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CEMETERY CONSIDERATIONS – THE CASE OF CAIRN 4 AT NOKIA VIIK, FINLAND

Abstract

Finnish cairn sites are typically defined through the concepts of ‘grave’ or ‘cemetery’, their main purpose being associated with burials. However, when one examines cemetery-related contexts in Iron Age Finland, they exhibit a great deal of variation with regard to the existence of interments, how they can be identified, and how they correlate with other finds. The case study, a re-examination of Cairn 4 at Nokia Viik, excavated in 1986–1987, illustrates some of these issues. With a focus on understanding the chronology, osteology, formation, and more detailed spatial character of the cairn, it is revealed that the monument has been accumulated over several centuries and includes elements that cannot easily be explained as individual burials or even cremation remains in a collective grave context. The site’s timespan extends from the Late Roman Iron Age and the Migration Period to the Merovingian Period and the Viking Age, where especially the latter periods seem to include deposited materials not related to any actual or distinguishable funerals. One major issue addressed is how to interpret complex structures, where distinct burials are difficult to define, and human remains only occur as one component.

Keywords: burial, cairn, cemetery, cremation, Iron Age, osteology, radiocarbon dating

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INTRODUCTION

It is a widely known issue that Iron Age cemeteries have complex, long-term formation histories. From a practical point of view, a burial is an event, but it also contains aspects that go beyond the actual funerary ceremony. The process of burying is related to both the past and present, as well

as a supposed or desired future, making it fairly multifaceted. Mortuary practices involve not only cultural/societal norms but also the intentions of the people left behind who needed to seek out new roles for themselves – their arrangements could have had an impact before, during, and after the actual interment or other final treatment of the body of the deceased.

The formation of a burial ground or cemetery consists of a series of events, which provides each site with a complex history in terms of its chronology, spatial characteristics, and the rituals performed. Embedded in the formation process of cemetery sites is the potential performance of rituals between funerals. Some have discussed the possibility of cemetery sites being used for a variety of rituals – related to not only mortuary practices but also domestic/everyday rituals. In addition, due to different processes and practices, the displacement of cemetery material is another possibility worth considering.

One way of furthering the understanding of various uses for different sites, and the diversity in their types, is to analyse cemeteries and their archaeological material in closer detail. It is important to acknowledge the whole material in its context, in addition to merely placing emphasis on the presence of human bone.

A re-evaluation of the archaeological material from Cairn 4, an earth and stone mixed cairn excavated between 1986 and 1987 at the Nokia Viik site in Finland, presents the opportunity to discuss these themes in further detail. An osteological analysis of the bone material was conducted after the excavations, but, for the purposes of this study, we have further elaborated the identification of the animal bones and analysed a small amount of the bone that was left unanalysed in the original research. We also examined the metal finds and pottery material in closer detail, reassessed the site's find distribution, and created a more detailed chronology that combines object data with new radiocarbon dates of the bone material and pottery. We focused on the chronological formation process of the cairn, as well as on its interpretation as a burial or ritual cairn in terms of its deposition patterns.

BACKGROUND

The concepts of cemetery, cremation burial, and grave

From a contemporary point-of-view, a cemetery is a burial ground, more specifically a graveyard, i.e., a distinct burial space. In Europe, this form of burying has its roots in prehistory (e.g., Snodgrass

2015), but it became more organized during the Middle Ages. The form of the graveyard as we experience it today was established in the late 18th and early 19th centuries (Anthony 2016). In Finnish archaeology, the concept of cemetery (in Finnish *kalmisto*) is commonly used for sites and monuments that contain burials or have been interpreted as probable burial sites. In official ontology, the definition encompasses sites/locations containing multiple (or collective) burials, often dating before the spread of Christianity.¹

Cremated archaeological human remains, as well as their deposition and interpretation, are topics that have received much discussion (e.g., Appelgren & Renck 2007; Schmidt & Symes 2008; Kaliff & Østigård 2013; Röst 2016; Williams et al. 2017; Therus 2019). Many researchers have also elaborated further on the more specific challenges related to the identification, definition, and interpretation of burials and cemeteries (cf. Asplund et al. 2019: 84, with references). Wessman (2010: 29–30; cf. Wessman & Williams 2017) has previously discussed the definition of the term 'grave' in Finland. It has been pointed out that some deposits have been interpreted as graves without detailed analysis of the quantity or quality of the present bone material. Indeed, sometimes the presence of a single fragment of human bone has been enough to define a grave-like structure as a grave (Taavitsainen 2003: 33), while in other sites, the existence of larger collections of human bone in a structure has not merited the same interpretation (Raik & Seppälä 2005: 65). In addition, some have attempted to identify burial events, and thus individual graves, on the basis of clusters of bone and/or artefacts, even if the burial form in cremation cemeteries under level ground is generally considered collective (Formisto 1996; Heikkurinen-Montell 1996; Hietala 2003). The terms 'cemetery', 'cremation burial' and 'grave' have seemingly been applied to a wide variety of sites and features, the interpretations of which are based on their structures or the presence of human bone (cf. Muhonen 2009: 295).

One definition for 'burying' is placing the dead in a 'burial site' that has been designed to last for a generation or more, as a reminder to

future descendants of their ancestors (Herschend 2009: 37; Lang 2011: 110). If moving from the material content and physical structure of graves towards the process of burying, Thereus (2019: 410) defines the archaeological notion of burial customs as ‘all collective practices, often of a rite of passage nature, associated with a deceased person’s remains, memorial, or remembrance, which have left material traces.’ With regard to the ‘burial’ concept, instead of seeing it in a functionalist perspective as ‘simply a container for the corpse’, it is identified as an expression of commemorative practices established in society (Thereus 2019: 412).

Quantities of cremated bone material

In Finland, the small quantity of burnt human bone present in graves or cemeteries has often not been considered problematic (Wessman 2010: 29). Finland’s typically acidic soil is poor for the preservation of unburned bone and, perhaps because of this, the presence of small volumes of any type of bone material is usually considered to represent the norm. However, after cremation – be it of the modern or ancient kind –, a considerable amount of human bone should still be present and osteologically identifiable – up to 30–140-mm fragments and with a 99% rate of element identification (McKinley 1994a; 1994b, Plates II–VI; 2013: 163–64). Modern cremations typically result in 1600–3600 g of bone material, with an average of 3000 g (McKinley 1989: 66).

The amount of bone in archaeological deposits is affected by the recovery rate from the pyre site, the deposition and handling of the bones, the destruction in the soil, and archaeological recovery methods (McKinley 1989; 1994a). Jaqueline McKinley (1989) has stated that, in archaeological contexts, the weight of bones from single adult cremations seem to vary between 200 and 2000 g, with an average of 800 g. These figures are in line with Finnish cremation urn or cremation pit burials. In the Early Roman Iron Age cemetery site Käsämäki in Maaria, the depositions interpreted as single adult cremation burials range from 5 g (KM 12686:89) to 1955 g (KM 8773:895, adult male), most falling within the range of 300–1000 g (Lahtiperä 1973).

Bones, ritual, symbolism

Even if the amount of bone material in Finnish archaeological burial sites is often low, it is evident that there is a lot of variation in the amounts of burnt human bone. This is the case in other areas as well (cf. Thereus 2019: 210–211). Small amounts of burnt human bone should not be considered the default, but rather a phenomenon that ought to be discussed with reference to ritual and taphonomic contexts. In the context of Finnish cremation burials, the possibility that the small amount of bone material could be due to deliberate partial burials (‘token burials’) has received some discussion (Taavitsainen 2003: 33; Tourunen & Troy 2011; Saipio 2017), but not in depth. A token (memento, symbolic, nominal) burial is a challenging term to define, but it is still a concept that is often used when discussing the deposition of burnt human remains (Andersson 2008; Kaliff & Østigård 2013: 79; McKinley 2013: 154).² In our article, we recognize the possibility of deliberate partial burials, i.e. burials where the deposited bone material intentionally contains only part of the whole cremation. We acknowledge that identifying and interpreting the purpose behind past action is challenging. However, repeating patterns of deposition, in this case in mortuary and other ritual practices, offer the possibility of studying these past intentions (cf. Andersson 2008: 112).

In a study of Iron Age (ca. AD 300–700) burnt bone deposits from the Lunda site in Sweden, Gunnar Andersson (2008) discusses the distinguishing factors of grave deposits and grave-like structures used for offerings. According to Andersson’s interpretation, part of the burial pattern in the Lunda cremations, dating from the 7th and 8th centuries AD, was to deposit part of the human bone material to some separate place, leaving only part of the total bone material for the main burial. According to Andersson, the modern concept of a grave is perhaps not applicable to prehistoric contexts – instead, we should focus our discussion on more general ritual behavior and depositions.

The questions related to the presence of low amounts of bone are not restricted to the Late Iron Age. In Eastern Sweden, for example, Late Bronze Age graves often contain only small

amounts of bone (Röst 2016). This continued in the Early Iron Age, when the variation of the number of bones is so striking that it cannot be just a coincidence (Appelgren & Renck 2007: 40). With respect to the Bronze Age in Finland, there have a long time been discussions on how the cremated bones in cairns from the period could be interpreted. The related issues include, for example, the small amounts of bone found and whether they should be treated as mere burials or as sites that also involve other meanings related to, for example, the cairn as a manifestation of a place and the symbolic control over its areas and landscapes. The bones of ancestors may have been used to connect a place with a kin group or tribe – thus actually being built primarily for the living and not for the deceased (Asplund 2008: 77–79). Accordingly, Jarkko Saipio (2017: 227) emphasizes the possibility that burnt human bone remains in Finnish Bronze Age inland cairns could derive from a variety of rituals, not all funerary in nature.³ There is a variation in the amount of human bone material recovered from cairns, ranging from one fragment to several hundreds of grams per individual (Vormisto 1985; Saipio 2017: 227). However, the quantification and comparison of this variation is challenging, due, e.g., to varying taphonomic factors affecting the demise of the bone material.

