

Teemu Mökkönen: *Studies on Stone Age housepits in Fennoscandia (4000–2000 cal BC): changes in ground plan, site location, and degree of sedentism*. Helsinki University Press, Helsinki (2011) ISBN 978-952-92-9059-8. 86 [157] pp.<sup>1</sup>

The main body of Teemu Mökkönen's dissertation consists of five previously published papers, but it begins with an extensive introduction on the various themes of the papers which ties them all together. As the title of the book informs us, the most important questions concern Stone Age housepits, their temporal changes, relationship to the environment and the question of sedentism viewed against this data. The first of the published papers are based on empirical material from eastern Finland and the Karelian Isthmus. The fifth paper has as its topic the oldest, Stone Age farming in Finland.

Mökkönen's discussion of the Stone Age housepits can be seen as an extension of Petro Pesonen's paper titled *Semisubterranean houses in Finland – a review*, published in the *Huts and Houses* -volume ten years ago (Ranta 2002). Whereas Pesonen's empirical data consisted of all housepits in the whole of Finland, the data used by Mökkönen derives from relatively small geographic areas, but his treatment of this material is based on a very wide body of published literature. Mökkönen employs extensive comparative material from Finland and its neighbouring countries, ethnographic data, and so forth – more so than anybody else discussing the subject has done so far.

In the first paper, Mökkönen (2002) studies the empirical data related to early dwelling sites from a 30 x 40 km slice of the Lake Saimaa region in eastern Finland. Chronologically, the material ranges from Early Asbestos Ware to Early Metal Period, and he also discusses the environment of the sites and the shape of the housepits. Mökkönen makes the following observations. The earliest settlements are distributed fairly evenly in the region, but during the Comb Ware period the settlement pattern changed from relatively sheltered places to peninsulas and islands. The number of housepits per site also grew, with the largest sites having more than ten housepits. Dur-

ing the Late Stone Age the settlement pattern of the Comb Ware period prevailed at first, but by the time the Pöljä Ware appeared in the region, the large clusters of housepits disappeared and the number of sites without housepits decreased. During the Early Metal Period there are no common features in the locations of sites.

He finds out that rectangular housepits and those surrounded by an embankment are more recent than round or oval depressions. Rectangular housepits are also larger than round or oval ones. Village-like settlements appear in the Late Comb Ware period and disappear at the beginning of the Kierikki/Pöljä Ware period. Studies of osteological material from the region suggest that the change cannot be explained through changes in hunting and fishing. He finds a probable explanation in changes in the environment. When the River Vuoksi formed a new outlet for Lake Saimaa around 3000 BC, large amounts of fertile soil were exposed as the level of the lake decreased dramatically. This, combined with the favourable conditions of the Holocene Climate Optimum, made it possible to maintain a higher population density.

Rupunkangas, the subject of the second paper (Mökkönen et al. 2007), was once an island in the Ancient Lake Ladoga. The island was studied by means of archaeological prospection, and a small excavation was conducted at a housepit known as Rupunkangas 1 A. Normally, housepits in Finland have been used only during a single period of prehistory, but Rupunkangas 1A proved to be an exception. The housepit features a 1.5 metre thick cultural layer. Radiocarbon and artefact datings from the site range between 8000 and 1300 BC. Only the Early Neolithic is missing from the sequence. Different floor levels could not be distinguished, with the exception of the lowest or Mesolithic floor. The last dwelling phase had probably been during the Early Metal Period. Although pithouses are normally connected to a relatively sedentary type of settlement pattern, the writers argue that Rupunkangas 1A was a short-term site used for seasonal visits, because the density of finds was low and the site is located in a marginal environment. It could have been used for fishing in autumn or sealing in winter.

In the third paper Mökkönen (2008) presents a study of a multi-room housepit found in Meskäärtty, the parish of Virolahti in south-eastern Finland. Meskäärtty is in many ways unique among our housepits. It is the first multi-room housepit found on the coast of southern Finland. It is large: the maximum width of the pit is about 10 metres and the length of the preserved part is 35 metres, but Mökkönen estimates that it has been originally 45 metres long. There are three separate 'rooms', or more precisely departments, which are connected by a corridor.

