A MESOLITHIC DWELLING:
EVIDENCE INTERPRETING FROM
THE UŽAVAS CELMI SITE IN LATVIA

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Abstract
The site of Celmi in the parish of Užava is the first archaeological site in Latvia where a Kunda culture dwelling has been identified. The site is dated to the Middle Mesolithic (6450–6260 cal. BC), and is a site where tools were made from locally available, poor-quality flint. An analysis of the dwelling depression, and the two hearths and stake-holes associated with it, suggests that a temporary shelter was erected here during the Mesolithic. Two flint-knapping areas, as well as other activity areas, can be identified in and near the dwelling-pit. The conclusions presented in this paper are largely hypothetical, and alternative interpretations are possible.

Key words: dwelling, activity areas, Mesolithic, Latvia.

Introduction
In any archaeological period, a dwelling is the main element of a settlement site, characterising most clearly the way of life of the residents; but as we go further back into the past, the amount of such evidence decreases. The excavation of Mesolithic sites in the eastern Baltic has provided only a very limited amount of evidence of remains of dwellings that might permit a more precise characterisation of the character of Mesolithic dwellings and the activities carried out in them. Until now, only hearths have been identified at Mesolithic sites in Estonia and Latvia (Kriiska 2002, p.236; Zagorska 2001, p.49), and we can only hypothesise that some of these relate to dwellings. There is more evidence of dwellings from the area of present-day Lithuania, mostly from the southern part of the country. At the Varėnės 2 site, three semi-subterranean dwellings of Late Mesolithic Janislawice culture have been discovered (Ostrauskas 2001, p.180ff). Possibly also Mesolithic is a dwelling on the Gluobų 1 site (Juodagalvis 1994, pp.37ff, Fig. 4; Girininkas 2009, p.104). Initially, it was dated to the Late Neolithic, but the Mesolithic forms of many of the tools recovered here (Juodagalvis 1992) suggest that there are several chronological layers on this site. Unfortunately, because of the limited amount of material, no extensive analysis of dwellings has been possible up to now, so it is hard to identify features that might be characteristic of the Mesolithic in the eastern Baltic. This paper presents an analysis of a dwelling discovered on the Celmi site. The results of this study contribute to our knowledge of the way of life of Middle Stone Age hunter-fishers in Latvia.

Questions and aims
When identifying archaeological features that have been unearthed, which in the case of the Mesolithic generally take the form of various patches of earth, hearths and find concentrations, there is always the question: does what the archaeologist imagines correspond to the prehistoric reality? This applies very clearly to dwelling remains. In the case of the Celmi site, too, it was only after long consideration that the author designated the uncovered feature a dwelling.

It must be borne in mind that a settlement is something much more than just one or more dwellings. It has been observed in the course of ethnographic studies that dwellings can be surrounded by a variety of activity areas, shelters, outdoor hearths, storage pits, etc. (Gron, Kuznetsov 2003, p.219). This is confirmed by archaeological research, in the course of which a variety of activity areas have been identified, used for cooking, tool-making and other activities (Oshibkina 2006, pp.12 and 51-52; Carlsson 2009, p.431). Thus, when examining sites where the material is not so well preserved or less distinctive, there is always a possibility of error.

A series of characteristics and relationships have been identified that permit Mesolithic archaeological features to be identified as dwellings. When we compare the material, we find that pits and depressions are among the most persistent indicators of dwellings. They appear as thickenings of the cultural layer four to ten metres in diameter, and ten to 50 centimetres thick (Gron 2003, p.692). A study of associations between various features indicates that dwelling pits or
lenses tend to be associated with flint concentrations and hearths (Gron 2003, Fig. 9).

In view of these features and relationships, the feature uncovered at Celmi, consisting of a depression filled with a rather indistinct cultural layer, along with two hearths, stake-holes and an associated concentration of finds, can be regarded as a dwelling. The dating is based on two C¹⁴ dates, although these are contradictory and need to be analysed within the overall context of the finds.

