

Causewayed camps, palisade enclosures and central settlements of the Middle Neolithic in Denmark

Poul Otto Nielsen

*The National Museum, Danish Prehistoric Collections, Frederiksholms Kanal 12, DK-1220 Copenhagen K, Denmark
(poul.otto.nielsen@natmus.dk)*

Many causewayed camps were transformed into settlements where various rituals continued to be performed. Such settlements are among the largest known from the Danish Middle Neolithic and are labelled 'central settlements' because of their size and character as ceremonial centres. The palisade enclosures of the late Funnel-Beaker Culture are interpreted along the same lines. A parallel development towards larger settlements took place within contemporaneous culture groups in Central Europe.

Keywords: Funnel-Beaker Culture, Pitted-Ware Culture, Battle-Axe Culture, Middle Neolithic, causewayed camps, palisade enclosure, settlement, ritual, culture change

Introduction

Since the first discovery and excavation of a causewayed camp on Danish soil at Sarup, south-west Funen, in 1971–84 (Andersen 1997; 1999a; 1999b), causewayed camps have been identified in different parts of the country. This has happened partly as a result of new excavations and partly through the study and re-interpretation of reports from earlier excavations. The causewayed camps belong to the Funnel-Beaker Culture and were built during a period covering the later part of the Early Neolithic (EN) and first part of the Middle Neolithic (MN), c. 3500–3200 BC. Thus their construction coincided chronologically with the building of megalithic tombs in Denmark.

The late discovery of causewayed camps in Denmark by comparison with neighbouring countries in Western and Central Europe is peculiar and can only be explained by former excavation practices, which allowed only minor parts of even large settlement complexes to be investigated. Attention was directed more towards the recovery of artefacts than towards exploration of the features and layout of the sites. At six of the 20 causewayed camps selected for this survey (listed in the Appendix) small or even large-scale excavation had been undertaken decades before it was realized that

there was a causewayed camp there (nos. 4, 5, 18, 19, 21, 23). These older excavations were carried out manually, and it was actually the introduction of the mechanical excavator at archaeological sites, which enabled the uncovering of areas spacious enough for the inspection of the large features of causewayed camps, as happened at Sarup in 1971 (Andersen 1997:15–20).

The earlier excavations at sites that later turned out to be causewayed camps were performed in order to recover part of the rich settlement material of the Funnel-Beaker Culture that is often found at such sites. The purpose of this survey is to obtain a clearer picture of the coincidence between causewayed camps and one or more phases of settlement during the MN A (c. 3300–2800 BC). Did the causewayed camps have a primary function as ritual centres and a secondary function as settlements in the MN? Or were they in fact settlements as well as sacred meeting places, in which case, what was the function of such settlements?

Later than the causewayed camps are the palisade enclosures from the later part of the Funnel-Beaker Culture. These are dated to the MN AV in Denmark, while in Sweden their dates overlap with the time of the Battle-Axe Culture (Svensson 2002). Unlike the

Table 1. Chronology of the Danish Early and Middle Neolithic.

| Years BC (calibrated) | Name of culture and period | | | | | Grave type, building period | Type of enclosure, building period |
|-----------------------|--|------------------------------------|-------------|-------------------|-------------|--|------------------------------------|
| --- 2450 --- | Single-Grave/ Battle-Axe Culture ----- Pitted-Ware | Middle Neolithic B (MN B) | III | Upper Graves | Per. 5 | Barrows, stone cists and flat graves | Palisade enclosures |
| --- 2600 --- | | | II | Ground Graves | Per. 4-5 | | |
| | | | I | Bottom Graves | Per. 1-3 | | |
| --- 2800 --- | Funnel- Beaker Culture | Middle Neolithic A (MN A) | V | St. Valby | | Passage graves Enlarged dolmens | Causewayed camps |
| --- 2900 --- | | | III | Bundsø | | | |
| --- 3000 --- | | | II | Blandebjerg | | | |
| --- 3100 --- | | | Ib | Klintebakke | | | |
| --- 3200 --- | | Ia | Troldebjerg | | | | |
| --- 3300 --- | | Early Neolithic (EN) | C | Fuchsberg / Virum | | Early dolmens | |
| | | | B | Volling | | Earthen long barrows | |
| --- 3500 --- | A | | Oxie | | | | |

causewayed camps, these enclosures have no interrupted ditches, and they may have multiple palisades. There are many indications of rituals having been performed, but there is also evidence of massive settlement activities at these sites. At least in one case, a palisade enclosure was built on the site of a causewayed camp. – Were the palisade enclosures sacred meeting places, or were they settlements as well?

This paper looks at causewayed camps and palisade enclosures with special focus on the evidence for settlement that is contemporaneous with or later than the time of construction of these sites. Of the 23 localities chosen for this analysis (see Fig. 1 and Appendix), only a few have been subject to more or less total excavation (nos. 4, 9). The sites listed here are those about which there is information on the date, location in the landscape and layout of the main constructional features. A number of the sites mentioned here are unpublished except for short notes in *Arkæologiske Udgravninger i Danmark*, in some cases supplemented with information from the person in charge of the excavation. No attempt is made to enumerate all the possible causewayed camps, and some sites that have not been finally assigned to this category are not included. More possible causewayed camps are mentioned by Niels H. Andersen (1997:267ff.).

Danish causewayed camps

A causewayed camp is defined as a site demarcated by one or more parallel rows of long or short ditches inter-

rupted by causeways and flanked on the inner side by a palisade, which may have forward-projecting sections. One feature that is shared by most causewayed camps is their position on projecting landscape formations. The two overlapping camps Sarup I and II (no. 9) are situated on a plateau surrounded by river valleys on three sides, and 15 of the causewayed camps considered here are located in a similar topographical position (nos. 1, 4, 5, 6, 8, 9, 10, 11, 13, 14, 15, 17, 18, 20, 21). Only Liselund (no. 12) is described as situated in a flat landscape. The camps may be found on elevated or low ground. While Bjerggård (no. 20) is located on a steep hill 84 m above sea level, Hygind (no. 10), Lønt (no. 22) and Bundsø (no. 23) are to be found on flat, low-lying ground near the shores of fiords. The position of the ditches may also differ. At Sarup II the ditches form a curve over the top of the plateau, and ditches with such a position are also found at Sigersted III, Trelleborg, Vasagård and Mølbjerg (nos. 4, 5, 8, 21), for example. In contrast to these, the ditches at Blakbjerg and Bjerggård (nos. 15, 20) encircle the top of a hill, while the 250 m-long row of ditches at Markildegård (no. 6) lies on the slope of a hill, reaching almost to the bottom of the slope.

There is a big difference in the size of the area surrounded by the palisade and ditches. The sizes of the areas are given in hectares in the Appendix, but the size can only be measured in 50% of the cases, and some of the measurements recorded are only approximate. After the discovery of the very large causewayed camps at Liselund (no. 12) and Lokes Hede (no. 13), covering

