

38. The settlement patterns of the Maglemose culture on Bornholm, Denmark. Some preliminary results and hypotheses

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The current research on Bornholm is based on two survey projects that analyse the possibilities of mapping the Mesolithic landscape by using old geographical maps and GIS-based computer programmes. This method has made it possible to create some settlement models that have been used to search for Maglemose settlements located on various topographical positions. The alternate types of settlements, such as coastal sites, inland settlements near larger lakes, observation sites on the higher grounds, and short-term transitory, hunting and fishing camps lying near the different creeks give us a unique chance to study a settlement pattern which integrates many varied topographical characteristics. The different types of sites are all registered in the Early and Middle phases of the Maglemose culture, when Bornholm was more or less connected to modern Germany-Poland. During the late Maglemose culture, Bornholm became an island and the settlement pattern changed. The site distribution declined and was concentrated near the coastal areas. These facts illustrate how geographic developments challenge a hunter-gatherer group to the limit and prove their ability to adapt to these incidents during the Maglemose culture in the Baltic region.

Keywords: Bornholm, Early Mesolithic, Maglemose culture, Ancylus Lake, survey projects, settlement patterns, site distribution, diversity, adaptation.

Introduction

During early prehistory the Baltic Sea underwent some drastic changes that had a major impact on the geographical situation on Bornholm. These changes had a serious influence on the living conditions for both animals and the hunter-gatherers, who lived on the island during the Maglemose culture (9500–6400 cal BC). Recent research results from two survey projects are described and the interpretations regarding the geographical and faunal changes are presented, together with the proposed development of the settlement patterns.

Geographical changes on Bornholm

The geographical development in the Baltic region can be divided into three main stages: the Baltic Ice Lake stage, 12,000–9300 cal BC; the Yoldia Sea stage, 9300–8500 cal BC; and the Ancylus Lake stage, 8500–7000 cal BC. During these stages, the only brackish phase occurred at 9000–8900 cal BC. From the Baltic Ice Lake stage until the beginning of the Ancylus Lake stage (c. 8200 cal BC), the island was either the northern part of a peninsula, which covered an area from Germany and Poland to Bornholm, or an island

with a substantial land bridge towards Vorpommeren. In the following phases, from 8200–7200 cal BC, the sea level of the Ancylus Lake was low, which, together with the continued transgressions, flooded the land bridge gradually and created several smaller islands between Vorpommeren, Rügen and Bornholm, at Adlers Grund and the banks of the Oder and Rønne. The size and geographical distribution of these smaller islands is still heavily debated, but it is clear that Bornholm became an island sometime during the Boreal period (Figure 38.1) (Jensen *et al.* 2002, 7).

Faunal changes and isolation

The faunal picture from the Preboreal, containing reindeer (*Rangifer Tarandus*), elk (*Alces alces*) and beaver (*Castor fiber*), proves that Bornholm had a complete range of migrating animals during this period, and that the animals managed to establish themselves on the peninsula. The finds from the Preboreal are especially dominated by reindeer, where the youngest has been ¹⁴C dated to the Early Preboreal (K-7070, 9660±85 BP, 9280–8800 cal BC). Elk were also present in the Preboreal. Seven have been ¹⁴C dated, and the youngest date to the transition between



Figure 38.1. The geographical situation in southern Scandinavia, c. 8000 cal BC, when Bornholm was part of a peninsula in the Ancylus Lake (after Jensen et al. 2002, 7).

Late Preboreal and Early Boreal (K-4402; 9020±130 BP, 8550–7750 cal BC). This particular date indicates that some time after the isolation of the island elk became extinct. However, when the land-bridge towards the south gradually disappeared it did not have any effect on other larger mammals, such as red deer (*Cervus elaphus*), roe deer (*Capreolus capreolus*) and wild boar (*Sus scrofa*), who migrated to Bornholm during the Late Preboreal and Early Boreal. This is proven by ¹⁴C dates of red deer (K-4879, 9270±130 BP, 8850–8200 cal BC) and wild boar (K-4637, 9120±120 BP, 8650–7950 cal BC). These animals had a high ability to reproduce and adapt to both a warmer climate and denser forest conditions during the Boreal and Atlantic periods, when Bornholm became an island (Aaris-Sørensen 1998, 127; Kim Aaris-Sørensen, pers. comm.). These faunal changes had an impact on the hunter-gatherers who lived on Bornholm during the Preboreal.