The conclusions expressed in the paper and the relationships identified should only be regarded as hypothetical. The author is aware that alternative interpretations of the material are possible.

The aims of this paper are: to analyse the material, in order to distinguish the features that could indicate dwelling structures; to determine the type of dwelling; and, based on the artefact material, to distinguish activity areas within the dwelling and in the immediate vicinity. In order to better understand the material recovered from the Celmi site, a series of thoroughly investigated and analysed dwellings of the Mesolithic of northern Europe, mainly Sweden and Denmark, are utilised for comparison. There are several reasons for this choice of comparative material. In the first place, as has already been mentioned, few dwellings are known in the eastern Baltic, and these have not been analysed in detail. Secondly, in Scandinavia there is a well-developed methodology for studying and analysing dwellings, which can be applied in full in the case of this particular site. Thirdly, although the structures utilised for comparison represent different archaeological cultures, the similarity of the natural environments and the living conditions presumably created the preconditions for similar principles of dwelling construction, and also for a similar kind of reflection in the material of the activities carried out in the dwellings.

Celmi is an example of a site in Latvia where flint was in short supply, and where locally available poor-quality flint was extensively used. Accordingly, when analysing the distribution of flint and seeking to identify flint-knapping locations, generally accepted methods cannot be applied.

The site and artefacts

In 2000 and 2001, a total area of 130 square metres of the settlement site was excavated, uncovering occupation layers relating to the Kunda culture of the Middle Mesolithic and the Corded Ware culture of the Late Neolithic. Excavations were undertaken on the top of the hill, which is thought to have been the most intensively occupied. Because the excavations were limited to a fairly small area, in addition to some trial trenches, it is impossible to determine the overall extent of the site.

The settlement was established on dune sands, which nowadays have a podsol soil with very distinct horizons. The contrasting soil horizons, the grey eluvial horizon, and the red-brown illuvial horizon, partly mask the archaeological features, so that these are difficult to identify. In addition to this, there is no pronounced cultural layer on the site, and it could be visually distinguished only at the locations of the features. Thus, in this particular case, the only possible approach was to excavate in spits corresponding to the soil horizons. The site was excavated in three spits, based on the soil horizons, and the locations of all finds were recorded individually.

During the Mesolithic, in the Lake Ancylus stage, according to geological studies, the water level was four to five metres higher than at present. In this area, the lower reaches of the River Užava and the environs of Sārnate Bog, there were one or more shallow freshwater lakes (Murniece et al. 1999, p.54). Only an approximate reconstruction of the situation at the time of the occupation of the site is possible. If we take as an approximate point of reference the five-metre line above present sea level, we see that the Celmi settlement was located on the western shore of a lake (Fig. 1). At present, it is not clear whether the site was located on an island, or to what extent the coastal lakes were connected with Lake Ancylus.

The site location

The site discussed here is located in western Latvia, in the Užava parish of the Ventspils district, at the edge of Sārnate Bog, 1.9 kilometres from the Baltic coast (Fig. 1). It is situated on a sandy hill, 7.5 to eight metres above the present sea level, gradually rising in height westwards and adjoining a belt of relict dunes.
by-products in the form of flakes and blades, and tools and tool fragments. The main raw material is locally available poor-quality flint, as a consequence of which the tool forms are not distinctive and are difficult to compare typologically. Only a few stone and flint tools can be assigned to the Late Neolithic based on tool form. All of these are made of high-quality flint. In view of the observations made at other Corded Ware culture sites where evidence of flint-knapping has not been found, in this case too we may assume that all of the material relating to flint-knapping dates from the Mesolithic. The material is not evenly distributed across the excavated part of the settlement. Instead, three concentrations are distinguishable, one of which is associated with the dwelling.