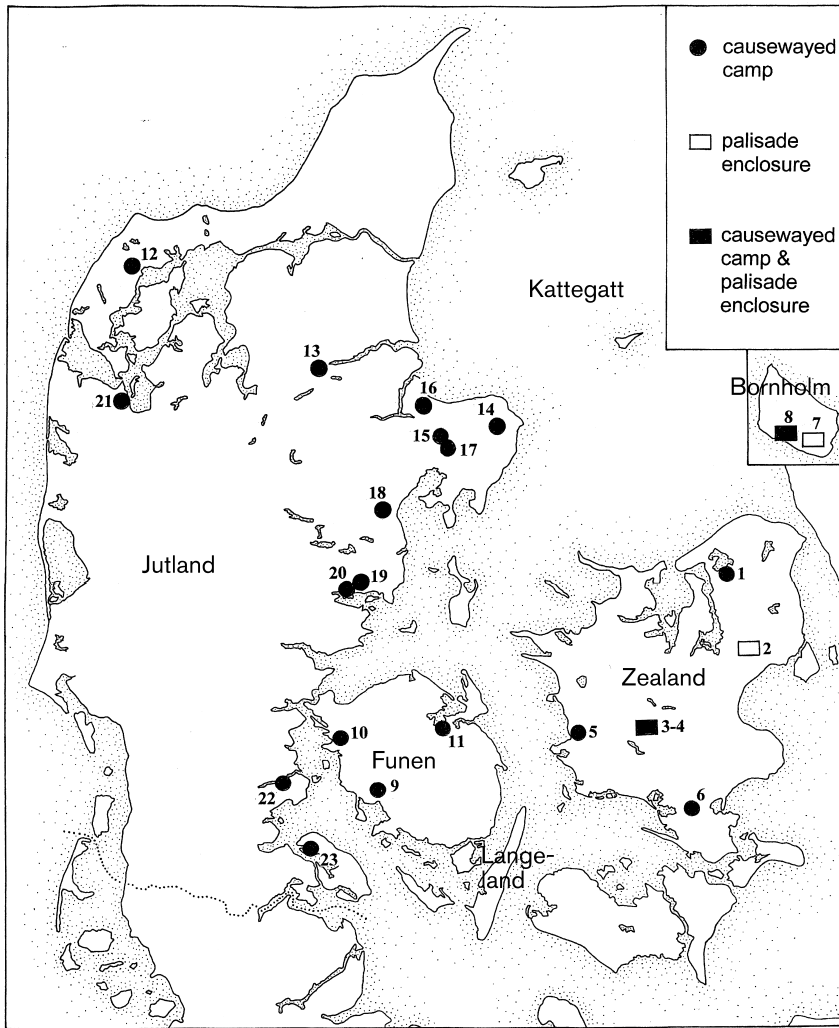


Figure 1. Map of the causewayed camps and palisade enclosures listed in the Appendix.

14.5 and 12–20 hectares respectively, even Sarup I, with its 8.5 hectares, can be regarded only as a site of moderate dimensions.

At seven of the causewayed camps listed here there is only one row of interrupted ditches, while at 13 there are two parallel rows. Most of the camps with only one row of ditches are located on Zeeland.

The initial construction of the ditches took place within the EN C (the Fuchsberg/Virum phase) and MN A1a-b. Thus the building of causewayed camps can be dated to the same time interval as the megalithic tombs (Table 1). In three cases, however, there is no material available for dating the earliest layers deposited in the ditches.

The function of causewayed camps

The current interpretation of the function of causewayed camps is based on observations made during the excavation of Sarup I and II (no. 9). The occur-

rence of human bones in the ditches and at the palisade, although small in number, leads to the hypothesis that interment took place in the ditches. Similar observations have been made at causewayed camps in Western and Central Europe (Andersen 1997:307–09). The place was intended for gatherings and for the performing of rituals, including temporary interment of the dead, and parts of human bodies were manipulated in the course of rituals at different places within the area of the causewayed camp, as were other items found buried in the ground, such as pottery vessels, some of which contained seeds of cereals, other pottery vessels, flint tools and battle-axes (Andersen 1997:301–18; 1999a:296–302). The rituals involving human bones that were enacted at the causewayed camps were part of a burial custom which also included the placement of skeletal parts in the chambers of the megalithic tombs. The location of the causewayed camp in relation to the distribution of dolmens and passage graves is well illustrated by investigations

in the Sarup area (Andersen 1999a:292–95). According to Niels H. Andersen, the causewayed camp was a meeting place for the inhabitants of small settlements distributed over a larger area, who belonged to a supposedly segmented tribal society. The causewayed camp symbolised the unity of the many small settlements or territories (Andersen 1999a:299). Each of them may have had access to their own ditch as a place for temporary interment. This interpretation is supported by the many re-cuttings observed in the ditches and by finds of human bones at the bottoms of ditches belonging to Sarup I, from the Fuchsberg Phase (EN C). No human bones were found in the ditches belonging to Sarup II, from the Klintebakke Phase (MN A1b), but burnt bones were found in two out of four postholes intended for the substantial wooden uprights belonging to a structure surrounded by a narrow semi-circular ditch near the edge of the plateau inside the palisade and ditches (Andersen 1999a:249–50). Some of the funerary ceremonies at Sarup II may thus have taken place at certain noticeable features within the limits of the palisade and ditches. The re-cuttings in the ditches outside the palisade, however, seem to have continued from Sarup I and II through Sarup III (MN AII) and Sarup IV (MN AIII–IV), which leads us to assume that the custom of temporary interment persisted for quite a long time.

Human bones have also been found in the ditches at other causewayed camps (nos. 4, 10, 11, 15, 17). At three sites, Åsum Enggård, Blakbjerg and Ballegård (nos. 11, 15, 17), they are found in the bottom layers. Only single bones or small collections of bone material occur, and never whole skeletons. These findings support the theory that human bodies were placed at the bottoms of the ditches, and that they were later removed in a decomposed state, during which process minor parts were left behind. During the excavation at Bundsø (no. 23) human skeletal remains, including skulls, were also found outside the ditches, embedded in the waste from the later settlement (Hoika 1987:150–52).

Most often only minor sections of the ditches have been excavated, but in a few instances larger parts of the bottom layers have been revealed. At Markildegård (no. 6) there were horizontal layers of wood and bark which may have served as a “floor” on which sherds of pottery vessels representing the Virum Phase were found, together with a few bones of oxen and sheep (P.Ø. Sørensen 1995:19). At Store Brokhøj (no. 16), a structure interpreted as a pottery kiln filled a large part of one of the ditches, apparently contradicting interpretations that the ditches were places only for the per-

forming of rituals. In seeking an explanation for this feature, we might assume that pottery was fired in this particular place in order to meet the demand for vessels used during the funerary ceremonies. Svend Nielsen has suggested that pottery production may in fact have been one of the activities carried out at causewayed camps. If so, it may help explain the uniformity of pottery shapes and decoration over large areas during the EN C and early MN A. The causewayed camps, being meeting places for a large number of people performing rituals and celebrating social events, served as centres of communication (S. Nielsen 1999:133).

The above interpretation of the function of the causewayed camps belonging to the Funnel-Beaker Culture in South Scandinavia as ritual meeting places finds support in observations from excavations of sites of the same nature within other culture groups. Most comparable with the Scandinavian ones are the causewayed camps of the Michelsberg Culture, because of their large size and difference in layout. Finds of human bones and whole skeletons in the ditches, where re-cuttings have been observed just as in the Danish ditches, indicate a similar function (Andersen 1997:184–203). When larger parts of the inner areas of Michelsberg causewayed camps have been examined, the features and finds do not reflect ordinary settlement activities. In particular, the contents of pits indicate deliberate deposition of material. The causewayed camps of the Michelsberg Culture are therefore looked upon as central places for rituals (Bertemes 1991).

