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HUT FLOOR AREAS AND CERAMICS — ANALYSIS OF THE EXCAVATION AREA IN THE RÄÄKKYLÄ PÖRRINMÖKKI SETTLEMENT SITE, EASTERN FINLAND

Abstract

This article deals with the excavations of the Rääkkylä Pörrinmökki settlement site in eastern Finland. In one of the excavation areas in particular the find distribution was carefully taken into account. The resulting find pattern is interpreted as two hut floor areas. The meticulous recording of finds makes it possible to examine some of the formation processes of the find distribution, and combined with the rich ceramic material it can also shed light on the chronological sequence of the site.

The ceramic vessels, though few in number, form a material with a long chronological span. The finds include Typical and Late Comb Ware, Early Asbestos Ware, Kierikki/Pöljä Ware and Early Metal Period Wares. The studies on the horizontal stratigraphy as well as on the cleaning effects and the phosphate values show that the floor area of the larger hut was occupied twice (Early Asbestos and Comb Ware). The floor area of the smaller hut was used mainly during the period of the Kierikki/Pöljä Ware.

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Introduction

The Pörrinmökki settlement site was first discovered in 1985. Soon after this excavations were needed because building projects threatened the site. The excavations took place in 1990–1993 (Hintikainen 1990; Lavento 1991; Pesonen 1992), with excavated area of 1150 m². The total area of the settlement site is estimated at several hectares.

The Pörrinmökki site is situated in the municipality of Rääkkylä in northern Karelia. It lies on the slopes and the southern plateau of the Jaaman kangas ridge. The only signs of the prehistoric settlement today are the dwelling depressions and stray finds which can be detected along the roadsides and gravel pits. The slopes of the ridge were modified by the Ancient Lake Saimaa. The Ancient Lake Saimaa at its largest extent is called Suursaimaa; its shore formations have survived because of the sudden fall in the lake's surface level around 5000 BP (e.g. Saarnisto 1970). In the Pörrinmökki site remains of the settlement have been found both above and below this Suursaimaa level. The radiocarbon samples from the upper

site are older than 5000 BP whereas those from the lower site are younger (Table 1). These dates are consistent with the history of the lake and the dates previously presented (c.f. Saarnisto 1970). Today the nearest lake lies half a kilometer southwest and the site is surrounded by swamps. The present vegetation consists mainly of pine-forest but macrofossil finds from the excavation suggest a richer vegetation at the time of the settlement (Jussila 1994).

Three larger areas have been excavated at the site (areas 1 to 3, see Fig. 1). In addition, several test trenches and pits have been made. In order to determine the whole extent of the site, phosphate analysis and the drill-and-sieve-method were also used. The main interest of this article, the hut floor areas, were observed in the excavation area 2.

Ceramic groups

The most prominent group of finds in the excavation area 2 were ceramics. Over 11000 finds were documented, of which ceramics numbered about

Table 1. Radiocarbon dates from the Rääkkylä Pörrinmökki settlement site. All the dates are uncalibrated.

	area	context	$\delta^{13}\text{C}$	BP	dates
Hel-3222	upper	hearth	-26.0	5270 \pm 100	Early Asbestos Ware
Hel-3223	upper	hearth	-25.7	5090 \pm 100	Early Asbestos Ware
Hel-3224	upper	grave ?	-25.7	5640 \pm 100	
Hel-3225	lower	hearth ?	-25.4	490 \pm 100	
Hel-3295	lower	pit	-25.2	3850 \pm 120	Kierikki/Pöljä Ware
Hel-3296	lower	post-hole?	-25.1	3640 \pm 110	
Hel-3297	lower	post-hole?	-23.3	2630 \pm 100	

8400 pieces, or 76 % of all finds. This material forms a good basis for the study of site formation and chronology. It can be further stressed by the fact that from the chronological point of view ceramics are the most important artifact group in the Finnish Stone Age research.

Altogether 28 ceramic vessels were separated, belonging to four major ceramic groups. When studying ceramics, all pieces smaller than 1 cm² in surface area were left out of the study. A great deal of asbestos ceramics also had to be left out because of its sandwich-like breaking which leads to unidentifiable sherds. Three Early Asbestos Ware vessels from the upper settlement zone were added to the study because of their importance in dating the settlement.

Early Asbestos Ware

No basic study of the Early Asbestos Ware exists but it is regarded as a regional group under the style I:2 of the Early Comb Ware (Carpelan 1979, 12; Edgren 1966, 147; Äyräpää 1934, 50). Carpelan also sees a longer chronological span in the style; according to him, the so-called Kaunissaari Ware (presented by Tallgren 1914, 19 and Pälsi 1915, 160) is a younger component of the Early Asbestos Ware and existed at the same time with the Typical Comb Ware (Carpelan 1979, 12; also Äyräpää 1934, 50 and Lavento 1992, 26).