Raw material studies on Bornholm

The Preboreal migration of hunter-gatherers provides an example of humans entering an area following a climatic amelioration. Limited finds from the Preboreal phase have been recorded on Bornholm. From Lundebrø a few microliths and blanks were found, showing similarities with regard to the Early Mesolithic Barmose phase (Casati et al. 2004, 123). The size and quality of the tools indicate that this assemblage probably derives from a Senon source in Rügen, which could have been imported to Bornholm as finished tools. The pieces are on average up to three times broader than the typical blades from the Middle and Later Maglemose phases on Bornholm. This proves that the later habitants on Bornholm were forced to adapt and adjust to a totally different raw material situation, which gave the lithic industry an extremely small and microlithic appearance.

The raw materials from Bornholm are located in secondary deposits and were brought to the island with the glaciers from the quaternary period. The most common flint

Typological Diagram					
Phase	Bornholm		Phase	Denmark	
1	Lundebrø		1	Klosterlund	
2	Melsted		2	Sdr. Hadsund	
			3	Bøllund	
3	Kobbebro		4	Early Sværdborg	
4	Frennegård		5	Late Sværdborg	

Figure 38.2. Microlithic typology and chronological development on Bornholm and in Denmark (after Casati and Sørensen 2006).

type is Kugleflint, which is a Senon type, often of good quality and not larger than four to six cm. The second most common material is the Kristianstad flint, which is a Danien type. It is dark grey and quite coarse and often up to 10–15cm in size. The third flint type is a bright Danien type, which is coarse- to fine-grained and tends to vary in size from four to six cm to around 10–15cm in size. The fourth flint type is the grey Danien type, which has the same morphological characteristics and size as the bright Danien (Becker 1952, 172; 1990, 13). Compared to all other prehistoric cultures on Bornholm, the Maglemose period seems to be the only phase where the local raw materials were the preferred materials used for flint knapping (Nielsen 2001, 87). The local raw materials were also exploited in the other Mesolithic and Neolithic cultures on Bornholm. However, these later assemblages are easy to separate from the Maglemose assemblages because of the different tool morphology and flint knapping techniques. This provides us with an ideal opportunity to find Maglemose settlements.

Current survey projects

The apparent topographical position of the different types of settlements on Bornholm gives us a unique opportunity to study a settlement pattern which integrates many settlement types and topographical characteristics. This gives us a unique chance to observe a settlement pattern which integrates many types of settlements and topographical characteristics. Future research may yield new results when focusing on some tentatively predictive models as a backdrop.

The first survey project focused on sites from inland areas, situated unusually far from any water resources. Information retrieved from old maps revealed all the old bogs and lakes that had been drained over the last 100 years, and, therefore, do not exist today. By raising the ground water level on modern maps using GIS, it was possible to recreate the size of the former inland lakes and thereby