Settlement occupation at the causewayed camps

In spite of clear evidence of rituals having been performed at the Danish causewayed camps, not all of the material found there indicates ritual behaviour. Traces of settlement activities have also been found at most of the sites, indicating either short-term or long-term occupation. First we have to consider that the presence of a large number of people engaged in the construction of a causewayed camp resulted in a certain quantity of refuse. The crew working with the timber used for building the palisades needed effective tools, which had to be repaired from time to time and were finally discarded, so that we may expect to find flint waste and maybe left-overs from regular tool production. Feeding the labour force would require accessories such as querns, fireplaces, clay vessels, etc., resulting in refuse like that found at ordinary settlement sites. We would also expect the people attending ceremonies year after

Table 2.

| Causewayed camps, indications of settlement | EN C | MN AI | | MN AII | MN AIII | MN AV | Pitted-Ware |
|---|------|-------|---|--------|---------|-------|-------------|
| | | a | b | | | | |
| 1. Skævinge | | | | | | | |
| 4. Sigersted III | | | | | | | |
| 5. Trelleborg | | | | | | | |
| 6. Markildegård | | | | | | | |
| 8. Vasagård | | | | | | | |
| 9. Sarup | | | | | | | |
| 10. Hygind | | | | | | | |
| 11. Åsum Enggård | | | | | | | |
| 12. Liselund | | | | | | | |
| 13. Lokes Hede | | | | | | | |
| 14. Ginnerup | | | | | | | |
| 15. Blakbjerg | | | | | | | |
| 16. Store Brokhøj | | | ? | | | | |
| 17. Ballegård | | | | | | | |
| 18. Voldbæk | | | | | | | |
| 19. Toftum | | | | | | | |
| 20. Bjerggård | | | | | | | |
| 21. Mølbjerg | | | | | | | |
| 22. Lønt | | | | | | | |
| 23. Bundsø | | | | | | | |

year at the causewayed camps to leave a certain amount of garbage behind.

From the sheer quantity of settlement material it is some times possible to determine whether we are dealing with temporary occupation in connection with the construction of the site or its ritual use, or whether there was more continuous occupation. The most obvious evidence of long-term occupation occurs at sites where thick sediments with mixed settlement debris cover not only the interior of the causewayed camp but also the surrounding ditches, thus sealing these features and extending beyond the confines of the original site. At many causewayed camps, however, no such occupation layers have survived, due to disturbances and erosion caused by modern agriculture. Thus settlement material may be present only in the fill of the ditches and in pits dug into the subsoil. In such cases long-term occupation can only be deduced from the quantity and character of the artefacts deposited. Furthermore, the presence of certain categories of objects such as harvesting implements should be seen as evidence of permanent habitation.

With due respect to the ambiguity of the evidence, we will now try to look at the indications for settlement occupation during successive stages at the causewayed camps listed in the Appendix (summarised in Table 2).

Early Neolithic C, the Fuchsberg and Virum phases, c. 3500–3300 BC

Settlement material from EN C that must have accumulated shortly after the construction of the causewayed camps has been found at five of the sites (nos. 1, 6, 9, 12, 19). At Sarup I (no. 9), settlement refuse was recorded over a large part of the space behind the palisade, while features containing evidence of ritual depositions were found on the periphery near the palisade and on the sloping ground bordering the interior area. No settlement material from this period was found in the ditches, but there were 25 pits containing settlement refuse. Niels H. Andersen suggests that the refuse in the pits was derived from the ritual use of the site, or alternatively, that waste was transported from settlements elsewhere to be deposited at

the causewayed camp (Andersen 1999a:276–77). A certain number of the postholes recorded at the site may have belonged to Sarup I, although no house sites could be identified.

At Liselund (no. 12), settlement material from EN C was found in pits and layers with waste covering part of the inside area of the causewayed camp, and settlement material from the same period was found in both the bottom and top layers of the ditches. This indicates quite extensive occupation shortly after the construction of the site. At Toftum (no. 19), settlement material was also found embedded in the layers within the ditches, from top to bottom.

Early Neolithic C – Middle Neolithic AI, c. 3500–3100 BC

There are two instances in which the date of the earliest activity at a causewayed camp is reported as EN C – MN AI, which means that the material either spans the two periods or cannot be dated more precisely. Both sites belong to the largest of the causewayed camps. At Lokes Hede (no. 13) some of the pits contained burnt clay, possibly the remains of ovens, while at Blakbjerg (no. 15) part of the inner area with occupation layers, pits and postholes were excavated in a search for house remains, which escaped detection here as at other sites. The material from the inner space of the site and finds from the ditch fill material bear witness to extensive, regular settlement activity at the causewayed camp in the time following its construction.

Middle Neolithic AIa–b, c. 3300–3100 BC

At Sarup II (no. 9) there were 77 pits containing settlement waste, which could be dated to MN AIb, the Klintebakke Phase. Some of the pits were interpreted as having been used for storage, which should indicate occupation of longer duration (Andersen 1999a:291). But as in the previous phase, settlement material was not mixed with the fill of the ditches. In the only ditch excavated at Åsum Enggård (no. 11) both the bottom and top layers contained finds from MN AI, and the top layer also contained accumulated settlement waste. Substantial occupation must have taken place here subsequent to the building of the causewayed camp. At Mølbjerg (no. 21) sherds of pottery from MN AI were found during minor excavation of an occupation layer, and some were also collected from the surface. Sherds from MN AI were found in the ditches at Voldbæk (no. 18) and Bjerggård (no. 20), but this does not necessarily indicate occupation during that period. It re-

mains to be seen how much of the rich material of finds from MN AI at Lønt (no. 22) can be attributed to settlement activities.

Middle Neolithic AII, c. 3100–3000 BC

Settlement activity during MN AII has been recorded at six of the causewayed camps (nos. 4, 5, 9, 10, 17, 22). At Sarup (no. 9) there was an extensive settlement covering c. 4 hectares during the Sarup III phase. Five features contained burnt clay and may be interpreted as the remains of ovens. Besides these, there were querns, hammer-stones, flint waste and traces of pottery production. Rows of postholes probably indicate house remains. The layers in the ditches contained substantial settlement waste from MN AII (Andersen 1999a:310–311). At Sigersted III (no. 4) settlement activity during MN AII covered an area that extended beyond the ditches of the causewayed camp. As at Sarup III, the upper layers of the ditches were mixed with waste from the settlement. Building activity had left numerous postholes, but no clear house plans could be identified. Several pits contained waste, burnt daub and querns. At Lønt (no. 22) a rich occupation layer also indicates substantial settlement at the site during this period.

Middle Neolithic AIII, c. 3000–2900 BC

There was settlement activity during this period at six of the causewayed camps (nos. 4, 5, 8, 9, 10, 23). Sarup IV (no. 9) has been dated to MN AIII–IV, and finds belonging to this phase cover about 4.5 hectares and indicate settlement activities. Pits with waste were not as numerous during this period as during Sarup III, but they were larger (Andersen 1999a:315, 319–20). At Sigersted III (no. 4) there was a certain amount of settlement material from MN AIII, which accumulated as a continuation from the MN AII-settlement, while at Bundsø (no. 23) the causewayed camp is covered by material that originates from a settlement during MN AIII.

Middle Neolithic AV, c. 2900–2700 BC

Settlement activities during MN AV have been recorded at ten of the causewayed camps (nos. 4, 5, 6, 8, 9, 10, 18, 20, 21, 23). At the three sites where finds from this period predominate, they indicate extensive, long-term occupation (nos. 6, 8, 20), while at six sites the find material is more limited (nos. 4, 5, 9, 10, 18, 23). The distribution of finds from MN AV at

Vasagård Øst (no. 8) extends beyond the ditches of the causewayed camp and reaches two parallel palisades at the foot of the hill, surrounding an area of about 2.5 hectares, and settlement debris from MN AV also covers a large area at Markildegård (no. 6) and Bjerggård (no. 20), the estimate at the latter being about 5 hectares. At Sarup, occupation during the Sarup V phase was probably brief. Settlement deposits were left in the upper levels of the ditches, but no new re-cuttings took place. At Damsbo Mark, about 3 kilometres from the Sarup site, settlement remains from the MN AV have been recorded over an area of about 8 hectares, indicating that a new location had been chosen for the major settlement of the region during this period (Andersen 1999a:324).