The present material includes 11 vessels from this group. Three of them are from the upper zone (area 1, Fig. 2) and eight from the lower zone (area

2, Fig. 3). All the vessels are tempered with asbestos and decorated with broad and short toothed stamps; in some vessels animal bones have been used as stamps. The decoration covers the whole surface of the vessels and is arranged in dense zones. Most of the surviving rim parts are straight and thickened at the mouth. The top of the rim is decorated with the same stamps as the wall surface. The vessels were manufactured by coiling. Some of the vessels have drilled holes in them, and there have been found conical sherds which fit into these holes as well as sherds with negative impressions of the decoration. It seems that the clay which was used in repairing the vessels was first pressed against the surface of the vessel and then pushed through the holes in order to keep the joint together. This method has previously been reported from the Maarinkunnas-Stenkulla site in Vantaa in southern Finland, the finds including Typical and Late Comb Ware (Vikkula 1981, 22–23). In Swedish Lapland and Norrland the method has been observed in the Early Metal Period Asbestos Wares (Carpelan 1965, 129; Hulthén 1991, 37–39).

The excavation in the upper zone of the settlement revealed fragments of only three vessels, which all belong to the Early Asbestos Ware. Because this ware was also found in the lower settlement, it is probable that the fall in the lake's surface level (the Vuoksi catastrophe) in 5000 BP happened during the phase of the Early Asbestos Ware. Similar observations have also been made in the nearby settlements in Rääkkylä. The horizontal stratigraphy between the Early Asbestos

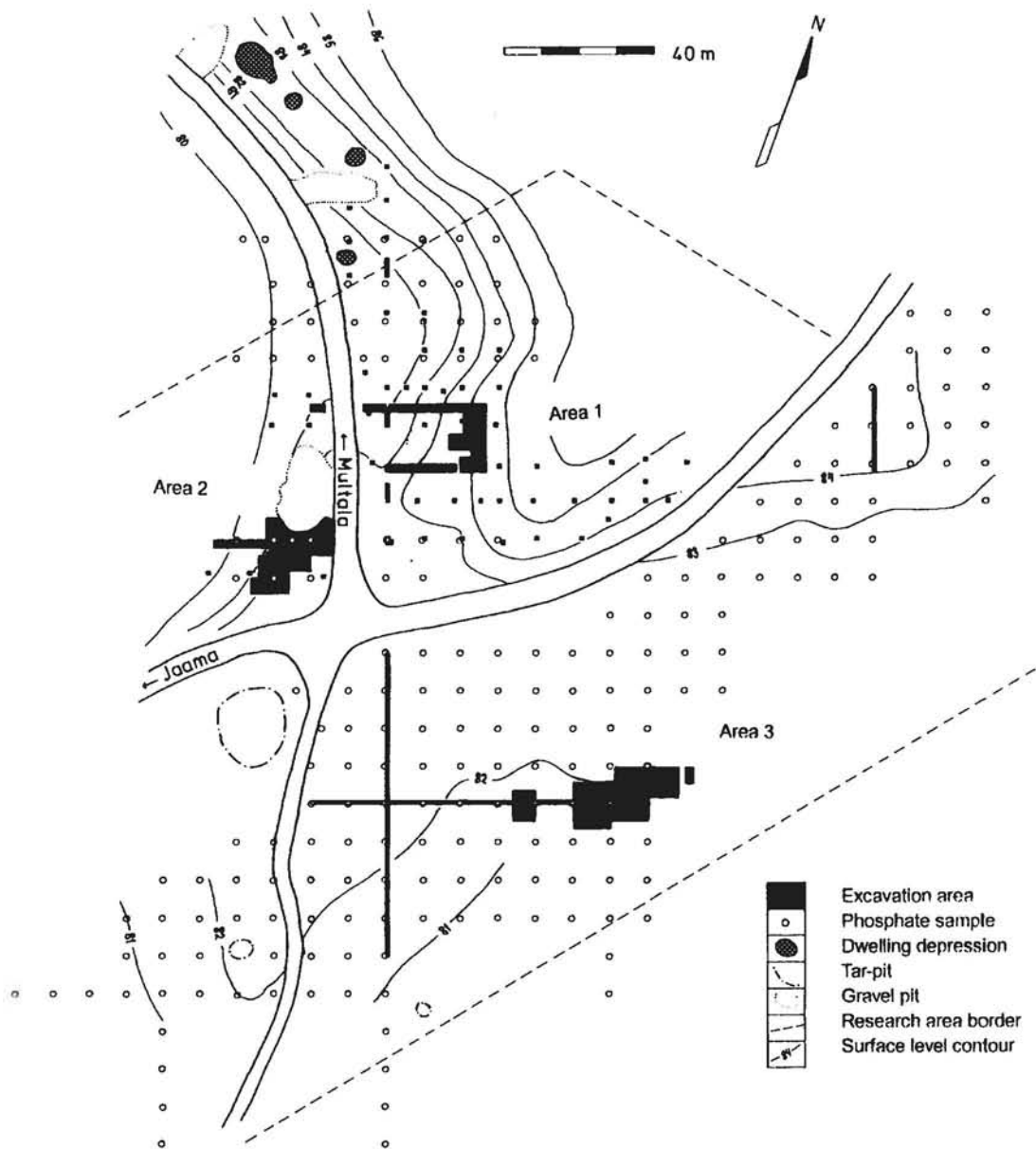


Fig. 1. General map of the Rääkkylä Pörrinmökki settlement site and excavations in 1990–1993.