Osteological analyses of human bones in Early and Middle Iron Age cairns in Finland

While burnt human bones have previously been recovered from several cairns or other stone structures dating to the Roman Iron Age or Migration Period, osteological analyses and radiocarbon dates of the burials or burial-related artefacts are scarce. However, the analyzed cairns exhibit variation in the amount and distribution of finds and bone material. Providing an exhaustive list of all available cairns is not within the scope of this article, but the following sites are examples selected to represent the variation found in cairns dating to the Early and Middle Iron Age.

Only a meagre amount of human bone material has been identified in some Iron Age burial cairns. In the cemetery site of Naarankalmanmäki, located in Lempäälä, ca. 20 km SE of the Viik site, two radiocarbon dates have been made

from the charcoal found in Cairn 3. One gave a result to the Bronze Age (1492–902 calBC) and the other to the Late Roman Iron Age (calAD 234–541), of which the latter is considered more indicative of the age of the burial (Raiké & Seppälä 2005: 64). Here, 124 g of burnt bones of a child and pottery fragments were recovered from a tight cluster near the central stone (Raiké & Seppälä 2005: 49, 77). Two radiocarbon dates are also available from Cairn 5, the first one from a cereal grain (calAD 183–538) and the second one from the organic crust of a potsherd (calAD 260–602). This cairn included ca. 53 g of burnt bone. Most of the bone belonged to a child, but one elk bone was also found. The bones were found scattered in the cairn. Most of the finds consisted of pottery and iron slag, leading to the conclusion that the structure represented a sacrificial cairn instead of a burial (Raiké & Seppälä 2005: 65, 77). In the latter case the potential complexity of the monument could be considered, i.e., the possibility of both a burial and other ritual activity. It is possible that cairns have not necessarily been specifically graves or sacrificial cairns but have had different functions during their time of use (cf. Moilanen 2015: 36).

The analysis of bone material from the Päiväniemi cemetery, also in Lempäälä, belonging to a partially excavated burial cairn resulted in the recovery of just ca. 100 g of burnt bone (Formisto 1987; Katiskoski 1987). The bones were found together with bronze jewelry and pottery fragments in a concentration at excavation layers three and four. The bone material consisted of human bone from at least one individual and four bear claws (Formisto 1987). However, most of the pottery was recovered outside of the burial cluster, scattered around the excavation area (Katiskoski 1987: 8). The artefacts found in the cairn date to the Late Roman Iron Age (ca. AD 200–400) and to the Merovingian period (ca. AD 600–800).

A Late Roman Iron Age cairn in Ketohaka 2 site in Salo, Southwest Finland, exhibits a different burial pattern. Here, ca. 19 kg of burnt bone belonging to at least 19 individuals – 18 adults and one infant – was identified (Hirviluoto & Vormisto 1984). The bones, along with various artefacts, such as bronze jewelry, knives, and a spearhead, were concentrated in a sooty layer ca. 40 cm in thickness. No pottery or

animal bones were found in this cairn. Several individuals and a total of ca. 21.7 kg of burnt bone were also recovered from the excavations of a cairn in Sotkalinna site in Nokia, dating to the Merovingian Period and possibly the Viking Age (Hakanpää 1996; 1997). The analyzed bone material (15.9 kg) was comprised of bones from at least five human individuals, as well as bear claws and sheep or goat bones (Fisher 1997). The bone material was found clustered on the western side of the cairn. However, the distribution of the pottery and burnt clay did not follow the distribution of the burnt bone (Hakanpää 1996; 1997).

Complex formation processes

Iron Age cemeteries and cairns in Finland often have complex formation histories that are increasingly emphasized by the growing number of radiocarbon dates from the sites. It has been

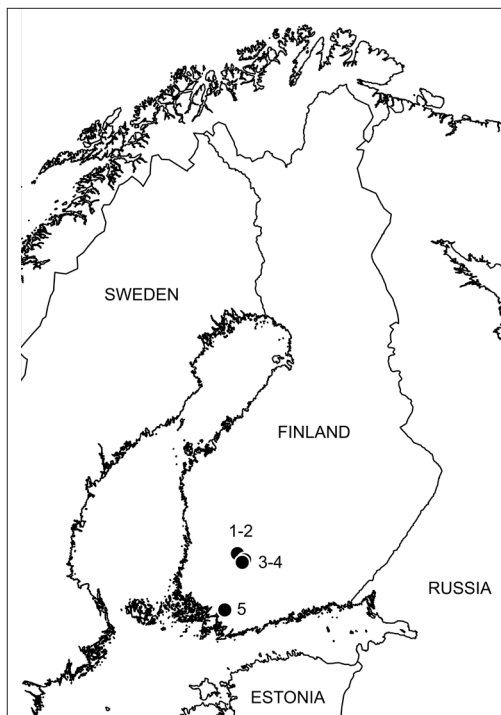


Figure 1. The location of Nokia Viik and the other sites referenced in the text: 1) Nokia, Viik, 2) Nokia, Sotkalinna, 3) Lempäälä, Naarankalmanmäki, 4) Lempäälä, Päivääniemi and 5) Salo, Ketohaka. Map: H. Asplund.

suggested that remembrance rituals, offerings, using sites as waste heaps or ritual deposition of domestic waste are responsible for the accumulation of finds, and that these may have been contemporary in nature or have occurred later than the initial burials (e.g., Taavitsainen 1992; Muhonen 2009; Mäntylä-Asplund & Storå 2010; Wessman 2010; Asplund et al. 2019).

A study of an earth and stone mixed cairn at Roismala Ristimäki site in Sastamala emphasizes the potential complexity of depositions in a site that has primarily been interpreted as a single formation event (Asplund et al. 2019). In this case, an inhumation burial was radiocarbon dated to the Late Roman Iron Age. However, from the cairn above the inhumation burial, a cluster of unburned human bone was dated to the end of the Pre-Roman Iron Age or to the Early Roman Iron Age, as well as pottery and animal bone to the Migration Period and the Merovingian Period. The latest date was given to a partial sheep skeleton at the bottom of the cairn. The results emphasize the complex formation process and several construction phases of Iron Age cairns, involving secondary deposition of a variety of materials, including – evidently reburied – old human remains.

CAIRN 4 AT NOKIA VIIK – MATERIAL AND RESULTS

The Nokia Viik site and its previous interpretations

Already in the late 19th century, late Iron Age objects were described from the area of Viik Manor (Heikel 1882: 52–54), but the exact locations of the sites of these finds are not clear. The actual Viik site (Fig. 1) was first registered in an archaeological survey of the municipality of Nokia in 1948.⁴ Five burial mounds were identified at the time (Erä-Esko 1948: 22). A survey in 1985 described four of them (Renvall & Salo 1986: 35–36). Further investigations in 1999 indicated a somewhat larger number of structures, with a total of eight (Haimila & Taavitsainen 1999: 5–6). The first (1986–1987) excavated structure was Cairn 4, according to the latest numbering

(Haimila & Taavitsainen 1999: 6).⁵ Cairn 3 was excavated in 1988 (Pietikäinen & Salo 1989) and cairn 7 in 1999. Furthermore, a test pit was dug in the center of Cairn 8 (Haimila & Taavitsainen 1999). In this study, Cairn 4 was chosen for closer examination to analyze and understand the monument more comprehensively than before.

The total excavated area of Cairn 4 is 160 m² in size (Koivisto & Salo 1988: 3; Koivisto 1991: 31). The construction has been described in many ways, such as ‘great mound’ (in Finnish *suurkumpu*) (e.g., Koivisto & Salo 1988: 3), but already during its excavation, it became apparent that the monument consists of several parts (Fig. 2).⁶ The main structure excavated in 1986 (in the northern part of the complex) has been interpreted as a Migration Period burial cairn with a central stone and a surrounding stone circle (Renvall & Salo 1987). An earthen mound (without any stones) was added to it at a later period in time. Furthermore, according to the excavation report,

the complex was later extended to the east and south in the form of a construction resembling an underground cremation cemetery.

The conclusion of the 1986 excavation was that the complex represented a rare ‘extended burial mound’ in which several burials had been made.⁷ Two to three separate burials were distinguished, and it was considered likely that the cairn with a stone circle contained the remains of one male burial (even though the finds were distributed all around the area). However, no concentrations of bone were detected, and the amount of burnt bone was low in general (Renvall & Salo 1987). One further burial, now based on the concentration of bone, was identified in excavation squares 102–104/98, though no objects could be linked to the burial (Renvall & Salo 1987). A third burial was recognized as a separate stone setting in the eastern part of the excavated area. Here, a knife, a glass bead, two clay beads, as well as a fragment of a bracelet were found, likely indicating a Viking Age female burial (Renvall & Salo