Pitted-Ware Culture (PWC), c. 2800–2600 BC

During the later part of MN AV the Kattegat region was influenced by the PWC, with an economy based on terrestrial as well as marine resources and adopting a new flint technology and the characteristic elements of PWC pottery decoration (Rasmussen 1991). At the newly found causewayed camp at Ginnerup (no. 14) a large PWC settlement has left deep layers containing waste which fill and cover the upper parts the ditches of the causewayed camp. Only limited excavation has taken place at this site so far, and we therefore have to wait for a description of the stratigraphy of the ditches and a date for the construction of the causewayed camp. Observations made at Ginnerup so far nevertheless provide evidence of the great size of some of the PWC settlements in Denmark, confirming what has already been demonstrated at Kainsbakke, only a few kilometres from Ginnerup (Rasmussen 1991). The general tendency for large, permanently occupied settlements by the end of the Funnel-Beaker Culture is also perceptible in the areas affected by PWC influence. At Stävie in the western part of Scania, settlement material from MN AV, combined with flint tools from the PWC, has been found in the fill of the interrupted ditches belonging to a causewayed camp, stretching over a distance of 250 m (Larsson 1982).

As it appears from this short survey, settlement activities on a major scale took place at the causewayed camps as early as EN C and MN AI, being most clearly demonstrated by the excavations at Liselund (no. 12), Lokes Hede (no. 13), Blakbjerg (no. 15) and Toftum (no. 19). This provokes the question as to whether ordinary occupation actually took place at some of the causewayed camps right from the beginning of their existence. At Sarup I (no. 9) the settlement waste from

the Fuchsberg Phase may be interpreted as traces of activity connected with ritual gatherings and not necessarily as evidence for exclusively profane occupation. We have to remember, however, that Sarup I was abandoned some time after its construction, and was not used during the MN AIa, the Troldebjerg Phase. A new causewayed camp, Sarup II, was built in the following period, MN AIb, the Klintebakke Phase. If activities had continued at Sarup during MN AIa, we might have had remains of a large settlement similar to the one at Troldebjerg on Langeland.

After the discovery of Sarup, and after it was realized that some of the already known settlements from the MN A were actually causewayed camps, or more precisely *situated* within causewayed camps, the question arose as to whether the eponymous site of MN AIa at Troldebjerg could also be regarded as a causewayed camp, as its location in the landscape might indicate. The long row of postholes in a foundation ditch which J. Winther interpreted as the remains of a longhouse might just as well be seen as a palisade (Madsen 1988:318). In 1977 an excavation took place at Troldebjerg in order to answer this question. According to J. Skaarup, this did not provide evidence for a causewayed camp. Troldebjerg still presents itself “as a regular settlement with substantial layers with settlement waste and remains of many small dwellings” (Skaarup 1985:49). However, considering that some of the causewayed camps were settled for longer periods during EN C and MN AI, the existence of substantial occupation at Troldebjerg in MN AIa does not exclude the possibility that this settlement was placed on the site of a causewayed camp. But the question can only be solved by making new excavations.

Returning to Sarup, a new causewayed camp was built in MN AIb, the Klintebakke Phase. The amount of settlement material recovered from this phase indicates the existence of a settlement that was used either permanently or repeatedly for shorter periods (Andersen 1999a:291). A more lengthy occupation took place in the following stage, Sarup III, dating from MN AII, the Blandebjerg Phase. The finds from Sarup III outnumber those from the previous stages at Sarup. The building of the causewayed camp in MN AIb was thus followed by a period of regular settlement in MN AII that continued in AIII and came to an end in MN AV. Causewayed camps with remains of major occupation in MN AII are also known at Sigersted III (no. 4) and Lønt (no. 22). Re-cuttings in the ditches nevertheless continued during Sarup II, III and IV, indicating that interim burials were performed during the time when the area was used as a settlement. Ritual deposi-

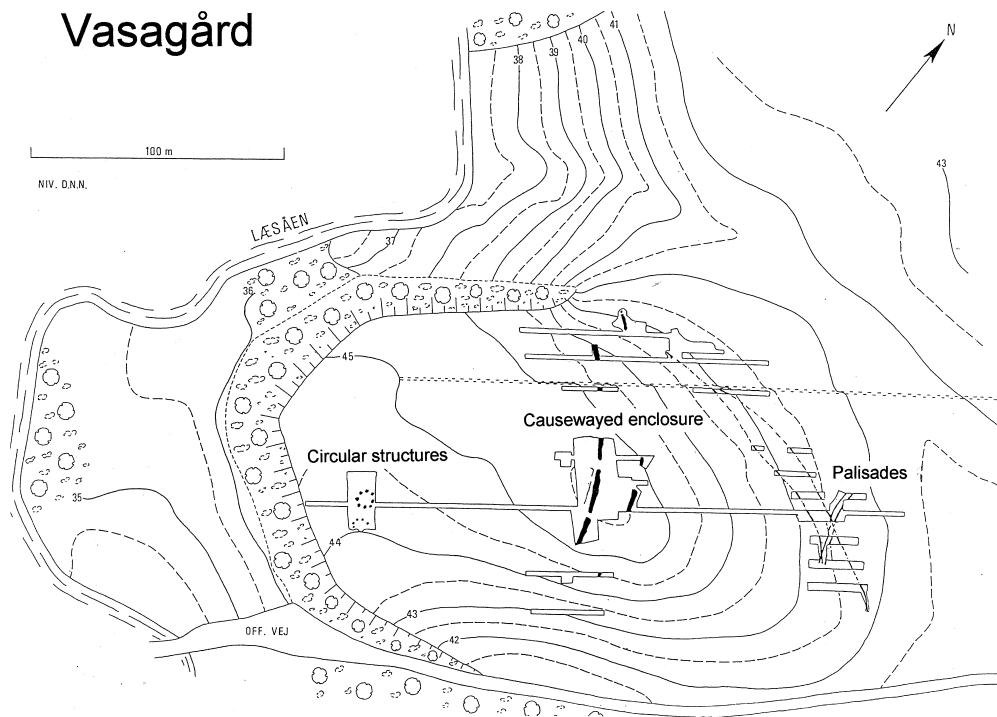


Figure 2. Vasagård East, Bornholm. Plan of the causewayed camp from the EN C and palisade enclosure from the MN AV.

tions of artefacts within the area of the causewayed camp also continued, as illustrated by several pits containing whole pottery vessels or flint tools belonging to the Sarup II and III stages.

Niels H. Andersen has described the change in settlement pattern that took place from the Early to the Middle Neolithic and has connected it with social and economic changes (Andersen 1997:316; 1999a:296–302). There was a shift from dispersed settlement in the EN towards a concentration on larger settlements in the MN, and the process presumably started in EN C. As can be deduced from the above, some of the largest known settlements of the Middle Neolithic Funnel-Beaker Culture developed on the sites of causewayed camps. The building of a causewayed camp may have been the initial step in the establishment of a central settlement within a larger area where funerary rituals continued to be performed. One of the functions of the central settlement was to serve as a ceremonial centre.

Palisade enclosures from the late Funnel-Beaker Culture

The causewayed camp at Vasagård East on Bornholm (no. 8, Fig. 2) was built during EN C, after which there seems to have been very little activity. Layers with

settlement waste filled the collapsed ditches in MN AIII, and then, in MN AV, a large settlement developed at the site, covering about 2.5 hectares and surrounded by a double palisade. Layers with settlement waste from this period completely covered the ditches of the causewayed camp, which were no longer visible, probably indicating that the original elements of the camp were no longer respected. Ritual depositions took place at the palisades and in pits dug in the ground inside them. One polished thick-butted flint axe was found buried, edge upwards, beside one of the postholes of the inner palisade, and some pits in the central part of the settlement contained flint tools or pieces of pottery that should be regarded as votive offerings. There were a remarkable number of fragments of burnt flint tools to be found, especially close to the palisades and in the palisade ditches, and one pit contained fragments of at least two fire-shattered flint axes.