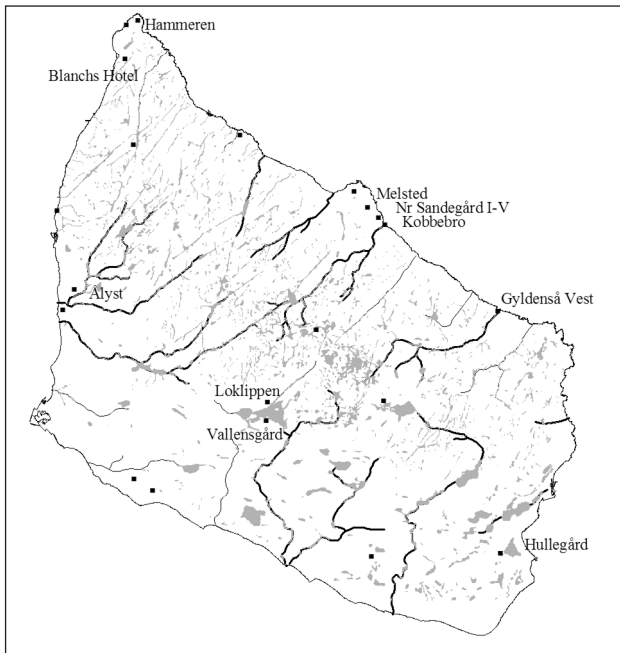


Figure 38.3. Site distribution from the Early Mesolithic during the Lundebo and Melsted phases. Note the clear differentiation of the former inland lakes and selected creeks, which contained a substantial amount of trout. This reconstruction of the Mesolithic landscape has been used in two survey projects that have concentrated on locating Maglemose settlements near different types of water resources (partly after Nielsen 2001, 92) (scale = 1:400,000).

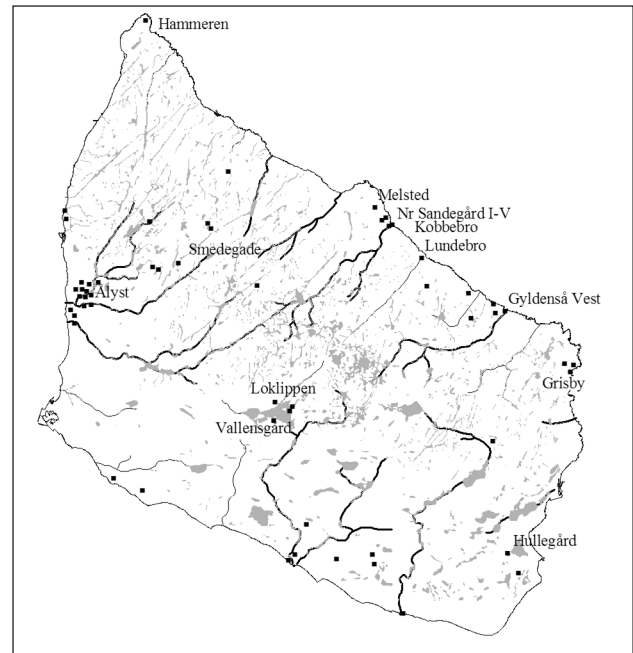


Figure 38.4. Site distribution from the Middle Mesolithic during the Kobbebro phase (partly after Nielsen 2001, 95) (scale = 1:400,000).

reconstruct the former landscape and lake. The majority of Maglemose sites were located exactly on the edge of these former lakes. The locations of springs have also proven to be useful guides to discovering new sites. These methods make it possible highlight future survey areas for amateur archaeologists (Figures 38.3, 38.4 and 38.5).

The second survey project involves sites lying near the different creeks and springs. These sites were repeatedly visited during all phases of the Maglemose culture. What caused the habitants to return to a certain area over a 1000-year period? One of the reasons could be the access to migrating salmon and trout (*Salmonidae*), which return to the same creek to spawn every year. This makes the trout (*Salmo trutta*) an important, stable, and regular resource during the Maglemose culture. Old statistics from the Bornholm region prove that, from 1909 until 1929, an average angler could fish 700kg of trout every year from the larger creeks (Jespersen 2004). Today trout are not used for consumption as they swim up creek to spawn; they are not considered worth eating, although their roe, on the other hand, is regarded as a delicacy. Recent biological reference on the trout population indicates that, in the larger creeks, a large number of migrating trout still swim up these creeks; this could determine some of the Maglemose hotspots (Figures 3, 4 and 5). This 'creek model' can be used in future surveys for other Maglemose hotspots in other creek systems, and this should give us a more updated image of Maglemose settlement distribution on the island.

