Kristin Ilves

STONE FOUNDATION HOUSES OF THE LATE IRON AGE AND EARLY MEDIEVAL ÅLAND AND NEW RADIOCARBON DATES FROM THE SETTLEMENT OF KULLA

Abstract
This article provides a comprehensive overview of the current knowledge of Late Iron Age (AD 550–1050) and early medieval (AD 1050–1300) stone foundation houses and sites on the Åland Islands. More than a quarter of known houses and sites have been subjected to archaeological excavation, most of them over 50 years ago. Many investigations have not been published and research is suffering from speculative and loosely founded generalizations covering long periods of time. In this article, I will compile and compare the excavated and documented stone foundation house sites to each other, examining their differences and shared similarities providing a qualitative description. The lack of solid chronology is a major obstacle in drawing conclusions of a more general character. New radiocarbon dates are presented from the seven stone foundation houses at the settlement site in Kulla, reliably anchoring this site and its chronology.

Keywords: The Åland Islands, Kulla, Late Iron Age, settlement archaeology, stone foundation houses

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BACKGROUND

There are over 300 archaeologically registered house foundations on the Åland Islands. Most of them are on what today constitutes the main island of Fasta Åland. This is the largest of the nearly 7000 islands, making up the Åland archipelago situated in the northern part of the Baltic Sea, halfway between Finland and Sweden. According to the data compilation published by Marita Karlsson thirty years ago (Karlsson 1987), 175 of these house foundations belong to the Late Iron Age (AD 550–1050) and early medieval times (AD 1050–1300). The chronological estimation is primarily based on their type and location close to Late Iron Age burial sites. Yet this register also includes a number of undisputedly high and late medieval house foundations[1] and, in some cases, the stated number of houses at the site does not match the longer description of the same site.[2] It is a dubious task to give an exact number of archaeologically known Late Iron Age and early medieval house foundations on Åland, given that, for the most part, there is no solid chronology. Furthermore, occasionally, especially on sites with long occupation, archaeological investigations have been and are unable to clarify the precise number of buildings at the site. However, emanating from the current register of ancient monuments on Åland, held by the Museum of Åland, house foundations today estimated to date to the Late Iron Age and early medieval times number over 160 and are distributed between 64 sites (see also Table 1; Fig. 1). In addition, there are about 25 areas with no registered house foundations but with layers and/or finds indicating dwelling sites that are estimated to belong to the same period based on the re-

Site ID	Village	Parish	Registered houses	Excavated houses	Year of excavation	Archaeologist	Re-port	Primary dating	Publication	Comment
Ec 6.18	Storby	Eckerö	2							
Ec 6.23	Storby	Eckerö	1							
Ec 7.3	Torp	Eckerö	1							
Fi 10.3	Kulla	Finström	7	7	1942–5	E. Kivikoski	+	Finds and 14C	Kivikoski 1946	
Fi 13.3	Pålsböle	Finström	5	3	1948	M. Dreijer	+	Type and location		
Fi 19.9	Tjudö	Finström	1							
Fi 2.1	Bartsgårda	Finström	5	1	1906, 1909	B. Cederhvarf	-	Type and location		
Fi 6.9	Emkarby	Finström	1							
Fi 9.18	Grelsby	Finström	2	1	1905	B. Cederhvarf	-	Type and location		
				partial excavation	1986	A. Vinberg	+			
Ge 16.5	Östergeta	Geta	1							
Ha 22.12	Torp	Hammarland	1							
Ha 22.22	Torp	Hammarland	1							
Ha 22.23	Torp	Hammarland	1							
Jo 10.3	Gölby	Jomala	10	7	1904–5, 1914	B. Cederhvarf	-	Finds		
Jo 13.2	Ingby	Jomala	2							
Jo 32.3	Ytterby	Jomala	3							
Jo 32.4	Ytterby	Jomala	1							
Jo 35.2	Önningeby	Jomala	1	partial excavation	1986	H. Antonson	+	Type and location, 14C		
Jo 35.5	Önningeby	Jomala	3							
Jo 35.7	Önningeby	Jomala	1	partial excavation	1986	B. Roeck-Hansen	+	Type and location	Roeck-Hansen 1991	
Le 16.1	Rörstorp	Lemland	1							

Table 1. The total of registered Late Iron Age and early medieval house sites on Åland with detailed information on the excavated sites and houses. Excavated stone foundation houses marked grey.

Site ID	Village	Parish	Registered houses	Excavated houses	Year of excavation	Archaeologist	Report	Primary dating	Publication	Comment
Ma 5	Mariehamn	Mariehamn	1	1	2011	K. Darmark	+	14C		Timber structure(s)
Sa 11.3	Hjortö	Saltvik	4	1	1905	B. Cederhvarf	-			
Sa 14.3	Kvarnbo	Saltvik	1							
Sa 14.7	Kvarnbo	Saltvik	7	5	1955–9	M. Dreijer	+	Finds and 14C		
Sa 14.9	Kvarnbo	Saltvik	many	unclear	2014, 2016	K. Ilves	+	Finds and 14C	Ilves 2015b; 2017b	Timber structures
Sa 16.2	Lavsböle	Saltvik	2							
Sa 17.1	Lavö	Saltvik	1							
Sa 18.4	Lagmansby	Saltvik	9	3	1913–4	B. Cederhvarf	-	Finds	Hackman 1940	
				2	1922–4	C.A. Nordman, A. Hackman & M. Kampman-Kenttämaa	+			
Sa 2.6	Bertby	Saltvik	5							
Sa 21.8	Näs	Saltvik	3							
Sa 22.1	Prästgården	Saltvik	2							
Sa 23.1	Rangsby	Saltvik	3							
Sa 23.10	Rangsby	Saltvik	2							
Sa 23.2	Rangsby	Saltvik	6							
Sa 23.3	Rangsby	Saltvik	1							
Sa 23.5	Rangsby	Saltvik	1							
Sa 29.2	Sålis	Saltvik	2							
Sa 3.8	Borgboda	Saltvik	1	1	1982–3	J.E. Tomtlund	+	Location	Karlsson 1984	Turf building
Sa 35.6	Ödkarby	Saltvik	1	1	1966	M. Dreijer	+	Type and location		Not prehistoric
Sa 6.2	Främmanby	Saltvik	2							
Su 1.1	Berg	Sund	1	partial excavation	1986	B. Roeck-Hansen	+	Type and location, 14C	Roeck-Hansen 1991	

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Site ID	Village	Parish	Registered houses	Excavated houses	Year of excavation	Archaeologist	Re-port	Primary dating	Publication	Comment
Su 10.8	Högbolstad	Sund	1							
Su 12.14	Kastelholm	Sund	4	1	1965	K. Lundholm	+	Type and location		Not prehistoric
				2	1967	M. Dreijer	+			
Su 12.16	Kastelholm	Sund	2							
Su 12.24	Kastelholm	Sund	1	1	1985–93	M. Núñez	+	Type and location	Núñez & Lempiäinen 1992	
Su 12.4	Kastelholm	Sund	6	2	1953	M. Dreijer	+	Type and location	Dreijer 1955a	
Su 12.7	Kastelholm	Sund	3	3	1967	M. Dreijer	+	Type and location	Kivikoski 1980	
Su 12.9	Kastelholm	Sund	9	1	1953	C.F. Meinander	+	Type and location		
				1	1965–6	K. Lundholm	+			
Su 13.6	Kulla	Sund	9							
Su 13.7	Kulla	Sund	2							
Su 16.7	Mångstekta	Sund	1							
Su 17.3	Persby	Sund	1							
Su 17.8	Persby	Sund	2							
Su 18.1	Prästgården	Sund	2							
Su 21.9	Sibby	Sund	1							
Su 27.2	Tranvik	Sund	1							
Su 28.2	Träsk	Sund	3							
Su 4.4	Brännbolstad	Sund	2							
Su 6.10	Finby	Sund	1							
Su 6.3	Finby	Sund	2							
Su 6.4	Finby	Sund	1							
Su 7.2	Gesterby	Sund	3							
Su 7.3	Gesterby	Sund	2							

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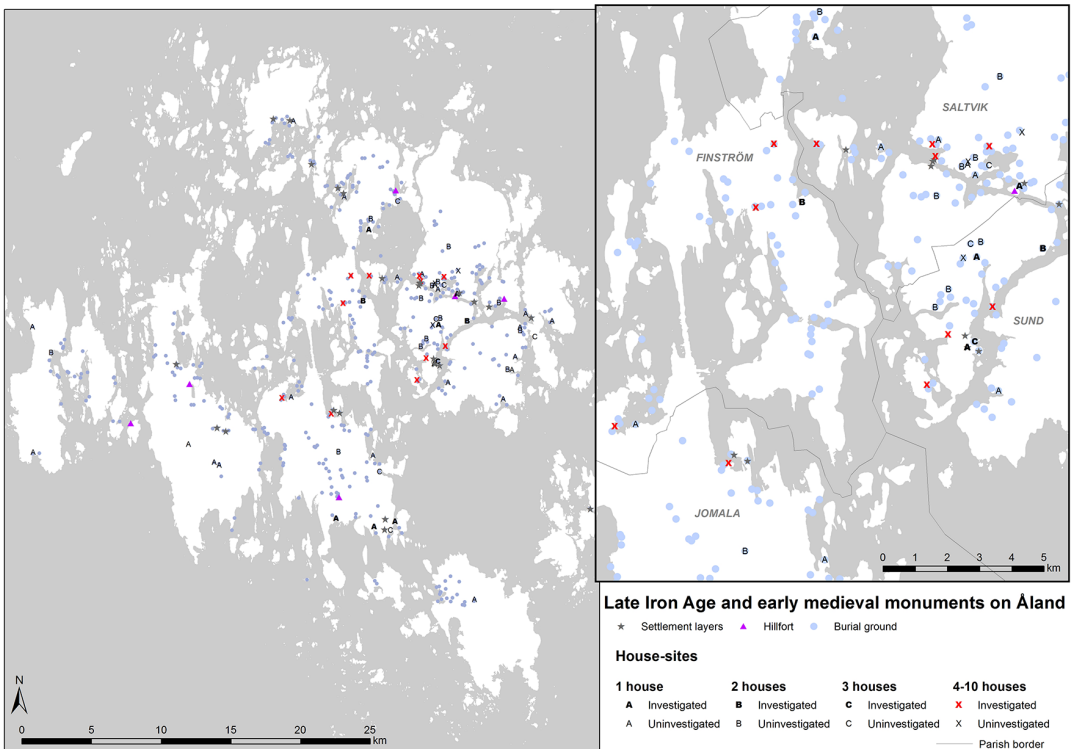