Three post circles measuring 5.15–6.50 m in diameter were found overlapping each other near the southern part of the plateau, and part of a fourth circle was found nearby. Such post circles, or tiny “woodhenges”, were discovered for the first time at the late Funnel-Beaker Culture settlement at Grødbygård, Bornholm, where they were interpreted as ritual structures (Nielsen & Nielsen 1991). They bear a certain

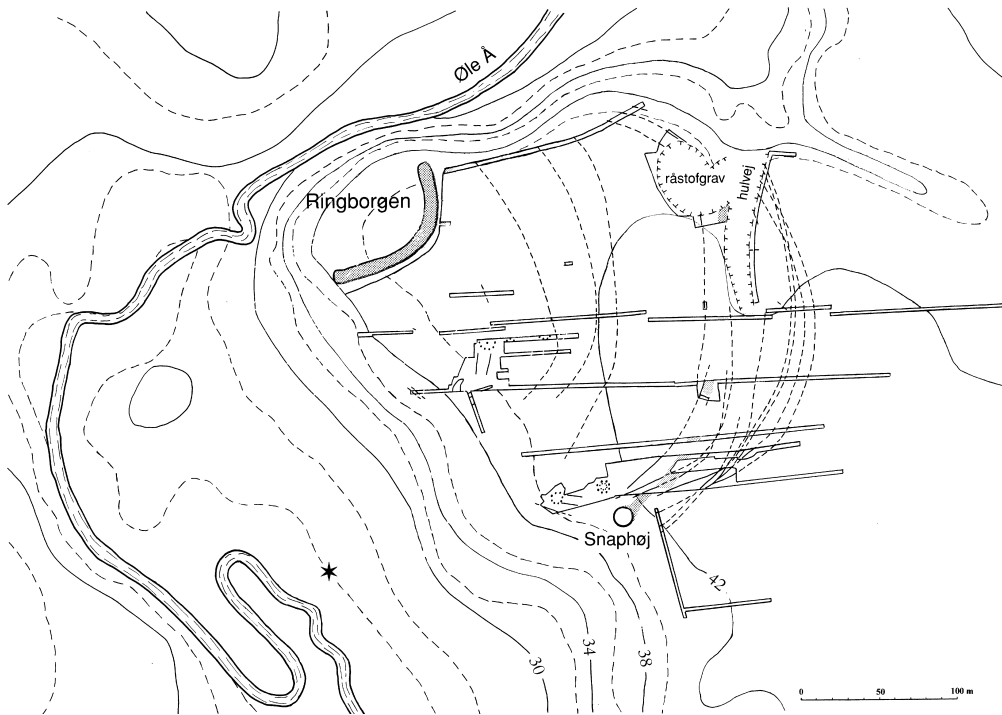


Figure 3. Rispebjerg, Bornholm. Plan of the palisade enclosure from the late Funnel-Beaker Culture. The location of the Brogård hoard is marked with an asterisk.

resemblance to the features of Sarup II mentioned above (Andersen 1997:86). Although there is a considerable time gap between Sarup II, from MN A1b, and Vasagård East, from MN AV, conspicuous constructions had been erected near the borders of both sites. The regularity with which the post circles were built at Vasagård indicates that the layout was determined by a prescribed formula, thus suggesting a ritual function.

Settlements generally grew in extent during MN AV, and like Vasagård East, some of the large settlements were situated on the sites of former causewayed camps (nos. 5, 6, 20, 21). This may not apply to all the large settlements of the late Funnel-Beaker Culture, but on the other hand, they sometimes occupy an accentuated position in the landscape, like many causewayed camps. This is the case at Rispebjerg (no. 7) only 8 kilometres east of Vasagård on the north-western part of a plateau, which is bordered on two sides by steep slopes rising from a river valley (Fig. 3). Traces of a settlement from MN AIII–V are recorded over an area of about 6 hectares, enclosed by no less than 13 or 14 palisade ditches, some of which can be paired as double palisades. Five circular post settings have been found in the trial trenches and small areas that have been excavated so far, the largest measuring 9.5 m in diameter. Two of these circular structures have double palisades leading up to them. Among the

finds from the layers with settlement waste are peculiar small, flat stones with finely incised decorations (Kaul et al. 2002:130, fig. 12–16).

Palisades have been found at other settlement sites from MN AV as well. At Sigersted I (no. 3), situated only about 300 m from the causewayed camp at Sigersted III (no. 4), two almost parallel rows of posts were originally interpreted as the remains of a longhouse (Davidsen 1978:151), but should rather be seen as a fragment of a larger palisade structure (cf. Svensson 2002:43), while a narrow ditch with postholes along the foot of the hill at the MN AV settlement at Spodsbjerg, Langeland, may have been a palisade or fence (H. Sørensen 1998:50–52). At Helgeshøj, to the west of Copenhagen (no. 2), foundation ditches for more solid palisades may have formed parts of a larger enclosure. Finds from ditches, layers with settlement waste and pits include MN AV pottery, tanged arrowheads and thick-butted flint axes of the B-group (Giersing 2004).

Palisade enclosures have been found during recent large-scale excavations in western Scania, near Malmö and on the west-coast railway line. One of these is Dösjebro, covering an area of about 3 hectares and dated to the late Funnel-Beaker Culture, although also with finds of pottery from the Battle-Axe Culture (Svensson 2002:32–36). Here flint axes were pro-

duced, some of the postholes in the palisade being stuffed with debris from this activity (Svensson 2002:35–36). Deposits of whole or damaged thick-butted flint axes have been found at this site and in two more palisade enclosures, at Hyllie and Bunkeflo. As at Vasagård East, the flint axes were placed at the foot of one of the posts of the palisade (Svensson 2002:37–38).

Ritual depositions of flint axes took place at the large Middle Neolithic sites, including Troldebjerg (Winther 1935:51), Blandebjerg (Winther 1943:29), Sarup II (no. 9), Sigersted III (no. 4) and Vasagård (no. 8). The deposition of hoards with flint axes, and of single flint axes, outside the settlements, in wetland environments and sometimes also on dry land, was markedly reduced from MN AI to AII. Very few flint axes of the Blandebjerg and Bundsø types, representing MN AII and AIII respectively, have been found outside settlements (Nielsen 1977:115–117; Karsten 1994:125). Hoards with thick-butted flint axes and depositions of single axes became frequent again during MN AV, however, and have been identified in various contexts and types of environments (Nielsen 1979:30–52). The burning of flint tools was a conspicuous feature at the settlement with a palisade enclosure at Vasagård and probably represents a spectacular ritual practice that may have been performed in order to impress large numbers of people (Larsson 2000).

By the end of the Funnel-Beaker Culture, society seems to have been effectively organised and ruled by an ideology or religion involving traditions from the past as well as new ritual practices. The sites of earlier causewayed camps were regarded as important or sacred, as they were reused as places for large, central settlements. The inhabitants must have developed a group identity that demanded sites with a visible and even monumental exposure. Where the primary function of the causewayed camps to establish a sacred ground for the community's ancestors, or a place guarded by them, the palisade enclosures of the late Funnel-Beaker Culture seem to have been both ceremonial centres and large fortified settlements.

From dispersed to aggregated settlement

None of the Danish causewayed camps has been dated to earlier than EN C (c. 3500–3300 BC). The inspiration to build such sites must have come from the Michelsberg Culture, in which causewayed camps had been known for more than half a millennium by that time, but there *are* finds indicating that sites earlier than the Danish ones were built in northern Germany, near the limit of the Northern Group of the Funnel-

Beaker Culture. A causewayed camp at Walmstorf, Landkreis Uelzen in Lower Saxony, has been dated to c. 4000 BC. This is situated in the north-eastern part of the Lüneburger Heide, within an area where the largest concentration of megalithic tombs in Germany was later to be built. Paralleling what we have seen happening in Denmark, a settlement from MN AII–III was situated on top of the remains of the causewayed camp (Richter 2002).

