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LEVÄNLUHTA – A PLACE OF PUNISHMENT, SACRIFICE OR JUST A COMMON CEMETERY?

Abstract

Levänuhta, located in southern Ostrobothnia, is one of the most famous archaeological sites in Finland. The finds consist of scattered human bones from almost 100 individuals and some artefacts, mainly dating to the Merovingian period (AD 550/600–800) and interpreted as grave goods. Previously, the site has been seen as a sacrificial place, a place of punishment, a battlefield or as a cemetery for slaves or people who had died of an epidemic. These negative connotations probably stem from the fact that the site itself is interpreted to have been a bog or a sacrificial spring. It will be argued here, however, that the Levänuhta site was more likely a small lake or a pond. The custom to bury the deceased in water is a global phenomenon that might be linked to new ideological views towards the landscape as well as the deceased and their ancestors.

Keywords: Levänuhta, bog, human bones, Kälämäki, burial practice, lake cemetery

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INTRODUCTION

Levänuhta, located in the municipality of Isokyrö in southern Ostrobothnia, is among the most well-known archaeological sites in Finland. Today, a selection of the artefacts and human bones are displayed in the National Museum in Helsinki where it keeps intriguing the visitors year after year. In all, the peculiar find consists of bones from almost 100 individuals together with some artefacts and animal bones. The material is traditionally thought to have been placed into a bog or a natural spring sometime during the Merovingian period (AD 550/600–800). The prehistoric human bone assemblage is not only exceptionally large for Finland but also strikingly well preserved due to the wet mud and clay, although the iron-rich water running in the natural springs has darkened the bones dark. Their interpretation, however, has been somewhat difficult because the bones were not found in anatomical order.

It has long been unclear whether the site was a spring, a fen, mire, swamp or a bog in the Iron Age. While the archaeologist Aarne Michaël Tallgren (1918: 76–7) interpreted the site either as a peatland meadow or a spring, it has later been defined as a low meadow, a former bog, with a visible water hole or spring (Meinander 1946: 91; 1950: 137; 1977: 38). More springs have been found in the excavations that have taken place at the site (Heikkurinen-Montell & Erä-Esko 1984). The site has thus frequently been interpreted as a bog (Kivikoski 1961: 182; Lehtosalo-Hilander 1984; Niskanen 2006) or as natural spring (Tallgren 1918: 76–7; Edgren 1993: 209–10). Regarding the latter interpretation, it is worth noting here that no preserved folklore tells us of any later sacrifices at the site, nor has the water from the site ever been used for healing. Both of these uses are typical for ancient springs (Europaeus 1925: 165), while the springs now occupying the site does not freeze even in the wintertime (Miettinen 1981). In all, as

archaeologists have not agreed on the type of bog they are referring to, the neutral word bog will be used in this article. Moreover, it is to be borne in mind that the geology of the Levänluhta site during the Iron Age is of crucial importance regarding its interpretation.

In English, Levänluhta means a marshy, wet meadow or swamp with algae, which suggests standing water or that the meadow has at least occasionally been flooded. During archaeological excavations in 1912, thirty five peat samples were taken and analyzed by the biologist Harald Lindberg (1871–1963) at the Department of Botany in Helsinki. He identified remains of several aquatic and mire plants taxa like sedges (*Carex*), mare's-tail (*Hippuris vulgaris*), gypsywort (*Lycopus europaeus*) and bogbean (*Menyanthes trifoliata*). In addition, he also found diatoms (Bacillariophyta) and water fleas (Cladocera). Plant species that only grow in fresh water, such as white water-lilies (*Nymphaea*) and common club-rush (*Schoenoplectus lacustris*) were also detected. As most of the bones and artefacts had been found in this peat layer, Lindberg interpreted the burials to have been made in standing water, such as a shallow lake or pond, that had been surrounded by marshy lakeside meadows. In particular, the water flies implied that the site must have been waterlogged during most of the year (Lindberg 1913). This conclusion, drawn already in 1913 and repeated by an osteologist, Dr. Tarja Formisto in 1993¹, did not reach many archaeologists for an unknown reason. Therefore, the idea of Levänluhta as a bog has been prevalent, and has apparently affected the interpretations concerning the site: bogs are marginal areas that are commonly understood as frightening and negative.

The aim of this article is to present a detailed research history of the find. An attempt will also be made to propose an alternative explanation to the site in the discussion part.

THE RESEARCH HISTORY

The Levänluhta site is first mentioned in a letter written in 1674 by Israel Alftanus, the vicar of Isokyrö parish, to the Antiquity Commission in Stockholm, in which he tells about a spring in the wet meadows of Orismala parish where

human bones have been seen throughout the times² (Meinander 1950: 136).

This information was probably forgotten as the next written records regarding the site are from 1884 and 1885, when the wet meadow was planned to be drained to arable land by ditching. While the area was hoed, human bones were found, but as they were thought to be fairly recent, these finds were re-buried into the original find spot by the local marshal (Catalogue, NBA archive). The text of a site map drawn in 1885 at the site indicates that the bones supposedly date to so-called Cudgel War in 1596–1597 (NBA archive) and shortly thereafter Oskar Rancken (1886) also arrived to the same conclusion.

The first archaeological excavations were organized as two separate campaigns in summer 1886 under the supervision of Professor Oskar Rancken (1824–1895). The excavations produced several finds, while additional stray finds were donated by locals involved in the 1880s ditching works (NM 2440:1–9, NM 2441:1–3)³. Unfortunately, the exact find spots of the artefacts were not documented (Hackman 1913a: 300, 303). ‘Birch clubs’ (Swe. ‘björkklubbor’) that were reportedly found at the site supported the previous assumption about a burial site for the victims of the Cudgel War. Rancken (1886) even reports that the diversity of the deceased (men, women and children) is indicative of an execution or a massacre and that the scattered human bones might even suggest dismemberment (Rancken 1886). Rancken was a local historian and collector of folklore, not an archaeologist, which probably affected the interpretation. The aforementioned ‘birch clubs’, which are actually wooden poles, have never been analyzed in detail, but they were probably used to hold down the bodies and thus to keep them from floating up to the surface.

When Alfred Hackman from the Antiquarian Commission photographed the site in July of 1894 (Fig. 1) he also recovered some human bones (NM 2996:125) around the spring (Hackman 1894). When he returned to the site as a Doctor of Philosophy in 1906 to draw a map of the site he reported that the area once excavated by Rancken was now filled with water. He also proposed that a geologist should inspect the site in order to establish whether or not it had previously been a lake (Hackman 1906). The



Fig. 1. Levänluhta in 1894 when Alfred Hackman first visited the site. The site seems to be quite wet even though the drainage works had started ten years earlier. One of the natural springs is clearly visible in front of the boy. The Momminmäki hill is in the background. Photograph by A. Hackman 1894/National Board of Antiquities.

soil samples that confirmed Hackman's idea and that were studied by Lindberg (1913) were taken during A.M. Tallgren's five day excavations in 1912.

While excavating a substantially large area (199 m²) in fairly short time, Tallgren came across a spring that had been covered and blocked with wooden planks, sticks and stones, probably during the time when the place was transformed into arable land. Under this barrier, at the bottom of the spring, he found human bones. Tallgren (1912) also reports that 'small beads of bog-ore were found in large amounts' in the ferriferous and wet soil, a notion which is interesting regarding the interpretation of the site.

While Tallgren found only a small brass ring (NM 6110:4) and a half of a probably recent horse shoe (NM 6110:7), Hackman's campaign in 1913 was slightly more fruitful as

he recovered vertically struck birch poles (NM 6373:17) in connection to human bones. Most of the finds were concentrated to natural springs. The excavation report (Hackman 1913b) states that the exuding spring water made it impossible to sieve the excavated soil and for this reason the excavators were forced to split the soil into smaller slices with their trowels. Therefore, Hackman suspected that smaller finds might have been missed by the excavators.

The excavations of Hackman were followed by several decades of inactivity, in spite of frequent correspondence between the Local History Association in Isokyrö and the Antiquarian Commission in Helsinki. In March 1936 the Local History Association acquired a small lot of land (517 m²) around the spring for a sum of 1000 Finnish marks. The lot was donated to the State represented by the Antiquarian

Commission (Aro 1936; Rauramo 1936a; 1936b; copy of the contract from 1936, NBA). Moreover, local enthusiasts started to collect for funds to finance future excavations at Levänluhta and its surroundings (Klemetti 1937). In only 3 months a fairly large sum of 70.000 Finnish marks (almost 22.000 €) was raised. In a letter to the Antiquarian Commission the donators made some suggestions on how the money should be spent. First, they wanted archaeological excavations to be carried out in Levänluhta as soon as possible. Second, they wanted to raise commemorative stones with short inscriptions, surround the site with a fence, benches to sit on and road signs to guide visitors from the main road to the site (Järviluoma & Salmenkallio 1937). All these wishes were ignored, as nothing happened until the 1980s.