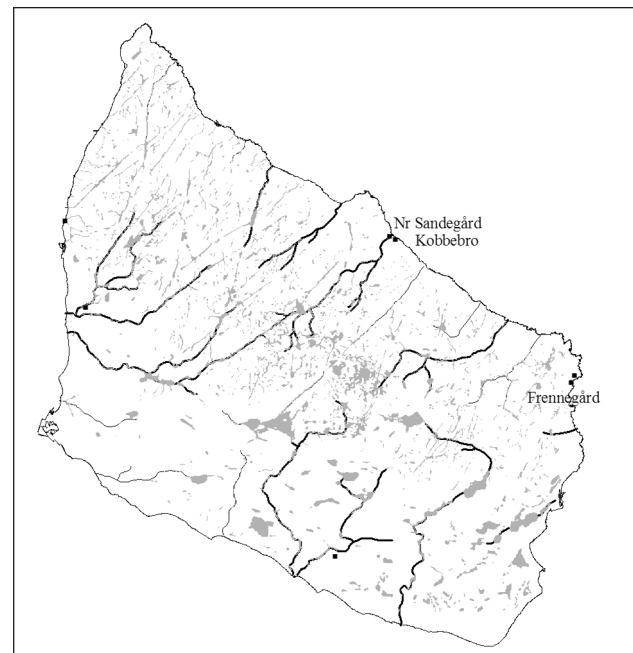


Figure 38.5. Site distribution from the Late Mesolithic during the Frennegård phase (partly after Nielsen 2001, 97) (scale = 1:400,000).

Settlement types identified on Bornholm

In the following paragraphs, a general overview of excavated Maglemose settlements is used to describe the different types of sites and their topographical characteristics.

Excavated coastal settlements

Two distinct types of coastal site have been observed on

Bornholm. The preliminary intra-site analysis, however, proves a major difference in the accumulation, use and exploitation of the settlement area. Kobbebro is located 60m from the current beach and has a 70cm-thick stratigraphic layer that could be divided into three major layers, and where some chronological variances were observed (Figure 38.2) (Thorsen 2000, 21). The site has been settled on exactly the same spot over most of the Maglemose period. An area of 30m² was excavated, but it is presumed that the actual site is much larger, covering an area of 100 x 100m. The three registered layers show one of the largest lithic assemblages in Denmark, with approximately 13 core axes, 900 microliths, 500 cores, 5300 blades and 75,000 flakes, totalling some 2000–2500 flint artefacts per square metre (Høier 1995; Thorsen 2000, 20). The uppermost layer belonged to the Frennegård phase, which had a depth of 15–30cm, and was filled with fire-cracked stones, lithics, charcoal, and burned hazelnut shells. It has been interpreted as a large layer of continuous hearths with burned stones. It is at present unclear if the hearths are synchronic, or if they were connected to different events. Some larger pits were excavated in the underlying layers dated to the Kobbebro and Melsted phases (Høier 1995).

Less than 500m from Kobbebro, towards the other side of the Kobbe Å (creek), the sites of Melsted and Nørre Sandegård have been excavated (Becker 1952). At these locations a different picture of a coastal-site type emerges, with clear and defined flint concentrations found in a 30cm-thick cultural layer that covers a larger area than at Kobbebro. Both sites are dominated by microliths, indicating that hunting must have played an important role. The concentrations are of various sizes, between five to ten metres in diameter. The excavations at Melsted covered 42m², with a 40cm-thick cultural layer. The site yielded 22,000 fragments of flake, 632 blades, 354 cores, 174 microburins, 537 microliths, 45 splintered pieces, 44 scrapers, 31 knives, 16 burins, one core axe, and three hammer stones. Nørre Sandegård I also had a vast amount of material – 23,700 flakes, 743 blades, and 514 cores. The tool assemblage contained 727 microliths, 126 microburins, 43 splintered pieces, 35 scrapers, 22 burins, 15 knives and two core axes. The whole tool assemblage is also represented at Nørre Sandegård III and Melsted. However, the core axes, scrapers, splintered pieces, knives and burins are very rare, or nearly entirely absent from the tool assemblages of Nørre Sandegård II, IV and V. This implies that different activities were connected to each concentration. Some evident structures such as postholes, hearths and pits were also observed at both Melsted and Nørre Sandegård I–V (Becker 1952; 1990).