In the remainder of this paper, I shall discuss in more detail a part of the excavation area measuring 56 square metres, which includes the dwelling and its immediate environs.
Description and dating of the dwelling

The whole outline of the dwelling depression was recorded at a depth of 60 to 80 centimetres, appearing as a rounded area of darker, inhomogeneous sand, measuring 3.2 by 3.8 metres, not far from which, on opposite sides, were two hearths (Fig. 2). Part of the area distinguishable as belonging to the dwelling differed in colour only slightly from the surrounding light-coloured dune sand. Two darker areas were observed at the surface. One of these was a clearly distinguishable dark, charcoal-rich area at the eastern end of the dwelling, showing some indirect connection with Hearth 1, while the other area, less clearly distinguishable, was located at the northern limit of the dwelling and related to Hearth 4. On the western side, a small distance from the limit of the dwelling depression, were three pits of different forms and sizes, the dimensions of which vary from 30 by 30 centimetres up to 110 by 40 centimetres, with a depth of about 30 centimetres.

The dwelling depression was about 40 centimetres deep. It may have been deeper, but because of the soil horizons the upper boundary was difficult to determine.

As seen in the cross-sections (Fig. 2), the darker areas observed in the surface of the depression extended downwards in the form of dark patches. There was no stratigraphy that could indicate different floor levels.

Several pits and hollows were observed in the lower part of the dwelling depression. At the centre was a circular pit measuring 25 centimetres in diameter and 40 centimetres in depth, containing the same kind of earth as the fill of the depression. In the western part was a second pit, smaller in diameter and shallower. Apart from this, two rounded hollows were observed in the eastern part of the depression, beneath an area of more intensive fill.

The finds, stone pebbles, flint-knapping waste and flint tools, were concentrated, with few exceptions, at the top of the fill of the depression.

The pit hearths at the edges of the dwelling are similar: circular in plan, with a diameter of 70 to 80 centimetres, with a layer of charcoal five to nine centimetres thick and burnt stones at the top. Hearth 1 contained a piece of worked flint and a flake, while Hearth 4 contained several blades. None of the finds from the hearths showed traces of exposure to fire.
Two charcoal samples have been dated. The first comes from the top of the fill of the dwelling depression and has been dated to the Middle Mesolithic (7510±80 BP, Tln-2917; 6450–6260 cal. BC). This is at present the main point of reference for dating the Mesolithic occupation at the site. The second sample comes from Hearth 4, but in this case the result indicates a Late Bronze Age date (2813±80 BP, Tln-2916; 1110–840 cal. BC) (Bērziņš et al. 2009, p.7). This is in contradiction with the character of the material obtained from the hearth and the surrounding area. As has already been mentioned, the Middle Mesolithic and Late Neolithic finds are not strictly separated stratigraphically at the Celmi site. Even if we were to admit the possibility that Hearth 4 relates to Late Neolithic Corded Ware culture, and that the Mesolithic finds ended up in the hearth by accident, such a late date is not explicable in archaeological terms.

Analysis of the dwelling

Two forms of dwellings can be distinguished in the Mesolithic, in terms of the floor level: above-ground and semi-subterranean dwellings, of which the former tend to be regarded as relating to summer occupation, and the latter to winter occupation (Hernek 2003, p.228; Jensen 2009, p.471).

Above-ground dwellings were built on the surface of the ground, and the occupation layer inside the dwelling forms a depression. Semi-subterranean dwellings have a specially created pit, which has become filled with a cultural layer during a long period of occupation. In terms of its structure, the dwelling uncovered at Celmi is reminiscent of a semi-subterranean dwelling, but there is a string of arguments that do not confirm this. Examining a variety of excavated semi-subterranean dwellings, we see that the fill of the depression consists of a more or less homogenous cultural layer (Hernek 2003, p.225, Fig. 31.4; Jensen 2003, p.233ff, Fig. 32.4; Jensen 2009, p.467ff, Fig. 70.4), in which lenses representing floor levels can sometimes be distinguished. At Celmi, the fill of the depression does not consist of the kind of occupation layer that develops as the pit gradually becomes infilled during occupation. Rather, it tends to resemble disturbed dune sand. Also, the hearth in semi-subterranean dwellings is generally within the dwelling pit, rather than outside it. Thus, it seems most likely that in the case of Celmi, we are dealing with an above-ground dwelling.