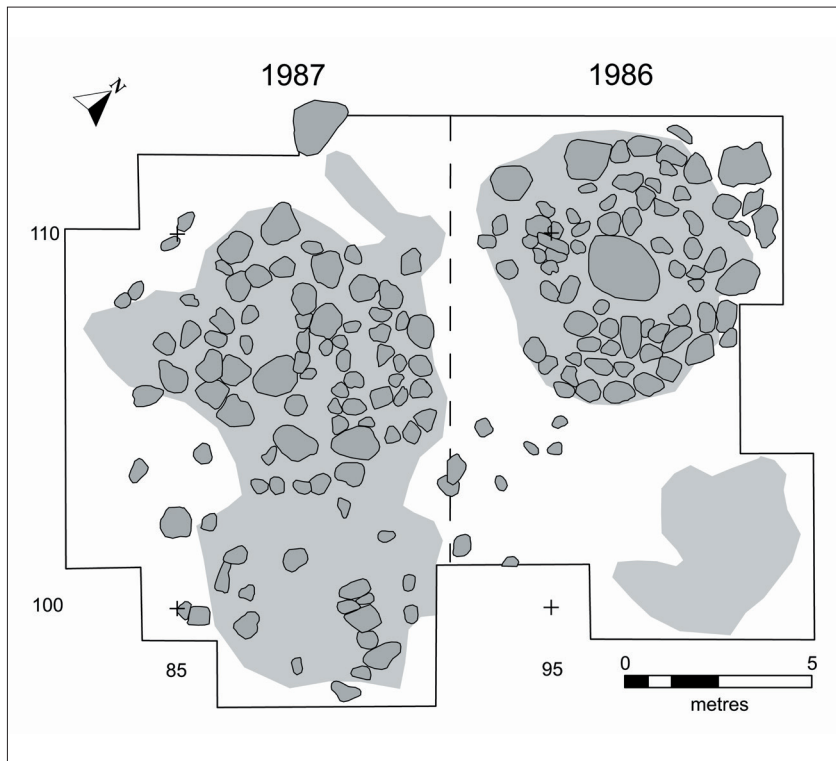


Figure 2. Main stone constructions of Viik Cairn 4 as documented in layer 4 of both excavations, except for the separate stone setting in the eastern part of the 1986 excavation area, best visible in layer 1. Gray shading represents areas with smaller stones. Map: H. Asplund and S. Salomaa.

1987). These examples illustrate the problem of defining a grave – evidently, it can be based on the occurrence of bones and/or supposedly burial-related artefacts.

The main structure, excavated in 1987 in the southwestern part of the complex, was a roundish cairn surrounded by stones partly bigger than in the rest of the cairn, but still did not likely indicate a bordering stone circle (Koivisto & Salo 1988: 18). Looking at some of the excavation maps, one could also interpret this as a rectangular structure. Based on the metal objects found, the construction of this cairn began in the Late Roman Iron Age, but the site was used also in the Migration Period. A couple of secondary stone settings were impossible to date accurately, but there was nothing to suggest that they would be considerably younger (Koivisto & Salo 1988: 19). One secondary stone setting in close connection with the cairn suggested at least one burial, based

on some finds (a knife, a fragment of a sickle, three arrowheads, and a ring made of thin bronze thread) (Koivisto & Salo 1988: 18).

According to the interpretations of the excavations made in 1986 and 1987, Cairn 4 (the combination of separate stone and earth mixed constructions) could be dated from the Late Roman Iron Age to the Viking Age (Koivisto & Salo 1988: 19; Koivisto 1991: 33). The archaeological identification of individual burials proved difficult, but the cairn was estimated to contain several interments, which is supported by an osteological analysis where a minimum of three individuals was identified. However, the distribution of the bones suggested, that both main structures could have contained at least three burials (Koivisto 1991: 33). The assumed purpose of the earthen mound between the two cairns was that it serves to unite the two cairns into one big mound. According to field observations, a further

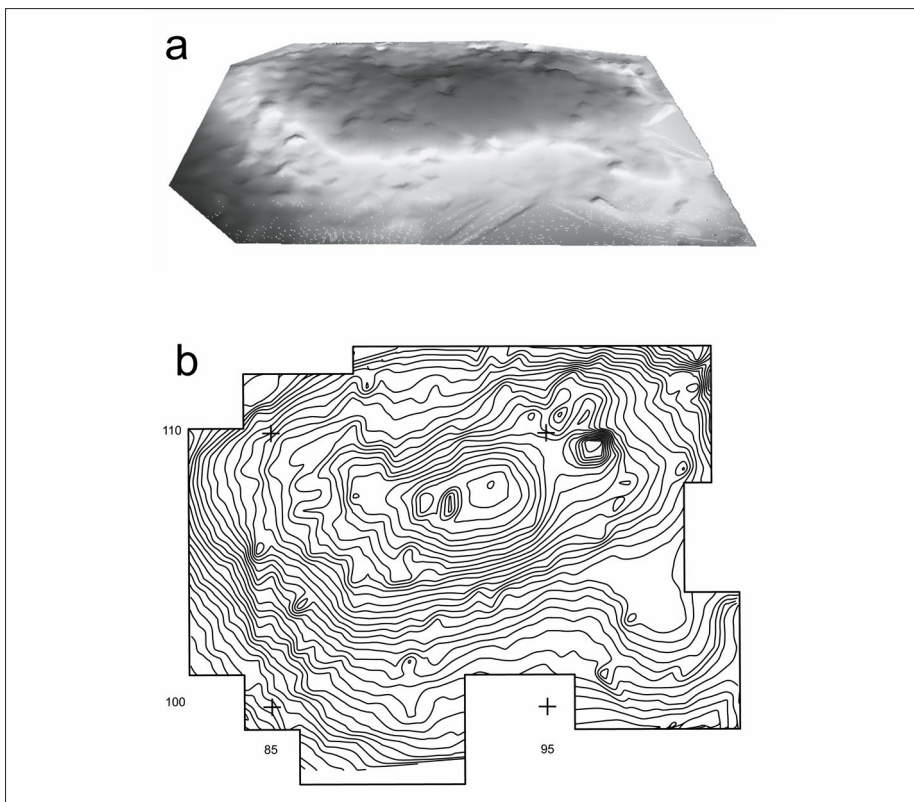


Figure 3. Nokia Viik, Cairn 4, modelled using leveling data, depicted as a) 3D model and b) contour lines. Map: H. Asplund.

one peculiar detail is that nothing pointed to an Iron Age dating of this uniting mound (Koivisto & Salo 1988: 20).⁸

Even though the appearance of the mound might have seemed prominent, the height of the monument could not have been more than one meter, based on the leveling readings from the topsoil and the bottom of the lowermost excavated layer. A 3D model made using levelling data in connection with this study reveals that the mound is not symmetrical and that the topsoil of the excavated areas displays a more complex change in elevations. The mound-like appearance, however, is clearly visible, as is the center stone of the structure excavated in 1986 (Fig.3).

Contrary to Cairn 4, the other excavated cairns at the site contained a more limited number of finds. Cairn 3 does not seem to be related to any Iron Age activities at all.⁹ Cairn 7, excavated in 1999, was clearly intentionally built, but the minor amount of bone present puts into question whether it represents an actual burial monument. The cairn has been interpreted as a possible ritual burial or sacrificial cairn, or even some kind of waste heap (Haimila & Taavitsainen 1999). The main parts of the finds consisted of ceramics (67.8%), followed by slag and quarts. Only eight pieces of bone (7.5 g) were found (Haimila & Taavitsainen 1999: 13).

Reanalysis of the metal objects

Several metal objects have been found in Cairn 4. They consist of jewelry, tools, and weapons as well as unidentifiable iron and bronze fragments. Majority of the metal artifacts are from the stone structure excavated in 1987, consisting mostly of jewelry and iron arrowheads.¹⁰ There are also some arrowheads in the stone structure excavated in 1986 and only a few are outside of these structures. The same applies to the jewelry, which was mainly found in or close to the stone constructions (see the section on spatial analysis, below). Other tools and weapons appear also outside of these structures.

In the stone structure excavated in 1986 two objects are of special interest. A socketed axe without eyelet (TYA 426:32) and a spearhead

(TYA 426:31) were found together underneath the central stone of the structure, and therefore represent a single assemblage. Similar spearheads in Finland have been dated to the Migration Period (Salmo 1938: 192; Kivikoski 1973: 52). Socketed axes without eyelets were common in the Early Roman Period and remained in use up to the Merovingian Period (Salo 1968: 163–164; Asplund 2008: 246). It is probable that these objects date the structure to the Migration period, since it is unlikely that objects could have been added under the central stone several times.

In the stone structure excavated in 1987 several datable objects were found. They originate from the bottom layers of the structure, dating mostly from the Late Roman Iron Age to the Migration Period.

Several finds of jewellery were found in this stone structure. The crossbow fibula with a tendril foot (TYA 426:6; Fig. 4a) represents a common type of crossbow fibula in Finland (cf. Keskitalo 1979: 151–159). Fibulae of this type are typically found in an area that encompasses large portions of Scandinavia and Central and Eastern Europe. These were in use from the beginning of the Late Roman Iron Age to the early Migration Period (Godłowski 2011: 75–77; Heynowski 2016: 89). The closest parallels (type A161) date from the early to mid-Late Roman Period (Nowakowski: 1998: 52; Heideman Lutz 2010: 156–157).

The crossbow fibula with a straight foot (TYA 426:5; Fig. 4b) is a simple variant of this group. Previous examples from Finland have been discovered in regions of Ostrobothnia, Satakunta and Finland Proper (Keskitalo 1979: 166–167). The closest parallels (type A170) can be found from Gotland, Öland and Bornholm in Sweden and Denmark (Keskitalo 1979: 167). These date from the early to mid-Late Roman Period (Heideman Lutz 2010: 164).

The cross-ribbed fibula (TYA 426:2; Fig. 4c) represents a Finnish variant of a type that has been developed from Estonian and Latvian examples. These are heavily concentrated in the region of Ostrobothnia (cf. Moora 1938: 94–97; Meinander 1950: 74–75; Hauptman 1998: 169–170, Abb. 13). The Finnish finds originate from the early Migration Period (Meinander 1950: 75, 80).

The first crossbow fibula with a triangular foot (TYA 426:4; Fig. 4d) is a simple variant with few parallels from Finland (Keskitalo 1979: 184–185). Similar brooches have been found in Öland and the Baltics, but the form seems to represent a local development (Keskitalo 1979: 185). The Finnish examples date to the transition of the Late Roman and Migration Period (Keskitalo 1979: 185).