In 1981 archaeologist Mirja Miettinen from the National Board of Antiquities inspected Levänluhta due to new ditching works in the surrounding fields. In her report she suspects the site to be much larger than previously thought, because Martti Arkkola, the local farmer, informed her of repeated human bone finds from fields surrounding the site. Miettinen (1981) concludes the report by expressing her concern about the destruction of the remaining find material unless further excavations are carried out at the site. In 1982–1984 docent Aarni Erä-Esko from the National Board of Antiquities excavated what was left of the burial site⁴, but as excavation reports on most campaigns were never completed, the exact location of his trenches is not known. Nevertheless, the number of finds from the site grew considerably, thanks to the more advanced techniques of excavation and the use of a metal detector (Heikkurinen-Montell & Erä-Esko 1984). Coins, burned clay and charcoal were the new find categories, whereas bones and artefacts were found adjacent to several new springs discovered in the excavations. One of these springs yielded a skull that was suspected to contain brain mass (Heikkurinen & Erä-Esko 1984). Thus, the find was preserved in surgical spirit (Edgren 1994: 656). When the brain mass was later analysed in a CAT scan, it was verified that the clay inside the skull had preserved only the shape of the cerebellum, not actual brain mass (Tomanterä, pers. comm.).

The majority of the bone material is reported to have been found close to the surface, at a depth

of 25–35 cm, inside and in the surroundings of the natural springs. Some finds were reportedly made deeper, in the Litorina clay (Tallgren 1912; Lindberg 1913; Heikkurinen-Montell & Erä-Esko 1984). The bones were not retrieved in anatomical order due to the ditching works and ploughing activity (Meinander 1950: 137; Formisto 1997: 144). In addition, it is probable that both water and frost had disarticulated, moved and broken the bones. This means that, even though the water in the springs is told not to freeze during winter, the soil around them is frozen. According to Carl Fredrik Meinander (1950: 136), unexcavated areas might still remain at Levänluhta, while Formisto (1993: 19) states that after the excavation of Aarni Erä-Esko in 1984 the site was completely excavated. Due to absence of 1984 excavation report one has to question this interpretation. In the only available literary source from 1980s, the 1983 excavation report, it is stated that bones and an artefact were found outside the excavated areas, that is, in the fields not under the protection of the National Board of Antiquities (Fig. 2). The fact that some of these areas were also lush could refer to the existence of additional springs and burials outside the protected area (Heikkurinen-Montell & Erä-Esko 1984).

THE BONE MATERIAL

Several scholars have analyzed parts of the bone material and the first osteological analysis was carried out only shortly after Rancken's excavations in 1886. However, the analysis with the largest impact on archaeological interpretations was made in 1902 by anthropologist Fredrik Wilhelm Westerlund, who proposed that the Levänluhta population had been long-skulled and thus of a different ethnic origin from the Finns. Hence, the bones were interpreted to have belonged to people of Germanic origin (Formisto 1993: 39; 1997: 147), which was the prevalent interpretation until dentist Pentti Kirveskari studied the teeth in 1983. Kirveskari concluded that the teeth belonged to people of the Fenno-Ugrian origin, and later on Formisto (1997: 149) also went along with this line of interpretation.

In fact, Tarja Formisto was the first person to deal with all the Levänluhta bone material (73.8 kg) for her doctorate thesis published in 1993.



Fig. 2. Levänluhta in August 2009 before the barley harvesting. Photograph by the author.

Until then the size of this bone collection had been unknown. For example, she painstakingly reconstructed the crania from the excavations in order to have a better estimate on the amount of individuals (Formisto 1993: 41–2). From the material that was organically very fragmented, approximately 98 individuals were identified and further divided into 32 infants, 6 juveniles, 41 adults, 18 matures and 1 senile (Formisto 1993: 103). Her sex-assessment was based on the crania, femurs and long bones. From 41 crania, 31 were morphologically identified as male, while in the analysis of 48 femurs, 37 females were identified. The conclusion based on long bones was that the assemblage included more females than males. The average stature for males was between 156.1–161.7 cm, and 147.8–150.7 cm for women (Formisto 1993: 97–100, 113). The only ^{14}C -date (St-9855) from a human bone, a tibiae, from the site is dated to 1475 ± 120 BP or cal. AD 437–655 (Formisto 1993: 42).

Some of Formisto's methods have been criticized in a recent article by an anthropologist,

Dr. Markku Niskanen from the University of Oulu (2006), who was mainly interested in the stature and the sex-assessment of the deceased and compared his own measurements from the Levänluhta material to Formisto's work. While Niskanen used European skeletons from, for example, England and France (AD 350–1066) as reference material, mainly Japanese reference materials had been used by Formisto. The result was that the stature estimates were systematically taller than the ones suggested by Formisto. The difference was attributed to different sex-assessment criteria. When Niskanen re-studied the joint sizes in a sample of 14 femurs and long bones, he saw that many of the bones previously interpreted as male bones were in fact female, when compared to European reference materials (Niskanen 2006: 29–30). None the less, the new stature estimations indicated that the Levänluhta population was still shorter than the average population during this time period. Niskanen (2006) suggested that this confirms the low social status of the deceased.

Most of the animal bones are from horses and

cattle (2.8 kg) while the remaining 1.1 kg consists of sheep, dog, domestic hen and birds (Formisto 1993: 138–141). As the bones of domestic hen have also been identified as a capercaillie or a large seagull (Hackman 1913a: 310–311), the assemblage should perhaps be re-analyzed by a zooarchaeologist. Two animal bones have been ¹⁴C-dated: a cattle rib (St-9854) to 2120 ± 210 BP or 429 cal. BC–cal. AD 76, and a horse radius (St-9856) to 640 ± 70 BP or cal. AD 1289–1384. As these dates differ from the rest of the find material, they might belong to a different context than the main body of finds (Formisto 1993: 42). On the other hand, the identified animal bone species correlates with the majority of the Iron Age cemetery material in Finland, which might suggest that the site was in fact used for a much longer period than has earlier been thought. Thus, without a more detailed analysis the bones should not be excluded from the material.

THE ARTEFACTS

The only detailed analysis on the artefacts from the Levänluhta site was made already by Hackman (1913a). Thereafter, the artefacts have been either described in brief (Meinander 1950: 138; Formisto 1993) or simply ignored (Niskanen 2006). This is partly understandable, as Formisto and Niskanen are both scholars specialized in physical anthropology, but on the other hand, balanced interpretation of the site should be based on all the evidence available. Moreover, the section on archaeology in Formisto's thesis was criticised severely by docent Torsten Edgren (1994: 653), which might be the reason why Niskanen decided to exclude the artefacts from his own interpretation (Niskanen 2006).

While the number of artefacts found from Levänluhta is not particularly high, the finds themselves are more diverse than the previous research has been actually willing to admit. In addition to jewellery and artefact fragments, such as fragmentary metal finds, also wood, charcoal and burned clay have been found. These are not usually mentioned in the literature when the find is described. It is also worth noticing that no weapons have been found from Levänluhta. In a letter written in 1892 professor Johan Reinhold Aspelin suggests, that the wet mud might have 'eaten' all weapons in Levänluhta (Aspelin

1892), which is an important observation to consider. The ferriferous water running in the ditch in Levänluhta suggests that the water has been corrosive already during its usage. However, this does not explain why the bronze objects are preserved.

The cauldron

Amongst the first finds made in 1886 was a badly damaged bronze cauldron (NM 2441:1, Fig. 3) with a round bottom and small triangular ears. The object is lacking holes for a handle, which seems a bit strange (Hackman 1913a: 309; Meinander 1950: 224). The cauldron was probably broken on purpose before deposition (Kivikoski 1961: 182), but as it has been made of soft and sheer bronze, the fragile nature of the object should neither be forgotten. The cauldron belongs to a so called Vestland-type, a name pertaining to SW Norway where it was a common burial vessel in cremation cemeteries during the Roman and Migration period. Vestland-type cauldrons are frequently found also in Central Norrland which suggests contacts between these two areas during this period (Lindqvist & Ramqvist 1993). Nevertheless, the cauldron is a Roman import (Shetelig 1912: 80–6; Hjørungdal 1999) and altogether three such cauldrons have been found in Ostrobothnia: the other two come from Gullydynt (NM 68) and Kaparkullen (NM 2891:14) in Vörå (Fi. Vöyri) (Salmo 1944: 30). In addition, a fourth vessel has been recovered from a cremation cemetery in Mynämäki (NM 11353:32), SW Finland, where the cauldron

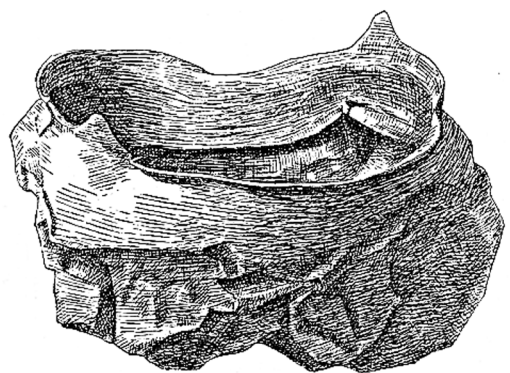


Fig. 3. The Vestland type cauldron as published by Alfred Hackman in 1913.

served as a burial urn for cremated bones, weapons and artefacts during 7th or 8th century AD (Salmo 1944).