Ware and the Typical Comb Ware periods has also been observed in the Vieremä Hukkalanharju and the Siilinjärvi Vanha Kansakoulu settlement sites in northern Savo (Pohjakallio 1984, 29–31). Previously only the Typical Comb Ware was connected with the Vuoksi catastrophe (Hellaakoski 1936, 83–85; Meinander 1948; Saarnisto 1970, 69; Äyräpää 1939, 39).

Comb Ware

The Pörrinmökki Comb Ware consists of eight vessels (Fig. 4). The temper variations include crushed asbestos, quartz, feldspar, mica and chamotte. Most of the vessels are evenly curved and their mouths are about 30 cm in diameter; a little cup is also included in the material. The ves-

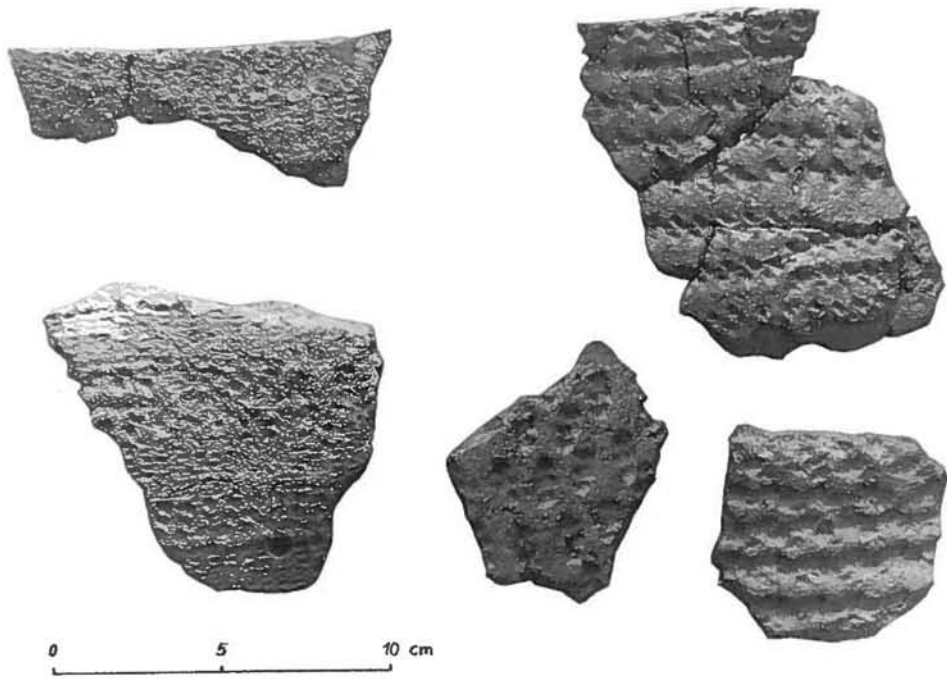


Fig. 2. Early Asbestos Ware from the upper settlement zone, area 1 (NM 25817:46, 135, 50, 65, 65).