The other two crossbow fibulae with triangular foot (TYA 426:1, 3; Fig. 4e-f) also represent local developments, and they are well known from the region of Ostrobothnia. The form was influenced by fibulae designs from Gotland and the Baltics (Meinander 1950: 84). Most of the Finnish fibulae date to the early Migration Period (Meinander 1950: 85).

In addition to these, other pieces and fragments of jewelry have been found in Cairn 4: two copper alloy bracelets (TYA 426:11,

12) that have parallels from the Late Roman Period (cf. Keskitalo 1979: 220, 222–223) and a broken copper alloy neck-ring with thickened ends (TYA 426:14) that has Late Roman Period parallels from Finland (cf. Kivikoski 1973: 48).

There are also several datable weapons and tools from the stone structure excavated in 1987. There were four arrowheads (TYA 426: 21–22, 26, 28; Fig. 4) in the construction dating roughly to the Late Roman and Migration Periods (Hiekkänen 1979: 67; Koivisto 1991: 33). One arrowhead is a barbed type (TYA 426:24; Fig. 5), which represents Hiekkänen's group 3GII. This type is rare in Finland, as only a few finds have been discovered in regions of Uusimaa, Satakunta, Häme, and Central Ostrobothnia. The earliest one is from a site dating to the Early to Late Roman Period, while the youngest site dates to the Migration Period (Hiekkänen 1979: 69–71). There is also

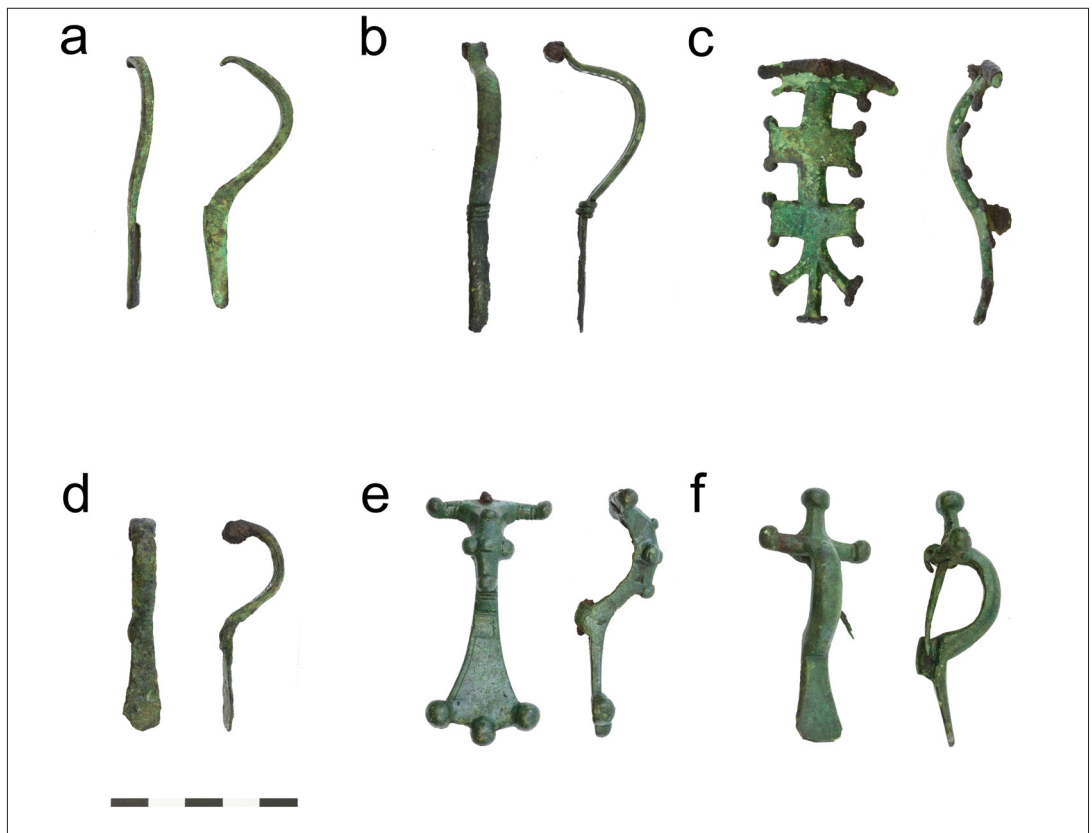


Figure 4. Fibulae from Nokia Viik, Cairn 4. Photo: S.-V. Härmä.

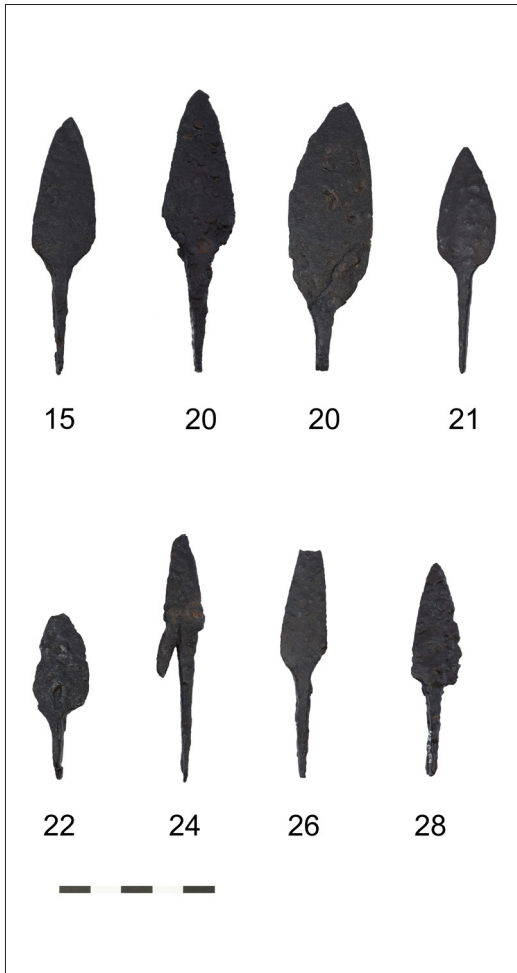


Figure 5. Examples of iron arrowheads from Nokia Viik, Cairn 4. Numbers refer to the find catalogues TYA 337 (the two arrowheads top left) and TYA 426. Photo: S.-V. Härmä.

a socketed axe without eyelet (TYA 426:33) dating from the Early Roman Period up to the Merovingian Period (Salo 1968: 163–164; Asplund 2008: 246).

Outside of the main stone structures only a few datable objects have been found. These include three iron arrowheads (TYA 337:15, 20; TYA 426: 20) dating to the Late Roman and Migration Periods (Hiekkanen 1979: 67; Koivisto 1991: 33), an oval fire striker (TYA 337:6), the earliest examples dating to the late Merovingian Period, and being common in the Late Iron Age (Kivikoski 1973: 88) as

well as a blue glass serial bead (TYA 337:5) dated to the Viking Age (Koivisto 1991: 33) from the low stone structure excavated 1986.

In addition to these, Cairn 4 featured a wide assortment of fragmented iron artefacts and finds more difficult to date. The better-preserved examples include three knives and one broken knife blade, two clay beads, four finger-rings, and two copper alloy spirals.¹¹

Analysis of the pottery material

According to the rim pieces, the area excavated in 1986 contained fragments from at least 15 different pots (Salomaa 2020). Nine of them are crude tempered, with over 2-mm-sized crushed stone in the paste. Six are fine tempered, with sub-2-mm-sized crushed stone. All the pots are undecorated, and their surfaces have been smoothed. According to the shape of the rim and variation with regard to the temper used, the material consists of small fragments from different pots – none of the pots come close to accounting for an entire vessel. In two different pots (numbers 1.6 and 1.7), a couple of rim pieces fit together, but the rest are connected only in resemblance.¹² Most of the pots are s-profiled (9 pots), but there are also pieces from pots with straight profiles (5 pots), as well as one pot with an inward-turning rim.

In the area excavated in 1987, pieces from at least 17 different pots were found (Salomaa 2020). Of these, ten are crude tempered and eight fine tempered. Most of the pots from this area are undecorated with smoothed surfaces, excluding one pot (number 2.1) belonging to the Morby Ware type of Early Metal Period ceramics (Meinander 1954: 173–179; 1969: 40–47; Edgren 1969; 1999: 313–317; Asplund 2008: 210–213). Again, only a few pieces from each pot were recovered, with none coming even close to accounting for a whole specimen. In addition, the pieces from just two pots (numbers 2.4 and 2.10) actually fit together. Nine of the pots have an s-profiled rim; the rest feature a straight profile (6 pots) or an inward-turning rim (3 pots).

A comparison of the pieces of different pots from both areas reveals that, in seven cases, the pieces could have originated from the same pot. In this case, the minimum number of different

pots in the total excavated area is 24. However, the pieces from different areas do not fit together.

The only typologically identifiable ceramic type is Morby Ware, represented by fragments from at least one vessel. This coarse pot features a striated surface and is decorated with imprints, also on the top of its rim. Crust from one fragment of this particular pot was radiocarbon dated to the Late Bronze Age or (more probably) the Early Iron Age (see the chapter on chronology). These fragments have been interpreted as occurring in a secondary context and may have ended up in the monument during some phase of its construction (Koivisto 1991: 33). One small piece of pottery with pit decorations (TYA 426:243), most likely representing the same type, was found from a test pit dug in the vicinity of the main excavation area (Koivisto & Salo 1988: 16).