The largest of the causewayed camps (Germ. *Erdwerke*) in the central part of Germany covers an area of about 25 hectares and is situated at Dölauer Heide, near Halle. It is surrounded by six continuous, parallel ditches and was used by the Baalberge and Salzmünde Groups during its earlier phases, during which time there seems to have been no long-lasting occupation, but later the Bernburg Culture, corresponding in time to the late MN A, left a rich and varied settlement deposit in the northern part of the site. This settlement was surrounded by a palisade enclosure that paid no respect to the features of the earlier causewayed camp (Behrens & Schröter 1980). Other causewayed camps in Central Germany were also settled by people of the Bernburg Culture, e.g. Schalkenburg (Starling 1988).

The Wartberg Culture in Hessen (*Hessische Steinkistenkultur*), c. 3000 BC, was characterized by a pattern of both small and large settlements, the large settlement sites being located on top of the rounded basalt mountains. The contemporaneous gallery graves are situated at a distance of about 1 kilometre from these hill-top settlements, usually with one gallery grave per settlement (Schwellnus 1979). Here the dominant position of the major settlements is emphasized by the special features of the landscape.

The settlements of the Altheim Culture in Bavaria, c. 3700–3360 BC, were situated near lake shores and on loess terraces. In the Isar valley they are distributed in groups numbering from five to eight settlements, one of which has the size and character of a central settlement (Matuschik 1991). Each group of settlements was located close to one of the tributaries of the River Isar. The populated area connected with a central settlement seems to have measured no more than 4–5 km². Compared with Torsten Madsen's map of the settlement pattern in eastern Jutland (Madsen 1988 fig. 17.10), the surroundings of the central settlements in Bavaria seem to be quite small. However, causewayed camps situated close to each other can also be found in eastern Jutland. The distance between Toftum (no. 19) and Bjerregård (no. 20), both built in EN C, is just 3 kilometres as the crow flies, for instance.

During the time of the later Chamer Group in Bavaria, c. 3100–2800 BC, central settlements were surrounded by continuous ditches and palisades. Settlement activities have been observed at several enclosures of the Chamer Group, and some of the sites may have been fortified, e.g. Galgenberg, where it is claimed by the investigator that ditches and a palisade were constructed for the purpose of defence (Ottaway 1999). During the time of the Chamer Group in South Germany there was a tendency towards a concentration of settlement at fewer, larger sites (Matuschik 1991).

A concentration of settlement took place c. 3500–3000 BC not only in South Scandinavia but also within several of the culture groups of Central Europe. Other comparable features include the establishment of major settlements on the sites of former causewayed camps, especially between 3200 and 2800 BC, and the monumentalising of the central settlements. The defensive functions of the central settlements that are sometimes attributed to the German sites have not been touched upon so much when discussing the South Scandinavian ones. Instead, ritual aspects have been more in focus.

Abandonment of the central settlements

We can only speculate about why the palisade enclosure at Dösjebro was eventually burnt down (Svensson 2002:34). Did it happen during a hostile attack? All the areas of South Scandinavia and Central Europe where large palisade enclosures were built felt the impact of the advent of the Corded Ware / Single Grave / Battle-Axe Cultures. The enclosures in the eastern part of South Scandinavia must have been in existence when the culture change occurred, as indicated by the dates obtained for the Dösjebro enclosure, although all 14C dates referring to the MN A – MN B transition are subject to substantial deviations due to wiggles in the calibration curve. The finds of pottery from the Battle-Axe Culture at this site indicate that some activity took place here at an early stage in MN B. Thick-butted flint axes of the B-Group in one of the pits at the enclosure of Helgeshøj (no. 2) and the location of the large hoard of B-axes at Brogård close to the enclosure on Rispebjerg (no. 7) (Kaul et al. 2002:127) seem to show that these enclosures were in use at the beginning of MN B, but in a Funnel-Beaker context. There are very few finds at all in the case of the enclosure at Hyllie in Scania, where the massive deposits with settlement waste from MN AV found at the Funnel-Beaker enclosures are missing and the few datable

finds are from the Battle-Axe Culture (Svensson 1991; 2002:37–38). Hyllie was not a central settlement, but simply an enclosure. There is no indication that central settlements existed behind the walls of palisade enclosures after the change from the Funnel-Beaker to the Battle-Axe Culture had taken place. As we know, this meant a shift from a nucleated settlement pattern to a dispersed one.

What was the attitude of the Corded Ware / Single Grave / Battle-Axe people towards the sites of the deserted central settlements and ritual centres? After the abandonment of the settlement with a palisade enclosure at Dölauer Heide in Germany the area became a burial ground. About 20 graves of the Corded Ware Culture have been found here, and a similar number of graves belonging to the same culture were found at Schalkenburg (Behrens & Schröter 1980). There does not seem to have been any long-lasting settlement during MN AV at Sarup, but the memory of the extensive site and its importance for the ritual life of the people must have been preserved for a long time after the cessation of occupation. At the time of MN BI or early BII (Bottom Grave Period or early Ground Grave Period) there were two burials made on top of the plateau by people of the Single Grave Culture, both surrounded by a circular ditch and probably both covered by the same burial mound (Andersen 1999a:328–330). Similarly, ten graves of the Battle-Axe Culture have been excavated close to the palisade enclosure at Dösjebro, but on the other side of the stream passing its northern limit (Svensson 2002:34). One of these graves contained a battle-axe of type C:2, which in Scania belongs to Malmer's Period 3 (Malmer 1962, grave no. 16), corresponding to the late MN BI. This is one of the largest concentrations of graves belonging to the Battle-Axe Culture in Sweden, and its location near the enclosure may not be accidental.

Conclusions

The building of causewayed camps during EN C and MN AI had a long-lasting effect on the organisation of settlement during the following periods of the Middle Neolithic. Occupation of some of the causewayed camps started as early as EN C, while at others it started later, in some instances as late as MN AV. At the large settlements emerging at the causewayed camps during the MN, interim burial of the dead continued until some time in MN AII or AIII, as indicated by the re-cuttings observed in the ditches at Sarup, but at other sites re-use of the ditches ceased in MN AII and the ditches and other features of the causewayed camp

were obliterated and buried below accumulating deposits from settlement activities. Other kinds of rituals in the form of offerings of pottery vessels or artefacts of flint or stone continued from the earliest use of the causewayed camp until the end of its occupation. The palisade enclosures of the late Funnel-Beaker Culture can be seen as a further development of the large settlements, which are here called central settlements because of their size, prominent position in the landscape and character as ceremonial centres.

In the later part of the EN and continuing into MN A, the dispersed settlement pattern was replaced by a concentration of settlement in a few large sites. Peasant life on the open land was replaced by life in villages that grew bigger towards the end of the Funnel-Beaker Culture, when they began to be protected behind palisades. After half a millennium of occupation, the villages were abandoned or destroyed, and a new age commenced with peasant settlement once more dispersed across the landscape, this time after a radical transformation of society. Some of the abandoned sites of the large settlements and ceremonial centres of the late Funnel-Beaker Culture retained their position as important places for some time, although they were no longer occupied. Instead, some of them were used by people of the Single Grave or Battle-Axe Culture as burial grounds. Thus these areas once again became the domain of the ancestors.

English language revision by Malcolm Hicks.

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Appendix

List of Danish causewayed camps and palisade enclosures

The sites are ordered following the numbering of archaeological sites in the National Register of Sites and Monuments.

Abbreviations:

- a. amt (county)
- h. herred (district)
- s. sogn (parish)
- sb. sognebeskrivelse (Parish Record)

The locations of the sites and updated information can be found using these numbers when searching the internet version of the National Register (DKC) database at the web address: dkconline.dk

1. Skævinge Boldbaner

Skævinge s., Strø h., Frederiksborg a. – 01.05.06 sb. no. 21. – Excavated 1986 by Arne H. Andersen for Gilleleje Museum. – Lit.: AUD 1986 no.16.

A causewayed camp situated on a flat elevation. A single row of five interrupted ditches could be followed over a distance of about 200 m. Two of the ditches were examined. They measured 21 × 7 m and 13 × 7 m, respectively, and reached down to a depth of 1 – 1.5 m. There were no traces of a palisade. Finds from the fill of the ditches, including pottery, have been dated to the Virum Phase of the EN C.

