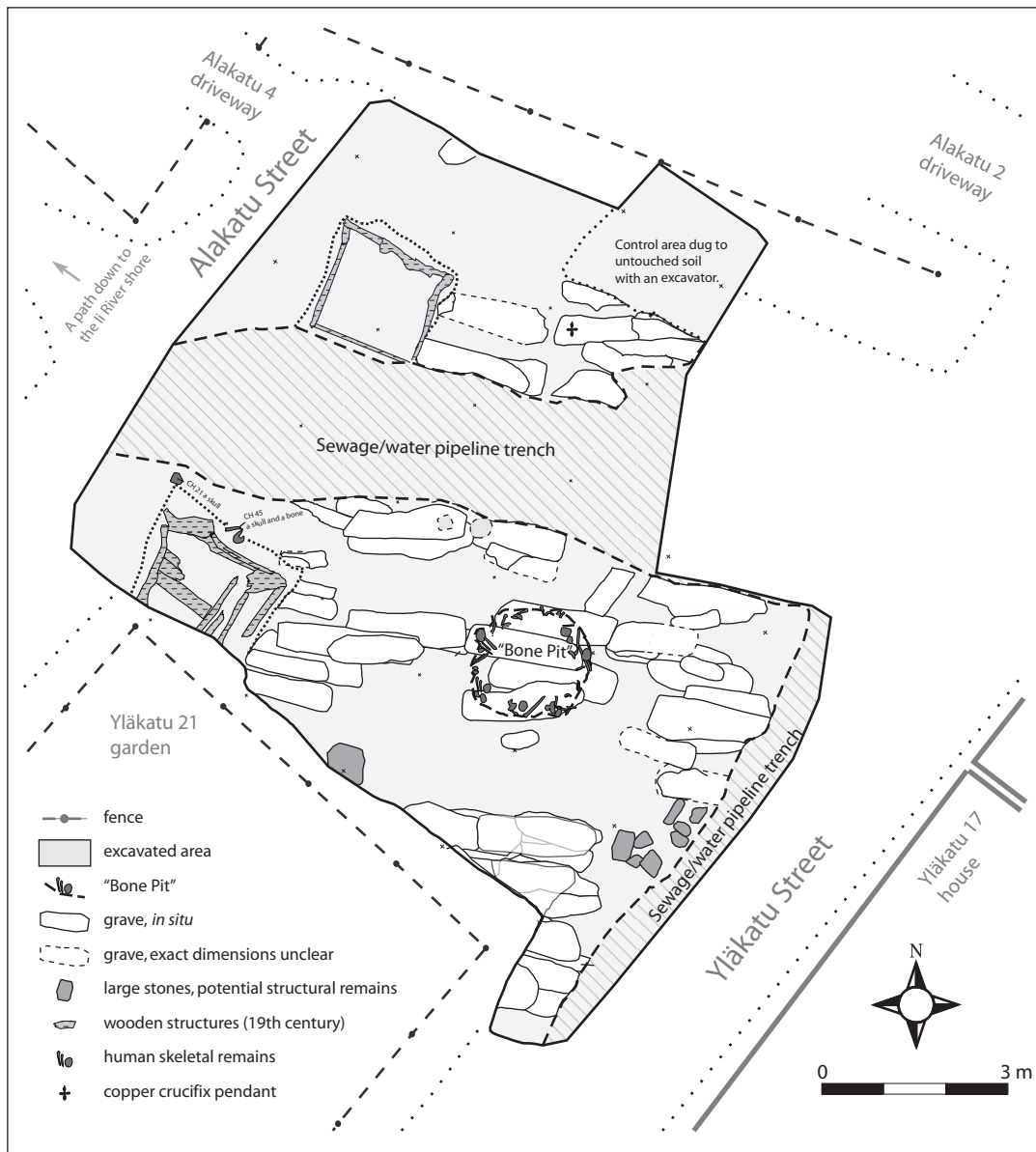


Fig. 3. Archaeologically excavated burials and the Bone pit at the intersection of Yläkatu and Alakatu in Ii Hamina.