These coastal sites were located 100 to 200 metres from the Ancylus Lake, which played an important economic role indicated by their repeated habitation. Furthermore, some fish bones were recovered from Kobbebro, proving the exploitation of these resources, although the importance of this remains unresolved. A more detailed picture is revealed at the Late Ertebølle coastal settlement of Grisby. Some organic material was preserved here, indicating

a variety of fishing methods in both deep (large cod (*Gadus*)) and shallow (flatfish) waters. The hunting of sea mammals was the main occupation at Grisby; 68% of the identified mammal bones are of ringed (*Phoca hispida*) and Greenland (*Phoca groenlandica*) seals (Vang Petersen 2001, 170). Seal hunting in the Ancylus Lake could have taken place during the Maglemose culture; ringed seals migrated into the Bothnic Bay during the Late Glacial period, when there was an ocean connection through the centre of Sweden during the Yoldia Sea and Baltic Ice Sea transition (Aaris-Sørensen 1998, 94).

Inland settlements

All inland settlements are located on higher ground near a lake, creek, or a forced passage; they are only known from surface finds. At one of the sites in Vallensgård Mose (peat bog), a dozen core axes were found. However the possibility of interpreting the lithics at these sites, and their seasonal indicators, are very limited. The potential for finding sites around the larger inland lakes, such as Vallensgård Mose, using the described survey method is very promising. In Vallensgård, six harpoons were found and two have now been ¹⁴C dated (AAR 9404, 9585±55 BP, 9200–8780 cal BC, and AAR 9280, 9280±65 BP, 8650–8310 cal BC. Peter Vang Petersen, pers. comm.), which implies that fishing and hunting occurred at Vallensgård during the Early and Late Preboreal. In some of the lakes it should be possible to find organic material, as the sites were located right on the edge of the former lakes.

Observation sites

Preliminary information was recently retrieved from two new sites, revealing both a larger (Loklippen) and smaller (Smedegade) type of observation site (Sørensen 2001; Finn Ole Nielsen, pers. comm.). Loklippen is located on elevated ground approximately 115m asl, with a wide outlook over the Vallensgård Mose; it is located near a forced passage, where hunters are still active today. The site covered an area of at least 50m², with a vast amount of material and much thicker stratigraphical layers than have been found at other observation sites. Unfortunately it was a small excavation, covering a sample of only one square metre, with a 40cm cultural layer. The square contained 1000 flakes, 80 blades, five cores, 50 microliths and microburins, one burin, one scraper, and one knife from the Early and Middle Maglemose phases (Figures 3 and 4). This proves that the site was used as a hunting camp through most of the Maglemose culture. The intensive blade production needed to produce the microliths indicates that the site was used as a preparation settlement before the actual hunt. The few tools and large amounts of burned flint indicate that some normal settlement activities also took place at the site. A smaller type of observation site was excavated at Smedegade in Klemensker, which was located on a high ground near a spring and with a panoramic view of the nearest lake (Figure 38.3). This site had a more

typical appearance compared to other observation sites and covered an area of four to eight square metres. The site had a limited lithic assemblage, with around 70 flakes, 30 blades, one core, one hammerstone, three microliths, three fragments of microliths, and some burnt hazelnut shells. Smedegade has been interpreted as a short-term hunting station which would not have been resettled at the same location. However, the situation at Loklippen proves the fact that some observation sites were more popular and more frequently used.

Transitory hunting and fishing camps

Transit camps were located on a sandy ridge near a spring or stream, where the conditions for water transportation, fishing, and hunting and gathering were favourable. Ålyst and Hullegård are two such sites that were visited repeatedly during the Maglemose culture; they contain a complex of smaller or larger settlements (Casati and Sørensen, this volume). The majority of the concentrations vary in size from 3 x 3 m and 3 x 7 m. They are often isolated and only a few of them overlap. Almost no scrapers, knives, burins, core axes or hammerstones have been found in most of the concentrations, except from Ålyst, where two concentrations were connected to some hut structures. Normally there are around 1000–2500 pieces of debitage in the concentrations. The main lithic production was blades, for the preparation of microliths. The Ålyst microliths can typologically be dated from the beginning (8000 cal BC) to the end of the Boreal (7000 cal BC) (Casati *et al.* 2004). This has been confirmed by some new ¹⁴C analysis which dates Hut I to (AAR-9876, 8925±65 BP, 8280–7910 cal BC) and Hut II (AAR-9881, 8870±65 BP, 8240–7780 cal BC) (Casati and Sørensen 2006). An important reason for the many incidents at these creek sites could be trout fishing, from October until December; this corresponds with the many finds of burnt hazelnut shells from all the flint concentrations at Ålyst.