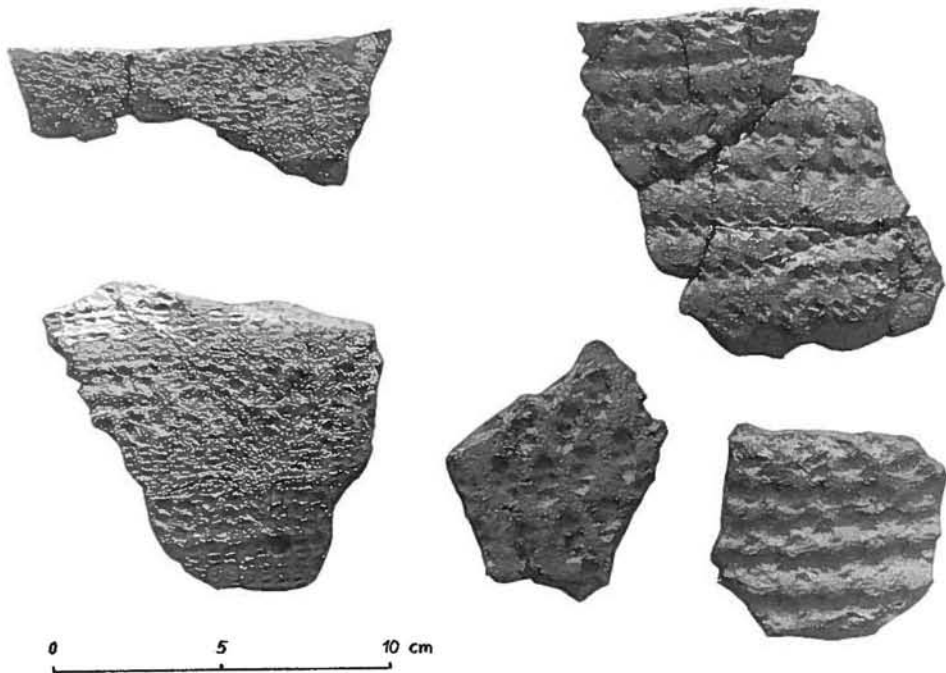


Fig. 3. Early Asbestos Ware from the lower settlement zone, area 2 (NM 27195:140, 27195:295, 27195:462, 26432:179, 26432:393, 26432:187, 27195:556).

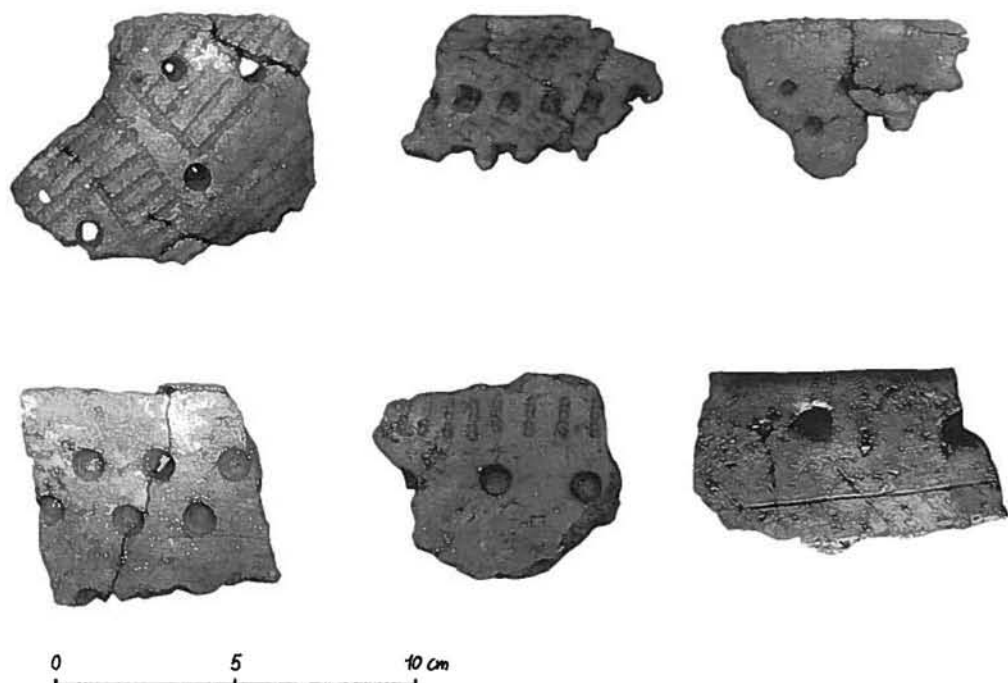


Fig. 4. Typical Comb Ware: 1–2 (NM 27195:391, 26432:818); Typical/Late Comb Ware: 3–6 (26432:385, 27195:303, 27195:159, 26432:594).

sels are decorated with pits and/or comb-stamps and they are round-bottomed. The bottom of a vessel has been reconstructed: it reveals how the vessel was manufactured by coiling and how it was repaired. There is some resin-like substance attached to the coils and it is obvious that the pieces have been glued together with it. A similar method has been reported by Kokkonen in connection with Comb Ware vessels (1978, 34). Around the bottom of the vessel there are also drilled holes which may be connected with the repairing of the vessel.

One sherd with zig-zag -decoration clearly belongs to the so-called supreme style of the Typical Comb Ware (Äyräpää 1930, 182–183). Most of the vessels have a sparser decoration and probably belong to the Late Comb Ware or somewhere between the Typical and the Late Comb Ware (c.f. Vikkula 1981, 47).