“The Bone pit”

The Bone pit was formed when human remains originally buried in a different place had been dug up and reburied in the same pit. The exact date of this reburial is not clear but one possibility is that the bone material was collected during the sewage and water pipeline installation in 1960s. However, nothing indicates that the formation of the Bone pit could not be dated to earlier times, even to the time of the active use of the cemetery.

The comingled bone material was analyzed to enlighten the demographical issues and pathological conditions of the people of Ii Hamina. This material was surprisingly well preserved compared to the *in situ* burials.

Because of the comingled contents of the Bone pit material, the minimum number of individuals (MNI) was calculated from the long bones and crania (Table 3). Our classification to determine “individual” was that more than 50% of a bone had been preserved. Greatest estimate of MNI based on crania was 160. Postcranial elements provided smaller MNI. We could estimate the sex for 129 individuals (Table 2) while age could be determined for 149 individuals, most of whom were adults (Table 4).

Conclusions drawn from human remains

According to our analyses the Bone pit included mainly adults and sub adults. This is probably explained by the inferior preservation of the juvenile skeletal remains. Also, as these bones

Table 3. MNI based on the number of long bones in the Bone pit.

		left	right
Upper body	<i>humerus</i>	90	91
	<i>ulna</i>	47	57
	<i>radius</i>	34	44
Lower body	<i>femur</i>	83 (+15)	102 (+14)
	<i>tibia</i>	58	62

Table 4. Age distribution of individuals in the Bone pit.

Category	Age	N
Juveniles	1–10	7
Young individuals	10–20	24
Adults	20–50	87
Old adults	>50	31
	Total	149

have been relocated, it is likely that the procedure has favored the well preserved and large skeletons. It is also likely that while collecting the bone material special attention has been paid to skulls – according to our analyses the minimum number of individuals varied greatly if counted from different skeletal elements.

The highest estimate for the minimum number of individuals in the Bone pit was based on cranial count. This is likely to reflect the fact that the crania have been considered more “valuable” and representative of an individual than other bones of the body. There are also more long bones and larger bones present in the Bone pit, where smaller bones have been either missed when the Bone pit was formed, or these bones were not considered to be important in representing the deceased individual.

The large proportion of female skeletons in *in situ* burials could be perhaps explained by selective location of burials according to sex. *In situ* burials reflect the normal attritional mortality more accurately than the Bone pit material. From the *in situ* burials it could be seen that in the juvenile burials the preservation of bone was poorer than that of adult skeletons.

THE FINDS WERE FEW

The finds from the burials of Ii Hamina cemetery consist mainly of numerous nails. Otherwise the scarce find material comprises a few coins, a couple of garment hooks and two pendants.

Coffin nails

The total amount of nails is 225 and they were found from 35 burials archaeologically excavated *in situ* burials. The substantial amount of nails suggests that the deceased were buried in coffins. This assumption is further supported by the fact that some of the nails still contained remains of wood and wood was also preserved below and round the skeletal remains.

Pendants

Two pendants were found from the burials. One is a simple pendant made from a seal’s canine (Herva & Puputti manuscript). The other is a complex and decorative copper cross pendant (KM2009038:517) found from the deceased’s

chest area. During the conservation process Christian images – a crucified figure in the center and presumably figures of saints on the edges – were revealed on one side of the object. A similar cross pendant was found in 1920s in Kuusamo municipality from a burial that has been interpreted as a grave of a Sami witch (Sirelius 1924: 103–8; Sarvas 1986: 162–3). Today, the Kuusamo pendant belongs to the Finno-Ugric collection of the Finnish National Museum (SU5031: 23).