The settlement pattern during the Early and Middle Maglemose culture

The settlement pattern from Bornholm integrates both coastal, inland, and transit camps during the Early to Middle Boreal, suggesting that the inhabitants lived on the peninsula all the year round (Figures 1, 3 and 4). However it is difficult to determine the seasonal aspects because of the poor preservation of the organic materials (Nielsen 2001, 87). The sites are located in areas where it was possible to exploit many resources connected to fishing, hunting and gathering. However it is still difficult to observe a diverse picture in the tool assemblage, which is connected to small raw nodules. The raw material situation makes lithic tool production limited to certain tool types, such as blades and microliths, whereas scrapers, burins, knives, and especially core axes, are few. Fortunately analyses of the lithic material and evident structures indicate some differences in size and duration between the

coastal and observation sites. Furthermore the intra-site comparison at Nørre Sandegård and Ålyst proves some variances in the activities and duration, which could be connected to each concentration. The majority of excavated sites show a higher density of occupation, indicating a repeated settlement pattern, closely connected to the larger creeks. This particular aspect provided ideal transportation possibilities, connecting movements from coastal areas to inland lakes (Figure 38.3).

Coastal and inland commuting

The settlement pattern on Bornholm was influenced by a regional mobility strategy linked to the special geographical conditions to be found on the peninsula. These observations also illustrate the regional differences between the Maglemose societies and their ability to change mobility pattern and adapt to local situations. However it could also prove to be a particular picture of a typical mobility pattern connected to the regions around the Ancylus Lake, which opens up discussions regarding coastal versus inland problems in southern Scandinavia. Opinions are strongly divided but all are based upon the same ¹³C values from human and dog bones from other excavated sites concentrated on Zealand (Fischer 2001, 406; Schilling 2001, 356).

One opinion is that there may have been two distinct and divided bands – one living in the inland area and one along the coastal shore. These two bands could then have had sporadic contacts (Schilling 2003). Others are of the opinion that one band oscillated between the coastal settlements in winter and the inland settlements during the summer (Fischer 2003), a seasonal rotation, as it were. Finally, some also tend to favour the possibility that Maglemose hunter-gatherers wandered through the landscape over a whole lifecycle, implying that they chose to stay in a region for a certain amount of time and then migrated to another region (Ewald Jensen 2001).

The hypotheses could all be correct, although it is important to acknowledge that the coastal versus inland discussion from a ¹³C perspective is fixed on a small regional area in western and southern Zealand. The discussion must consider the geographical differences, which could lead to alternative mobility strategies in each region of the Maglemose culture. In particular, during the Maglemose culture the sites from Holmegård, Sværdborg and Lundby were located closer to the Ancylus Lake than to the marine coast to the north. This location could lead to a commuting strategy between the inland lakes and the Ancylus Lake, with sporadic contacts to the marine areas, as indicated by several objects of marine origin (Schilling 2003, 357). This hypothesis is supported by the ¹³C values from Zealand, showing some low terrestrial values that could indicate a mobility strategy orientated towards the Ancylus Lake rather than the marine coast (Schilling 2001, 356; Fischer 2003, 406). A similar observation has been made in north-eastern Sweden from the ¹³C analysis of the Barums Kvinnen, the well-known female skeleton, dated

to the Late Maglemose culture (Ua-10667, 7895±75 BP, 7010-6540 cal BC), which was located approximately 10km from the Ancylus coastline. She had a value of -20.9‰, indicating a diet of mainly terrestrial fauna (Sten *et al.* 2000, 73 ff.). All the areas surrounding the Ancylus Lake, including Bornholm, probably had a similar mobility and settlement pattern, orientated towards the Ancylus Lake and the minor inland lakes (Figures 38.3 and 38.4). However the settlement pattern around the inland lakes changed drastically in the Late Maglemose period, after Bornholm had become an island.