Fig. 1. The distribution of Late Iron Age and early medieval monuments on Åland. The house sites have been divided into four size categories, each subdivided into groups of investigated and un-investigated structures. The shoreline roughly consistent with that of the beginning of Late Iron Age. Illustration: K. Ilves.

sults of the archaeological investigations as well as their landscape situation and vicinity to Late Iron Age burial grounds. Considering that there are almost 11 000 burial mounds registered at about 450 Late Iron Age burial grounds in the archipelago, it is clear that the number of coeval settlement sites was significantly higher, as every burial ground presumably had a farm or farms attached to it. However, some farms probably lacked cemetery, while some might also have had several cemeteries attached to them. In the present context, it is also relevant to mention that there are no calculations made how much destruction by cultivation has affected the preservation of Late Iron Age settlement structures, though it must have been rather extensive.

Almost all of the Late Iron Age and early medieval houses registered on Åland are so-called stone foundation houses. Just three sites out of 64 have houses of a different type (cf. below and Table 1). Stone foundation houses were constructed with low dry-stone walls set on the outside of an inner wood-wall house structure, often of the wattle-and-daub type, but log- and stave-built walls have also been documented. The outer stone walls were usually built with a single row of bigger boulders, which could vary a lot in size, and were functioning as a foundation for the outer turf or peat walls. Sometimes there was a packing of smaller stones between the boulders and the inner wood-wall structure supporting the wall posts. The gap between the boulders and the inner walls has also been observed to have been filled with peat (Hackman 1940; Kivikoski 1946; Dreijer 1955a; Núñez 1994). Such a building method means that the width of the walls might vary greatly and there can be a considerable difference between the inner and outer dimensions of the house. During the Late Iron Age houses built in such a man-

ner is a uniquely Ålandic phenomenon. Furthermore, the principal method of construction has been shown to remain largely unchanged until the late medieval times (Cederhvarf 1910; Dreijer 1955a: 29; Kivikoski 1962: 19).[3] This clearly renders typology-based house dating a rather unreliable exercise. The closest parallels to the Ålandic stone foundation houses are to be found on the islands of Gotland and Öland, in Sweden (known as *kämpagravar* or *jättegravar*), and in some parts of Norway, but these are dated to the earlier period of AD 200–700 (cf. Carlsson 1979; Fallgren 2006; Svedjemo 2014). In addition to the stone foundation houses, in recent years, there are also timber structure houses from the Late Iron Age registered on Åland. In Hindersböle (Ma 5), within the city limits of Mariehamn, discovered and rescue-excavated in 2011 (Darmark & Ilves 2016), and in Kvarnbo (Sa 14.9), Saltvik parish, at the site discovered in 2012 and excavated in 2014 (Ilves 2015a) and 2016 (Ilves 2017a). There is one more house registered and archaeologically excavated in 1982–3 that is not of the stone foundation type, in Borgboda (Sa 3.8), Saltvik. The walls of this house were entirely of turf. Unfortunately, this building remains undated (cf. Karlsson 1984: 66–7). This notwithstanding, it is still commonly reckoned among the Late Iron Age and early medieval houses because of its location close to the Late Iron Age burial ground.

Being a relatively visible type of ancient monument, the prehistoric stone foundation houses on Åland were excavated already by the archaeological pioneers of the beginning of the 20th century. In Table 1, together with the total of registered Late Iron Age and early medieval house foundation sites on Åland, a detailed overview is given of the excavated sites and houses.

Most of the Ålandic stone foundation houses that have been subjected to archaeological investigation were excavated in the first half and in the middle of the last century. During the past 30 years, no prehistoric stone foundation houses have been excavated on Åland. But with more than 40 houses from 17 sites having been excavated, more than a quarter of the registered stone foundation houses and sites have been studied. This is a considerable amount. It is therefore paradoxical that these sites have not yet been analytically examined. With the exception of the simple data compilation and a section in the short descriptive article published by Karlsson (1987; also 1997), there are only single and largely site-specific publications on this category mostly originating from the middle of the last century. Based on these studies, Ålandic stone foundation houses have for a long time been just recognized without any further scrutiny. In some cases, generalizations are made that do not bear much relation to the main body of evidence and suffer from ambiguities arising from a non-synthesizing view. As a part of my previous research (Ilves 2017b), I have addressed and refuted the statement that houses around 20 metres in length are typical for the Late Iron Age Åland. In this article, I will compare the excavated stone foundation houses and sites to each other, examining their differences and shared similarities as well as discussing the chronology problems involved in drawing conclusions of a more general character. New radiocarbon dates are presented in the examination of internal chronology of the site Fi 10.3 in Kulla, Finström parish, where all of the registered house foundations have been excavated.

AN OVERVIEW OF THE STONE FOUNDATION HOUSE SITES

Introduction

The 61 Late Iron Age and early medieval settlement sites with visible remains of stone foundation houses on Åland are not evenly distributed (see also Table 1; Fig. 1). Two-thirds of the sites (n=40) are in the central and eastern part of Åland, spread between the parishes of Saltvik (n=17) and Sund (n=23). The remaining third (n=21) has an unbalanced distribution, with most of the sites (n=13) spread more or less evenly between the parishes of Finström and Jomala.

Approximately half, 26 out of 61 sites have just one building registered. Five such houses have been subjected to archaeological investigations, but three of these too partially for meaningful consideration. Excavation documentation from just two sites (Sa 35.6 and Su 12.24) is useful for further scrutiny. 15 sites have two stone foundation houses registered, one site has been studied, but unfortunately, existing site records do not enable further analysis (see, however,

Vinberg 1986). Seven sites have three buildings registered; one site (Su 12.7) has been investigated and has available excavation documentation. 13 Late Iron Age and early medieval settlement sites on Åland have four to ten stone foundation houses registered. These are known from all of the four above-mentioned parishes where house foundations concentrate. Ten of these sites have been archaeologically excavated. Thus, the archaeological research has clearly targeted the largest house sites in the archipelago. It is unfortunate that most of the large sites were the first to be excavated and there is no available documentation in regard to the excavations from three of the ten sites studied. However, with available documentation regarding seven sites with four or more stone foundation houses (Fi 10.3, Fi 13.3, Sa 18.4, Sa 14.7, Su 12.4, Su 12.9 and Su 12.14), it is clear that the largest house sites dominate among the sites with available material. All in all, although of greatly varying quality, there is applicable excavation documentation regarding ten house sites and 29 stone foundation houses that are estimated to belong to the Late Iron Age and early medieval period. The data set is heavily biased towards the sites containing more than three houses.

From a distributional point of view, half of these ten sites are located on the lands of the village of Kastelholm, in the parish of Sund. This must be considered very favourable for the study of settlement development in this particular micro-region, while making it harder to assess the validity for the rest of Åland. Of the remaining half, three sites are located in the parish of Saltvik and two in Finström.

Despite the large number of registered stone foundation houses and sites that have been excavated, the data set is meagre when it comes to offering possibilities for answering questions on the nature and dynamics of these sites. The same is true for the Ålandic Late Iron Age and early medieval settlement in general. Most of the sites with available documentation were excavated more than 50 years ago, and most of the attention then was given to individual house plans. I find it necessary to give a concise summary of these ten sites, their position in the landscape and the results of the excavations. Such a presentation is relevant in a purely empirical sense because most of the excavations have not been published. But perhaps more importantly, it is also an attempt to offer a more comprehensive and systematic approach to the study of the Ålandic stone foundation house sites. Combined, this information provides a qualitative overview of the nature of the Late Iron Age and early medieval settlement sites on Åland.

Pålsböle

The house site Fi 13.3 in Pålsböle, Finström parish (Fig. 2), has five stone foundation houses registered and estimated to belong to the Late Iron Age and early medieval period (Dreijer 1948; Helminen 2012). There is also a sixth stone foundation house and an earth cellar at this site, but these belong to the modern era. Three house foundations – nr. 49, 51 and 52 – have been excavated, all of these just partially. The investigated buildings are rectangular, oriented in a north–south direction, with maximum (outer) measurements of 9 x 6.5 m, 7–10 x 4.5 m and 5 x 3 m. These three houses are situated in a north-west–south-easterly line at some 30–40 m distance from each other. Finds were unearthed from two larger houses (nr. 49 and 51), both interpreted as simple log cabins. Finds are few and non-diagnostic, consisting mainly of burned and unburned bones, burned clay, fragments of pottery and nails. Also, two similar segmented glass beads were discovered, one from each house, as well as small fragments of an iron kettle, a piece of flint, a fire steel and a knife. The smallest stone foundation house without finds is interpreted as an outbuilding.