The Mynämäki cauldron is particularly interesting as it is probably at least 200 years older than other artefacts in the burial. This means that the cauldron was antique when it was placed in the burial (Wessman in press). The same can possibly be said of the Levänluhta cauldron, as AD 350–500 is the suggested date for this vessel type in Finland and Sweden (Salmo 1944: 30; Ramqvist 1992: 223). If the earliest burials in Levänluhta were made around AD 600, as suggested by previous research, the cauldron was at least 100 years old when it was deposited there. Thus the cauldron could have been a family heirloom like the Mynämäki cauldron. Another possibility not to be excluded is that Levänluhta was used as a cemetery already during the Migration period.

Arm rings

Of the ten arm rings found in Levänluhta, seven (NM 2440:1–3, 5, 8–9; 6373:2) belong to so-called concave-convex type, which is typical for the Merovingian period in Finland. According to the find catalogue pertaining to the 1886 excavations, an ‘arm bone’ was found inside one of these arm rings (NM 2440:1) thus making it the only find that can clearly be defined as a belonging of a deceased (Klemetti 1934).

Of the two multi-zoned arm rings – a type that is believed to have originated from the Baltic area – one is intact (NM 2440:4) and the other one is fragmentary (NM 6373:4). Arm rings of this type were common in Finland during the 7th century AD (Kivikoski 1973: 69), although Nils Cleve (1943: 96–97) dates them from AD 500 onwards.

The finds also include an arm ring made of a plain round bronze rod (NM 21926:2). Similar rings are known from Gotland, where they date to the Vendel period (Nerman 1919: 75, fig. 130; Kivikoski 1973: 69), but simple arm rings of the same kind of are also found in older contexts. For example, several arm rings of this type are known from Finnish and Baltic tarand graves dated to the Early and Late Roman Iron Age (Kivikoski 1973: 33–4, fig. 117–8; Hirviluoto & Vormisto 1984: 27–8).

Neck rings

A half of a silver neck ring (NM 6373:6) with saddle-formed ends was found from Levänluhta during Hackman’s excavation in 1913. Although these neck rings are common in Finnish cemetery contexts, the origin of the type is to be found in the Baltic area. In Finland the type is most often dated to the Merovingian period (Kivikoski 1973: 68), while in the Baltic countries it remained in use until AD 1100. Another neck ring was found in the 1886 excavations, but Rancken did not recognize it as jewellery and it was catalogued as a 37 cm long angular bronze rod (NM 2441:2) with convergent ends that had been bent into a ring (catalogue NBA archive). Later on, Hackman (1913a: 308) re-interpreted the find as a bronze neck ring belonging a type that was quite rare in Finland.

Brooches

The site has yielded altogether five brooches. A small, round bronze button (NM 2440:6) decorated with garnets and edged with silver was found in the 1886 excavations. The button had probably been fastened to another object, such as a button-topped brooch (Hackman 1913a: 308–10) or it might have been a separate ornament (Meinander 1950: 224). Button-topped brooches are usually considered to be luxury items due to materials used in their manufacture (e.g., gilded bronze, silver and garnets) and their ornamentation (Salin’s style II). In Scandinavia they are dated (Stjerna 1905: 137, 162; Nerman 1919: 24–25) roughly from the end of the Migration period to the Merovingian period (AD 550/600–800). In Finland these brooches are quite rare, although the nearest 3 examples are from the Gullydynt cemetery in Vörå (Kivikoski 1973: 63; Meinander 1950: 100, 179–80), while they are especially common on the island of Gotland and in Norway (Stjerna 1905; Nerman 1919: 25).

A bronze serpent brooch (NM 2441:3) was also found in the 1886 excavations. It is formed by two serpents with their bodies twisted around one other (catalogue NBA archive). Another brooch of this type, but consisting of one serpent only, was found in 1983 (NM 21926:1). The brooch had 12 hollows for infillings and during

its conservation traces of gold-plating was found on the surface (catalogue NBA archive). Serpent brooches are thought to have developed from the Scandinavian loop-shaped brooches into an independent, domestic brooch type. The gold-plated single serpent brooch can be dated, based on the typologies of Knut Stjerna (1905: 137) and Nils Cleve (1927: 5–12; 1943: 77–9.), to AD 550–675, while the other brooch is of a later date, probably from AD 675–750.

In 1982 Kyllikki Arkkola, a local woman visiting Erä-Esko's excavation, donated a small equal armed brooch (NM 21813) found around 1978–9 in the flower bed of her estate. The earth for the flower bead had been taken from the 'sacrificial fount' in Levänluhta. The brooch was in excellent condition as it even lacked the normal green patina from its surface (catalogue NBA archive). Another small equal armed brooch (NM 21926: 3), possibly the pair of the other find (catalogue NBA archive), was found in 1983. Small equal armed brooches of this type are usually dated to the Merovingian period both in Finland and on Gotland (Stjerna 1905: 170; Kivikoski 1973: 61).

Chains and finger rings

Two spiral finger rings of bronze (NM 6373:3, 9) and a 15 cm long bronze chain (NM 6373: 5) have also been found. A small (Ø 0.7 cm) brass ring (NM 6110: 4) found in 1912 might, according to Hackman (1913a: 39), also derive from a chain. Spiral finger rings were used in Finland throughout the Iron Age (Kivikoski 1973: 70) so they are difficult to date.

Other finds

Many of the finds in this category cannot be dated precisely and some classes, such as unidentifiable metal finds, are also difficult to interpret. Resulting from the progress in excavation techniques more finds and even new find categories were encountered in 1980s. Pieces of burned clay, over 55 grams in total (NM 21926:1710–15; NM 22403:144–5), clay daub (NM 22395: 59) and charcoal (NM 21814:1052–6; NM 21926:1716–20; NM 22403:146–7) represent these new finds. Although found in small quantities only, they are not to be excluded

from the interpretation. Burned clay and clay daub are often connected to settlement sites, but they are also found frequently in cemetery contexts, as they possibly had a ritual character in the funerary process (Hirviluoto 1996: 79; Wessman 2009: 33–4).

A bone comb found by the locals in the 1880s is the subject of a letter by J.R. Aspelin (1886) to the crown marshal Liljeqvist of Isokyrö parish, as Aspelin asked the marshal to take action in order to retrieve this find. In his reply (Liljeqvist 1886), the marshal states that the bone comb was already given to a local collector, Mr. Salomon Wilskman (1821–1913), who collected ancient artefacts on the behalf of the Antiquarian Society and thus the comb was probably already sent onwards to Helsinki. The information about the bone comb is however missing from the find catalogue, which suggests that it was lost or forgotten before it was catalogued.

As stated above, several pieces of birch wood, some of which were found positioned upright (NM 6373: 17), were recovered during the excavations. Additional birch wood and bark (NM 6373:18; NM 21814:1048–51; NM 21926:1721–35; NM 22403:148) were also collected as samples in the different excavations. In the 1983 excavations wooden poles were documented in the same context with human bones, which suggests that they are coeval (Heikkurinen-Montell & Erä-Esko 1984). Similar wooden poles have also been found in connection to the famous bog bodies in Europe, and they are interpreted to have fixed the bodies into the bog in order to prevent them from floating up to the surface. It is possible that the poles also had another meaning than keeping the dead under the water. The liminal character of the deceased in a burial process might result in fear towards the dead and by fixing the deceased with wood could have prevented the dead from rising again in a more ideological way too (Williams 2003: 95).

Some finds, like pieces of iron (NM 6373:7; NM 22395:60, 64) and fragments of bronze objects (NM 6373:8; NM 21926:1741) are very difficult to identify and date. The same comment also applies to the iron rods⁵ (NM 22395:61, 63) and a bronze rod (NM 22395:62) recovered in 1983. Metal rods might, for example, be remains of jewellery or belong to a previously unknown artefact form. For example, they might have been symbolic artefacts that somehow

connected the deceased to the water. A bronze rod has also been found from the Kälдамäki site (see below) suggesting that these objects could have played a special role in the funerary process or their occurrence in watery burials is mere coincidence.