Coins

Altogether 13 coins were found during the excavations, 11 of which were found from 9 burials. Most of the coins are bracteates – thin, one-sided silver coins used in the Middle Ages – of which the majority is ornated with a crown-headed figure. Some ordinary coins minted on both sides were also recovered from Ii Hamina. Two of them can be indentified as a *fyrk*: a small value silver coin, namely ¼ of öre. The two coins in question were produced during the first half of the 16th century. The assemblage of two-sided coins also include a 4 penning coin minted by Erik of Pomerania (1396–1439) and a ½ örtug minted by Sten Sture. The former had been minted in the city of Turku and the latter in Västerås, the rest of the two-sided coins are also Swedish. In all, the minting of the coins found from the Ii Hamina cemetery dates approximately from the later half of the 14th century to 1560 (Lagerqvist 1970; Malmer 1980).

DATING OF THE DISCONTINUED CEMETERY

According to coin finds and the known church history of the Ii parish, it is possible that the burials in Ii Hamina churchyard may have taken place from the 15th century to the early 17th century. The latest burials were possibly made when the church was moved to a new place in 1620s. In a mapping carried out by Claes Claesson in 1648 the churchyard is marked as the old churchyard (Sw. “gamla kyrckogården”).

Radiocarbon dates from the human bone remains may give us a more definite time frame. At the moment, however, we have to accept a date for the cemetery ranging from the late medieval to the beginning of the early modern period.

REFERENCES

Unpublished sources

- Herva, V.-P. & Puputti, A.-K., manuscript. *Sea, seals and people: environmental relations on the early modern Gulf of Bothnia and problems of interpreting animal bone finds.*
- Kallio-Seppä, forthcoming. *Iin Hamina, Ylä- ja Alakadun kunnostustyöt. Hautausmaan arkeologinen koe- ja pelastuskaivaus sekä seuranta 2009.* Excavation report. National Board of Antiquities, Department of Monuments and Sites.
- Karppinen 1990. Interview of E. Karppinen – the leader of the sewage and water pipeline installation project in Ii Hamina during 1960s – by V. Tolonen in 30.10.1990. Archives of the Ii municipality.

Literature

- Ahmavaara, A. 1910. *Piirteitä Iin pitäjän historiasta ennen v. 1600.* Kaleva, Oulu.
- Bass, W. 1986 [1971]. *Human Osteology: A Laboratory and Field Manual of the Human Skeleton*, 2nd edition 4th printing. Missouri Archaeological Society Special Publication No. 2. The Missouri Archaeological Society, Inc.
- Elo, K., Satokangas, R. & Vahtola, J. 1998. *Iin seurakunnan historia.* Iin seurakunta, Ii.
- Lagerqvist, L.O. 1970. *Svenska mynt under vikingatid och medeltid (ca 995–1521).* Stockholm.
- Luukko, A. 1954. *Pohjois-Pohjanmaan ja Lapin keskiaika sekä 1500-luku.* Pohjois-Pohjanmaan ja Lapin historia II. Osakeyhtiö Liiton kirjapaino, Oulu.
- Malmer, B. 1980. *Den senmedeltida penningen i Sverige. Late medieval pennies in Sweden.* Kungl. Vitterhets historie och antikvitets akademiens handlingar. Antikvariska serien 31. Almqvist & Wiksell International, Stockholm.
- Sarvas, P. 1986. Raha-aarteita Kuusamosta. In A. Sarvas & P. Sarvas, *Kuusamon esihistoria. Kuusamon historia IV:* 227–266. Kuusamon kunta, Kuusamo.
- Sirelius, U.T. 1924. Tietoja Suomen Lapin noitarummuista. *Kalevalaseuran vuosikirja* 4: 93–109. Kalevalaseura, Helsinki.
- Vahtola, J. 1994. Iin kirkot. *Kaltio* 6: 208–10.
- Virkkunen, A.H. 1953. *Oulun kaupungin historia I. Kaupungin alkuajoilta isonvihan loppuun*, 2nd edition. Kirjola Oy, Oulu.