Kierikki/Pöljä Ware

The Pöljä Ware was first defined by Meinander (1954) although its characteristics were noticed much earlier (e.g. Tallgren 1914; Äyräpää 1930,

208). The definition included features such as asbestos temper, an unprofiled vessel wall, usually a round bottom and often an inward bent rim. The decoration is careless and consists of comb- or other stamps, usually in a fishbone arrangement. Some vessels are striated (Meinander 1954, 165). Later the most important criterion for defining the Pöljä Ware has been the inward bent rim (Edgren 1964; Purhonen 1973). The Kierikki Ware was defined by Siiriäinen (1967), based on the ceramics found at the Kierikki site in Yli-Ii. The Kierikki vessels have a straight, slightly thickened rim and are tempered with asbestos or/and talc. They are sparsely decorated with comb- or other stamps and have a round bottom (Siiriäinen 1967, 31–32). The fact that the definitions are based on different material causes problems in classification (Carpelan 1979, 14; Siiriäinen 1984, 32). The latest efforts on the subject link the Kierikki and Pöljä groups with each other, although some chronological difference is obvious (Siiriäinen 1986, 190–191).

The Kierikki/Pöljä material in Pörrinmökki consists of 10 vessels (Fig. 5). None of the rims are as sharply inward bent as the “classic” Pöljä rims (e.g. Edgren 1964, 20–23 Figs. 6–9). The

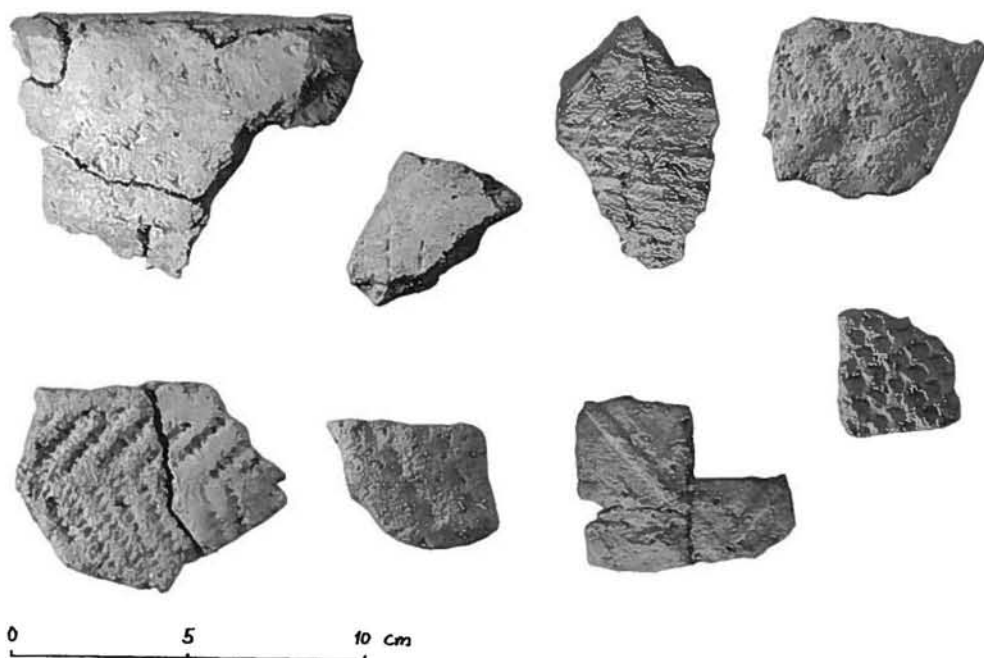


Fig. 5. Kierikki/Pöljä Ware: 1–6 (NM 27195:1228, 27195:1321, 27195:435, 27195:1491, 27195:1119+1573, 27195:647); Early Metal Period Wares: 7–8 (NM 27195:891, 27195:1217).

temper variations include fibrous asbestos, chamotte, soap-stone, burnt bone, feathers (impressions) and very small crushed quartz. All the vessels were made by coiling. The profile and the bottom of the vessels remain undefined because of the high level of fragmentation. Five of the vessels are decorated with long comb-stamps, in at least three cases with a fishbone-motif. Three of the vessels have striations formed probably by scraping or burnishing the surface at the manufacturing stage (c.f. Rice 1987, 137–138). Three of the vessels lack decoration or striations totally. Since the vessels carry no clear characteristics of either of the types, they are broadly called the Kierikki/Pöljä Ware. A sample from a pit where Kierikki/Pöljä Ware was found in the lower area of Pörrinmökki was radiocarbon dated at 3850 ± 120 BP which is an appropriate date for this ware.

Early Metal Period Wares

Few sherds of very thin-walled asbestos-tempered ceramics were found (Fig. 5). They are from two different vessels with no surviving rim parts. The

first vessel is decorated with even-based, 4–5 mm wide grooves grouped in pairs. The pairs of grooves intersect other pairs diagonally and thus form a rhombic pattern. The other vessel is decorated with small but deep half-moon-like impressions.

The counterparts of the first vessel can be found in the Säräisniemi 2 -group which forms the main body of the Early Metal Period Wares in eastern and northern Finland (Carpelan 1965). The vessel probably belongs to the so-called Sirnihta group of Säräisniemi 2 -pottery (M. Lavento pers. comm.). The decoration motif has its near counterpart in the Hankasalmi Salo vessel which is often compared to the Andronovo ceramics in Russia (e.g. Äyräpää 1951, 82–83 Fig. 5).