2. Helgeshøj

Sengeløse s., Smørum h., Københavns a. – 02.02.11 sb. no. 71. – Excavated 1999–2000 by Tom Giersing for Københavns Amtsmuseumsråd (Museet på Kokkedal). – Litt.: AUD 1999 no. 56; 2000 no. 52. – Svensson 2002:44. – Giersing 2003.

A palisade enclosure. Two parallel palisades could be followed over a distance of 60 m, and a third one over a distance of 40 m. The finds are dated to MN AII and AV – BI and include tanged arrowheads of the Pitted Ware Culture. One pit contained five thick-butted flint axe pre-forms that were partly fire-shattered, to-

gether with fragments of thick-butted flint axes of Group B and pottery of MN AV.

3. Sigersted I

Sigersted s., Ringsted h., Sorø a. – 04.02.14 sb. no. 32. – Excavated 1974 by C.L. Vebæk for the National Museum. – Lit.: K. Davidsen 1978:22–28. – Svensson 2002:42–44.

Two parallel palisades, probably part of an enclosure. Situated about 300 m north of Sigersted III on a flat, sandy terrace above a river valley. Finds from the postholes have been dated to the MN AV.

4. Sigersted III

Sigersted s., Ringsted h., Sorø a. – 04.02.14 sb. no. 34. – Excavations 1978 by C.L. Vebæk and 1997–99 by P.O. Nielsen for the National Museum. – Lit.: AUD 1997 nr.121; 1998 nr.144; 1999 nr.129.

A causewayed camp situated about 300 m south of Sigersted I, on a sandy terrace projecting between two river valleys. Seven interrupted ditches were excavated, six of which were in line, surrounding an area of about 1 hectare. Human bones were found in one of the ditches. The upper layers in all of the ditches contained settlement material from MN AII. Many of the pits and postholes belong to a settlement from the MN AII, covering a larger area than the causewayed camp and followed by occupation in the MN AIII and AV periods. Niels H. Andersen dates the causewayed camp to MN AII (Andersen 1997:270), but this applies only to material from the upper layers of the ditches. No dating material has been found in the lower layers. It is therefore possible that the ditches were initially dug before MN AII.

5. Trelleborg

Hejninge s., Slagelse h., Sorø a. – 04.03.04 sb. no. 8. – Excavated 1934–42 by P. Nørlund for the National Museum. Supplementary excavation 1979 by Niels H. Andersen. – Lit.: C.J. Becker 1957. – Andersen 1982.

A causewayed camp situated on a plateau of morainic clay projecting between two river valleys. 125 pits were found during exca-

vation of the Viking fortress in 1934–42, some of which were later identified as ditches distributed in two parallel rows (Andersen 1982). The various features contained finds from all periods of the Middle Neolithic Funnel-Beaker Culture (Davidsen 1978:29–31).

6. Markildegård

Bårse s., Bårse h., Præstø a. – 05.02.03 sb. no. 61. – Excavated by P.Ø. Sørensen 1986 for Sydsjællands Museum, Vordingborg. – Lit.: P.Ø. Sørensen 1995.

A causewayed camp situated on the northern part of an oblong sandy elevation above a former wet area. 22 short and long ditches were uncovered over a distance of about 250 m, in principle forming a single line, but with some of the smaller ditches placed parallel to each other. Parts of one or more complex palisades were situated about 20 m behind the ditches. The bottoms of the ditches contained layers of wood and bark, on top of which were fragments of pottery vessels dated to the Virum Phase of the EN C. Remains of a settlement from the same period were found in the area behind the ditches. Part of the causewayed enclosure was covered by layers rich in settlement material from the MN AV.

7. Brogård / Rispebjerg

Pedersker s., Bornholms Sdr. h. – 06.02.03 sb. no. 167. – Excavated since 1995 by Finn Ole Nielsen for Bornholms Museum, Rønne. – Lit.: F.O.S. Nielsen 1998; Kaul et al. 2002.

A palisade enclosure situated on the north-western part of a plateau rising above and surrounded by a river valley on two sides. Settlement material dated to the MN AIII and AV has been found over an area of some 6 hectares. There are 13–14 palisade ditches and 5 circular post-settings that date from MN AV.

8. Vasagård East / Vasagård West

Åker s., Bornholms Sdr. h. – 06.02.05 sb. no. 203. – Excavated 1988 and 1993 by F.O. Nielsen & P.O. Nielsen for the National Museum in collaboration with Bornholms Museum, Rønne. – Lit.: Kaul et al. 2002.

Vasagård East: A causewayed camp and palisade enclosure on a hill consisting of morainic gravel and clay rising above a river valley. A double line of ditches forms a curve over the hilltop, surrounding an area of about 1.5 hectares. Finds from the bottoms of the ditches have been dated to EN C, while the upper layers contain settlement material from MN AIII and the top layers were deposited in MN AV, at which time there was a settlement covering some 2.5 hectares surrounded by a double palisade. Ritual depositions in pits and circular post settings are from the same period.

Vasagård West: A causewayed camp forming an extension to that at Vasagård East but on the opposite side of the river valley. Material from the fill of the ditches has been dated to MN AIII.

9. Sarup

Hårby s., Båg h., Odense a. – 08.02.09 sb. no. 19. – Excavated 1971–84 by Niels H. Andersen for Forhistorisk Museum, Moesgård, in collaboration with Fyns Stiftsmuseum, Odense. – Lit.: Andersen 1997; 1999a; 1999b.

Two causewayed camps on a sandy plateau projecting between two river valleys. The oldest causewayed camp, Sarup I, covers 8.5 hectares and has been dated to the Fuchsberg Phase of the EN (the investigator dates the Fuchsberg Phase to the transition from ENC to MN AI). It consists of a double line of long ditches along a continuous palisade with projecting sections added to the front. Sarup II covers 3.5 hectares and has been dated to the Klintebakke Phase of the MN AIb. It consists of a double line of short ditches surrounded by post settings, following a palisade of multiple lines of posts. The area inside the palisades has evidence of both ritual depositions and settlement activities belonging to Sarup I and II. Settlement activities were extensive during MN AII (Sarup III),

but less extensive during MN AIII–IV (Sarup IV) and MN AV (Sarup V). Re-cuttings of the ditches took place during Sarup I–IV.

10. Hygind

Husby s., Vends h., Odense a. – 08.07.10 sb. no. 20. – Partial excavation by Niels H. Andersen 1986–88 for Forhistorisk Museum, Moesgård, in collaboration with Fyns Stiftsmuseum, Odense. – Lit.: AUD 1987, no.120; 1988, no.126.

A causewayed camp situated on a promontory close to the bay of Tybrind Vig. A trial trench revealed a section through two parallel, interrupted ditches. The area behind these ditches featured two parallel palisade ditches dated to MN AI and pits belonging to settlement activities during MN AII–V. Bones are well preserved because of the lime-rich soil, and a large faunal material could be recovered, comprising bones of both game and domestic animals, together with a few human bones.

11. Åsum Enggård

Åsum s., Åsum h., Odense a. – 08.08.11 sb. no. 27. – Partial excavation 1988 by Nils M. Jensen & Eigil Nikolajsen for Fyns Stiftsmuseum, Odense. – Lit.: AUD 1988 no. 136. – Jensen & Nikolajsen 1990:13–20.

A causewayed camp situated on a sandy promontory above a river valley. One of two parallel ditches was excavated. Settlement material from MN AIa–b was found in the lower and upper layers of the ditch and a few human bones were recovered from the bottom.

12. Liselund

Sjørring s., Hundborg h., Thisted a. – 11.03.05 sb. no. 261. – Partial excavation 1989 by Martin Mikkelsen & others for Museet for Thy og Vester Hanherred, Thisted. – Lit.: AUD 1989 no.190. – Westphal 2000.