The site is situated directly south from and adjacent to a Late Iron Age burial ground with 48 registered burial mounds; one unexcavated house foundation is in-between the burial mounds. There is another burial ground with 30 visible burial mounds about 150 m to the east. Not far, there are also several Bronze Age (1500–500 BC) or Early Iron Age (500 BC–AD 550) burial cairns. The house site of Fi 13.3 was not directly on the shore. It was more than 300 m to the north-east from the shoreline in the beginning of the Late Iron Age. At the end of this period, the shoreline was at a distance of about 500 metres.[4] In regard to the waterways crisscrossing Åland, the site had a dead-end location. But as there are traces of the Late Iron Age and early

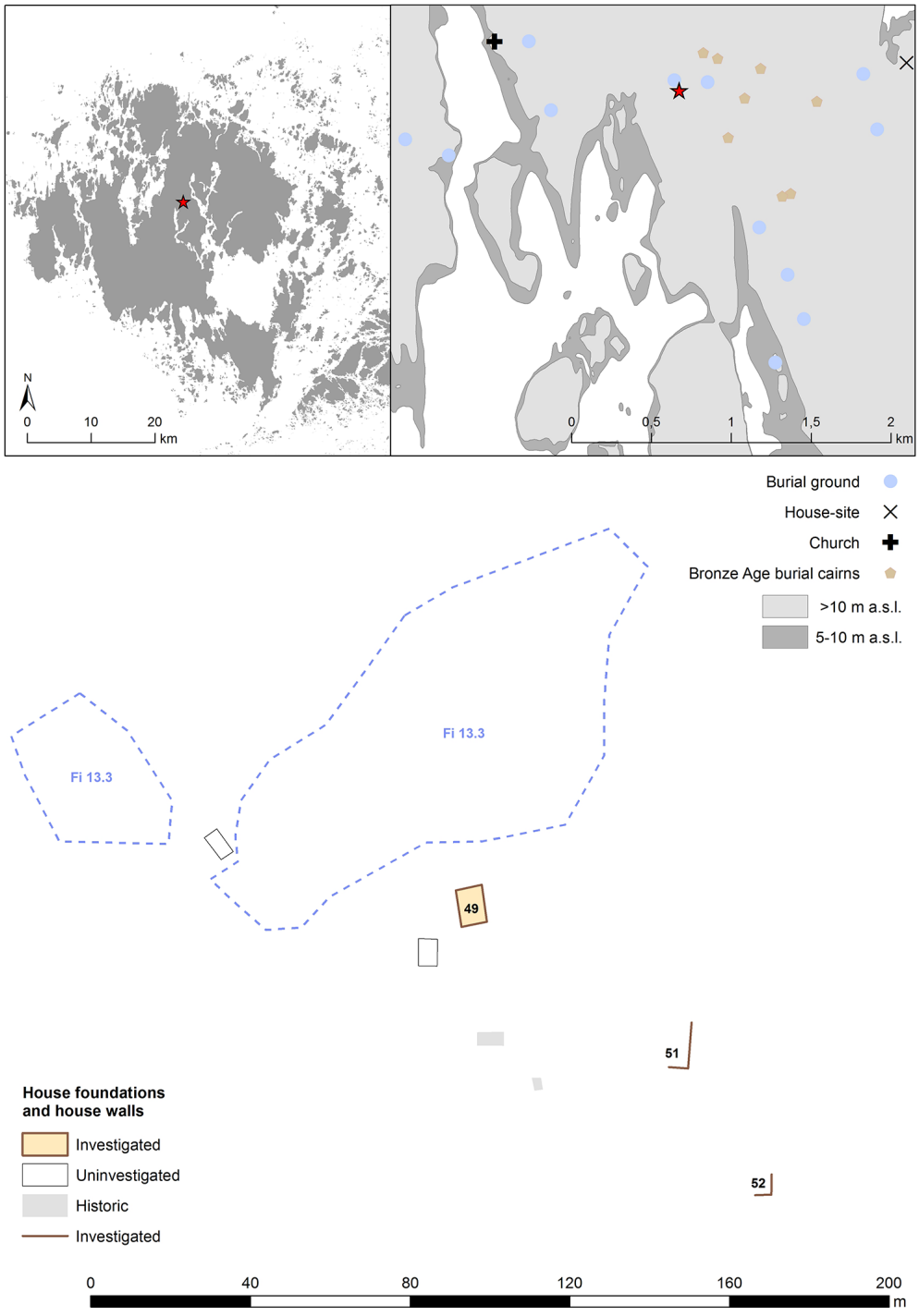


Fig. 2. The house site Fi 13.3 in Pålsböle, Finström parish. Insets are showing the site's location on the present-day map of Åland and in relation to the Late Iron Age and early medieval shorelines, as well as the archaeological monuments in the vicinity. Illustration: K. Ilves.

medieval settlement up to 2 km in all directions from the site, it was a populated area at that time. The medieval church of Finström is just 1.2 km west–north-west from the site.

Kulla

At the house site Fi 10.3 in Kulla, Finström (Fig. 3), all seven stone foundation houses registered have been archaeologically studied and published by Ella Kivikoski (1946). As this site has been discussed in detail by Kivikoski, but also by most authors who have written or commented on the Ålandic stone foundation houses (e.g. Liedgren 1992; 1994; Karlsson 1997; Vuorinen 2009), I will not repeat the house-constructional description here. I will, however, turn to the specifics of this site and its finds that are dating the site to the Late Iron Age in my later discussion.

At the beginning of the Late Iron Age, the site was situated close to the rear end shore of a sheltered shallow bay running in a north-east–south-west direction. It had a hidden location and in order to reach this site, one had to venture off the natural course of the waterways intersecting Åland. Because of the flat terrain in this area, the site lost its immediate access to water quite rapidly. The nearest shore was at about 1 km distance in the end of the period. Two Late Iron Age burial grounds with 114 burial mounds in total are situated about 100 m to the north-east from the house site. A smaller burial ground with 14 burial mounds is situated 100 m to the south-west from the house foundations. About 500 m to the east, there is a house site with one stone foundation house registered adjacent to the Late Iron Age cemetery with 30 burial mounds. This small farmstead, that was also shore-bound in the beginning of the Late Iron Age, has three Bronze Age–Early Iron Age burial grounds in the vicinity. In addition, not far from that site and 1 km from the house site Fi 10.3 in Kulla, a treasure consisting of 92 Arabic silver coins struck between AD 829 and 958 has been unearthed. Three Late Iron Age cemeteries about 1.5 km to the north-east from the house site of Fi 10.3, marking the entrance to the former bay, indicate coeval settlement in that direction, but generally speaking, the house site in Kulla had a secluded position.

Lagmansby

At the house site Sa 18.4 in Lagmansby, Saltvik (Fig. 4), nine stone foundation houses were registered in the beginning of the 20th century. The houses are about 5–15 m from each other. Five houses have been archaeologically excavated, but only two have been published (Hackman 1940). Both are rectangular and in north-west–south-east direction. The largest house (nr. A/7) measures 24 x 6–7.7 m. It has a partially sanded floor, wattle-and-daub walls, several fireplaces and internal transverse walls; also, it showed signs of reparation. A second stone foundation house (nr. B/9) measures 14 x 6 m and has stave-built inner walls. Finds are rather scarce and similar in both houses, consisting mostly of burned bones, loom weights, whetstones, grinding stones and pottery as well as some glass beads. In addition, a comb fragment and some knives were unearthed from the larger house and a fragment of an arrowhead from the other one. Clearly diagnostic finds include a bird-of-prey brooch and a decorated bronze bracelet from the largest house, and a decorative iron pin found in the area between these two houses; all these objects date to the Merovingian period (AD 550–800). Several other diagnostic finds from the Late Iron Age have been discovered at this house site, including a fragmentary Anglo-Saxon penny of King Athelstan (AD 924–939) (Talvio 2002: 206), different brooches and a Thor's hammer-ring. However, these finds were made during the investigations that lack published site documentation.

During the Late Iron Age, in the beginning of the period, the site was situated about 300 m north–north-west from the rear end shore of a sheltered shallow bay. There is a Late Iron Age burial ground (Sa 18.3) with ten burial mounds directly to the east, adjacent to the house foundations. Two larger Late Iron Age cemeteries with in total 104 registered burial mounds are situated between the house site and the shoreline as it was in the beginning of the period. Similarly to the Fi 10.3 site in Kulla, the site in Lagmansby had a hidden location, when waterways are considered – in order to reach the site, one had to venture off the natural course of the nearby, west–east directed waterway. The entrance to the bay was marked with Late Iron Age cemeteries. As a fur-