The vessel with dense impressions has no counterparts in the published Finnish material. Jörgensen and Olsen (1987, 15–16) describe a textile-ceramic group in northern Norway which has asbestos temper and impressions similar to the Pörrinmökki vessel. This pottery is also found in Norrland (Hulthén 1991, 22). The Imitated Textile pottery (IT) is also tempered with asbestos (Arponen 1992; Carpelan 1970, 26; Jörgensen &

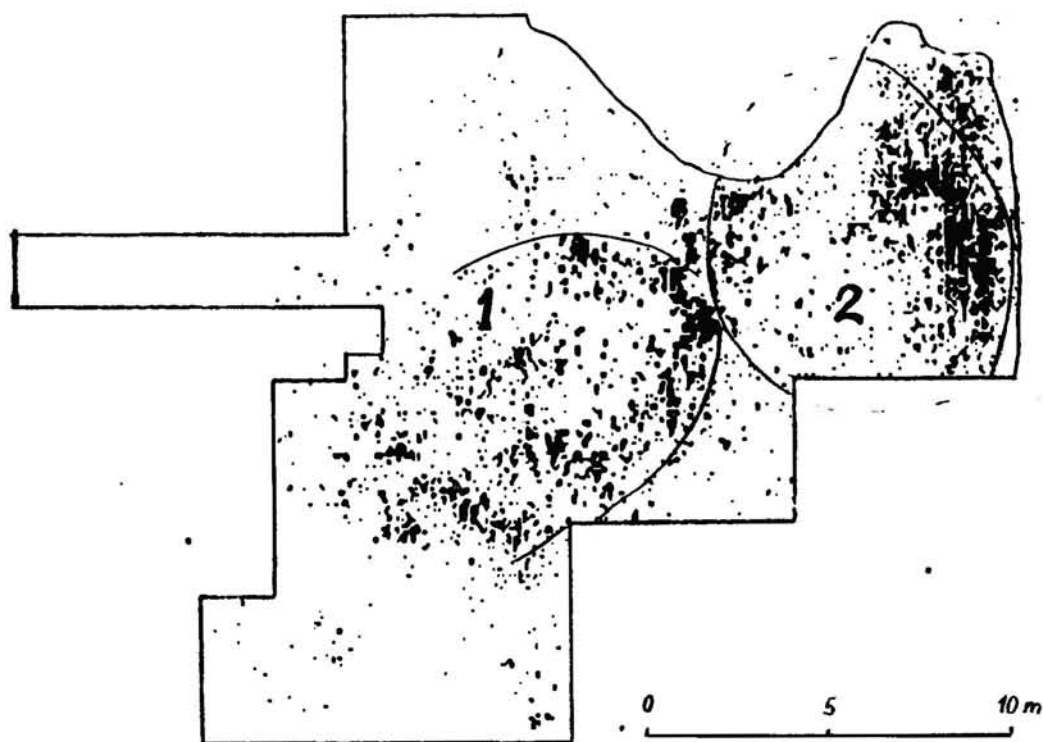


Fig. 6. The find distribution in the excavation area 2. The approximate borders of the hut floor areas are marked.

Olsen 1987, 16), but the rhombic paddle impressions (Carpelan 1970, 31) are different from the ones of the Pörrinmökki vessel. The nearest counterparts can thus be found in the Early Metal Period asbestos ceramics in Norrland and Norway.

Hut floor areas

Huts in the Finnish research

The Stone Age and Early Metal Period dwellings can usually be detected as shallow, round or oval depressions in the ground, with 6–10 m in diameter. When excavated, they rarely contain a stone hearth or other structures (Meinander 1976, 28). Some larger and more complex depressions have also been excavated (e.g. Pieksämäki Naarajärvi, Matiskainen & Jussila 1984). The find distribution in the excavated depressions differs from place to place. In some places the finds are concentrated inside the depression, while in other

places they are concentrated mainly between the depression and the shore (Meinander 1976, 26–27; Rauhala 1977, 17). Sometimes the ceramic finds in particular are clustered along the walls of the depression (Meinander 1976, 26–27; Moisanen 1991, 31).

A dwelling without any visible depression was first defined by Pälsi (1918) who reconstructed the classic Räisälä Pitkäjärvi hut with a circle of post-holes and a stoneless hearth in the middle of it. The finds were concentrated inside the hut floor area. Pälsi and Luho documented similar hut floors also later (Luho 1967, 74; Pälsi 1939, 63). Sohlström (1992) has been able to identify a hut floor area with the aid of a hearth, soiled earth and the find distribution. She also discusses the origin of the soiled earth and suggests that the earth could have been coloured by skin- or food-preparing (Sohlström 1992, 31). Also in some other studies the identification of an activity area or a hut floor area has been based on the evidence of soiled earth and find distribution (e.g. Grön 1983).