Two types of pottery were found in the housepit. One was a porous type with an organic temper, while the other one was more compact. The porous ceramics is identified as an Estonian type of Late Comb Ware, while the more compact ware has features peculiar to the Estonian Late Corded Ware. Organic remains on a sherd of the latter type were dated to 2460–2130 cal. BC (2 sigma). Among the finds was also a stone battle axe, which Mökkönen classifies as an early sharp-butted axe, an intermediate type between Baltic Karlova-type axes and sharp-butted axes, but it is made of Finnish diabase. In the photograph (Fig. 8) and in the drawing of its asymmetrical cross-section (Fig. 9.a) it bears a closer resemblance to the 'barbaric imitations' of battle axes than the battle axes of the Corded Ware culture. Mökkönen does not discuss about this possibility.

Mökkönen compares the housepit of Meskäärtty to housepits recorded in different parts of Finland and Karelia. In the introduction of the dissertation, he draws more comparisons to the housepits of our neighbouring countries.

In the fourth paper, Mökkönen (2009) presents housepits found in the Kaukola–Räisälä region of the Karelian Isthmus during the last ten years. At the moment there are 82 known housepits in 24 dwelling sites. He classifies the housepits as oblong, oval, rectangular or round, and gives measurements of their size. In his research area, the smallest housepits are associated with the Early Comb Ware. Housepits of the Typical Comb Ware period have a wide range of sizes, and with sites dating to the Late Comb Ware the range is even wider and at the same time the shape of the pits becomes more oblong. This development is closely analogous to the wider development of pithouses on the Karelian Isthmus and in the Republic of Karelia. The Early Comb Ware settlements were situated at inner bays on well-sheltered locations,

as were a part of sites associated with Typical Comb Ware and Pitted Ware. A part of Typical Comb Ware sites, on the other hand, were poorly sheltered, as is also the case with sites dating to the later Stone Age.

Mökkönen specifies the criteria of sedentism in ethnography and archaeology and concludes that in the Early Neolithic pithouses existed only in winter villages. By the beginning of the Middle Neolithic, the settlements became more sedentary, perhaps even fully sedentary. At this time the winter dwellings were built in unsheltered places in the archipelago, or locations that were similar to the summer dwelling places of the previous period. He maintains that incipient agriculture played a role here, encouraging increased sedentism. He writes that the situation is similar to that in northern Sweden where, according to Norberg (2008), Corded Ware or other contemporary agricultural 'cultures' influenced the local hunter-gatherers.

The fifth and last paper of the dissertation is titled *Kivikautinen maanviljely Suomessa (Stone Age agriculture in Finland; Mökkönen 2010)* – unlike the other papers, it is written in Finnish. The oldest generally acknowledged evidence of agriculture in Finland consists of cereal pollen from the site of Vasikkasuo (located in the municipality of Puolanka, province of Kainuu) dating to 2300–1800 BC, and of macrofossil remains of naked barley from the Niuskala site in Turku, dated between 1700 and 1300 BC. By contrast, the Comb Ware culture has been regarded as a pure forager culture, with a subsistence based upon hunting, fishing and gathering. The character of Corded Ware culture in Finland remains controversial. The distribution of Corded Ware settlements, limited to the south-western part of the country, as well as their location in the landscape, supports the idea that they are associated with a farming culture, but concrete evidence for this mode of subsistence is still missing.