In the 1886 excavations a Stone Age chisel (NM 2440:7) made of green slate was found. Stone Age tools are not rare in the Iron Age burials and the chisel could thus belong to the find context. The find catalogue informs us that one end of the tool has been broken, which could imply secondary use of the artefact, as for example for magical purposes (Wessman in press).

The finds of more recent date include horse shoes and coins. Several fragments of a horse shoe have been found during the excavations (NM 6110:7; NM 21814:4, 7, 10). All but one of the 25 coins found date to the 1960s and 1970s (NM 21814:1058; NM 21926:1739), while the remaining example is from the 18th century (NM 21926:1740). They are possibly commemoration coins of some kind that have been ‘sacrificed’ in the spring by locals or tourists visiting the site between the excavations.

The dating

In the previous research, attention has been mainly paid to specific finds like the bronze cauldron, the silver neck ring and the bronze button with garnets, which C.F. Meinander (1950: 137–9) saw as the only artefacts of real value. Of the later finds, the gold-plated brooch, for example, could also be included in this list.

The Levänluhta find has been most often dated to the beginning of Merovingian period (AD 600–650) based on the typology of the artefacts (Meinander 1950: 138; Formisto 1993: 42; Purhonen et al. 2001), but a date between AD 600 and 700 would be a bit safer, while the site would still have remained in use for a relatively short period of time (Hackman 1913a: 316; Meinander 1946: 92). In a letter by J.R. Aspelin (1892) the find is dated to AD 500 making it is somewhat older. This is corroborated by the bronze cauldron and possibly also by the plain arm ring, which seems to be older than the other finds. This suggests that not all burials derive from a short period of time. In addition, the neck ring with saddle-formed ends belong to a type

that might have been in use for a much longer time than the Merovingian period, even though it unlikely pre-dates the early Viking Age. Hence, the finds might even derive from a much longer time period, from the 5th century to the end of the 8th century AD.

KÄLDAMÄKI – A VARIATION OF THE THEME?

Kälдамäki, a very similar site to Levänluhta, is located some 28 kilometres away from Levänluhta in Vörå (Fi. Vöyri) parish in Ostrobothnia. There, human bones were found in 1935 during the drainage works of the ditch Kälдамäki bäcken that runs between two cliffs. Jacob Tegengren, an amateur archaeologist and bank manager, visited the site and reported in a letter to the National Museum⁶ that human bones had been first found by the locals already in 1901. An informant told Tegengren that two generations earlier, when people used to collect sedge (*Carex*) from the site, the help of the ‘marsh spirits’ prevented them from sinking through the squashy soil. Some bones had later been found from the site, but they had been placed in an ossuary located in the Vörå church (Formisto 1993: 151–2). Archaeological excavations were organized at the site in 1936 by Dr. Aarne Äyräpää and student C.F. Meinander (Catalogue, NBA). The excavations were continued by C.F. Meinander and Carl Olof Nordman (Catalogue, NBA) in June–July 1937. Despite efforts to retrieve them, the excavation reports have not been found from the archive at the National Board of Antiquities, but fortunately the excavation has been described later by Meinander (1950: 139–40; 1977: 37–8) and photographs are still available from the excavation.

According to Meinander, the human bones were found at a depth of 1 meter. A few cow bone fragments were also found in the same layer in addition to some wooden poles (NM 10202:3; 10438:1, 3–12; 10622:1–2), similar to the ones found from Levänluhta. This suggests that they were used for the same purpose (Meinander 1950: 139; 1977: 37). In 1967 a human cranium (NM 17276) was found from the same place (Catalogue, NBA). In addition, an axe shaft (NM 10438:2), a nearly complete fish trap (NM 10622:4) and a bronze rod (NM 10622:3), similar

to the ones in Levänluhta, have been recovered. Unfortunately, the assemblage does not include a single datable artefact (Catalogue, NBA).

At first, the crania of eight individuals were reported to have been recovered from the site (Meinander 1950: 138–40; 1977: 37; Lehtosalohilander 1984: 303). However, their number was later on corrected to six by Formisto (1993: 153), as archaeologists with no training in human osteology had done the first count. While the bones from Kälдамäki were not as well preserved as the ones from Levänluhta, at least two males and two females could be identified in the material and their age ranged from juveniles to adults and mature individuals (Formisto 1993: 153).

Meinander (1946: 92; 1950: 138–40) proposes that the deceased had been buried in a shallow bay, either directly in water or on the beach, but it is uncertain whether all of them were buried simultaneously. The disarticulation of the bone material he explains by currents that have moved the bones from their original location. According to a sediment analysis the deceased have been placed in shallow brackish water. The sediment layer from where the bones derive contains both water plants and alder (Hyypä 1936). The two ¹⁴C-dates from a single bone done in Uppsala are (Ua-991) 1500 ± 85 BP or cal. AD 451–614 and (Ua-992) 1550 ± 80 BP or cal. AD 419–579 (Formisto 1993: 152–3; 1997: 149). Thus the Kälдамäki site possibly dates either to the end of Migration period or to the beginning of Merovingian period (Purhonen et al. 2001: 220–1), which coincides with the dating of the Levänluhta site.

PREVIOUS INTERPRETATIONS

As Levänluhta has been habitually interpreted as a bog burial, the site has often been associated with negative connotations. Bogs are often understood as demeaning and non-normative burial places for people who have been unworthy for any other type of burial. The bog has thus dazzled researchers into believing that something queer or out of the ordinary must have been associated with this place of burial. Thus, the Levänluhta site has frequently and unsurprisingly been interpreted as a place for punishment, sacrifice or as a place where less significant people like slaves or the poor were buried. Also the presumed short

stature of the deceased has added the mysticism around the find.

Human sacrifice

Levänluhta was first interpreted as a place for human sacrifice by Alfred Hackman (1913a) and for archaeologists it was the prevailing theory until the 21st century. The famous Scandinavian bog bodies were seen to confirm this interpretation (Hackman 1913a), although they are mainly single depositions and not cemeteries. Moreover, the bog bodies often lack artefacts that could be interpreted as grave goods and the deceased have been found either completely naked or wearing only minor items of clothing such as caps or capes (Williams 2003: 98–9). The dress ornaments, such as the brooches and pieces of chain, found from Levänluhta do not fit well into this picture.

By the time Hackman drew his conclusion, there was already plenty of accurate information available on Scandinavian bog bodies, but it was still believed that the victims had been drowned alive into the bogs (Hackman 1913a: 313). Later research has shown that these bodies have often severe head injuries caused by blows or they have been strangled, which proves that the people deposited into a bog were actually dead (Kaul 2003: 40; Williams 2003: 92).

The interpretation of Levänluhta as a site for human sacrifice might also derive from the famous war booty sacrifices in Denmark. Also the variously dated Iron Age sacrificial sites found in wetlands in Europe might have had an effect, although this tradition seems to end already by the end of the Migration period, around AD 450–500. The cult probably moved from the lakes and the bogs to be performed in special buildings at the settlement sites (Fabech 1991)⁷. The items that were sacrificed are also more diverse – food, ceramics, animals, weapons, precious metals, jewellery and occasional humans (Kaul 2003; Larsson & Lenntorp 2004) – than at Levänluhta.

Hackman (1913a: 314) found further support for human sacrifice at Levänluhta from written sources, for example in the famous passage of the Icelandic Saga *Ynglingatal* (chapter 15, see Johansson 1991: 37). It tells the story of the Swedish king Domalde who is sacrificed in the Uppsala temple after several years of crop failure. During the first year of crop failure, the

people had tried to soothe the gods by offering animals. As this did not help, human sacrifice was performed during the second year with similar results. In the end, during the third year their king was sacrificed. Adam of Bremen, the German priest and historian, also mentions human sacrifice in a text written in AD 1076, as he describes in chapter 27 a human sacrifice at the pagan temple of Uppsala (Ubsola). The chapter tells us that sacrifices were performed in the sacred grove every ninth year and that one of each living species, including humans, of the male sex had to be offered in the grove. Adam of Bremen never visited the site himself, but he reports that up to 72 corpses had been seen hanging from the trees at times (Lindqvist 1923: 85–7). However, the text should not be taken as an eyewitness account and as a Christian priest Adam of Bremen had very likely religious and political motives to write about it.