The settlement pattern during the Late Maglemose culture

The main difference compared to the settlement pattern of the earlier periods is the almost deliberate rejection of using the interior as a habitation zone, and concentration of settlements on the coastal zone (Figure 38.5). A possible explanation for this major change could be the fact that some important resources were lost when the larger inland lakes became overgrown and filled with sediments. This reaction made it impossible for hunter-gatherers to exploit the freshwater resources in the lakes. A similar pattern and decline of site distribution has been observed around some of the flat-bottomed lakes on Zealand, such as Barmose, Lundby, Sværdborg, and Holmegård (Schilling 2003, 353). It is very likely that the island, during this late phase of the Maglemose culture, was sporadic inhabited, with settlements concentrated on the coastal area zone.

Territorial borders

Part of the repeated settlement pattern proves that some of the creeks were used over more than 1000 years through the Maglemose culture; this may have been related to both historical and ecological factors. It seems that Maglemose societies integrated the use of regular inland lakes, springs, water systems, elevated ground, paths, areas of cleared vegetation, abandoned camp-sites, and religious or ceremonial landmarks in their settlement pattern. This repeated use of landscape with special features could indicate territorial borders that were determined by creeks: individual family groups could exploit particular creeks. Unfortunately it is impossible, at present, to locate these territorial borders, because of the incomplete picture of site distribution and seasonal features.

Unknown aspects of the site distribution and settlement pattern

The settlement patterns presented in this paper must be regarded as preliminary and subject to later modification, mainly because the sites have been dated by their microlithic component. On Bornholm, a preliminary regional microlithic typology with four phases has been suggested (Figure 38.2) (Nielsen 2001, 89 ff.; Thorsen 2000, 21). However we face serious problems in fine-tuning the

typo-chronology of the Maglemose culture, especially the Melsted phase, which is highly problematic as it covers most of the Boreal and thus contains many types of microliths. If the phase could be split into minor groups, the site distribution would be much sparser compared to the current picture of the site distribution (Figure 38.3). This hypothesis will be challenged by further analysis of the microlithic typology, detailed raw material studies, technological analysis, and future ¹⁴C dates from selected sites, although it is clear that during the Late Maglemose a decrease in inland site distribution is witnessed.

Out of sight - out of mind?

The repeated settlement pattern and the fact that the typological and functional expressions are unchanged during the Maglemose culture indicate that the societies on Bornholm had continuous social and cultural contacts with other groups, tribes, or bands within the Maglemose culture. These aspects indicate that the hunter-gatherers on Bornholm had the seamanship skills necessary to sail towards Scania or Vorpommeren. At the end of the Maglemose culture habitation was sporadic, and the opportunities to contact other cultural groups became limited and difficult – because Bornholm was then an island. However, the regression created several smaller islands between Vorpommeren and Bornholm. These would have made potential contacts easier, because the distances between these islands were reduced. The size and geographical development of these islands is still uncertain, although it is important to keep in mind that Bornholm was never totally isolated and had continuous social and cultural contact with the later Kongemose and Ertebølle cultures. This hypothesis is currently supported by the fact that the first Kongemose site (Sandemandsgård) has been identified at Bornholm. In addition a submerged site was located on southern Bornholm, at Boderne, at a depth of four to five metres, indicating a submerged landscape around Bornholm, which was settled in the Mesolithic (Finn Ole Nielsen, pers. comm.). Several submerged sites from the Late Ertebølle culture, documented at Lübeck, Wismar Bay, and Rügen (Lübke 2004, 85) also add weight to the theory. The use of this submerged landscape, and the impact on settlement patterns, are currently under debate. Another argument for continuous contact between Bornholm, Germany and Scania is the fact that the distance between Bornholm and the landmasses towards Vorpommeren was probably shorter than expected. These factors show that Bornholm was never out of sight, or out of mind, of local hunter-gatherers. The results presented in this paper illustrate how geographical changes challenge hunter-gatherer groups to the limit, and also their ability to adapt to these incidents during the Maglemose culture in the Baltic region.