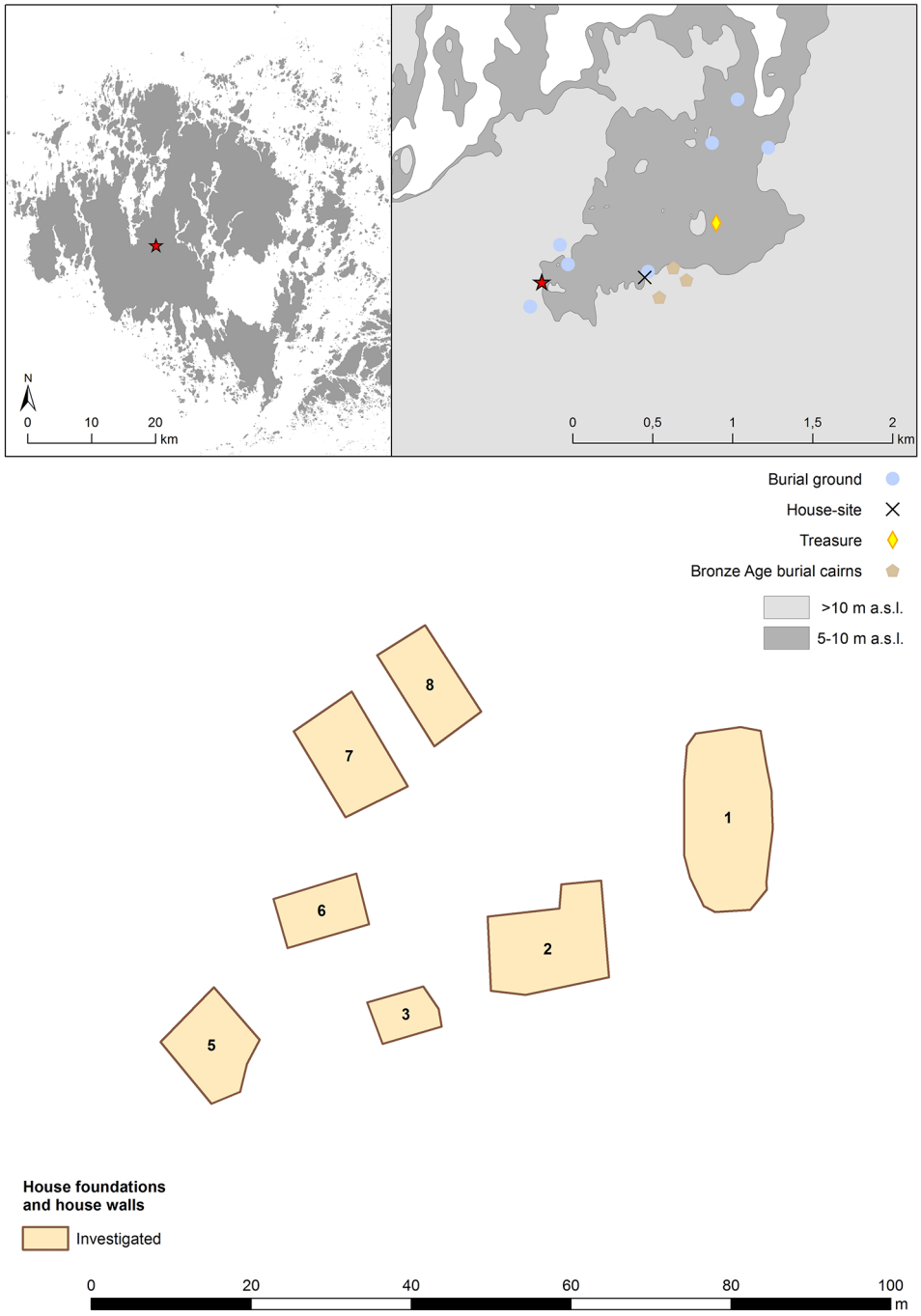


Fig. 3. The house site Fi 10.3 in Kulla, Finström parish. Insets are showing the site's location on the present-day map of Åland and in relation to the Late Iron Age and early medieval shorelines, as well as the archaeological monuments in the vicinity. Illustration: K. Ilves.

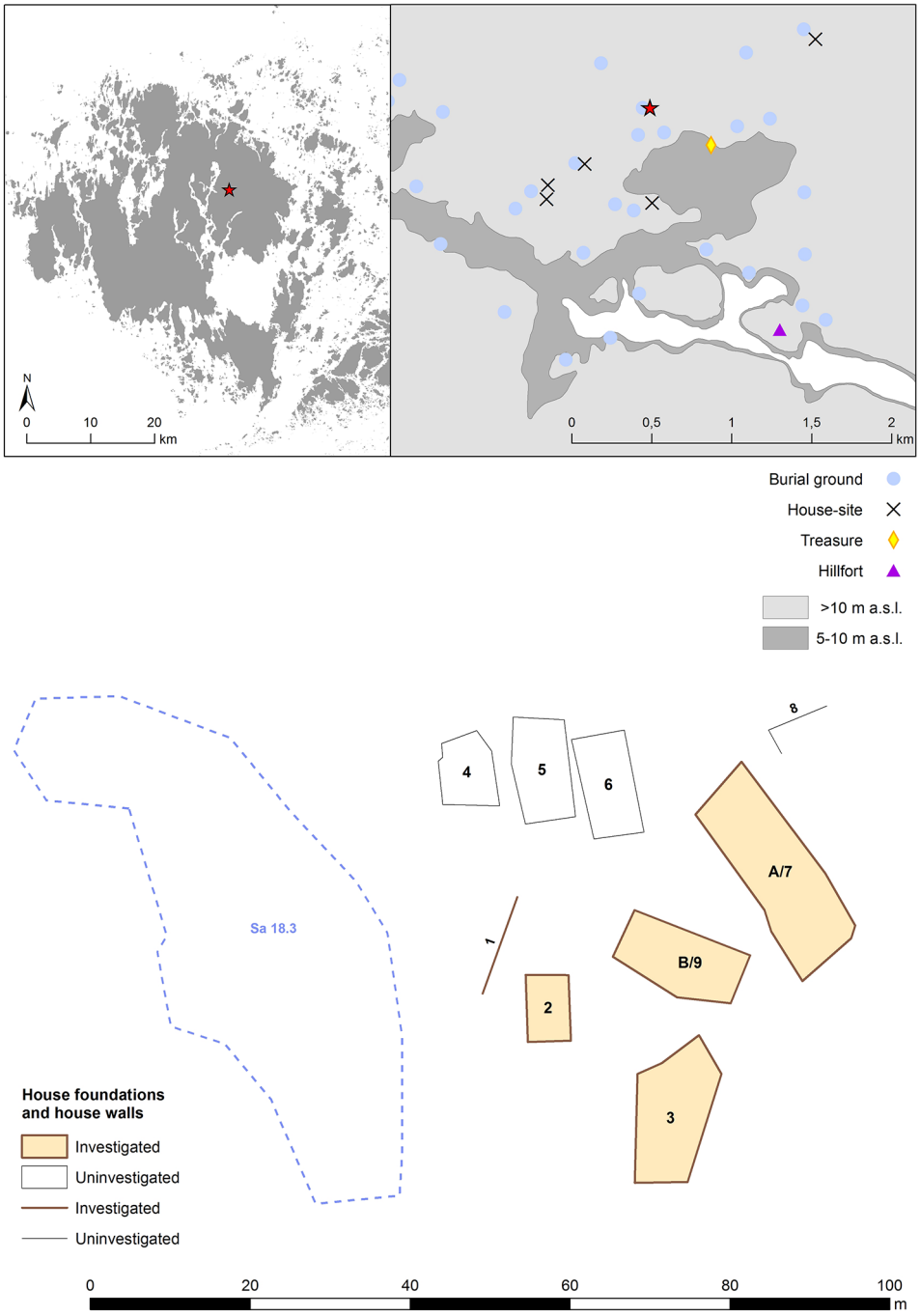


Fig. 4. The house site Sa 18.4 in Lagmansby, Saltvik parish. Insets are showing the site's location on the present-day map of Åland and in relation to the Late Iron Age and early medieval shorelines, as well as the archaeological monuments in the vicinity. Illustration: K. Ilves.

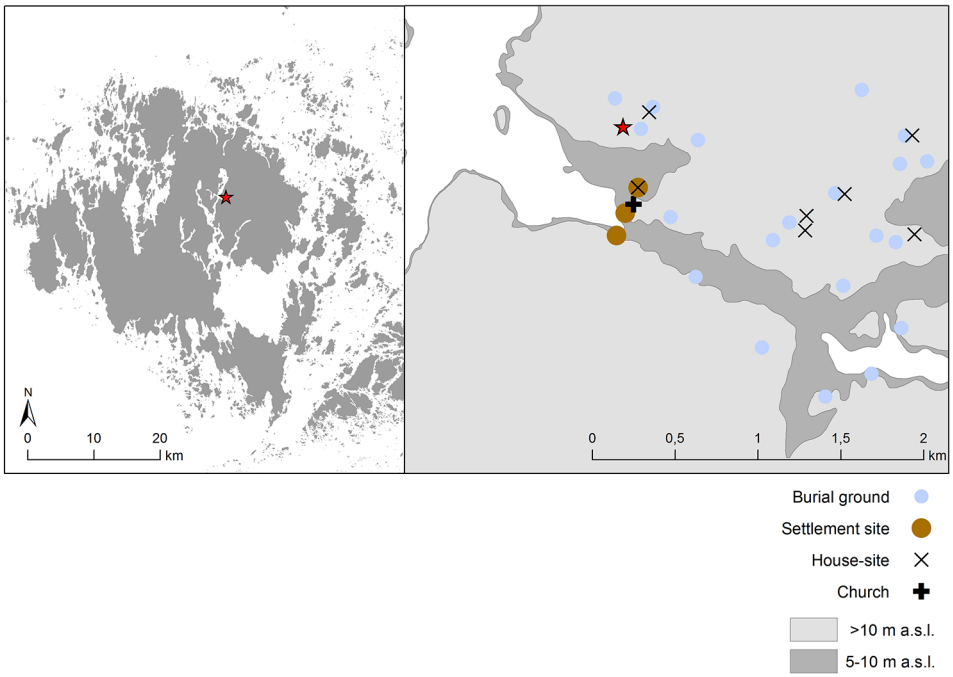
ther similarity to the Fi 10.3 site in Kulla, the site in Lagmansby lost its fairly easy access to water quite rapidly. The nearest shore was at about 1 km distance during the end of the period. The largest treasure ever found on Åland, consisting of at least 859 Arabic silver coins struck between AD 739 and 874/875 and buried in an Oriental jug (Talvio 2002: no. 108) has been documented just 400 m to the south-east from the house site.

The house site Sa 18.4 in Lagmansby shares many similarities with the house site Fi 10.3 in Kulla. Unlike Fi 10.3, that had a relatively secluded position in the landscape, the house site in Lagmansby however, is in an area of very dense Late Iron Age and early medieval settlement. Its surroundings are dotted with the remains of burial grounds and settlement sites. Among these, there is a large cemetery (Sa 2.4) with 140 burial mounds, about 500 m to the east. This cemetery was excavated in its entirety during 1957–60 by Kivikoski (1963). Many sites with stone foundation houses estimated to belong to the Late Iron Age and early medieval period are also in the neighbourhood. Of special interest is the cluster of house foundation sites up to 1 km to the south and south-west, in Rangsby. To the west from the house site Sa 18.4, at a distance of 1.7 km, there is the house site Sa 14.7, in Kvarnbo-Kohagen, where five out of seven registered stone foundation houses have been excavated.