Most of the crude-tempered pots could be common Iron Age ceramics, used mainly in everyday contexts (Carpelan 1980: 193; Enqvist 2005: 98–99). This follows the general interpretation made in the excavation report of the 1987 material, according to which the majority represented coarse, undecorated pottery typical for the Iron Age (Koivisto & Salo 1988: 16). The fine-tempered pots, although carefully made, are not decorated or polished and thus cannot be linked to the finer ceramics occurring during the Late Iron Age in Finland (cf. Lehtosalo-Hilander 1982: 76–84). The pieces are so small that no orifices could be measured. However, with regard to the thickness and shape of the rim, some of the pots differ from one another, and it is likely that they have been used for different purposes (Fig. 6).

In the report of the 1987 excavation, it was noted that some large concentrations of pottery were found, but no pots broken in situ (Koivisto & Salo 1988: 16). According to the re-examination, this also applies to the 1986 excavation. The material in total is quite fragmented, with an average sherd weight of 3.8 g. In layers 1–4, pieces of ceramics occur both in the earthen mound and in the stone structure excavated in 1987. In layers 5–6, the pieces occur in the stone structure, whereas in layers 7–9, they only appear in the earthen mound in the middle of the complex. However, the stone structure excavated in 1986 featured markedly less or even hardly any pottery. Although no

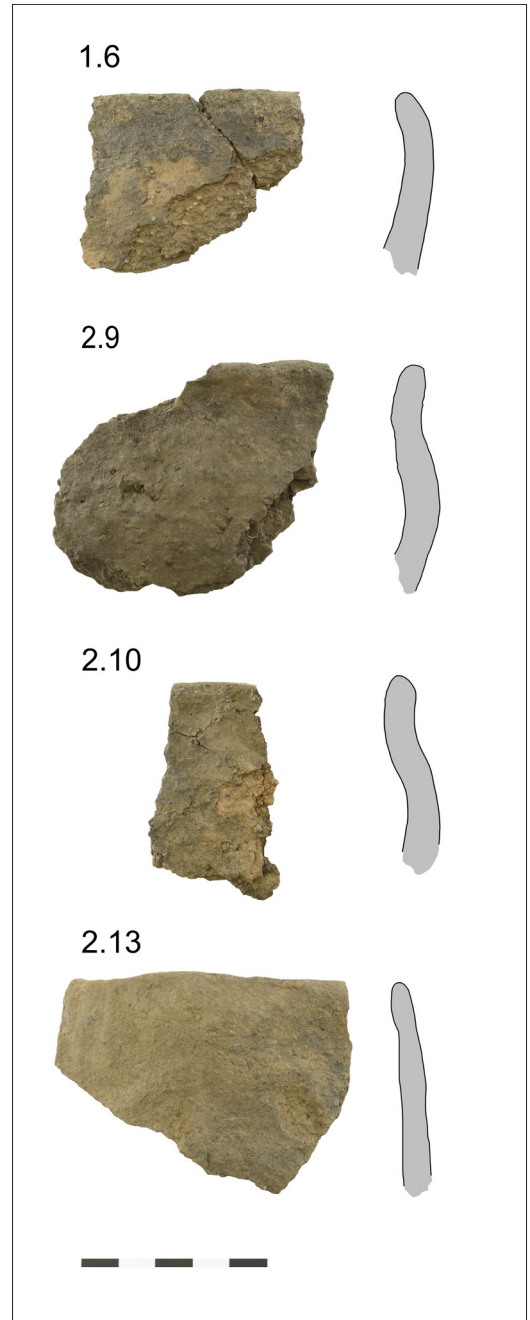


Fig. 6. Examples of pots found in Nokia Viik, Cairn 4. Each identified pot has its own number that was given during the ceramics analysis process. Pictures and descriptions of each identified pot can be found in the ceramics analysis report (Salomaa 2020). Photo: S. Salomaa and S.-V. Härmä.

whole vessels were put into the complex, the spatial distribution suggests that there was some intention or depositional reason behind the distribution of the ceramics.

The two dated potsherds representing the Late Iron Age (TYA 337:147 and TYA 426:155) are from two different parts of the monument – square 104/92 in layer 4 and square 104/84 in layer 4, respectively. While these pieces date to slightly different periods of the Late Iron Age, they were found in the same layer. Furthermore, some of the fitting rim pieces were discovered in very different locations, suggesting that later disturbances affected the material in the complex and caused the ceramics that had been added in different periods to mix.¹³ Another possibility is that the material had already been mixed before ending up in the complex.

Osteological results

The osteological material from the site was originally analyzed by Tarja Formisto (1991). A total of six samples (TYA 337:156–161) that were not included in the original analysis for an unknown reason were now analyzed for this article. In addition, the animal bone material was re-examined and clarified further, such as by identifying unidentified fish bones and allocating previously unidentified materials to the correct species. The original analysis did not include a NISP (Number of Identified Fragments) table; this was now counted based on the original and new analysis (Table 1). The fragment number of unidentified bones was not counted, and therefore the distribution analyses are based on weight.

The osteological material consists of both burnt and unburned bone. Formisto (1991) divided the material into human, animal, and unidentified fractions, and this division is also used in this article. All the human bones recovered from the site, 491 fragments in total, are burnt. According to Formisto (1991), the bone material includes a minimum of three individuals identified by the piece of skull above the right eye socket (*margo supraorbitalis* and *arcus superciliaris*) – one adult male and two children (TYA 426:255 and 312 belonging together, 291, 299). An interesting fact regarding the two fitting eye socket bones is that they were found in different excavation

squares and layers. The vertical positions of the pieces were quite different, as the one was found in layer 1 and the other in layer 5.¹⁴ This is an interesting detail, and difficult to interpret without considering a mixing of strata or elements in the deposition process. A total of 371.2 g of human bone was recovered from the site, with a total of 540.4 g of human and unidentified burnt bone in all.

The animal bone material consists of 235 g of burnt and 147.2 g of unburnt fragments. The identified animal species include sheep or goat (*Ovis aries/Capra hircus*), pig (*Sus scrofa*), cattle (*Bos taurus*), horse (*Equus caballus*), European elk (*Alces alces*), northern pike (*Esox lucius*), and cyprinids (Cyprinidae).

Spatial analysis

When the excavation of Cairn 4 began in 1986, the excavation area was divided into 2x2-meter squares (Renvall & Salo 1987). The same coordinate system and fixation point for levelling were used during the 1987 season (Koivisto & Salo 1988: 4; Koivisto 1991: 31). The 1986 excavation was conducted in five technical excavation layers, while in 1987, the total amount of documented technical layers was nine. This poses problems as to whether the layers are compatible. While they are certainly not parallel in detail, it seems that the 1987 excavation reached deeper in the monument than before, in which case the top-level layers (which contained the majority of the finds) might be comparable.¹⁵

The bronze finds generally display an even vertical distribution but with a peak in layer 4 within the 1987 excavation area. This applies to objects and fragments classified as jewellery. Horizontally, most of the bronze ornaments and fragments can be found in connection with the stone structure excavated in 1987 (Fig. 7a). The distribution of iron (mostly related to weaponry and/or tools) is similar, with layers 3–4 standing out in particular. All the iron arrowheads, save for one, are from layer 3 or deeper down. Horizontally, the iron finds have a somewhat wider distribution than bronze, but the 1987 stone structure and its vicinity still remain the standouts (Fig. 7b).

Burnt human bones (ca. 330 g in total)

were found in layers 1–6 (3–5 in the 1986 excavation), with the largest number found in layers 3–4 of the 1987 excavation. Horizontally, the bones were found both within and outside the main structures. However, most of the burnt human bones were located within or close to the structure excavated in 1987, while considerably fewer bones occurred within or close to the 1986 structure (Fig. 7c). In the report of the 1987 excavation, it was noted that burnt bone – unidentified in species at the time – was concentrated in some specific areas within the most solid stone structure; 527.9 g in all, mostly in layers 3 and 4 (Koivisto & Salo 1988: 17).

Burnt animal bones (ca. 235 g in total) were most prevalent in layer 3 of the 1986 excavation area. However, bones occur in all layers – even in small numbers in the lower layers of the 1987 excavation. In addition, unidentified burnt bone (ca. 157 g) occurred most frequently in layers 3 and 4. The most notable single concentration of burnt animal bone is present in one square

(x 102-104, y 98-100) in the SE part of the excavation area, in layers 2 and 3. Contrary to burnt bone, unburned animal bones (ca. 150 g in total) occurred mainly within the 1987 excavation area (Fig 7d). The largest numbers were found in layers 3 and 5. In these layers, the horizontal distribution is within the central part of the excavated area, in and around the stone structure excavated in 1987. The distribution is quite different from that of the burnt animal bone.

Pottery (ca. 10.2 kg in total) was distributed throughout the layers, including the lower layers of the 1987 excavation. The majority of the finds were, however, from the upper layers; most of the pottery was found in layers 3–4 of the 1986 excavation and layers 2–3 of the 1987 excavation. With regard to the horizontal distribution, the pottery does not seem to be closely related to the main stone structures (Fig. 7e). Only in layer 6 was there more pottery within the stone structure excavated

in 1987 than outside of it. The find material from the 1987 excavation and its distribution have already been elaborated in the excavation report. When the distribution of pottery was viewed as distribution per excavation square, it was noted that the biggest concentrations were found especially at the borders of the most solid stone construction, while considerably less pottery could be found in the central part.