During the past few years an increasing number of Early Neolithic or even Mesolithic pollen finds from Estonia and the Republic of Karelia have been interpreted as indications of early farming of cereals. Mökkönen argues that that small-scale agriculture was probably introduced from the east together with Comb Ware pottery and through the same networks that distributed amber. The Corded Ware culture introduced a more intensive type of agriculture, but not agriculture *per se*. He puts

forward some pollen findings, which in earlier research have been viewed as anomalous or 'too old'. He interprets the shift of settlements at Lake Saimaa, from sheltered bays to windy capes, as motivated by a need to store grain in windy places. A rather strange idea. How many farming cultures do we know of who preferred to live at windy capes because they wanted to store their grains there? The obvious reason for a farming culture to choose a cape – surrounded by water on three sides – would be that these are humid places. It is typical for farming cultures to live within a few hundred metres from the shore, as is the case with the Corded Ware culture.

It is, of course, possible that the Comb Ware culture practised some amount of farming, but I will make two points here. First, a recollection from my schooldays in southern Ostrobothnia in the beginning of 1970s. One winter morning when I went to school, I noticed that the snow which had fallen at night was of a reddish colour. The following day I read in the newspaper that there had been storms on the steppes north of the Black Sea, which had caused some fine-grained particles of soil to enter the upper atmosphere. The prevailing winds took the soil to Finland, where it fell down together with the snow. Thus, even if the pollen of the early cereals is heavy, it can move hundreds or thousands of kilometres together with the winds. Farming began in Pontic steppes at 5800–5700 cal. BC (Anthony 2007: 138). The first cereal pollen in Finland and perhaps also in Estonia might thus derive from the steppes. Estonia lies closer to the steppes than Finland, so it is only to be expected that more cereal pollen are to be found there than in Finland.

My second point of criticism concerns the first domesticated crops of early agriculture. Is it necessary that they must belong to the cereal family? The late professor of archaeology in Helsinki, C.F. Meinander, proposed an interesting idea in his lectures, but as far as I know he never put it forth in any of his publications. Meinander proposed that the earliest plant to be cultivated could well have been the swede or turnip (*Brassica rapa* subsp. *rapa*; Fi. *nauris*). The problem is that this hypothesis is very difficult to prove. The pollen of yellow turnip cannot be distinguished from that of natural cruciferous vegetables. The seeds of turnips, moreover, are so small that they are difficult to find in flotation. They remain undiscovered if they are not consciously looked for.

There are some weak indications of turnip storage. Grain cannot be stored in pits in the ground, as Mökkönen seems to suppose, but turnips have been stored in this way in our folk culture. Edgren (1970) studied a massive amount of Corded Ware pottery sherds found in Finland and did not find a single imprint of a grain. On the other hand, he interpreted a pit full of dark soil as a possible Corded Ware housepit. Equipped with the knowledge we nowadays have concerning housepits, we can safely say that Edgren's pit was not a housepit. It may, however, have been a pit for storing turnip, which has later served as a waste pit. Of course, this is only a hypothesis, and without macrofossil analysis it is impossible to say anything definite about the matter.

## SEDENTISM

Mökkönen treats the problem of Neolithic sedentism in Finland in several papers. His treatment of the subject is more thorough than in any other study so far. He brings forward arguments based on ethnography, osteology, comparisons with studies made in the neighbouring countries, find density, etc. He is the first archaeologist to define 'sedentism' in the context of the Finnish Stone Age.

For example, Kotivuori (1993; 2002) characterised the land use system of the River Kemijoki area as nomadic, with winter settlements located on the coast and summer settlements in the inland. Mökkönen argues that the finds indicate that a part of the population lived permanently on the coast, which would imply an almost full sedentism there. Mökkönen makes the conclusion that in the Middle Neolithic the habitation became more sedentary, and may even have been fully sedentary (Mökkönen 2009: 153). According to Mökkönen, sedentism emerged as a result of contacts with agricultural societies.

This conclusion concerning sedentism (but not its cause) is plausible, but even if the amount of evidence presented is outstanding, I do not think that it is better vindicated than before. Something is missing. What we would need is an analysis of every settlement located in an area of some thousands of square kilometres, accompanied by an assessment of the season when they have been used. Even though this method would bring only probable knowledge, it would be a new, independent variable on the theory.