Somewhat baffling with regard to the structure of the dwelling is the considerable depth of the depression, at least 40 centimetres, and the occurrence of finds exclusively in the upper part of the fill. In the course of activities on the soft sand of the dunes, flint flakes and other finds should have been mixed into the layers below, but there are no such finds. A similar distribution of finds has been observed in other Mesolithic sites (Hernek 2003, p.225). As was pointed out by O. Grøn (2003, p.695), it is possible that these dwellings had a floorcovering of branches, twigs and bark, preventing the majority of flint flakes and tools from penetrating to the deeper layers.

The main features characterising a dwelling structure are the stake-holes. In the Mesolithic, various kinds of stake-holes can be found, depending on the stage of preservation, the type of construction and the form of the structure (round or elongated). In some dwellings, the stake-holes are arranged along the perimeter (Jensen 2003, p.233, Fig. 32.4; Casati, Sørensen 2009 p.438, Fig. 66.3), indicating the position of the walls. In other dwellings, they occur within the pit, located at the corners so as to form a rectangle (Hernek 2003, p.225, Fig. 31.4), or else there may be several stake-holes in a row along the centre (Larsson 1985, p.200, Fig. 2a). In the last two cases, the arrangement indicates roof-supporting structures. Also, in certain cases, stake-holes may occur both along the edges of the dwelling and in a row along the centre (Carlsson 2009, p.432, Fig. 65.2). Only in a few cases are stake-holes present throughout the area of a dwelling. Usually they are observed only in some of the deeper locations. One of the rare exceptions is a Veret’e culture site, where seven to ten-centimetre diameter stakes were found densely spaced along the whole perimeter of the dwelling (Oshibkina 2006, p.47, Fig. 89). As is indicated by this description, there are no general regularities, and in interpreting the structure of a dwelling we cannot rely on analogies, but instead must proceed solely on the evidence from the particular dwelling in question.

In assessing various dwellings in Scandinavia discovered in earlier excavations, it has rightly been pointed out that many stake-holes and post-holes may have been overlooked in the course of excavations (Grøn 2003, p.691). On the other hand, it is equally possible that natural structures in the earth may be mistaken for stake-holes, since they appear similar, but are of different origin.

On the Celmi site one stake-hole or post-hole was located at the centre of the dwelling depression. Judging from the depth of the hole, this may relate to the main roof-supporting structures (Fig. 2). A second pit, located in the western part of the depression, and likewise the hollows in the eastern part, are difficult to interpret. As we can see in the plan, there are three features aligned on the central axis of the dwelling, seemingly marking the location of roof-supporting posts, but because these features differ from one another, they can-
not be interpreted as representing this kind of structure. Apart from this, the presence of several central roof supports is characteristic of elongated, rather than circular dwellings (Larsson 1985, p.200, Fig. 2a; Carls-son 2009, p.432).

The position of the wall stakes is indicated by the pits on the western side, based on which it is possible to partly reconstruct the wall-line. The distribution of finds also supports the idea that there was a wall along this line (compare Figs. 3-5). It is possible that the 50 to 100-centimetre-wide space between the dwelling depression and the wall indicates a part of the dwelling which was less intensively used because of the slope of the wall. In semi-subterranean dwellings, platforms of this kind, seen in cases where a stretch of the wall does not coincide with the edge of the pit, are regarded as a part of the interior space that could have been used for sleeping, or for keeping items of dress, tools and other objects (Hernek 2003, p.223; Jensen 2009, p.467, Fig. 70.3).