Burnt clay (ca. 5.2 kg in total) exhibited a somewhat similar vertical distribution to the pottery, with most of the finds being made in layers 2 and 4 of the 1986 excavation and layers 2–3 of the 1987 excavation. The burnt clay seems, however, to have a different distribution over the excavated area

Table 1. Bone material from Nokia Viik, Cairn 4. Data are provided as NISP (Number of Identified Specimens).

| Nokia Viik TYA 337, 426 NISP | | | |
|------------------------------------|---------|-------|-------|
| Species | Unburnt | Burnt | Total |
| Human | | 491 | 491 |
| Sheep/goat | 4 | 4 | 8 |
| Pig | 2 | 5 | 7 |
| Cattle | 4 | 2 | 6 |
| Cattle? | | 1 | 1 |
| Horse | 2 | | 2 |
| Elk | 1 | | 1 |
| Large ungulate | 9 | 5 | 14 |
| Small ungulate | 1 | 1 | 2 |
| Pike | | 3 | 3 |
| Cyprinid | | 1 | 1 |
| Unidentified fish | | 2 | 2 |
| Total | 23 | 515 | 538 |
| Nokia Viik TYA 337, 426 weight (g) | | | |
| Human | | 371,2 | 371,2 |
| Animal | 147,2 | 235,0 | 382,2 |
| Unidentified | 2,3 | 169,2 | 171,5 |

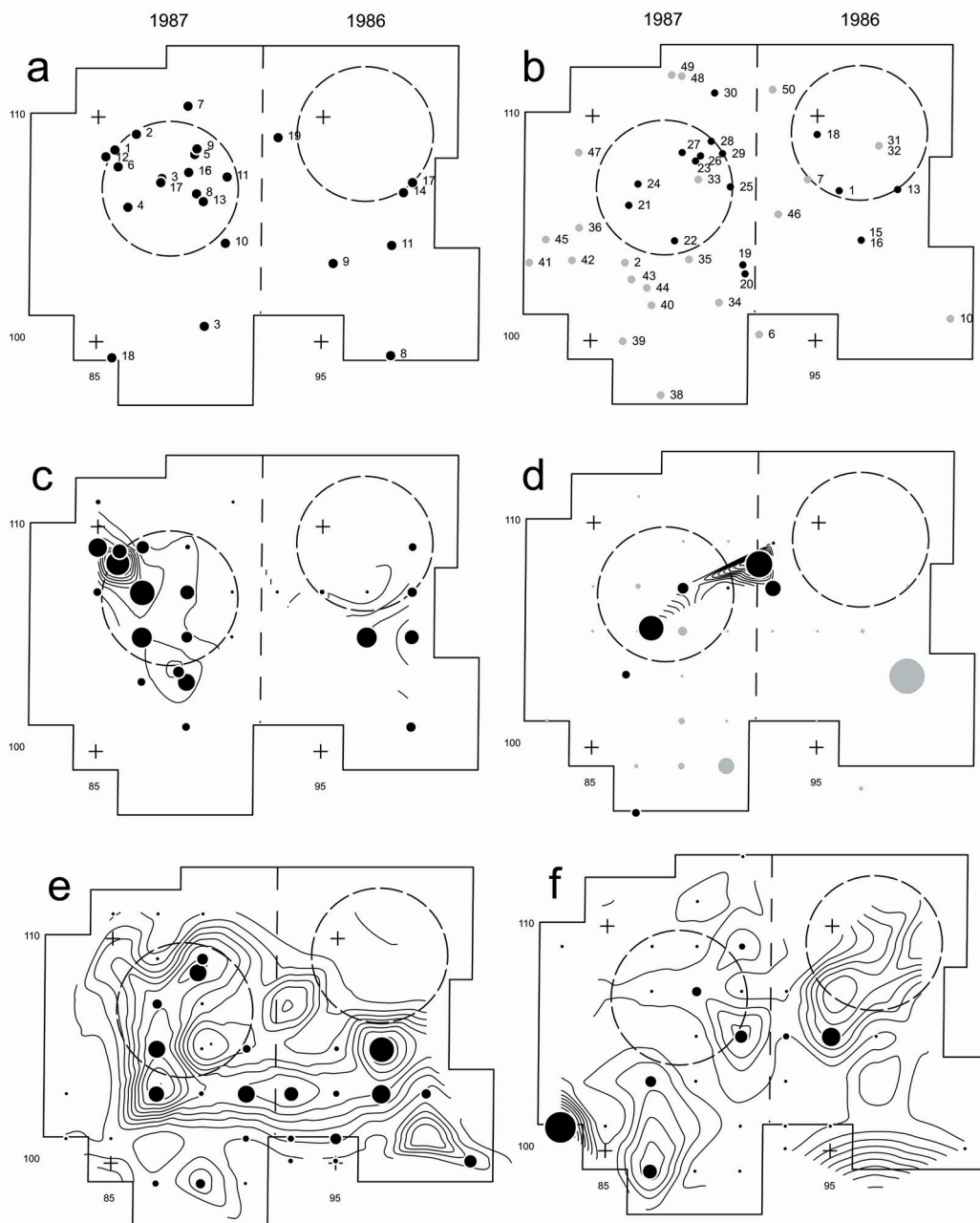


Figure 7. Horizontal distribution of main find categories in Cairn 4. The central stone structures in the excavation areas of 1986 and 1987 depicted as circles. Metal finds include a) bronze objects and fragments, and b) iron objects and fragments, arrowheads in black; the numbering refer to the find catalogues TYA 337 (1986) and TYA 426 (1987). Distribution of bone shown as the total distribution of c) burnt human bone (dots and curves), and d) unburnt animal bone (black dots and curves) and burnt animal bone. Pottery and burnt clay compared as e) the total distribution of pottery (curves) and distribution in layer 3 (dots), and f) the total distribution of burnt clay (curves) and distribution in layer 3 (dots); the size of dots (representing weight) is not comparable to those of bone. Map: H. Asplund.

than the other find categories, like that of the pottery (Fig. 7f). A few pieces are daub with triangular cross-sections, and some display imprints of twigs (Koivisto & Salo 1988: 17).

Iron slag (ca. 5.1 kg in total) has a vertical distribution that differs from all the other finds. During the 1986 excavation, most of the slag was found in the upper layers, especially in layer 1, while in the 1987 material, slag was found only in the lower layers, with a large concentration in layer 8. This concentration is in the middle of the total excavated area, located between the main stone structures. In the excavation report, this concentration (square 108/92) was explicitly noted to have occurred within the earthen mound (Koivisto & Salo 1988: 17).

Chronology

The datable bronze ornaments date to the Late Roman Iron Age and the early Migration Period. The same applies to the iron arrowheads as well as the iron spearhead. The previously suggested Viking Age dating seems to be based solely on one serial bead. The dating presented in the report of the 1986 excavation (Renvall & Salo 1987) was later repeated by Koivisto (1991: 33). The dating is not conclusive as blue serial beads could occur even during the Early Iron Age (Tempelmann-Maczyńska 1985: 33, Tafel 2:91). The copper alloy spirals as well as the oval fire striker could, however, be other indicators of Late Iron Age depositions of ornaments and metal objects.

Seven samples were radiocarbon dated – two from human bone, three from pottery crusts, and two from animal bones. The dates give a new insight into the chronology, but the material is still limited. There is no way to exclude the possibility of material from other periods as well, if more samples of, for example, bones were dated. The oldest result is from a potsherd (TYA 426:163), which on typological grounds can be considered to belong to the Early Metal Period or, more specifically, to the Late Bronze Age or the earliest Iron Age. This is confirmed by the outcome, 2419±30 BP (Ua-61157), i.e., calBC 750–680, 670–640 or 570–400, where

the highest probability (76.1%) points to the latest period.¹⁶ The occurrence of this type of pottery in the site complex has been interpreted as indicating Early Iron Age (or maybe Late Bronze Age) activities, but not as having a direct link to processes recorded later. All the other dated samples were younger in nature (Fig. 8), with a gap of seven centuries.

The material related to burial includes two dates from burnt human bone (TYA 337:157 and TYA 426:318). The results are 1661±30 BP (Ua-61158), i.e., calAD 250–280, 330–440 (75.3%) 450–480 or 490–540, and 1569±31 BP (Ua-61160), i.e., calAD 420–570, respectively. The results point to the probability of two different burials: one that most likely dates to the end of the Late Roman Iron Age or the very beginning of the Migration Period, and the other with a general dating to the Migration Period. There is, however, a small possibility of overlap. The older date is from the 1986 excavation area, outside or at the edge of the stone structure with a central stone. The latter is from the 1987 excavation area, inside the main stone structure. If the dates were interpreted as directly related to the structures, this would contradict the previous idea of the chronological phases of the monument. These dates are, however, in general accordance with the dating to the Late Roman Iron Age and the early Migration Period, suggested by the typologically datable metal finds.

Regarding the later use of the site, dates from charred organic material (crust) from fragments of two different ceramic vessels (TYA 337:147 and TYA 426:155) indicate that the vessels were in use during the Merovingian Period. The results are 1338±29 BP (Ua-61155), i.e., calAD 640–710 or 730–780 and 1283±29 BP (Ua-61156), i.e., calAD 660–780 (92.5%), 790–800 or 810–820, respectively. It seems evident that the potsherds are of a later date than the burial-indicating bones – at least there is an age difference between the bones and the potsherds now dated.