References

- Aaris-Sørensen, K. 1998. *Danmarks Forhistoriske Dyreverden*. Copenhagen, Gyldendal.
 Becker, C. J. 1952. Maglemosekultur på Bornholm, in *Aarbøger for*

- nordisk Oldkyndighed og Historie 1951*, 96–177. København, Det Kongelige Nordiske Oldskriftselskab.
- Becker, C. J. 1990. *Nørre Sandegård. Arkæologiske undersøgelser på Bornholm 1948-1952*. Historisk-filosofiske Skrifter 13. Copenhagen, Munksgaard.
- Casati, C., Sørensen, L. and Vennersdorf, M. 2004. Current research of the Early Mesolithic on Bornholm, Denmark, in T. Terberger and B. V. Eriksen (eds.), *Hunters in a changing world*, 113–32. Rahden/Westphalia, Verlag Marie Leidorf.
- Casati, C. and Sørensen, L. 2006. Ålyst – et boplads kompleks fra Maglemosekulturen på Bornholm. Foreløbige resultater baseret på ukonventionelle udgravningsmetoder, in B. V. Eriksen (ed.), *Stenalderstudier*, 241–75, Århus, Århus University Press.
- Ewald Jensen, L. 2001. *Maglemosekulturens Bebyggelsesmønster*. Unpublished Master's Thesis. Århus University.
- Fischer, A. 2003. Trapping up the rivers and trading across the sea – steps towards the neolithisation of Denmark, in L. Larsson, H. Kindgren, K. Knutsson, D. Loeffler and A. Åkerlund (eds.), *Mesolithic on the Move: Papers presented at the Sixth International Conference on the Mesolithic in Europe, Stockholm 2000*, 405–13. Oxford. Oxbow Books.
- Høier, H. 1995. *Unpublished excavation report from Kobbebro, journal no. 2217*. Rønne, Bornholms Museum.
- Jensen, J. B., Kuipers, A., Bennike, O. and Lemke, W. 2002. BALKAT. Østersøen uden grænser. *Geologi. Nyt fra GEUS* 4, December 2002, 2–19.
- Jespersen, H. 2004. *Ørreder i de bornholmske vandløb*. Bornholms Regionskommune. Allinge, Natur and Miljø.
- Lübke, H. 2004. Spät- und endmesolithische Küstensiedlungsplätze in der Wismarbucht – Neue Grabungsergebnisse zur Chronologie und Siedlungsweise. *Bodendenmalpflege in Mecklenburg-Vorpommern* 52, 83–110.
- Nielsen, F. O. S. 2001. Nyt om Maglemosekultur på Bornholm, in O. Lass Jensen, S. A. Sørensen and K. Møller Hansen (eds.), *Danmarks Jægerstenalder – status og perspektiver*, 85–99. Hørsholm, Hørsholm Egns Museum.
- Schilling, H. 2003. Early Mesolithic settlement patterns in Holmegård Bog on South Zealand, Denmark, in L. Larsson, H. Kindgren, K. Knutsson, D. Loeffler and A. Åkerlund (eds.), *Mesolithic on the Move: Papers presented at the Sixth International Conference on the Mesolithic in Europe, Stockholm 2000*, 351–58. Oxford, Oxbow Books.
- Sten, S., Ahlström, T., Alexandersen, V. A., Borrmann, H., Christensen, E., Ekenman, I., Kloboucek, J., Königsson, L.-K., Possnert, G. and Ragnesten, U. 2000. Barumkvinnan. Nya forskningsrön. *Fornvännen* 95, 73–87.
- Sørensen, M. 2001. Unpublished excavation report from Loklippen. Rønne, Bornholms Museum.
- Thorsen, M. 2000. Kobbebro. Nyt om Bornholms Maglemosekultur, in S. Hvass and Det Arkæologiske Nævn (eds.), *Vor skjulte kulturarv*. Copenhagen, Det Kongelige Nordiske Oldskriftselskab and Jysk Arkæologisk Selskab.
- Vang Petersen, P. 2001. Grisby – en fangstboplads fra Ertebølletid på Bornholm, in O. Lass Jensen, S. A. Sørensen and K. Møller Hansen (eds.), *Danmarks Jægerstenalder – status og perspektiver*, 161–74. Hørsholm, Hørsholm Egns Museum.