Kvarnbo-Kohagen

The real number of houses at the site of Sa 14.7 in Kvarnbo-Kohagen, Saltvik (Fig. 5), was certainly higher than the registered seven. There is information about removal of several rows of stones directly to the west from the area with the investigated foundations due to land reclamation for agriculture (Dreijer 1955b). Also, at least two of the studied house foundations (nr. 4 and 5) were documented to have been built on top of older houses (cf. Dreijer 1960; 1963; Dreijer, S. 1961). The excavated and defined house structures at the site are built in a north–south (nr. 1, 2 and 5) and north-west–south-east direction (nr. 4 and 6). The buildings are mostly rectangular, only the largest house (nr. 5), measuring 18 x 7.5 m, has a slightly convex form. Houses nr. 1 and 2 are situated farthest to the north of the studied structures. House nr. 1 has outer measurements of 9 x 5.5 m. House nr. 2, measuring 12 x 7 m, is immediately adjacent and parallel to house nr. 1. About 10 m to the south of these lays another pair of houses, nr. 4 and 6. House nr. 4 was documented to have been built on top of older building(s). It measured 8–9 x 5 m in its earlier stage but was re-built into a square house measuring 5 x 5 m. It is noteworthy that this later phase of house nr. 4 has an, at least partially stone-built furnace in the corner of the building.[5] Adjacent and parallel to house nr. 4, house nr. 6 is situated. This structure, measuring 9 x 5 m in total, might actually consist of two separate square structures. It is very probable that in this area more constructions might have been destroyed while building the houses that were defined during the archaeological investigations. The destruction of older structures is clearly the case with the house nr. 5 situated about 10 m to the east from houses nr. 4 and 6 – archaeological features indicating older buildings were documented in the areas both west and south, adjacent to the stone foundation of the house nr. 5.

It seems more than justified to assume that at the site Sa 14.7 there are several settlement phases on top of each other. This is also supported by the thickness of the cultural layers around and in-between investigated house constructions, especially by house nr. 5, and by the richness of the archaeological find material unearthed. In addition to an abundance of the material commonly found at Late Iron Age and early medieval house sites on Åland, i.e. burned and unburned bones, burned clay, loom weights, whetstones, grinding stones, flint, cereal grains, glass beads and pottery, there is a much higher number of different metal tools and objects, including knives, needles, scythes, arrowheads, harpoons, drills, nails and rivets, as well as iron and bronze rings. Furthermore, a fair and varying amount of diagnostic artefacts were discovered, such as several different kind of brooches, ornate silver finger-rings, bracelets, faceted carnelian pearls, Arabic silver coins and oriental belt rivets, as well as Thor's hammer-rings. To complement the artefact-based chronology that has a clear emphasis on the Viking Age (AD 800–1050) and the beginning of the medieval period (although with few Late Merovingian exceptions), there are also three radiocarbon dates from house nr. 5 that cover the period of AD 820–1280.[6]



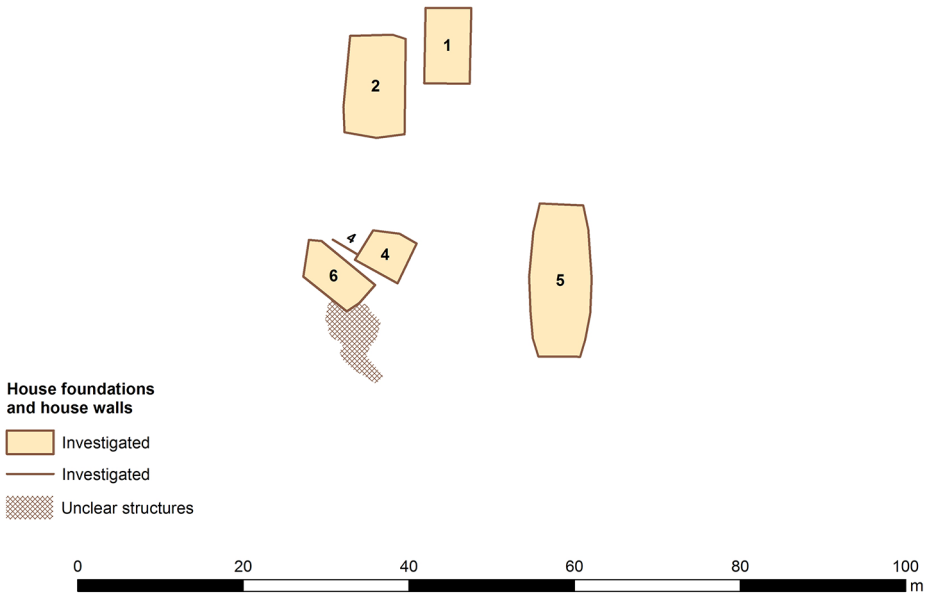


Fig. 5. The house site Sa 14.7 in Kvarnbo-Kohagen, Saltvik parish. Insets are showing the site's location on the present-day map of Åland and in relation to the Late Iron Age and early medieval shorelines, as well as the archaeological monuments in the vicinity. Illustration: K. Ilves.

Although not directly on the shore, Kvarnbo-Kohagen site was close to the settlement-contemporary shoreline and hence close to one of the main waterways intersecting the whole of Åland in south–north direction throughout the Late Iron Age and in the early medieval period. It has three Late Iron Age burial grounds in its vicinity. Just 50 m to the east, there is a cemetery with 33 registered burial mounds and 100 m to the north, a burial ground with 31 mounds. About 150 m to the north-east, there is burial ground with 17 registered burial mounds and one stone foundation house. Most notably, however, the Kvarnbo-Kohagen house site is just 350 m to the north from the settlement and house site of Sa 14.9 – a potential hall-farm that is argued to have formed a central place of intraregional importance (cf. Ilves 2015b; 2017b). In addition to the nearby and extensive settlement layers, on top of which the medieval church of Saltvik is situated, the largest Late Iron Age cemetery on Åland with 180 registered burial mounds is neighbouring the hall-farm site. At the hall-farm site, three well defined and a number of undefined timber-constructed houses have been documented. The site is dated to cover the whole Late Iron Age (Ilves 2015a; 2017a). It is clear that the Kvarnbo region was rather heavily populated during the Late Iron Age and with clear signs of social stratification.

Ödkarby

The stone foundation house at the site Sa 35.6 in Ödkarby, Saltvik, was discovered among 18 Late Iron Age burial mounds situated at about 200 resp. 400 m distance from the Late Iron Age and early medieval shoreline. However, according to the site report (Dreijer 1966), there are actually traces of two more houses at that site. Two small rectangular buildings were documented lying on top of burial mounds, and determined to belong to the modern era following the account of the local inhabitants. The stone foundation house, that in the current register of ancient monuments on Åland stands as belonging to the Late Iron Age and early medieval period, was also documented to have been built on top of the burial. Furthermore, the few finds made in that house, such as post-medieval pottery, porcelain and a fragment of a modern lock, clearly indicate a period much more recent than the Late Iron Age. It is very surprizing that this house is considered among prehistoric buildings. I will resume this matter later when discussing the chronological problems related to the study of the Ålandic stone foundation houses.

Kastelholm

The five archaeologically excavated house sites in Kastelholm, Sund (Fig. 6), are situated on a land mass created by two large waterways that fork from the large bay of Lumparn and head through Åland in a northerly direction.

The southernmost site in that area, Su 12.4, had a sheltered location and was approachable from the western waterway. According to the principal investigator Matts Dreijer (1954), there are six house foundations at the site; two have been subjected to archaeological excavation and published (Dreijer 1955a).[7] The excavated house nr. I is situated somewhat apart, about 100 m to the north-east from the other archaeological house remains. This rectangular building is in north–south direction, measures 14 x 9 m and has a central row of internal post holes. It has been used as a foundation for more modern structures, but there are also indications of an older building under (cf. Dreijer 1954). There is a drainage ditch associated with the structure. The excavations unearthed pottery of both medieval and modern period but also a great amount of decorated loom weights of Late Iron Age character. Unlike this house that has been used for a long period of time, the other building excavated at the site – house nr. II – was interpreted to have been used for a rather short period of time. This building also has a rectangular stone frame and is situated in a north–south direction. Similarly to house I, there is a drainage ditch associated with the structure. House II has outer measurements of 15 x 8 m, a partially sanded floor and just two pairs of internal post holes, about 6 m apart. This creates a large open space in the middle of the house with a central fireplace close to the northernmost set of internal post holes. The house incorporated a byre. Finds, which concentrated around the fireplace, are few – burned bones, loom weights, nails and pottery, but also some fragments of melted glass,