The sacrifice interpretation was later picked up by Professor Ella Kivikoski (1961: 183), according to whom the combination of artefacts and the animal bones supported the idea. Also Dr. Pirkko-Liisa Lehtosalo-Hilander (1984: 304–5) was in favour of sacrifice interpretation, although she was dazzled by the fact that such a large force of labour had been wasted into a bog. She further stated that the population performing the sacrifice was probably local since the artefacts were domestic, but also suspected that the victims could have been of a foreign origin. Hence, the interpretation followed the old idea about the Germanic origin of the deceased.

The fragmented bone material of Levänluhta has been seen even as evidence of cannibalism. While this interpretation appeared in a journal published by the Local History Association as late as in 1985 (Kaakkuri et al. 1985: 28), it should be understood as mere fiction, as the fragmentary state of the bone material is most likely explained by taphonomy. The bones have dried out during summers, wet in spring and autumn and frozen in the wintertime (Formisto 1997: 144).

A place of punishment

Tacitus' account *Germania* (AD 98) has been frequently used in archaeology, especially during the early 20th century when its historical accuracy was seldom subjected to source criticism. The

early date of the text with somewhat vague geographical definitions used in it mean together that it cannot be projected per se to Merovingian Finland. Nevertheless, Tacitus' text has been used in connection to Levänluhta. *Germania* (chapter 12.1, see Önnersfors 2005) reveals that cowardliness and unmanly behaviour, such as desertion, were crimes that could result in a death sentence by drowning into a bog. This interpretation became very popular thanks to bog bodies found during peat cutting in Denmark, northern Germany, the Netherlands and the British Isles (Kaul 2003: 20; Williams 2003: 91).

There is also historical evidence of burying the dead in bogs. For example, people who had committed suicide, criminals and suspected witches could be doomed to be buried there (Lindsten 1933: 329). In 1599, Olof Gustafsson Stenbock, former councillor to the Swedish king Eric XIV, was captured and executed in Finland for violent behaviour and crimes against the Swedish crown. He was shot in the woods and his body was buried in a nearby bog (Fryxell 1900: 298–9). Bogs were thus places where feared people could be buried.

Finnish folklore and the national epic *Kalevala* have also functioned as popular 'evidence' in the search for an interpretation for Levänluhta. *Kalevala*, frequently cited in older Levänluhta research (e.g., Meinander 1946; 1950; Kaakkuri et al. 1985), should not be used as a source material in itself. It is mainly a creation of Elias Lönnrot, the author of the book. Instead, one should refer to the authentic folklore collected in the 19th century (Lahelma 2008: 148; SKVR-corpus).

The negative associations to bogs are found from old Finnish poems, where bogs are sometimes described as places of punishment. For example, in some poems the leading shaman Väinämöinen curses the young and arrogant Joukahainen into the bog by singing (SKVR 11: 170, 177, 184). In the Finnish folklore, the location of the Afterworld is placed behind a bottomless swamp. The bog could also serve as a place of punishment, where the souls of sinners would be tormented (Meinander 1950: 144; Siikala 1992: 157–8). Folklore connected to the beliefs of water spirits and bog spirits is also numerous in the Baltic countries, Russia, Belarus and Ukraine. While water spirits inhabiting

lakes, ponds and rivers were mostly connected to fertility, bog spirits were seen as supernatural beings connected to death. Hence, bogs were the gateways into the Afterworld (Johansons 1968).

To sum up, a bog has been comprehended as a somewhat scary and mystical place used only for desecration or punishment. But if Levänluhta was not a bog but a lake during the period of its utilization, the whole concept is changed. Moreover, the demography of the deceased shows that people of varying ages were buried there, while a claim that circa 100 people in a very small area of Ostrobothnia had committed a crime and were sentenced to death is simply absurd.

Famine or plague

A new interpretation of the Levänluhta site was put forward by Tapio Seger (1982), who assumed that the deceased could be victims of a plague or some other hazardous disease. By referring to previous research carried out on Gotland in Sweden, he suggested that the Justinian plague of AD 541–2 had devastated the settlement in the Ostrobothnia and the site was thus the mass grave for the victims.

While the interpretation has been very popular among the Finnish researchers (Formisto 1993; 1997), even Seger (1982) was ready to admit its weaknesses. For example, the evidence on black rat that used to spread the disease is lacking from Scandinavia before the medieval period. Moreover, during the Merovingian period in Finland, people probably still lived in small farmsteads instead of villages that became more common towards the medieval period. Hence, it would have been more difficult for the bacteria to spread over such a large area, and although plague does not leave visible traces on bones, there should be more evidence of this in other cemeteries if the plague really reached Finland.

Famine is another improbable alternative, as the living in Ostrobothnia during the Merovingian period was based on a combination of farming and animal husbandry. The occurrence of certain weeds suggest that animal dung was used to fertilize the fields (Engelmark 1991: 89; Engelmark & Viklund 2002: 18; Herrgård & Holmblad 2005: 153), while the importance of fishing and hunting – wild game, birds and seals – as a supplement to both the diet and the

economy (Hårding 2002: 215–6) has been proven with osteological analyses from settlement sites and cemeteries. Thus, had the crop failed, forests, rivers and the sea would have offered plenty of food for the inhabitants. Failing crop would not affect the animal husbandry either, because the fodder was gathered from wet meadows that were highly productive (Engelmark 1991: 89–95; Engelmark & Viklund 2002: 16–8; Segerström & Wallin 1991: 64; Herrgård & Holmblad 2005: 153).

Only 3 individuals in the Levänluhta material (Formisto 1993: 125–6) have so called Harris lines on their tibiae's (1 adult and 2 young individuals). Harris lines are growth arrest lines in the long bones that might result of malnutrition, infectious diseases or trauma (White & Folkens 2005: 310). Moreover, there is only one skull (a child) that seems to belong to a person suffering from *cribra orbitalia*, a disease that Formisto (1993: 116, 129) interprets to be a cause of nutrition deficiency. However, nowadays it is no longer believed to have been caused by deprived diet, but rather by infections, such as diarrhoea (White & Folkens 2005: 320, 329) It is also worth mentioning that no dental hypoplasia that would suggest dietary stress and/or starvation has been reported from the Levänluhta material. Thus, should the population had died of starvation it should also be more visible on the bones.

A mass grave for special people

The analysis of the bone material from Levänluhta has clearly shown that the demography reminds of a common cemetery with both children and adults. Despite of the grave goods, some researchers have suggested that it was a cemetery for people of low social status like slaves (Meinander 1946; 1950; Niskanen 2006). The logic behind it is probably connected to the view of bogs as demeaning places, that could not be the final resting place for people belonging to the norm.

Meinander (1946: 94) proposed that only higher social classes could have afforded to cremate their dead and had the manpower and status to raise cairns or cremation cemeteries for their deceased. Thus, people of lower status would have been forced to bury their dead uncremated in bogs and lakes⁸. Interestingly, Finnish archaeologists have traditionally

associated inhumation graves with high social status, for example the Merovingian period inhumation cemeteries from Lake Pyhäjärvi area (e.g., Cleve 1943). Yet for Meinander the shift in the burial custom was not important but the place of burial. Personally, I doubt that cremation would have been reserved for the rich, while the poor would have been buried in bogs or lakes. In the context of Levänluhta Meinander seems to ignore the fact that find material includes some prestige artefacts. The imported Roman cauldron of Vestland-type, the garnet button, the silver neck ring and the gold-plated serpent brooch are clearly finds that did not belong to the poor or to slaves (Kivikoski 1961: 183).

In fact, Meinander revised later on his interpretation (1977: 38) due to the discovery of Skedemosse offering site on the island of Öland in Sweden. There, not only weapons, jewellery, food and animals but also people had been sacrificed into a former lake around AD 250–500 (Hagberg 1963:1 44, 146–8; 1964: 227–8). However, the find categories are very different and the weapons dominating the Skedemosse find material are absent in Levänluhta

In a recently published article Markku Niskanen (2006: 34) suggests that the relatively short stature of the deceased in Levänluhta was caused by deprivation of food and that they would have, in fact, belonged to a lower social class. In other words, he agrees with the ideas put forward by Meinander (1950), who later on changed his opinion in favour of sacrifice theory.

The earlier belief that the bones would have belonged to people of Germanic ethnicity, and thus to foreigners, made the slave interpretation quite popular in Finland (Lehtosalo-Hilander 1984: 304), even though the ethnicity of the deceased was later revised. In addition, only a minor part of the bone material bear signs of hard labour that would support this idea (Formisto 1993: 115–30; 1997: 148–9).

The bones of children have been explained as unwanted or disabled individuals because of oral poetry that describes child abandonment in bogs⁹. According to Professor of Comparative Religion Juha Pentikäinen (1990: 84), child abandonment was mainly based on economic and social reasons. Also the Icelandic Sagas refer to child abandonment in case of poverty or the birth of an illegitimate child. In fact, child

abandonment was the first thing made illegal by the Christian medieval laws in Scandinavia (Pentikäinen 1990: 73–81). However, it would be somewhat unjustified to suggest that all children in the bone material would have been abandoned, due to the high number of individuals and their age distribution. Their presence could possibly be better explained with high infant and child mortality.