A causewayed camp situated on flat terrain. An area of about 14.5 hectares is surrounded by a double row of interrupted ditches. There were fragments of pottery vessels from the EN C (late Volling / Fuchsberg) in the bottom of one of the ditches, and accumulated settlement material from the EN in the top layers of a number of them. Settlement material was also found in pits and layers behind the ditches. Activities seem to have ceased in the EN.

13. Lokes Hede

Nørre-Onsild s., Onsild h., Randers a. – 14.07.07 sb. no. 79. – Partial excavation 1987 by Peter Birkedahl for Ålborg Historiske Museum. – Lit.: Birkedahl 1994. – AUD 1987 no.299.

A causewayed camp situated on a plateau above wet ground to the north and south. Six interrupted ditches in a single row formed a curved line surrounding an area estimated to cover between 12 and 20 hectares. Some pits contained pottery, others burnt clay, which may be the remains of ovens. The finds have been dated to EN C / MN AI.

14. Ginnerup

Ginnerup s., Djurs Nørre h., Randers a. – 14.01.05 sb. no. 164. – Partial excavation from 2001 onwards by N.A. Boas & L. Wincentz Rasmussen for Djurslands Museum, Grenå. – Lit.: AUD 2001 no. 394.

A causewayed camp situated on a plateau above the former fjord of Kolindsund. The top of the plateau is encircled by a number of interrupted ditches probably in a single row. The upper layers in two of the ditches contained settlement material from the Pitted-Ware Culture.

15. Blakbjerg

Marie Magdalene s., Sønderhald h., Randers a. – 14.10.11. sb. no. 47 – Excavated 1992–93 by N.A. Boas for Djurslands Museum, Grenå. – Lit.: AUD 1992 nr. 284; 1993 nr. 335. – Boas 2001.

A causewayed camp situated on a raised plateau with steep

slopes on three sides. The top of the plateau is encircled by a single row of interrupted ditches, 12 of which have been located, surrounding an area of about 9 hectares. The ditches are V-shaped in section. A fragment of a child's jaw was found near the bottom of one of them. Settlement material dated to EN C / MN A1a was found in the fill of the ditches and in layers covering parts of the area inside the circle.

16. Store Brokholm

Vivild s., Sønderhald h., Randers a. – 14.10.20 sb. no. 27. – Excavated 1985–86 by R. Fiedel & B. Madsen for Kulturhistorisk Museum, Randers. – Lit.: B. Madsen & R. Fiedel 1988.

A causewayed camp situated on a hill. Four ditches, presumably in a single row, have been located. At the bottom of one of them were remains of an oven that may have been used for firing pottery. The finds have been dated to EN C / MN A1a.

17. Ballegård

Skarresø s., Øster-Lisbjerg h., Randers a. – 14.11.07 sb. no. 9. – Excavated by G. H. Rasmussen (1988) & Lisbeth Wincentz Rasmussen (1993) for Djurslands Museum, Grenå. – Lit.: AUD 1988 nr. 307; 1993 nr. 341.

A causewayed camp situated on a plateau projecting between two river valleys. Five ditches distributed in two parallel rows near the base of the slope to the east were partly examined. Human bones were found at the bottoms of the ditches. The finds in the lower fill have been dated to MN A1–A2 and those in the overlying layers to the late Single Grave Culture, the Late Neolithic (shell layers with Bell Beaker pottery) and Bronze Age.

18. Voldbæk

Brabrand s., Hasle h., Århus a. – 15.03.01 sb. no. 5. – Partial excavation by C.L. Vebæk 1939–40 for the National Museum. – Lit. K. Davidsen 1978, 57–58. – Andersen & T. Madsen 1978:151–52. – T. Madsen 1988:303–09.

A causewayed camp situated on a sandy plateau projecting between a river valley and the lake Brabrand Sø. Two oblong, parallel ditches were excavated and seven more were observed. The finds from the ditches were dated to EN C (Fuchsberg Phase), MN A1 and MN AV.

19. Toftum

Søvind s., Voer h., Skanderborg a. – 16.05.08 sb. no. 74. – Excavated by C.L. Vebæk (1956–57) for the National Museum and by T. Madsen (1976) for Forhistorisk Museum, Moesgård. – Lit.: T. Madsen 1978a; 1978b; 1988.

A causewayed camp situated on a sandy hill projecting between two areas of wet ground. Nine ditches were distributed in two parallel rows. The finds from the fill were dated to EN C (Fuchsberg Phase), dated by the investigator to the transition from EN C to MN A1. The ditches may have surrounded an area of some 1.5 hectares.

20. Bjerggård

Vær s., Voer h., Skanderborg a. – 16.05.12 sb. no. 16. – Excavated by T. Madsen 1981–83 for Forhistorisk Museum, Moesgård. – Lit.: T. Madsen 1988:309–311.

A causewayed camp situated on the top of a steep-sided hill 84 m above sea level overlooking Horsens Fjord. An area of about 1.6 hectares is surrounded by one row of ditches. The lower and middle layers in the ditches contained pottery from EN C (Fuchsberg Phase), MN A1 and a few sherds from the following periods of the MN A, while the upper part of the fill contained settlement material from MN AV. A large amount of settlement material from MN AV was found spread over the whole of the plateau, an area of about 5 hectares. Postholes, pits and other features excavated in the area behind the ditches were dated to the Fuchsberg Phase.

21. Mølbjerg

Ølby s., Hjerm h., Ringkøbing a. – 18.05.17 sb. no. 46 – Minor excavation 1938 by Th. Mathiassen for the National Museum. Private collections acquired by the National Museum and Holstebro Museum. – Lit.: Mathiassen 1948:66–68. – Olesen 1993:19–23. – Eriksen & Olesen 2002:26–29.

A causewayed camp situated on a promontory overlooking a small fiord, occupying an area of some 2 hectares. Two parallel rows of ditches about 30 m apart were observed from the air. The inner row consists of eight ditches of almost equal size forming a curved line, while the ditches in the outer row are larger and form a more irregular pattern. A third row of ditches running in another direction can be discerned in the aerial photographs. Finds from a trial excavation and surface collection have been dated to MN A1, MN AV and the Late Neolithic.

22. Lønt

Sønder Starup s., Haderslev h., Haderslev a. – 20.03.08 sb. no. 50. – Excavations 1977–78 and 1998–99 by E. Jørgensen for Haderslev Museum. – Lit.: Jørgensen 1988:204–07. – AUD 1998 no.587; 1999 no.653.

A causewayed camp on a flat plateau protruding towards the bank of Haderslev Fjord. It is estimated to cover an area of 4–5 hectares. Investigations in the area behind the double row of ditches have been concentrated on narrow ditches for fences or palisades and pits containing whole or fragmented battle-axes and flint axes dating from the EN C and MN A1. The ditches were covered by a 20 cm layer of with an abundance of settlement material from MN A1.

23. Bundsø

Havnbjerg s., Als Nørre-H., Sønderborg a. – 23.01.02 sb. no. 48. – Excavation by C. Rothmann 1904–08 for the Museum in Kiel, now Schleswig-Holsteinisches Landesmuseum in Schleswig, and by H.C. Broholm 1924, P.Helweg Mikkelsen 1928–32, Th. Mathiassen 1935 and P.O. Nielsen 1979–81 for the National Museum. – Lit.: Mathiassen 1939. – Hoika 1987:131–152.

A causewayed camp on a peninsula, Flintholm, protruding into a now drained fiord. A rich deposit of settlement material has been excavated on the bank of the peninsula, mainly dating from MN A1, with a smaller part from MN AV. The excavation in 1980–81 located a double row of ditches running across the neck of the peninsula, covered by layers with settlement material from the MN A1. Human skulls have been found among the settlement remains on various occasions.