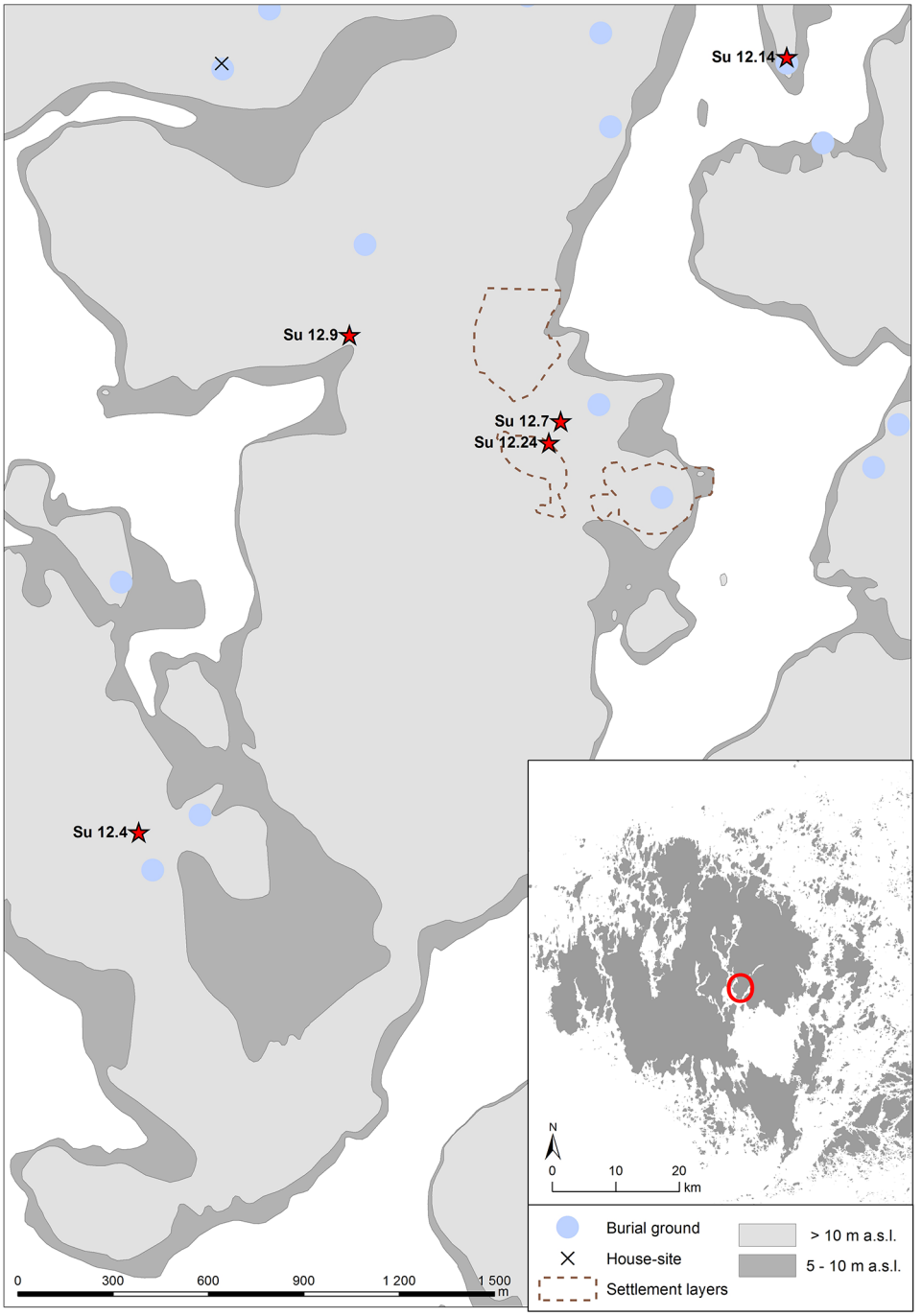


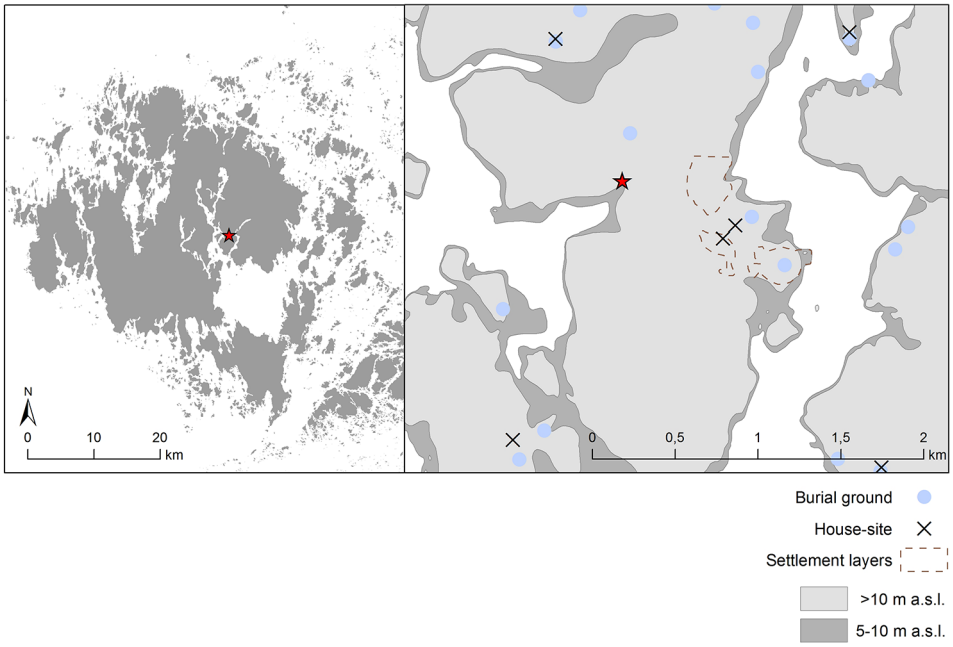
Fig. 6. The five archaeologically excavated house sites in Kastelholm, Sund parish in relation to the Late Iron Age and early medieval shorelines as well as the archaeological monuments in the vicinity. Inset is showing the sites' location on the present-day map of Åland. Illustration: K. Ilves.

a glass bead, an ornamented comb fragment and a probable weight. The houses were close to the shoreline in the beginning of the Late Iron Age and at about 400 m distance in the end of the period. Adjacent to the house foundations, there are three mounds of fire-cracked rock, which are estimated to be coeval with the settlement. Two burial grounds with 70 registered burial mounds in total are situated about 50 m to the south and 100 m to the east from the settlement area. Some 1.7 km to the north-east, as the crow flies, is the house site Su 12.9 that was also approachable from the western waterway.

The site of Su 12.9 (Fig. 7) had immediate access to water throughout the Late Iron Age. The closest Late Iron Age cemetery, with 116 registered burial mounds, is about 200 m north of the site. Nine stone foundation houses have been registered at the site, in a double row along the slope toward the shore. The houses are about 5–10 m from each other. Two buildings – identified as nr. 6 and 7 – have been excavated (Meinander 1954; Lundholm 1966). House nr. 6, situated in north-east–south-west direction, has a slightly convex form and outer measurements of 17 x 8.5–10 m. There is a drainage ditch associated with the structure. It seems likely that the house saw several phases of construction. It had a partially stone-paved floor and is interpreted to have incorporated a byre. Also, house nr. 7 has a slightly convex form measuring 10–15 x 7.5 m. It is situated in west–east direction at the southern end of house nr. 6 and was somewhat destroyed by the latter. However, house nr. 7 is itself documented on top of an older building. Finds are few and similar in both houses, consisting mostly of pottery, burned clay, burned nutshells and burned bones. Fragments of whetstones and some iron objects were also found. Two glass beads were unearthed from house nr. 7.

About 500 m to the east of Su 12.9, by the eastern waterway, there is one of the spatially most extensive Late Iron Age settlement complexes documented on the Åland Islands (see also Fig. 6). Two sites with stone foundation houses, Su 12.7 with three registered and excavated houses and Su 12.24 with one house foundation registered and studied, are part of this complex. In addition to the stone foundation houses, extensive settlement layers have been documented within an area covering about 35 hectares. There is a burial ground with 137 mounds (Su 12.7) located centrally in this area; this cemetery was excavated during 1962–7 and in its entirety by Kivikoski (1980). A smaller burial ground with just seven registered burial mounds is also part of this complex. This settlement area was situated on the shore during the Late Iron Age and has actually not lost its easy access to water up to this day.

Two excavated houses directly to the west of the large burial ground Su 12.7 are both in north–south direction. House nr. 1 is rectangular, 12 x 6.5 m in size and has a partially stone-paved floor. Finds are few and consist of pottery, burned clay, burned nutshells, loom weights, two glass beads, a knife, some nails and iron slag. House nr. 2 has a slightly convex form and measures 15 x 8 m; there is a smaller building or an annex measuring 4 x 4 m related to this house. There were more finds made from house nr. 2, however, even these of a rather low chronological value. There were many fragments of loom weights documented outside and along the western wall of the house. Within the house, burned bones, burned clay, whetstones, knives, nails, iron slag and pottery as well as two glass beads were unearthed. Further to the west from these houses, there are remains of a historic farmstead, but more prehistoric buildings are also hypothesized at the site (cf. Kivikoski 1980: 57). Only some 100 m to the south from the excavated houses at Su 12.7, there is the house site Su 12.24, which should be seen as part of the same complex (also Núñez & Lempiäinen 1992). At the site Su 12.24, in addition to extensive settlement layers and an excavated stone foundation house, there are strong indications of an additional set of house foundations (cf. Núñez 1994). The measurements of the investigated house are about 18 x 9 m. The building is in north–south direction, has a partially stone-paved floor, a central hearth and internal roof-bearing post-holes in pairs. The inner wood-walls of this house were interpreted to have been built using a split-log technique. There is a drainage ditch associated with the structure. The investigations revealed an abundance of the usual material found at the Late Iron Age and early medieval house sites on Åland. There were lots of pottery and loom weights discovered as well as iron slag and