Victims of war

The beginning of the Merovingian period has traditionally been seen as a turbulent time by the Finnish archaeologists (Pihlman 1990: 45–7 with references). The interpretation is based on the high number of weapon burials, but the material culture also shows new features (Wickholm & Raninen 2006: 155). Especially, the increase in the number of weapons inside the cemeteries could refer to violent and restless times (Raninen 2009) and thus, it is unsurprising that both Levänluhta and Källdamäki have been interpreted as mass graves that would have resulted from warfare.

The large number of bones could support this idea, but the absence of severe trauma from them does not. The worst pathologies found are different inflammations, some of which are chronic and others are degenerative changes, such as osteoporosis and osteophytosis, which might result from age and/or hard labour. However, only a few bones show such traces (Formisto 1993: 115–30). In addition, weapon finds lack from both sites in Ostrobothnia, while the famous war booty sacrifices in southern Scandinavia and northern Germany never contain human remains (Jørgensen 2003: 16; Lund Hansen 2003: 89) and are also much older than Levänluhta. Similar war booty sacrifices from the Latvian and Lithuanian wetlands are much later, AD 900–1400, and consist mainly of weapons and jewellery without human bones (Vaitkevičius 2004: 41–2).

The archaeologist Jorma Leppäaho (1949: 79) has written about the connections between archaeology and oral poetry. Without offering further explanation, he dates much of the poetry to AD 500–700 and places the heroic epic of *Kalevala* in Satakunta and Ostrobothnia (1949: 62, 79). Leppäaho probably refers to certain poems that describe warfare between the two

geographical areas, Kalevala and Pohjola, a story that is well known to the Finns because of the *Kalevala*. According to Leppäaho (1949: 80, see also Meinander 1946: 93) Pohjola, situated in Ostrobothnia, was also called ‘the village that eats and drowns men’¹⁰. The interpretation is somewhat strange considering that the osteological report was probably known to him. If he honestly believed that soldiers had been buried or sacrificed at Levänluhta after a battle, then how did the demography of the deceased vary so much? One might also ask, where had all the weapons gone?

DISCUSSION

The Merovingian period in Ostrobothnia – what happens during the Viking Age?

The very rich material culture that flourished in southern Ostrobothnia during the Migration period changed along with the settlement pattern during the course of Merovingian period. The amount of grave goods decreases and the settlement seems to concentrate into smaller areas. During the 8th century AD the number of cemeteries is further decreased and the archaeological evidence on settlements virtually disappears by the early Viking Age implying that the area was depopulated (Meinander 1946: 99; 1977: 42–3; Edgren 1993: 229–32). The settlement continuity is indicated only by some stray finds and single burials in Kurikka, Töysä and Teuva. In addition, pollen analyses and ¹⁴C-dates from charred plant remains also indicate cultivation in parts of the area after the depopulation. In Vörå, cemetery and settlement activity is detectable until the end of Viking Age (Engelmark & Viklund 2002; Viklund 2002), but nothing is known archaeologically regarding the following Crusade period.

An alternative explanation to the discontinuity in Ostrobothnia has been put forward by archaeologists and botanists from the Umeå University in Sweden suggesting realignment in the settlement pattern that would have caused the population to move from their former settlement sites. This is believed to have been caused partly by the land upheaval process but also due to new agricultural innovations

(Baudou et al. 1991; Engelmark & Viklund 2002; Viklund 2002). However, clear evidence in form of settlement sites or cemeteries reaching from Viking Age until the end of Crusade period have not yet been found in Ostrobothnia (Wickholm 2000). Similar changes in the settlement pattern has also been observed in the western Uusimaa region during the Merovingian period where the discontinuity in the settlement is believed to have taken place in the end of Viking Age (Wickholm 2005b). A rapid downswing in the economy is also observed in Central Norrland, Sweden during the beginning of Merovingian period (Meinander 1977: 43; Selinge 1977: 288-90; Flink 1990: 199–200). Large settlement sites like Gene in Ångermanland and the Högom cemetery in Medelpad seem to have been abandoned around AD 550–600. Earlier this phenomenon was explained by changing trading routes that resulted in an economic and political crisis (Selinge 1977: 288). Lately, however, ecological reasons have been stressed. In particular, it has been suggested that the changing effects of land upheaval process could have resulted in settlement realignment (Selinge 1977: 415; Ramqvist 1992; Lindqvist & Ramqvist 1993: 129–32).

A volcanic eruption or a series of comet impacts around AD 536–7 and/or AD 545 has also been suggested to explain settlement changes during the Iron Age (Baillie 1999; Keys 1999). Hence, the catastrophic change of the environment, observed for example in tree-ring samples (Baillie 1999), would have had a global effect on the human livelihood. ‘Fimbul-winter’, a cold and long winter that lasted uninterruptedly for three years in a row, is described in Scandinavian sagas (Widgren 2005). The ‘Fimbul-winter’ is also described as a time when the sun was of no use, suggesting that there still was a summer, even though it was very cold. It has, however, not been possible to date this long cold period exactly (Gräslund 2007). Mediterranean written sources do not confirm the extent of this catastrophe, as suggested by David Keys and Mike Baillie, but they do describe a cold and damp time period that lasted approximately for a year resulting in crop failure. Also tree-rings samples from pine in Scandinavia and oaks in Northern Europe clearly indicate that something happened between AD 536 and AD 546, but

the phenomenon is not global. Interestingly, it seems that the best growing season for pine trees in Finland was in AD 535 (Arjava 2002; Arjava 2007). What are the implications of this regarding Ostrobothnia? Can sudden climate changes impact the livelihood in a way that would have altered the settlement pattern or even led to decolonization, or was the pattern now observed in archaeological evidence merely caused by social and economic changes?

Elsewhere in Finland the settlement seem to extend. The Satakunta area in western Finland becomes more important during the beginning of the Merovingian period, and it seems to have reached its peak during the Viking Age. The number of cemeteries increases both in Satakunta and in the Finland Proper and the grave goods express wealth. The few inhumation cemeteries of this era all derive from the Lake Pyhäjärvi region in Lower-Satakunta. They are richly furnished with weapons and jewellery and date from the end of the Migration period/beginning of Merovingian period to the end of Crusade period. They are often described as burials of people belonging to small social elite that was in close contact with Scandinavia and even Central Europe. Elsewhere in Finland cremation burials prevailed until the middle of the 11th century AD (Cleve 1943; Pihlman 1990; Raninen 2005).

During the Merovingian period, settlement activity is also found around Lake Ladoga in Karelia, where the cemetery finds suggest a migration from SW Finland (Uino 1997). Thus, some areas seem to become more densely populated by the end of the Merovingian period while in other areas, like Ostrobothnia and western Uusimaa, settlements are rather abandoned or alternatively settlement pattern underwent structural changes.

A lake cemetery?

In previous interpretations the macrosubfossil analysis made by Harald Lindberg has not been taken into account. The plant remains found in the peat layer of Levänluhta suggest that the burials took place in fresh water, while the plant species are such that thrive around and in lakes or ponds (Lindberg 1913). Hence, the site was probably a small lake with several underwater springs that have also been observed

in the excavations. No traces of moss have been detected among the subfossils, which makes it unlikely that Levänluhta would have been a bog at some point.

Although the idea about cemetery is not new (Meinander 1950), some essential things have been previously omitted from the discussion. The population demography based on the bones fits well for a cemetery, although I do not personally believe that the site would have been reserved only for persons of lower social status (Meinander 1950; Niskanen 2006). The bones have neither injuries suggesting war or sudden death. If the people died from disease, they must have died because of an epidemic as there are no disease induced signs on the bones (Formisto 1993: 198). If the people were sacrificed there should, in my opinion, be signs of blunt injuries in the head as in the European cases (Williams 2003: 91).

The artefacts are both of domestic and imported origin and they were found together with the bone material. This suggests that they are grave goods, some items may even be indicative of high social status. The bronze cauldron could imply that food or drink was offered to the dead, because feasting was an important burial rite in Scandinavia during the Iron Age. However, in Finland, these cauldrons have been used mainly as burial urns in cremation cemeteries. By the time of deposition the cauldron was probably old suggesting that it had been an important mnemonic item within the society (Wessman in press). On the other hand, it may simply prove that the cemetery was used for much longer time than has previously been thought. One has also to bear in mind that the Vestland type cauldrons are found in cemetery context also elsewhere (Shetelig 1912; Hjørungdal 1999) and the disposal of such item shows investment.