This complex chronology is underlined furthermore by one burnt pig (*Sus scrofa*) bone (TYA 337:156), which dates to 1207±28 BP (Ua-61159), i.e., calAD 700–740 or 770–890 (88.8%). Regardless of the slight overlap,

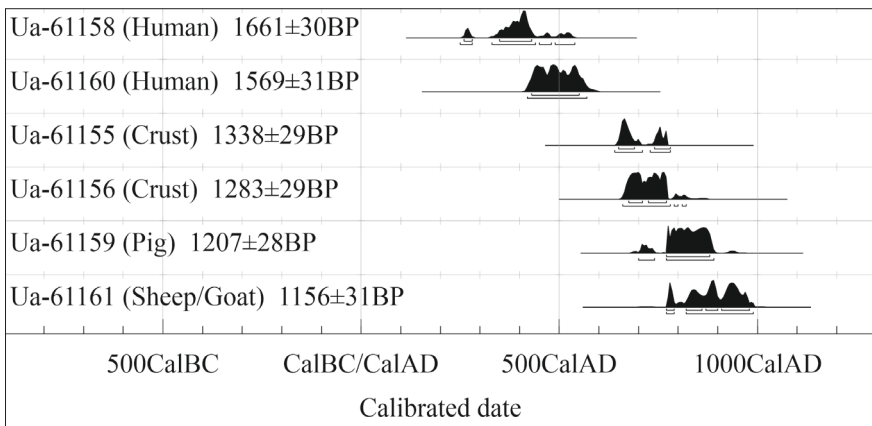


Figure 8. Radiocarbon dates (excluding the Early Metal Period date from pottery).

this suggests a younger date than the pots, most probably the late Merovingian Period or the earlier part of the Viking Age. The latest date of the series was obtained from one unburned sheep or goat (*Ovis/Capra*) bone (TYA 426:343). This bone might, in principle, be contemporaneous with the former, although exhibiting a somewhat later date of 1156±31 BP (Ua-61161), i.e., calAD 770–790 or 820–990 (86.2%).

DISCUSSION

Deposition of human bone

In the case of Nokia Viik Cairn 4, the main impression – both vertically and horizontally – is that there is no clear occurrence of clusters of bones and objects in combinations that could be directly interpreted as single burial depositions, positioned in a specific spot. The stone construction unearthed in 1987 contains lots of objects and bones, but the distribution is more in the fashion of communal/collective burials encountered in Finland in later cremation cemeteries under level ground. It is interesting that the first excavated (1986) structure does not seem to show any concentrations of human bone and/or artefacts (except for the deposition of an axe and spearhead under the central stone),

with very little human bone overall. There must be some reason behind the erection of the stone construction, but it almost seems like the distribution of burned human bone, found mainly outside the structure, is avoiding it.

In the osteological material, the remains of at least three individuals – one adult, one child or adolescent, and one of undetermined age – were deposited in a mixed and scattered state. Due to the distribution of the bones, it has been suggested that the material could involve other individuals with the same osteological characteristics (Koivisto 1991: 33). An equally possible explanation is that the distribution of bones is more random and does not correlate with the structures identified, i.e., the deposition of bones from certain individuals could follow a different pattern. In addition, the bones of the adolescent and adult individuals are mixed in the material and e.g., found in the same square/layer. In this sense, the deposits resemble communal burials, e.g., cremation cemeteries under level ground, contradicting the idea that bones of each individual should be deposited separately.

In such cases, it is likely that the body did not have to be complete or located in a single place (Appelgren & Renck 2007: 40). The low amount of bone – the destruction of the body – could be seen as a way of erasing the individual. However, as Appelgren & Renck (2007) have suggested, this could also be a method for including the individual in something more

comprehensive. When a structure is physically identified as a grave but contains only a small amount of bone or no bones at all, one possibility is that the bones of the deceased have been returned to nature and deposited in one or several of its four elements (Appelgren & Renck 2007: 72–73).

The cremated human bone materials from Nokia Viik, Lempäälä Naarankalmanmäki and Päivääniemi as well as Salo Ketohaka sites (cf. Hirviluoto & Vormisto 1984; Formisto 1987; Katiskoski 1987; Raike & Seppälä 2005) demonstrate the variation of depositions in Iron Age cairns. What is evident is that there are at least as many differences as there are similarities, and this seems to also apply to other materials and not only bones. Variation seems to be one key feature of Finnish Iron Age cairns. In Naarankalmanmäki Cairn 3, Päivääniemi and Ketohaka, a clear cluster of human bones was present, while in Naarankalmanmäki Cairn 5 and in Nokia Viik, the human remains were more scattered. In the case of the former group, the osteological analysis supports the interpretation of the human bone clusters as burials in the traditional sense – all or most of the remains from the cremation pyre were deposited in one location. Even in Naarankalmanmäki Cairn 5, the human remains could derive from one individual, a child.

In the case of Nokia Viik Cairn 4, it is possible that the human bone material represents deliberate token burials with symbolic or ritual purposes. The potential deliberate shifting of burial elements has been discussed regarding the Iron Age in Estonia, especially tarand-graves (e.g., Kalman 2000: 25–29; Arukask 2011: 141; Lang 2011: 121–122). At Viik, the slight correlation between metal finds and human bones in and around the stone construction excavated in 1987 may represent an area dedicated to a ritual that involved scattering elements related to one or several funerals. Without a total excavation of the Viik site, it is challenging to evaluate whether these bones derive from other burials made at the same site or if they were perhaps transported from another location, e.g., for the purposes of maintaining a connection with one's ancestral spirits in a new settlement. However, as the Viik

cairn contained evidence of later depositions, we must also consider the possibility that some of the bones may represent disturbed primary burials.

Chronology

Nokia Viik Cairn 4 revealed a complex chronology, where the dated pottery and animal bone samples turned out younger than most of the archaeologically dated artefacts and the radiocarbon dates from human bone. The artefacts point to the Late Roman Iron Age and the early Migration Period. This is supported by the radiocarbon dates from the burned human bone, while the other radiocarbon dates indicate other periods of activity and, evidently, changes in deposition patterns at the site. The bone and metal objects dating from the Late Roman Iron Age to the Migration Period are from the middle layers (mostly layers 4–5) of the stone structure excavated in 1987. Objects have probably been deposited on several occasions, and at least in the Migration Period also human bone material has been added to it. Later abundance of other material, such as pottery, animal bones and burned clay has been brought to the structure as well as outside of it.

Deposition of metal objects under the central stone of the main structure excavated in 1986 suggest that the structure might have been in use at the same time in the Migration Period. However, in this structure only a few metal objects, a minimal amount of human bone and, in the upper layers, some burned clay has been added. Outside the structure there is a deposition of human bones with an older or similar dating as the main stone structures. So here, one stone structure has been a target of several depositions, whereas it seems like the other structure of the same date has almost been avoided.

It is not possible to accurately date the different structures inside the monument since repeated depositions have been made during a long period of time. However, since the radiocarbon dates of the pottery and animal bones are of later periods (from the Merovingian Period to the early Viking Age) and they are found further away from the main stone structures, it is likely that they represent an expansion of the monument and a changed deposition pattern of adding waste-like

material into the complex. The two cases where human bones and pottery pieces fitting together were found in different layers, strengthen the picture of later interferences.

The complex result of several depositions is highlighted by the animal bones. The dated unburned mandibular tooth of a sheep or goat in an animal bone deposit was recovered from the mound connecting the two earlier cairns. In this find context, the presence of material younger than the burial activity is perhaps not surprising (see also Bläuer 2020). However, the dated burnt pig tarsal bone (T4) was found in a concentration of animal bones outside the stone construction excavated in 1986, near burnt human bones of a different age. The find context is such that, without dating, it could have been interpreted as part of actual burial activity at the site. The same applies to the pottery fragments – without closer analysis and dating the deposition of ceramics could be mistaken for a contemporary phenomenon directly related to the human bones.

Once again, it is evident that the extended use or reuse of a former (burial or ritual) site is an important issue that has also been discussed in previous research (e.g., Asplund et al. 2019: 98–100, with references). Burial may have been the starting point – the initiation or manifestation of a special place – which led to other events later on. The dates from the Nokia Viik site share an interesting resemblance with a former series from Roismala Ristimäki in Sastamala (Asplund et al. 2019, Fig. 6), as both series indicate old human bones, followed by the depositions of ceramics, and later pig and sheep bones. However, there are also dissimilarities both in the actual dates, as well as in the occurrence of unburned human bones in the case of Roismala Ristimäki. It is quite probable that the similarity of composition is due to a still-limited number of sites and dates. The general observation of chronological complexity is, however, beginning to appear increasingly typical.

Formation

Extended use is one factor affecting the formation of cemeteries. Estonian examples show that burials in the same grave constructions could take place over multiple centuries (Kalman

2000). Reuse in the form of consciously adding or removing material from a cemetery site is likewise another option. An interesting concept is that of ‘palimpsest monuments’ (Thereus 2019), involving the idea of reuse and remembrance, where depositions connect the place and people, creating and maintaining a collective identity.

Scandinavian examples demonstrate that sometimes the old monuments have been reused for burials after a break, becoming subjects of new meanings and functions for the new users (Thäte 2007: 192–193, 278–279). The remembered or presumed age of the old monuments has affected which monuments have been chosen for reuse: monuments of certain age have been chosen or avoided (Thäte 2007: 192–194, 237–238, 276–280). The place where the secondary burial inside or next to the monument was placed probably carried meaning (Thäte 2007: 234–241). The logic of avoiding or targeting structures, seen also inside Nokia Viik Cairn 4, might be connected to real or mis-remembered properties of the structures and desired effects and meanings of the reuse.

The locations of former burial sites may also have been used in other ritual contexts. The general concept of ‘ritual deposition’ (Berggren 2006: 306; cf. Röst 2016: 322) could be considered in the case of cemeteries as well. There are cases where it becomes difficult to distinguish the concept of ‘grave’ from that of ‘offering’ (Thereus 2019: 240). Concerning Uppland in eastern Sweden Thereus (2019) has highlighted the complexity and diversity of burial customs during the Late Iron Age; only very late in the process the burial practices started to resemble what is today regarded as burials.