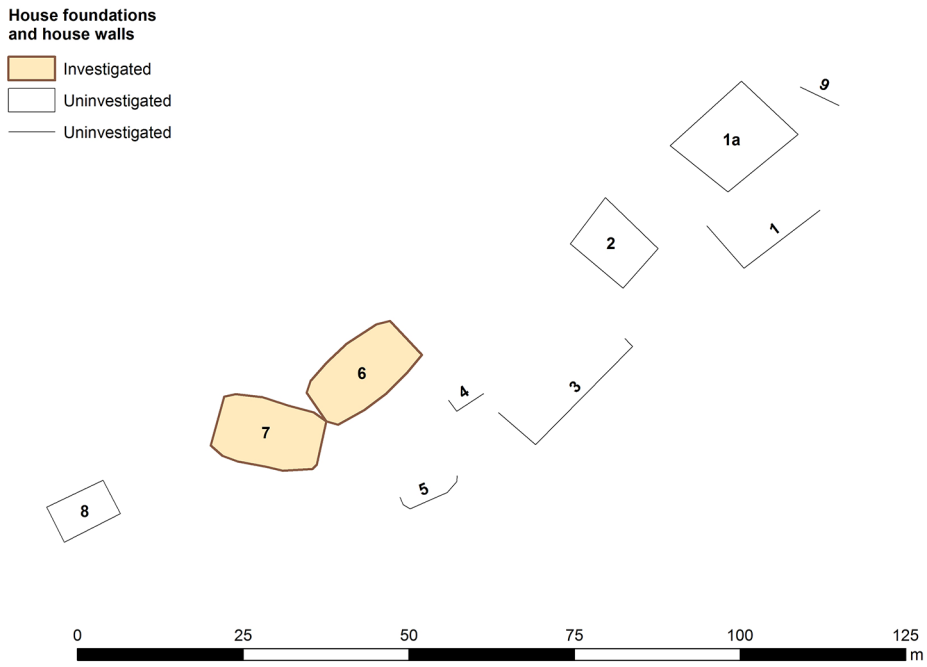


Fig. 7. The house site Su 12.9 in Kastelholm, Sund parish. Insets are showing the site's location on the present-day map of Åland and in relation to the Late Iron Age and early medieval shorelines, as well as the archaeological monuments in the vicinity. Illustration: K. Ilves.

burnt clay. In lesser numbers, burned bones, flint, fragments of whetstones and grinding stones as well as burned nutshells and cereal grains were recovered. Also, a number of iron artefacts were unearthed, knives, nails and rivets, even an arrowhead and a spearhead. The latter is considered to point towards the second half of the Viking Age.

About 1 km further north from the described complex, following the waterway, the house site Su 12.14 was documented on a very prominent position: on a narrow isthmus running north to south into the waterway (see also Fig. 6). This site of Su 12.14 has four registered and three studied stone foundation houses as well as 37 adjacent burial mounds. It had a position excellently suited for control over the waterway during the entire period of Late Iron Age and medieval times. House foundations at this site are in the northern (houses II and III) as well as in the southern part (house I) of the burial ground. Also, settlement layers were discovered while investigating burial mounds – close to mound nr. 7, which is somewhat detached from others, there were layers that yielded an abundance of rich finds dating to the medieval times. The mound itself is not a burial but a probable furnace of a house. The investigations of this area were, however, discontinued when the discovered find-rich layers were estimated to belong to the medieval times (Dreijer 1964). Some metres to the east, closer to the burial ground, traces of another house (house IV) were documented. This building turned out to be on top of a cremation burial and is interpreted as a potential smithy. All of the few finds made are of medieval and modern character (Dreijer 1969). Houses II and III were the only ones visible at the site before the investigations, but allowed hardly any constructional interpretations when excavated. House II is estimated to be in a north–north-west – south–south-east direction and to measure about 6 x 5.5 m; house III has an irregular form and its expanse remains unclear. Finds are few and non-diagnostic: burned and unburned bones, burned clay, some nails and flint. Thus, the medieval and modern settlement at the site of Su 12.14 is supported by the empirical evidence, but it remains an open question whether there is a prehistoric phase at the site as well.

CHRONOLOGY

The number of reliably dated stone foundation house sites and individual houses from Åland is small. At present, Fi 10.3 in Kulla and Sa 18.4 in Lagmansby can with certainty be identified as Late Iron Age dwelling sites and the houses at the site of Sa 14.7 in Kvarnbo-Kohagen as belonging to the Late Iron Age and the beginning of the medieval period. Despite claims of Late Iron Age and early medieval houses at the other locations studied, these are the only locations where absolute dates and/or the *reliable bulk* of diagnostic artefacts recovered clearly support a Late Iron Age origin. However, four of the five studied sites in Kastelholm (Su 12.4, Su 12.7, Su 12.24 and Su 12.9) are also probably of Late Iron Age origin based on the great amount of loom weights and single diagnostic objects discovered. The house site Fi 13.3 in Pålsböle might have roots in this period. However, it seems more than probable that the registered and excavated houses at the sites Su 12.14 in Kastelholm and, especially, Sa 35.6 in Ödkarby are of medieval and post-medieval origin.

The stone foundation house sites on Åland have been interpreted as farmsteads that were in use for a long time. Furthermore, a prehistoric origin is readily seen. It is easy to see how this understanding arose. The stone foundation house sites investigated show similar characteristics in terms of house plans. The bulk of material is made up of chronologically non-diagnostic finds assigned a relative date, and since many of the Late Iron Age forms differ little from their medieval counterparts, the date range is wide. Few diagnostic artefacts unearthed indicate that such sites were and could have been used both in the beginning of the Late Iron Age and in the end of the period as well as during the medieval period. Moreover, house sites are all located close to Late Iron Age burial grounds – investigations conducted at the cemeteries show use throughout the period. Despite the fact that a diagnostic artefact type, especially when scant in numbers, merely identifies presence at a certain time, generalizations are made that are covering long periods of time. Also, I would not exclude the possibility that single artefacts may well represent heirloom items. In this connection, it is of interest to note that a wheel/leaf-headed pin

dating to the first part of the Roman Iron Age (AD 1–400) has been found from the house site in Lagmansby during investigations that lack site documentation (Forsberg & Taffinder 1984). Such pins originate from the Upper Volga-Oka-Dnepr region and single finds have been also made in Estonia, Lithuania, Belarus and Sweden (Lang 2007: 137). It is unreasonable to argue for an Early Iron Age settlement phase in Lagmansby based on a single artefact; instead, I find it very conceivable that this wheel/leaf-headed pin might rather represent an heirloom item.

When were sites established? When were they abandoned? What was the length of the occupation and the reasons for that? How many houses were contemporaneous at a house site? How many house sites were contemporaneous? Why would Åland have its own house building tradition in comparison to neighbouring regions? In looking at the available material, either separately or as a whole, it is clear that as yet it does not seem possible to answer the range of questions related to the development of the Late Iron Age and early medieval settlement on Åland. In order to start to unravel this situation, I chose to examine the house site Fi 10.3 in Kulla. This site was chosen since all of the seven registered stone foundation houses at the site have been excavated, very well-documented and published – furthermore, this site has for a long time been the 'flagship' of the Ålandic Late Iron Age settlement.

The seven houses at the site (see also Fig. 3) vary greatly in size with the largest (house nr. 1) measuring 22 x 10 m and the smallest (house nr. 3) 6.5 x 5 m. The houses do not have a uniform direction in regard to the cardinal points: house nr. 1 is the only one in north–south direction, houses 2, 3 and 6 are in east–west direction and houses 5, 7 and 8 are in north-west–south-east direction. There is no structural or constructional overlap; the houses are about 10–15 m from each other, occupying an area of about 0.3 hectares (the area between the houses has not been investigated). The largest house is the only one that has a slightly convex outline, while the others are rectangular. These seven houses are argued to represent at least three different types of house construction. From a functional point of view, houses nr. 1, 2 and 5 are seen as year-round dwelling houses, while houses 3 and 6 are discussed to be unsuitable for a permanent housing. No definite interpretation is made in regard to houses nr. 7 and 8, though the first is more inclined to be seen as a dwelling house, the oldest one at the site (cf. Kivikoski 1946: 65). Through a few diagnostic artefacts unearthed, the site is dated from the 7th century to the beginning of 11th century. The principal investigator Ella Kivikoski never argued for all of the seven stone foundation houses studied to be coeval and/or older houses necessarily left to ruin when new houses were built. She is rather suggesting a chain of development in the use of the houses. New houses take over the functions from the older ones that, in turn, change in function. Also, several of the houses have been used in combination. The site in Kulla is interpreted as a large farm belonging to a family of a higher social rank.

The find material from the site, though not rich in numbers, aligns well with these interpretations. There is the expected material related to settlement activities, such as burned bones, loom weights, whetstones, flint, cereal grains, beads, pottery and metal tools. These are more numerous in the constructionally similar houses nr. 1 and 2, but whereas house nr. 2 had been burned down (also, houses nr. 3 and 6 have evidently suffered a fire) house nr. 1 showed no signs of fire. At the same time, all the foundations studied are characterized by common settlement finds. Notably though, loom weights are missing in houses nr. 3, 6 and 8; house nr. 6 further distinguishes itself from the others through the presence of iron slag. From a chronological point of view, an equal-armed brooch dated to the 11th century, as well as a white melon bead found from house nr. 2 indicates a later use-phase than, for example, in the case of house nr. 7 where a horse-shaped brooch dating to the 7th century was found. Faceted carnelian beads from house nr. 8 point towards the Viking Age, and a shield pendant dating to the 10th–11th century as well as a large mosaic bead were discovered from house nr. 5. Kivikoski (1946: 52–3) concludes that houses 1 and 7 are the earliest at the site, with house nr. 7 being the oldest, and houses nr. 2 and 5 belong to the final stages of the settlement; house nr. 8 is dated to the Viking Age. A few medieval and post-medieval finds – two shreds of glazed red

Lab-index	BP	±	calAD (2σ)	Context	Material
Ua-53500	1326	27	650–770	House nr. 7	Burned bone
Ua-53497	1251	30	670–870	House nr. 1	Cereal
Ua-53498	1225	29	690–890	House nr. 5	Burned bone
Ua-53499	1179	27	760–950	House nr. 6	Burned bone
Ua-53495	1128	27	770–990	House nr. 3	Cereal
Ua-53496	1081	27	890–1020	House nr. 8	Cereal
Ua-53494	1080	27	890–1020	House nr. 2	Cereal

Table 2. Radiocarbon dating results from Kulla. All datings have been calibrated using OxCal 3.10.

earthenware from two different vessels from houses nr. 2 and 6, and an iron padlock from house nr. 5 – are considered to point towards some post-occupational disturbance.