Another find often associated to cemeteries is burned clay and daub. To my mind, the fragments of burned clay found at Levänluhta constitute an additional proof of a cemetery and not, for example, a sacrificial site. Excavation techniques might be the reason for why the amount of burned clay has been so low. It is highly unlikely that burned clay would have been kept as a find in the late 19th century excavations and, therefore, the only examples of burned clay recovered and catalogued pertain

to the excavations in 1980s. Clay daub might have had an important role in the interplay between the living and the dead. When a person was buried it was perhaps important to bring something concrete from the settlement site to the cemetery in order to connect the dead to their new dwelling place, the cemetery. Thus, burned clay and clay daub might have been symbolic gifts or memories from home that reassured the dead in their new resting place.

The animal bones also support the idea of Levänluhta being a cemetery. The identified species of cattle, sheep, dog and bird conforms to contemporary cemetery material in Vörå (Hårding 2002: 215). Bones from dog and goat/sheep was also found in the nearby Pukkila boat burial (Kivikero 2009). The previously mentioned early ¹⁴C-date from the cattle rib (429 cal. BC–cal. AD 76) could imply earlier activity at the lake. Is this perhaps an indication of the fact that the lake had been used already long before for ritual purposes? Maybe this was the reason to why people decided to bury their dead here in the first place? Naturally, the cow drowning in the lake might have been a mere coincidence, but considering the complicated context of this site the first alternative can not be excluded either.

Several things in the Levänluhta burial are atypical for the time period. Firstly, the idea to bury the dead in a lake or a pond without cremation indicate a burial custom that was out of the norm, since the vast majority of contemporary societies cremated their dead and scattered the bones in cemeteries under level ground¹¹ or in small cairns. The closest cremation cemetery under level ground is located only 1.5 kms from Levänluhta in Ylistaro parish. Secondly, the lack of weapons and ceramics amongst the finds at Levänluhta is also atypical for the Merovingian period. The quantity and quality of metal grave goods during this time period is relatively high which differs from the Levänluhta material. Does the lack of weapons show that the deceased in Levänluhta were mostly women and children, as Niskanen has argued, or is the status and personhood of the deceased expressed in a different way from the majority of the men who identified themselves through their weapons? The weapons and other iron implements were perhaps deliberately removed before the final stages of the burial rite (Williams 2005).

Levänluhta would not be the only cemetery in Finland that has been reserved mainly for women and children. Naarankalmanmäki (Eng. 'The cemetery hill for the female sex') cremation cemetery in Lempäälä, Southern Finland contained 10 burial cairns dated to 4th–9th centuries AD with burned bones of children (*Infans I-II*) and young adults. One cairn contained a burial with a small child (*Infans I*) and a young adult; thus it was interpreted to belong to a young mother and her child. It was also the only cairn with grave goods – a pair of small equal-armed brooches –suggesting female gender (Formisto 1998; Söderholm 1998; Raike & Seppälä 2005). Also in the Vainionmäki cremation cemetery under level ground in Laitila, SW Finland, the female and male graves had been distinguished by digging them into different areas of the cemetery. The women were buried in the centre of the cemetery, on the top of the hill, while the men were buried on the slopes (Heikkurinen-Montell 1996: 94–5; Purhonen 1996: 126).

In Sweden, the famous cemetery Tuna in Badelunda, Västmanland, shows a striking contrast in the burial custom between the women and men during Vendel and Viking periods. All boat-burials belonged exclusively to high-status women¹² and the burials were all concentrated around a wealthy chamber-grave belonging to a woman from Late Roman Iron Age. Moreover, the women were buried in the centre of the cemetery while the majority of male burials had been placed at the edges. The rich female burials in Badelunda have been explained by the women's leading function in the religious sphere. The boat itself can be understood as a having a religious significance since it is often connected to Nerthus/Njord or Frö/Freyr/Freyja cult. However, also the find material suggests that the women had an active role in the fertility cult and as transmitters of tradition (Schönbäck 1981: 128, 131; Nylén & Schönbäck 1994a; 1994b; Gräslund 2001: 92–5; Fernstål 2004; Gerds 2006: 156).

Several rich weapon graves are known in cemeteries neighbouring Levänluhta; like the famous boat burial Pukkila in Isokyrö (AD 500–800) and the cemetery and settlement complex of Gullydynt in Vörå (AD 450–700). These cemeteries contain imported jewellery and weapons decorated with ornaments belonging



Fig. 4. A view from the Momminmäki cliffs. In 1913, the excavations took place on the right side of the hay barn. The result of the drainage works and the cultivation is clearly seen in the picture. Photograph by A. Hackman 1913/National Board of Antiquities.

to Salin's style I and II. Also objects implying long distance contacts – Roman gold coins, a Vestland -type cauldron, cowries (*Cyprae moneta*) and numerous glass and amber beads – have been found at Gullydynt (Hackman 1938; Erä-Esko 1965; 1986; Kivikoski 1973). Hence, the difference between these cemeteries and Levänluhta in both the burial custom and in the composition of grave goods is striking. The reasons for this might lie in the economy but I personally believe that it is more probably a sign of a different ideology.

The land uplift process is more rapid in Ostrobothnia than in other parts of Finland transforming the former seashore to marshy meadows, bogs and lakes. This dramatic change in the landscape did not only affect the livelihood, but possibly also people's minds as it changed the way the surrounding landscape was perceived. These new areas became important places, because they were different from the nearby agricultural fields. Instead of cremating

and burying their dead on top of small moraine hills, some groups apparently chose different ways, as indicated by Levänluhta and Käldämäki. It is thus possible that the land upheaval process was also reflected upon the beliefs towards the dead. Had the lake been perceived as a special place already before, as the date from the cow rib suggests, the connection to the site is even stronger.

Ostrobothnia is generally a fairly flat province lacking any higher hills. The Momminmäki hill is the closest rise in topography to Levänluhta, situated only a dozen meters ENE from the visible spring. It is a fairly long forested hill with exposed bedrock top on its south side. This steep cliff, which clearly stands out from the surrounding cultivated fields, has a fairly flat cliff top. It is possible that the cliff played some part in the funerary process, as the former lake can be clearly seen from this place (Fig. 4). Funerals are not only assemblies with the first and foremost function to dispose the dead body. Instead, the

funeral is more important for the living than for the dead. They are public meetings where old alliances are broken and new ones are re-established in order to recreate social structures (see Oestigaard & Goldhahn 2006). The visual attraction of burying the dead in the water, as well as the rituals performed during the process, has most likely impacted the people attending the funeral. In this process the Momminmäki cliff could perhaps have functioned as a 'stage' or arena from where the funerals were viewed. The hill could also later function as a place where the living interacted with their dead ancestors through different rituals such as shared meals and offerings. Interestingly, similar cliffs are also connected to the Källdamäki site (for fig., see Meinander 1950: 140). It is thus possible that these cliffs had a deeper meaning in both the funerary process and later on.

Parallels from other countries

Wetland burials are known from many other sites in northwest Europe, from the Mesolithic to the medieval period. Symbolic and ritual aspects are often connected to natural places, such as wetlands. Lakes could thus be perceived as liminal spaces where people could enter and exit, for example, the Afterworld. Levänluhta and Källdamäki, however, are the two known lake burials in Finland. Is it a mere coincidence that these two sites are located quite close to one other?

The idea about bogs and lakes as supernatural places may be related to iron-bearing ore extracted from these places. The transformation of ore, first to iron and then to a final product, is not only functionalistic but also a ritualistic, symbolic and mythological process as Terje Gansum (2004) has proposed. This metamorphosis, which is very close to death, rebirth and fertility has probably intrigued Iron Age people and might even have led to superstitious beliefs towards these sites. The Finnish folk poetry contains several poems that connect marshy areas and iron making. In one poem (SKVR 11:379) iron, water and fire are defined as the elements that bring people to the Afterworld. This connection is also highlighted in a recent colour photograph from Levänluhta, in which the ferriferous water has coloured the water reddish (Herrgård & Holmblad 2005: 171). The 'small beads of bog-ore' found by Tallgren

further underline the connection to iron. Thus, is it strange that no iron slag, iron objects or weapons have been found in the cemetery. Could it perhaps be intentional or is it possible that they have corroded away due to the ferriferous water, as Aspelin suggested already in 1892? Moreover, the lack of soft tissues and clothing, even though seemingly well preserved bone and wood material adds to the mysticism. One might ask why the preservation environment is like this. It is probable that the ditching works and the later ploughing have disrupted the preservation somehow. Extensive chemical analysis of the soil and the water should be made in order to clarify what the preservation environment is like in the Levänluhta area. Thus, the conditions could be assessed and it would also be possible to see if there are any variations within the area.