## 'LONG HOUSES' OR 'LONGHOUSES'

In the papers of his dissertation, Mökkönen argues that the change to long, multi-room houses was prompted by influences from the Corded Ware culture. This is based on dating the beginning of the Corded Ware in Finland to 3200 cal. BC. Before writing the summary of his thesis, he has changed his dating to the more plausible 2900 cal. BC for the first emergence of the culture in Finland. He modifies his theory and speaks of two waves of influence, which he believes were responsible to the changes observed in Finnish Middle and Late Neolithic cultures.

The first wave, which spread to northern Fennoscandia during the CW2 period (Typical Comb Ware) and had its roots in the Comb Ware-related cultures to the south or south-east of Finland, disseminated the idea of a more sedentary type of settlement. This may be seen in an increase in the number of housepits and village-like communities. The second wave, which saw an increase in the size of the pithouses as well as the complexity of their ground plans, was a consequence of social changes brought about by the spread of Neolithic ideas, which were introduced already before the Corded Ware culture. Archaeologically, it can be best seen in the more oblong shape of the houses, or the occurrence of multi-room houses.

Teemu Mökkönen's theory is impossible because of a chronological problem. He (Mökkönen 2009: 137) writes himself, referring to Zhulnikov (2003: 101–2), that around Lake Onega both the rectangular pithouses with a frame or horizontal logs and the first interconnected pithouses date to the first half of the 5th millennium cal. BC and are connected to the Pit and Comb Ware culture. He makes references to Ove Halén's dissertation (Halén 1994), but has not noticed that Halén describes a five-department terrace-house at the River Kalix, 50 km west of the Finnish border in north-eastern Sweden. The house is dated to 3900 cal. BC. During that time there were no 'Corded Ware-related cultures'. According to our present knowledge, the oldest log-based 'long houses' are not to be found in the south-east, as Mökkönen maintains, but in the northern zone, within the present-day Republic of Karelia and north-eastern parts of Sweden.

Mökkönen emphasises several times the weight of 'ideas' *contra* environmental factors as the rea-

son for culture change, the latter being a basic doctrine of 'traditional archaeology'. He also takes from the 'old' archaeology the diffusionistic idea that the 'savages', i.e. hunter-gatherer-fishers, do not invent anything but the reason for change has to come from outside – in this case not from the early civilizations, but from the agrarian Neolithic cultures of central Europe.

There are certain methodological problems in his discussion of the housepits, which to some extent explain the range of possibilities in his conclusions. Mökkönen has not considered the fact that housepits are artefacts. As artefacts they are structured as data only after they have been classified or defined as types, i.e. complexes of variables or attributes. Mökkönen has not typified his data. He only distinguishes round and rectangular pits and measures them. In this analysis they remain unstructured signs. He does not consider what the most important attributes concerning the form of the pit are. The 'ideas' behind central European longhouses and north-east European 'long houses' have nothing in common. Central European longhouses are formed by a single structure, where the weight of the roof rests on the poles. The only function of the dividing walls is to isolate. The 'long houses' of north-eastern Europe consist of small houses with a base made of logs. A 'long house' is not an innovation with a single origin.

If the Finnish and Karelian type of house is not a local innovation, as Zhulnikov (2003: 101–2) assumes, then it surely has eastern roots. The oldest rectangular, probably log-based buildings are known from western Siberia, from the settlement of Chernoozere II, where they have been dated to 14 500 bp (uncalibrated) (Troeng 1993: 98). Alternative explanations are not limited to environmental explanations or diffusionistic models such as were presented in the 1950s. For example, archaeologists working in northern Norway have presented interpretations for the changes in housepits, which draw upon social factors and seem quite plausible (e.g. Olsen 1994).

Eero Muurimäki  
emuurimaki@gmail.com

## NOTES

<sup>1</sup> The introductory chapter can be accessed online at <http://urn.fi/URN:ISBN:978-952-10-6979-6>. Two of the papers of the dissertation have been published in *Fennoscandia archaeologica* (Mökkönen et al. 2007; 2009) and may be read online at [http://www.sarks.fi/fa/fa\\_articles.html](http://www.sarks.fi/fa/fa_articles.html). Mökkönen 2008 can be read at [http://www.kirj.ee/14767/?tpl=1061&c\\_tpl=1064](http://www.kirj.ee/14767/?tpl=1061&c_tpl=1064).