Based on the house-plans, some aspects of the internal chronology of this site have been briefly, but on a holistic level discussed by Dreijer (1955a: 48ff). While he agrees with the house nr. 7 being probably one of the oldest at the site, house nr. 1 is argued to belong to the 11th century. However, it is clear that without more solid chronology only tentative conclusions can be drawn. In order to bring clarity to and have a more reliable basis for the discussion on the chronology of the Fi 10.3 house site, I decided to send seven samples, one from each house, to radiocarbon dating (Ångström Laboratory, Uppsala University, Sweden). The results of radiocarbon dating and calibration are summarized in Table 2.

The results of radiocarbon dating align with the interpretations made by Kivikoski. The site has been in use for several hundreds of years, from the late 7th until the beginning of the 11th century. Not all houses were in use at the same time, but a chain of development where new houses take over the functions from the older ones, as well as the idea of houses also being in use at the same time, is very likely. House nr. 7 can definitely be argued to be the oldest at the site and house nr. 1 was probably taken into use shortly after the first one. Houses nr. 2 and 8 belong apparently to the final stage of the settlement, both dating to the second half of the Viking Age. In case of house nr. 5, where a 10th–11th century shield-shaped pendant was unearthed, radiocarbon date falls into the end of the Merovingian period and the first half of the Viking Age – taken together, a longer period of usage must be hypothesized. The smallest houses at the site, nr. 3 and 6, being of the outbuilding type, seem to have been used at the same time, from the very end of the Merovingian period, but mostly during the Viking Age. The conducted radiocarbon analysis is now firmly anchoring the site of Kulla in absolute chronology, allowing site-specific patterns to be aggregated and less hypothetical inferences to be drawn. But for a fuller understanding of the site, the area between and surrounding the stone foundation houses should be studied as well. Further, targeted dating (of house nr. 7) is needed to shed light on the establishment of the site (cf. Ilves 2017b).

To use radiocarbon dates is a standard archaeological practice. However, there are less than hundred radiocarbon ages available for the *entire* Iron Age of the Åland Islands (500 BC–AD 1050), many originating from uncertain contexts. Although there is now a much more solid chronology for the house site Fi 10.3 in Kulla, in order to move from a site-specific approach to the general trends characterizing Ålandic settlement during Late Iron Age and early medieval period, a solid chronology for a number of settlement sites is essential. Only upon an unambiguous and reliable chronology is there a possibility to interpret events and cultural processes on a wider scale.

CONCLUSIONS

Today's main island of Fasta Åland, which in fact consists of a few islands connected by bridges, was a broken archipelago during the prehistoric times and the nature of the settlement on Åland has always been more or less maritime. All of the known dwelling sites estimated to belong to the Late Iron Age and early medieval period lay within a distance of 5 km from the coast today, but due to shore displacement resulting in raised shorelines, these were originally much closer to

site-contemporary shores. As is demonstrated in this study, it is obvious that there were no certain types of locations uniformly preferred in regard to shoreline or waterways. Dwelling sites are located immediately by the shore as well as at some distance from it. The sites also vary when it comes to access to transportation routes, with some being adjacent to waterways and others situated in more secluded locations. There is little evidence that sites shifted location in response to changing shorelines. It is, however, justified to suggest that the location close to the shore was important for the sites established in the very beginning of the Late Iron Age. During the initial establishment phase, the topographical situation, primarily immediate access to water, was important in deciding where to create new settlements. Subsequently, however, these settlements and the cultural landscape they formed, seem to have become a more important localizing factor than the receding shoreline.

This overview of the stone foundation houses and sites that have been archaeologically excavated has shown that the sites, grouped together by the existence of low dry-stone walls marking house foundations, also differ in many aspects. The presence, amount and character of the find material bear obvious witness to the diversity, both functional and social. There are likewise variations in house plans and construction methods, as well as in house sites' spatial relation to burial grounds and to other remains in the vicinity that are estimated to indicate coeval dwelling or signify region's previous importance (i.e. Bronze Age burial cairns). Yet what I find most interesting is the fact that there are stone foundation houses showing hardly any major signs of repairs, rebuilding or overbuilding at sites with long continuity, such as in Kulla. At the same time, there are really 'messy' sites, where many houses are built on top of older structures and overlapped by younger ones, such as in Kvarnbo-Kohagen that is also one of the richest sites. Still, overlapping stone foundation houses are also evident from sites that have yielded very few finds, as is the case with two excavated houses at Su 12.9 in Kastelholm where a number of construction phases were documented in a limited area just as in Kvarnbo-Kohagen. From an archaeological point of view, sites with complex stratigraphy are often associated with longer occupation. Yet, there are studies, based mainly on the Scandinavian houses from the end of the Early Iron Age, that show a rather long life span of a house – most commonly around 100 to 150 years, 50 to 75 years before the need of reparation (Göthberg 2000: 108–9 with references). The life span for stone foundation houses has been suggested to be even longer (Svedjemo 2014: 64). In that sense, the fact that the house site in Kulla is so 'clean' in regard to house plans is not so puzzling as such. However, the site is also rather scant in finds. The latter aspect has been explained by the controlled abandonment of the site, while in case of Kvarnbo-Kohagen a violent end to the settlement has been proposed (cf. Karlsson 1997: 91–2; Tomtlund 1999: 28). Although both these sites have suffered a fire, I am not excluding the possibility of, for example, an attack to Kvarnbo-Kohagen settlement leading to many things left behind. But I do think that the 'messy' nature of the site is also indicating a much more intense settlement of a different nature than at the single and rather secluded farm in Kulla, which seemed to have belonged to one family for generations. Obviously, this remains just a hypothesis as long as Kvarnbo-Kohagen site's internal chronology is not clarified; the same is relevant for other house sites.

Although a large number of Ålandic Late Iron Age and early medieval house sites has been subjected to archaeological excavation, the archaeological record has a very uneven character. There are some well-studied and -published houses and sites, but also many sketchily excavated ones with poor or absent documentation. This must be considered as one of the main reasons why the Ålandic stone foundation house sites have not been analytically examined. Another fundamental, but solvable problem is the lack of chronology, which is seriously hampering a meaningful discussion on the transformations occurring on Åland (cf. Ilves 2017b). Radiocarbon dating of samples from what can undoubtedly be described as an *abundance* of already excavated contexts is a suitable, feasible and not-so-expensive first step to take. There is a huge potential in such study. Anchoring sites in a finer chronology and building up a base of knowledge would open up the possibility for finding answers to questions related to understanding the nature and dynamics of Ålandic Late

Iron Age and early medieval settlement. That, in turn, would enable to break the prolonged hiatus in the settlement archaeological research and demarginalize Åland within the field of Late Iron Age and early medieval studies.

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NOTES

[1] Such as 17 house foundations at the site of Jo 22.4 in Prästgården, Jomala (cf. Cederhvarf 1910), and 6 at the site of Sa 3.5 in Borgboda, Saltvik (cf. Tomtlund 1986). For the discussion in this article, it is noteworthy that both these sites are immediately adjacent to the Late Iron Age cemeteries.

[2] Cf. Jo 35.7 in Önningeby, Jomala, or Sa 11.3 in Hjortö, Saltvik.

[3] The continuity in construction of stone foundation houses is one of the significant arguments against the early medieval settlement discontinuity theory that has been advocated based on the history and etymology of place names almost throughout the history of scholarly research on Ålandic settlement (for the most recent insight, see Sjöstrand 2014). Today, it is generally not questioned that the majority of Ålandic place names are not of prehistoric origin, but younger. This has been explained – especially, since Lars Hellberg's classical study of the place names on Åland (Hellberg 1980) – that Åland, having had a rather dense population during the Late Iron Age, was depopulated in the early 11th century only to have witnessed a rapid re-colonization about 150 years later. This explanation, however, is in contrast with the archaeological as well as paleobotanical material.

[4] The results of shoreline calculation for the whole of Fasta Åland in the beginning of the Late Iron Age are spanning from 8.5±0.4 m asl. in the south-east to 9.8±0.4 m asl. in the north-west; in the end of the period, the values are spanning from 5.5±0.3 m asl. to 6.4±0.3 m asl., respectively (Ekman 2017).

[5] In the present connection, I would like to draw attention to Björn Cederhvarf's investigations at the house site of Jo 22.4, close to the Late Iron Age burial ground, but also to the medieval church in Prästgården, Jomala (Cederhvarf 1910). One stone foundation house of the 17 houses was excavated and firmly dated to the end of the 14th century–the beginning of the 15th century. The excavated and dated house was considered to be one of the two oldest stone foundation houses at the site. These two houses had their stone-built furnace positioned centrally in the building, while others have it in the corner of the house. The central position of the furnace is discussed to reflect a more archaic building tradition, while its position in the corner is seen as a more modern characteristic. Even in the case of another excavated house foundation, in Borgboda, dated to originate, at the earliest, from the medieval times, stone-built furnace was documented to have been positioned centrally in the building (cf. Dreijer 1955a: 51–2).

[6] All three ^{14}C dates from house nr. 5 in Kvarnbo-Kohagen were obtained from carbonized cereals and dated in 2006. The results cover the transition period from the prehistoric to medieval times (data from the Museum of Åland, ÅM): 1115±35 BP (Ua-33352; from investigation unit A5, find ÅM 328:43), 885±35 BP (Ua-33354; from investigation unit D9, find ÅM 328:258) and 830±35 BP (Ua-33353; from investigation unit C3, find ÅM 328:157).

[7] According to the current register of ancient monuments on Åland, there are only two stone foundation houses registered at the site. In this article, I have chosen to follow the account of Dreijer.

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