Locating the other walls of the dwelling is quite difficult. As has already been mentioned, according to the C\textsuperscript{14} date, Hearth 4 is from the Bronze Age, but in terms of archaeological criteria, it corresponds to the Mesolithic. Henceforth, ignoring this contradiction, I will consider both hearths in the context of the Mesolithic finds. The situation is more difficult to comprehend, because the hearths are located on the possible line of the wall, outside the dwelling depression. In Mesolithic dwellings the hearths are not always positioned at the centre, and in certain cases they may be fairly close to the outer wall, but always within the limits of the pit or depression. One exception to this rule is an Early Mesolithic tent in Norway, where a hearth was located outside the structure opposite the entrance (Åstveit 2009, p.417).
In the case of the Celmi dwelling, too, the hearths may have been located in front of the entrance. If we assume them to be contemporaneous, each having its own functions, it cannot be ruled out that the northeast wall of the dwelling was open, and that this was not a dwelling in the usual sense, but rather a kind of shelter open on one side. This is indirectly confirmed by the positions of the pits for the main supporting structures, at the centre of the dwelling and on one side of the semi-circle, as in the case of Strandvägen in Sweden, where a structure has been interpreted on the basis of the recovered finds as a workshop open on one side (Carlsson 2009, p.433, Fig. 65.3).

Characteristically, Mesolithic dwellings have the entrance facing the shore of a body of water (Jensen 2003, p.234). If the structure at Celmi was a shelter, then in this case, too, the open side would have been facing the lake shore.

**The distribution of finds**

The analysis of finds is based on the study of the distribution patterns of particular categories of finds and the relationships between the distributions of these find categories (Skaarup, Grøn 2004, p.51). In dwellings where the material permits such an analysis, the first aim has been to distinguish flint-knapping areas. These are generally identified from the distribution of small flakes left from the retouching of flint tools, because these are more difficult to remove in the course

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**Fig. 4. Distribution of flint pebbles, cores and stone pebbles:**

1. flint pebble
2. flint pebble fragment
3. core pre-form
4. core
5. round stone pebble
6. elongated stone pebble
7. fragmentary elongated stone pebble
8. grindstone.
of cleaning the dwelling than larger pieces. The term ‘small flake’ has not been applied consistently in dwelling analysis. In some cases, it is taken to mean flakes with a maximum dimension of up to ten millimetres (Jensen 2003, p.234), while in other cases a size limit of 20 millimetres has been applied (Skaarup, Gron 2004, p.54ff). Evidently, it is necessary to consider the size of the raw material, namely the flint pebbles. At Celmi, small pebbles of low-quality flint have been used, measuring up to 60 millimetres in length, and the flakes and blades obtained are on average about 20 millimetres long. In this particular case, because of the relative paucity of finds, dividing the material in terms of size would serve no practical purpose. In analysing the material, it has also been taken into account that it may have been disturbed at the time of the second period of occupation, in the Late Neolithic, so the finds are not considered separately, but within the overall context instead, pooling the material from all the spits, including the individual finds recorded above the identified Mesolithic habitation level.

By examining the relative frequency of flint flakes and unretouched blades per square metre, it is possible to distinguish two concentrations: one at the southern end of the dwelling, and the other on the eastern side of Hearth 4 (Fig. 3). The density of finds is low, and does not exceed 25 finds per square metre within the concentrations. The distribution of cores and flint pebbles coincides with the two concentrations of flakes and unretouched blades (Fig. 4). More or less similar concentrations can be identified in the distribution of elongated and rounded pebbles recovered in and around the dwelling. Two of these pieces have impact marks,
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suggesting that they served as hammerstones for flint-knapping. If we consider the overall distribution of all the above-mentioned find categories, flint pebbles, cores, flakes, blades and stone pebbles, then it is possible to distinguish two flint-knapping areas: one at the eastern edge of the dwelling, and the other by Hearth 4. The tools from the site are small and not distinctive, which may indicate that, with a scarcity of flint, bone and antler tools were mainly used, which have not survived. The majority of the assemblage consists of retouched blade fragments and flakes with retouch along one edge. Scrapers constitute the main tool category, among them both side-scrapers (10) and end-scrapers (3), in addition to which there is a tip fragment from a lanceolate point. If we consider the distribution of flint scrapers, we find that, in addition to flint-knapping, other materials were also worked near Hearth 4: all of the end-scrapers from the site have been found here. Another group of scrapers, namely side-scrapers, was located in the central and rear part of the dwelling (Fig. 5). The location of the two different scraper forms in separate areas may indicate that each area served for working different materials.