The discrepancy between the dates of burials and those of other ritual activities were underlined in a study of animal remains from twelve Iron Age cemeteries from southern and western Finland. Unburned animal bones could have been ritually deposited in former (or then-unused) cemeteries in connection with remembrance rituals or with the intention of securing the health and productivity of livestock (Bläuer 2020). One idea is that these sites may have contained a certain power – ‘kalma’ – due to the human remains (Bläuer 2020: 12). The

cemetery was a platform where the sacred and profane intertwined, which was probably the case in the everyday life of Iron Age people as well (Korkeakoski-Väisänen & Bläuer 2020: 353). The dating results from this study demonstrate that the same could also apply to the burnt animal bone material. Thus, not all burnt bone necessarily belong to a burial phase, as burnt animal bone could also have been used in later ritual depositions within the old structures.

It is probable that ‘everyday rituals’ or ‘secular rituals’ have been involved in the formation of sites (Brück 1999; Bradley 2003; 2005; Berggren 2006; Asplund et al. 2019). In principle, any type of object can contain or transmit symbolic meanings; what is important when trying to reach an archaeological interpretation is the contexts of the occurrence, its irregularities, and the recurring combinations of these (Renck 2000: 214–217). Regarding cemetery sites where burial-related rituals have been performed, this could have made them places where other remains of past lives – including material remains from the daily sphere of living – could be properly disposed of (Asplund et al. 2019: 99). At some sites, the simplest explanation for the occurrence of material related to the domestic sphere is that the material was actually brought from a settlement site. This leads to the question of how the ritual treatment of waste may have contributed to the formation of sites that have been archaeologically defined as cemeteries (Asplund et al. 2019: 96–100).

What is now regarded as mere waste may not have been experienced in the same way in the past. When we consider the abundance of pottery fragments, the connection to the domestic sphere is evident. Pottery vessels used by households can function as metaphors for home, food, etc., which makes the pot fragments additionally meaningful in a ritual sense; the destruction of the objects and the remaining sherds could also be seen as being anchored to death as such (Stilborg 2021).¹⁷ The idea of depositing fragments from daily life can also be considered to represent the remnants of a farm or family. Much of the material could, in fact, be household waste from one or several houses. One could think of a relationship between the house/the living and the cemetery/the dead if one sees their house as a ‘living entity’ (Bailey

1990: 28). Houses could have been thought of in a biographical/life cycle-oriented manner, where crises or the abandonment – or ‘death’ – of a house would have consequences resulting in rituals of remembrance and the deposition of household waste at a place of ritual importance.

CONCLUSIONS

Sites that fall under the Finnish archaeological concept of a cemetery (*kalmisto*) often seem to involve elements that are not comparable to the current understanding people have of graveyards or other locations solely intended for burials. What is problematic is that we have no knowledge of how prehistoric people experienced sites that archaeologists now classify as cemeteries. It is certain that these locations were sites – places – of importance due to mortuary practices. However, they seem to include other aspects as well, relegating the burial function itself, as we experience it today, to a seemingly secondary role. In many cases, the very concept of a burial – the existence of and variation in the number of bones and/or other materials indicative of funerals – has proven to be difficult to interpret.

The main factor uniting the different ritual elements at these sites are the locations themselves. In addition to actual burials or rituals involving human remains, they have hosted different kinds of activities, resulting in the deposition (and, likely, displacement) of material during different periods. While it may be too early to abandon the Finnish archaeological concept of cemeteries, they should be understood in a more multifaceted manner than as mere burial sites. Categorization also remains a key issue. Attaching the concept of ‘cemetery’ to sites such as cairns without detailed analysis subsumes sites that may be very different in nature, especially when we acknowledge changes in their use during different times. From the perspective of interpretation, the ways in which the cemetery concept is used is problematic, as it encompasses sites that may include other than funerary functions. A ‘cemetery’ is often a label used for sites or monuments with common physical characteristics, while identifying actual burial and/or other ritual practices is a matter of interpretation. Through future analyses

concentrating on recognizing nuanced activities in sites such as Nokia Viik, we might be able to understand them in a way that better appreciates the varied activities that were carried out in these locations. While we cannot inhabit the minds of those who were present in these rituals and ascertain whether later depositions were related to any mortuary practices or other rituals, we can still record the material evidence of change.

The functions of different sites, and the ways in which people understood them, could have changed over time – a former burial site may still have been recognized as a special and important place as it was repurposed for other types of rituals. Based on the few samples examined in this article, this seems to apply to earth and stone mixed cairns involving elements from different periods of the Iron Age. These sites seem to indicate patterns of prolonged use and changes in rituals, especially in cases of burial-like constructions and depositions from the Early Iron Age that also include materials of a non-funerary character from later periods.

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NOTES

¹ In Sweden, the definition of a cemetery or burial ground (in Swedish *gravfält*) includes the occurrence of at least five prehistoric grave constructions within a mutual distance of no more than 20 meters.

² There have even been discussions on whether it is possible to distinguish graves with no burial remains at all (Appelgren & Nilsson 2007; Appelgren & Renck 2007).

³ In the case of Late Bronze Age structures it has been stated that the material should be discussed in its own right – not as ‘graves’, but as ‘traces of actions’ concerning stones and sometimes human bones (Röst 2016: 320).

⁴ The site is registered under the name Viik 1, #536010019, in the Ancient Relics Register maintained by the Finnish Heritage Agency.

⁵ There have been some irregularities in the numbering (and locations) of the monuments at the site. This is explained in the 1999 excavation report (Haimila & Taavitsainen 1999: 5–6).

⁶ Different concepts have been used to define the monument. At first, the term ‘mound’ was used, while ‘cairn’ (in Finnish *röykkiö*) has been used more frequently in subsequent studies. In addition, the Finnish term ‘raunio’, evidently a synonym for ‘cairn’, has been used on some occasions (e.g. Koivisto & Salo 1988). In this study, the main structure as well as the combination of structures are referred to as an ‘earth and stone mixed cairn’ (for a clarification of the concept, see Asplund et al. 2019: 83).

⁷ The composition of the monument has evidently been regarded as special at the time of investigation. In general terms, however, reuse and the extension of burial constructions is not uncommon (cf. Thäte 2007; Wickholm 2008; Wessman 2010; Wessman & Williams 2017; Therus 2019: 240–242).

⁸ In connection with the excavation in 1987, ten soil samples were taken from the excavation area for macrofossil analysis. Eight of the samples are

from the earthen mound and two from the cairn. Several charred cereal grains were found in both sets of samples – ten from the mound and nine from the cairn. Seven were identified as barley (*Hordeum vulgare*) and one as rye (*Secale cereale*) (Lempiäinen 1991: 41). As part of the material was discovered in layers that were interpreted to be old, it is likely that the grains are connected to the cairn (Lempiäinen 1991: 43). However, none of the grains have been radiocarbon dated.

⁹ Cairn 3, excavated in 1988 (the investigation had begun already in 1986 when the uppermost part of half of the mound had been unearthed) is the smallest (about 4 meters in diameter and 0.6 meters in height) of the mounds at the site, and situated about 20 meters NE of the ‘great mound’ (Pietikäinen & Salo 1989: 1–2). The finds consisted of one piece of Iron Age pottery and one piece of burnt bone. Other finds were a couple of metal objects (one button and one button-like piece), three clay fragments from a tobacco pipe and two pieces of glazed pottery. Furthermore, the mound contained over 20 kg of brick fragments (Pietikäinen & Salo 1989: 6). Although the mound at first sight was considered as a ‘perfect’ Iron Age cairn, the content makes unlikely the interpretation that this would be a prehistoric structure (Pietikäinen & Salo 1989: 7).

¹⁰ Seventeen arrowheads were recovered from the monument (Fig. 5). Sixteen of these represent Hiekkänen’s group 3BII (Koivisto 1991: 33), which have mostly been found in Häme and Satakunta (Hiekkänen 1979: 68). Group 3BII dates roughly to the Late Roman and Migration Periods (Hiekkänen 1979: 67).

¹¹ The clay beads (TYA 337:12) are rather irregular and feature skewed holes, which might suggest that they could have been formed naturally. On the other hand, they seem burned, which could suggest that they were deliberately produced.

¹² Individual pots are referred to with the numberings used in the ceramics analysis report (Salomaa 2020).

¹³ In the area excavated in 1986, pieces fitting together from pot number 1.6 were found in

layer 1, square 108/84 and layer 4, square 106/94. In the area excavated in 1987, pieces fitting together from pot 2.4 were found in layer 4, square 100/88 and layer 5, square 100/88.

¹⁴ TYA 426:255 was found in layer 1, square 102/88, while TYA 426:312 was found in layer 5, square 104/88, according to the osteological report (Formisto 1991). In the find catalogue TYA 426:312 is, however, recorded as found in square 204/90, which must be a typing error – probably the correct numbering should be 104/90.

¹⁵ From a current perspective, the excavation and documentation technique was not optional. When mainly focusing on layers and squares, the interpretation of single contexts and their relationships is almost impossible to achieve later. Even creating simple distribution maps in a true metric system (e.g. Fig. 7) from the old data require a lot of work. In this case, the number of catalogued finds or assemblages was 549, the locations of which had been recorded with reference to layers and 2x2 meter squares, in some cases supplemented with measurements (coordinates) within squares. As the current example and the former case of Roismala Ristimäki in Sastamala (Asplund et al. 2019) illustrates, recalculations can (to some extent) be done, which increases the potential for more detailed spatial analyses of old excavation data.

¹⁶ All calibrated dates are given with a 95.4% probability. They were calculated with the OxCal v3.10 program (Bronk Ramsey 1995; 2001) using the IntCal20 calibration dataset (Reimer et al. 2020).

¹⁷ When discussing mortuary practices, the common occurrence of fragments of objects (as well as burned and crushed human bones) in Finnish Iron Age cemeteries has also been explained as linked to conscious breaking and sharing. Fragments could have been distributed within the group of people linked to the ritual site – this would have been a sign of bond between kin group members (Moilanen 2023).