A belief known in Central and Eastern Europe tells that the souls of the dead are living in a lake or a bog. Much of the folklore connected to lakes in the Baltic Countries informs us that lakes had magical characters and that people were superstitious towards them. All sacred waters like lakes, springs or rivers, were thought to provide people with health, fertility, harvest and knowledge. Thus, people performed sacrifices and other rituals at these sites even as late as in the 19th and 20th centuries (Vaitkevicius 2004: 37–40). In the shamanistic worldview, running waters like rivers and streams, can also be gateways to the Afterworld (Siikala 1992: 163, 182, 256–7).

Jordanes describes in *Getica*, written in AD 551, how Attila, the king of the Huns was buried after his unexpected death in a dried river bed with expensive grave goods at night-time. After the burial, the slaves that had performed the burial were killed and the water was led back to the river bed. This was done to prevent looting but also in order for Attila to rest in peace in his grave (Nordenstorm 1994: 270; Nordin 1997: 167–71).

Archaeological parallels can be pointed out from Britain and Ireland, for example, where several excavations have revealed that people have also been buried in rivers and lakes, especially during the last millennia BC. Human remains, in connection to weapons and jewellery, found in rivers and lakes suggest that metal hoards could possibly be associated with funerary rituals, especially during Bronze Age

and early Iron Age (Bradley 1990: 108–9, 113; Denison 2000; Fredengren 2002: 191–2).

The Irish crannogs, multiperiod and man-made islands often with defensive palisades, have recently been studied in greater detail by Ireland's state funded research institute in archaeology (Fredengren 2007). Modern research had not been carried out on crannogs to any appreciable extent before this project. Before, it was believed that the crannogs were simply defensive islands with links to high status residences and metalwork production. However, Christina Fredengren (2002) has proposed there are also ritual and religious aspects to the crannogs from the Mesolithic into at least the early medieval period (AD 400–1100). During the Lake Settlement Project 70 human skulls were estimated to have been found in connection to the Irish crannogs (Fredengren 2007). The connection between life and death and land and water is thus evident.

Recent underwater excavations in the harbour of the famous trading post Birka in Sweden have also yielded human remains. Four human vertebrae found in 2008 could suggest an alternative burial rite during the Viking Age, although this find might also be the result of an accident (Olson, pers. comm.). When an oval brooch, an item that is mostly connected with burials, was found in the water close by the assumption for a watery burial should not be completely excluded, but the connection has to be confirmed by future research (Cassel 2008).

Parallels where the dead are buried in ponds, springs and bogs can also be pointed from Florida, where this custom was practiced among the Native Indians of the Early Archaic period (Clausen et al. 1975). The Windover cemetery, with its 160 children and adults, buried in a pond between 6000–5000 cal. BC is one of the most famous wetland cemeteries in Florida. The preservation of the dead and their grave goods is excellent; for example brain tissue could have been extracted for DNA analysis from over 90 individuals (Doran et al. 1990; Fagan 1995: 367; Snow 2003: 848). The Republic Grove is another cemetery site in Florida consisting of a bog with several springs. There human remains and artefacts were excavated in the end of the 1960s. In addition to the rich bone and artefact material, some 33 wooden poles that

had been struck vertically into the bog to keep the deceased under water have been recovered. Similar poles were also found at the Windover site (Purdy 1991: 167–70).

The idea of trying to draw parallels to Stone Age Florida is of course somewhat farfetched. However, the landscape dominated by large areas of wetlands, such as ponds and bogs, has been similar both in Florida and Ostrobothnia. This probably reflected in the way the people perceived their surrounding landscape and this, in turn, had an effect on their ideology.

CONCLUSION – WHERE ARE WE TODAY?

Levänuhta has intrigued both researchers and the general public for over a century. The recent studies have mainly focused on the bone material and pretty much disregarded the archaeological site with its artefacts. For this reason, some of the old and apparently false interpretations have been able to live on for an unjustly long time.

This article has shown that a lot can be still learned from the Levänuhta material. It seems more likely that this was a shallow lake and not a bog during the period of its active utilization. The fact that Levänuhta belongs to something else than cremation, signifies an otherness in the burial tradition. The demography of the buried based on the bone finds, in addition to the artefacts, indicates that the deceased were neither poor nor slaves, but people of relatively high social status. Moreover, the grave goods probably derive from a much longer period, from the 5th century to the end of 8th century AD than has been proposed earlier.

The question, why the cemetery is lacking iron objects is intriguing but also difficult to answer. It is imaginable that the people did not think that they needed to put iron in the lake because it was already filled with iron ore. The ferriferous water might actually have been the initiative for people to bury their dead at the site. The ideological beliefs toward lakes are documented in the vast folklore collected in Finland and the neighbouring areas. The rapid land uplift process in the area might have given impetus for these beliefs, because it probably had an effect on the way the people perceived the surrounding landscape.

Recently a group of archaeologists, biologists

and researchers in forensic medicine have started a project aiming, among other things, at extracting ancient DNA from the Levänluhta bone material (<http://www.helsinki.fi/bioscience/arageopop/members/putkonen.htm>). If they succeed in this task, the outcome will be intriguing also for archaeology and for the whole interpretation of the site. We are hopefully entitled to learn the precise date or dates of this find, whether the deceased were related to each other and what their diet was like.

Hence, the Levänluhta story is not a finished chapter. This article is merely an opening or a beginning. In the future the author will continue working with this material in order to address some of the questions that were portrayed here but remained unanswered due to the limits of this article.

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NOTES

¹ Formisto (1993: 32) misspelt Lindberg's (1913) interpretation as (Swe.) 'ett grundvattenbäcken med sött vatten' (a subsoil water basin), while the report should actually be read as 'ett grunt vattenbäcken' (a shallow water basin).

² Swe. 'Een Kella på en Sänch Engh Emellan Riarcetoby och Orismala thär Een hoph Meniskio been skall alla tijder wara sedth, och än sees' (Ståhle 1960: 299).

³ The National Museum of Finland, archaeological collections.

⁴ In her thesis, Formisto (1993: 20) states that the 1982–1984 excavation reports were not available for her, and even if the find catalogues were at hand, she does not refer to them in her work. As the excavation reports were still missing from the archive of the National

Board of Antiquities in 2009, the author contacted Liisa Erä-Esko at the National Museum of Finland who kindly supplied the 1983 excavation report to the archive – the other two reports were probably never completed, neither have any notes or diaries from the 1982 and 1984 excavations been archived. This might explain why the 1984 excavations were also forgotten by the National Board of Antiquities, as the relevant information is lacking both from their on-line database and the book *Maiseman muisti* (Purhonen et al. 2001: 220), where the site and its research history are introduced to the general public.

⁵ Fi. rautavarras.

⁶ The letter has been transcribed by Formisto (1993), while the author has not been able to locate the original from the archives of the National Board of Antiquities.

⁷ Recent studies concerning south Scandinavia has suggested that wetland sacrifices did not end in AD 500 as proposed before. There are several weapon depositions, especially swords and axes, found in river estuaries and lakes dating to Viking Age and the Middle Ages in both Scania and Zealand, but similar finds are found also in Britain, Ireland, The Netherlands and northern France. The depositions have probably been made in connection to bridges and natural harbours (Fredengren 2002: 259; Lund 2004). These depositions are however not connected to human remains.

⁸ 'believe that the poor lie in the swamps and on the bottom of the lakes' [Swe. 'jag tror att fattigfolket ligger i kärren och på sjöbottnarna.'] (Meinander 1946: 94).

⁹ 'Take the boy away to the bog and hit him on the head with a wooden pole' [Fi. 'Poika suolle vietäköhön, puulla päähän lyötäköhön'] (SKVR 11: 682, 683, 689); 'We have a ditch at home, a small stream under the field, into where the boy is dropped, into the girls child is thrown' [Fi. 'On meillä oja kotona, pellon alla pieni virta, mihin poika puotetahan, tytön lapsi työnetähän'] (SKVR XIII 1: 1279).

¹⁰ [Fi. 'Pimeä Pohjola [...] miehen syöjästä kylästä, Urhon upottajasta'] (SKVR 11: 467).

¹¹ In the beginning of the Merovingian period the so-called cremation cemeteries under level ground (Fi. polttokenttäkalmisto) appear also in Ostrobothnia as a new cemetery type. The burned bones and the artefacts from the funeral pyre are scattered into a low, irregular stone pavement. Hence, this type of cemetery is very difficult to detect in the landscape. The grave goods comprise a large amount of weapons, especially during the Merovingian period, jewellery,

ceramics and tools (see Wickholm 2005a; Wickholm & Raninen 2006; Wickholm 2008).

¹² In the nearby boat-graves of Vendel and Valsgårde the boat-graves were reserved for men only (Gräslund 2001:92).

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