## REFERENCES

### *Unpublished sources*

Kotivuori, H. 2002. Alisen Kemijoen kivikautiset asumuspainanteet – topografiseen havainnointiin ja aineistovertailuun perustuva asutuskuva. Unpublished Licentiate's thesis. Archaeology, University of Turku.

### *Literature*

- Anthony, D.W. 2007. *The horse, the wheel, and language: how Bronze-Age riders from the Eurasian steppes shaped the modern world*. Princeton University Press, Princeton.
- Edgren, T. 1970. *Studier över den snörkeramiska kulturens keramik i Finland*. Suomen muinaismuistoyhdistyksen aikakauskirja 72. Suomen muinaismuistoyhdistys, Helsinki.
- Halén, O. 1994. *Sedentariness during the Stone Age of Northern Sweden in the light of Alträsket Site, c. 5000 B.C., and the Comb Ware Site Lillberget, c. 3900 B.C.: Source Critical Problems of Representativity in Archaeology*. Acta Archaeologica Lundensia, Series in 4:o No. 20. Almqvist & Wiksell International, Stockholm.
- Kotivuori, H. 1993. Kivikauden asumuksia Peräpohjolassa – vertailuja ja rakenteellisia tulkintoja. In R. Huopainen (ed.), *Selviytyjät: Näyttely pohjoisen ihmisen sitkeydestä*: 120–60. Lapin maakuntamuseon julkaisuja 7. Lapin Maakuntamuseo, Rovaniemi.
- Mökkönen, T. 2002. Chronological variation in the Locations of hunter-gatherer occupation site vis-à-vis the environment. In H. Ranta (ed.), *Huts and Houses: Stone Age and Early Metal Age buildings in Finland*: 53–64. National Board of Antiquities, Helsinki.
- Mökkönen, T. 2008. A review of Neolithic multi-room housepits as seen from the Meskäärty site in Virolahti parish, extreme south-eastern Finland. *Estonian Journal of Archaeology* 12(2): 114–51.
- Mökkönen, T. 2009. Neolithic housepits in the Vuoksi River valley, Karelian isthmus, Russia – chronological changes in size and location. *Fennoscandia archaeologica* XXVII: 133–61.
- Mökkönen, T. 2010. Kivikautinen maanviljely Suomessa. *Suomen Museo* 2009: 5–38.
- Mökkönen, T., Nordqvist, K. & Belskij, S. 2007. Rupun kangas 1A site in the archipelago of ancient Lake Ladoga: a housepit with several rebuilding phases. *Fennoscandia archaeologica* XXIV: 2–28.

- Norberg, E. 2008. *Boplatsvallen som bostad i Norrbottens kustland 5000 till 2000 före vår tideräkning: en studie av kontinuitet och förändringar*. Studia archaeologica Universitatis Umensis 23. Umeå universitet, Umeå.
- Olsen, B. 1994. *Bosättning og samfunn i Finnmarks forhistorie*. Universitetsforlaget, Oslo.
- Pesonen, P. 2002. Semisubterranean houses in Finland – a review. In H. Ranta (ed.), *Huts and Houses: Stone Age and Early Metal Age buildings in Finland*: 9–41. National Board of Antiquities, Helsinki.
- Ranta, H. (ed.) 2002. *Huts and Houses: Stone Age and Early Metal Age buildings in Finland*. National Board of Antiquities, Helsinki.
- Troeng, J. 1993. *Worldwide Chronology of Fifty-three Prehistoric Innovations*. Acta Archaeologica Lundensia. Series in 8:o. No. 21. Almqvist & Wiksell International, Stockholm.
- Zhulnikov, A.M. 2003. *Drevnie zhilishcha Karelii*. Skandinaviya, Petrozavodsk.