Conclusions

If we consider the general picture that emerges from the analysis of the dwelling material, we have to admit that only hypothetical conclusions can be advanced. In the Middle Mesolithic (6450–6260 cal. BC), the Celmi site, on the shore of a coastal lake, was inhabited by a small group of hunter-fishers, which, judging by the small number of finds and the weakly expressed cultural layer, occupied this location for a fairly short period, probably during the warm part of the year. The dwelling could have been a shelter that was open on the side facing the lake, built as a frame structure, its roof supported on a central post. In spite of the contradictory
dates, the material shows that there was a hearth on both sides of the shelter. Whether or not the hearths are contemporaneous cannot be determined.

Several activity areas can be distinguished. At the centre of the shelter there may have been an area used for craft activities not related to flint-knapping. Apart from scrapers, various other tools and tool fragments were found here. In front of this, a flint-knapping area can be distinguished quite clearly, while at the northern edge, by the hearth, there is an area almost devoid of finds, which is considered in Mesolithic studies to indicate sleeping locations (Hernek 2003, pp.227-228; Jensen 2003, p.236). A second activity area, outside the shelter, was located by Hearth 4. Judging by the finds, this area was used both for flint-knapping and for processing other materials (Fig. 6). In the course of analysing the material and seeking general patterns, the impression obtained was that the hearths had a ‘passive’ role in the lives of the site’s inhabitants, since there were no tool concentrations in their immediate vicinity, and practically no finds in the hearths themselves.

Acknowledgements

The author is grateful to Dr Valdis Bērziņš for arranging the C14 dating in the framework of a project to date archaeological sites in western Latvia, funded by the State Culture Capital Foundation of Latvia, and to Dr Ilga Zagorska for advice and suggestions in the preparation of this paper.

Translated by Valdis Bērziņš

Abbreviations


References


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Santrauka
Celmi gyvenvietē Užava apylinkēje yra pirmas paminēklas Latvijā, kur buvo rastos Kundos kultūras būstas (1 pav.). Gyvenvietē naudota nuo vidurino mezolito (6450–6260 cal. BC). Tai vienas iš paminēklų, kur vietēs prastos kokybēs titnagās buvo naudojamos įrankių gaminimui. Vėlyvajame neolite toje pačioje vietoje buvo virvelinės keramikos kultūros gyvenvietė. Šis straipsnis aptaria tik tą tyrinėtą plotą, kur buvo rastos būstas, ir jo artimiausią aplinką.

Gyvenvietē yra Sārnate pelkēs pakraštyje, 1,9 km nuo Baltijos jūros kranto, ant kopos kalvelēs, 7,5–8 m aukštēje virš dabartinio jūros lygio. Vidurinēs mezolīto stadijoje, ji galbūt buvo ant ankstesnio pakrantēs ežero vakarų kranto (1 pav.).

Būsto kontūras įsiskyrė kaip nevienalytēs 3,2 x 3,8 m dydžio tamsetnio smēlio ķūba, šalia kurios ķutē jūs tos puse buvo du ķūdiniai (Nr. 1 ir 4). Namo ķūbas ģlis buvo apie 40 cm, be aķīšķos sluoksnių stratigra-

Vertē Audronė Blujiunē