The Pörrinmökki hut floor areas

There were no traces of structures above the ground. The structures could only be observed during the excavation; they were fairly indistinct and were not of great importance when defining the hut floor areas. The main indicator of the floor areas is the find distribution which is supported by phosphate mapping. The methods for documenting the finds as well as the phosphate analysis are discussed in more detail by Pesonen (1994).

The find distribution in the area 2 is presented in Figure 6. The most distinctive features are the areas of clustered finds and the empty areas between them. The distribution seems to indicate two oval activity or hut floor areas, with a concentration of finds on the northern sides of the assumed huts. In this article they are called hut floor areas 1 (larger) and 2 (smaller). The phosphate analysis in the area was carried out only in 1992 (Fig. 7).

If the later disturbances are counted out, the clusters of artifacts found at a site can be interpreted

as primary or secondary refuse (Schiffer 1987, 58). Primary refuse means basically an uncleaned activity area and secondary refuse means artifacts discarded elsewhere as a result of cleaning. When applied to the Pörrinmökki hut floor areas, the finds that are distributed along the walls show the cleaning-up effect and the ones in the centre can be interpreted as primary refuse. The hut floor area is kept tidy simply because it is more comfortable. The so-called möddinge-mounds around the Norwegian pit-houses are clearly refuse heaps (Schanche 1992, 55). The principle of these formations is parallel to Pörrinmökki hut wall find distribution: a waste-area. Only the smallest artifacts avoid cleaning and remain in the inner hut area.

The high phosphate values inside and on the walls of the hut floor area 2 and only on the walls of the hut floor area 1 (Fig. 7) can be interpreted as different amounts of organic material deposited in those places. The sources of phosphate in a dwelling site are for example remains of food, plant parts, carcasses and excrement (Jussila et al.

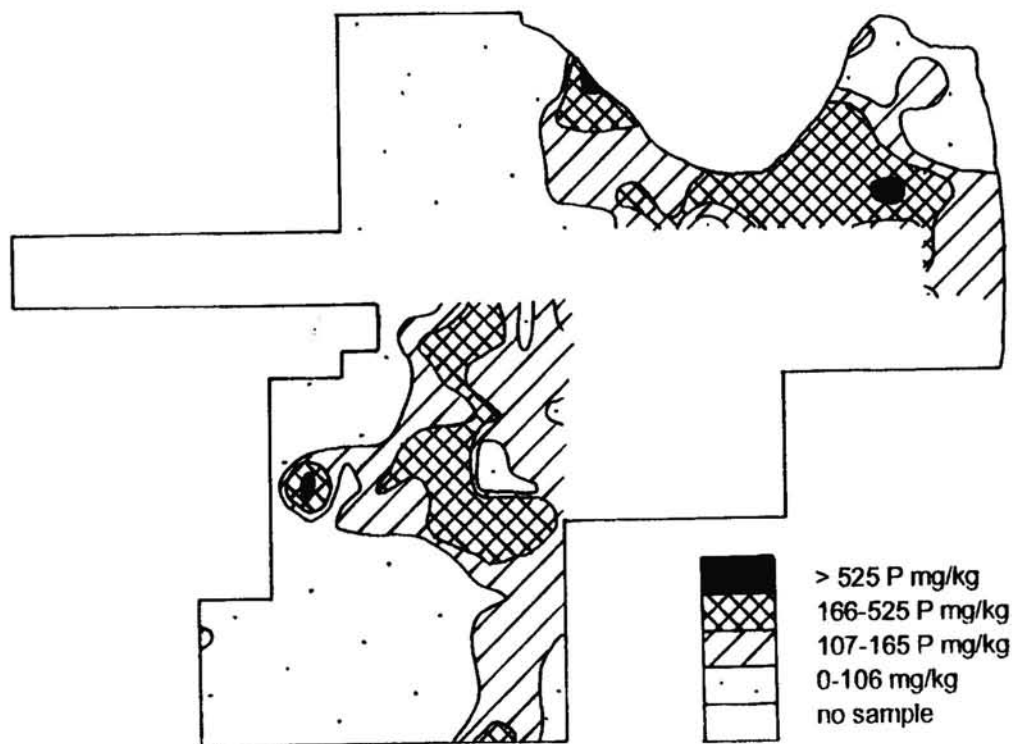


Fig. 7. The phosphate analysis in the area 2. The presentation is based on a statistical interpretation of the original data (c.f. Pesonen 1994).

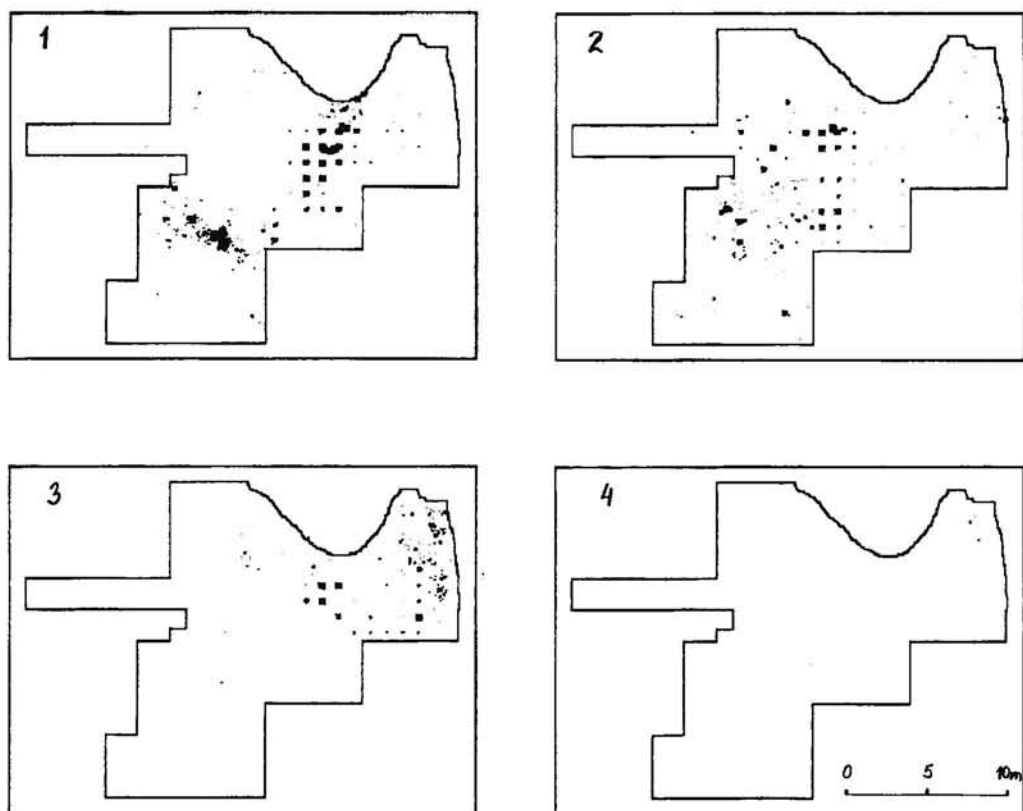


Fig. 8. The distribution of ceramics in the area 2: 1) Comb Ware, 2) Early Asbestos Ware, 3) Kierikki/Pöljä Ware, 4) Early Metal Period Wares.

1989, 13). The phosphate values are thus a kind of find group (Hulthén & Welinder 1981, 34). Like the other finds, the organic matter accumulated in the wall areas as a result of cleaning and eventually produced the high phosphate values. An inward collapsed construction could have caused the high values inside the hut floor area 2. This kind of collapse can be seen for example in the Enontekiö Markkina 17th – 18th century huts in Lapland (Halinen 1992).

Hut floor areas and ceramics

The find distribution maps of the presented ceramic groups (Fig. 8) show quite a clear distribution of Early Asbestos and Comb Ware in the hut floor area 1 and Kierikki/Pöljä and Early Metal Period Wares in the hut floor area 2. There are Early Asbestos Ware and Comb Ware also in the area of the hut floor 2.

The hut floor area 1 was probably occupied twice. The first occupants used Early Asbestos Ware and the later ones used Comb Ware. It could be possible to detect vertical stratigraphy between the Early Asbestos Ware period and the Comb Ware period in the hut floor area 1. This assumption must, however, be confirmed by later studies. The hut floor area 2 was occupied most intensively during the Kierikki/Pöljä period but the area had already been in use in earlier times.

The dwellings of the different stages were probably not exactly at the same place and thus their shapes can not be clearly defined. The clustered arrangement of finds along the wall areas was primarily interpreted as resulting from the cleaning of the floor area. It remains unsolved who in fact cleaned the areas: it could have been the first settlers as well as the later ones.

It is difficult to examine the chronological difference between the dwellings by using the means presented here. A radiocarbon date is given only

for the Kierikki/Pöljä Ware, which points to a later period than that of the Comb Ware. The other radiocarbon dates indicate that there was some activity in the area later on, but it is difficult to connect the dates with the find areas. However, it is possible that the two huts are contemporaneous. The presented interpretation should only be regarded as one of several alternative explanations and the material needs further consideration. The next step in this study is to connect the other finds from the area with the hut floor areas and the ceramics. In any case, the meticulous recording of finds and the phosphate analysis seem to be of great help when separating contexts and studying spatial organization of a Stone Age settlement.

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Abbreviations

FA	—	Fennoscandia archaeologica
FM	—	Finskt Museum
HyalM	—	Helsingin yliopiston arkeologian laitos Moniste
SM	—	Suomen Museo
SMYA	—	Suomen Muinaismuistoyhdistyksen Aikakauskirja