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Borremose Reconsidered

The Date and Development of a Fortified Settlement of the Early Iron Age

by JES MARTENS

The western part of Himmerland forms a slightly hilled moraine plateau penetrated by many small rivers and creeks. The area is damp and changes between low dry hills and vast meadows. In the Early Iron Age this part of Denmark was perhaps one of the most densely populated. The hills were covered by celtic fields, and the villages were numerous (*e.g.* Hatt 1938a+b, 1949 and Vestergaard-Nielsen 1937). As a crescent the low lands of Borremose lies in the very heart of this moist country, a raised bog and one of the largest of its kind in the area. In the southern part of it a small islet of gravel moraine rises over the surface. Throughout prehistory bogs and lakes were sacred places, and it is no surprise that Borremose yielded at least four bog bodies (K. Thorvildsen 1947, E. Thorvildsen 1952, Tauber 1979) and several other things like pottery, clothes and wooden implements mainly dating to the Late Bronze Age and the Early Iron Age. It was, however, rather unexpected when – in 1929 – it was discovered that the tiny islet was not only strongly fortified but even inhabited through a period of more than two hundred years during the Pre-Roman Iron Age (fig. 1).

AN OUTLINE HISTORY OF THE INVESTIGATIONS

The investigations of the Borremose Stronghold were carried out throughout more than two decades and remained for long the largest exploration of a single Iron Age site in Denmark. At the same time it yielded the first total plan of a prehistoric village not only in this region but in the whole of Northern Europe. The persons in charge of this great undertaking were Johannes Brøndsted and Peter V. Glob. Geobotanical investigations were carried out by Johannes Iversen and his assistant Alfred Andersen in close collaboration with the archaeologists. This became of great importance later when interpreting the site. Whereas the results of the geobotanical research already have been published (Iversen 1959, Andersen 1977) the archaeological material remained unworked for a long time except for a few generel statements by the investigators (see references).

The site was discovered in 1929 during works of drainage in the southern part of the Borremose fen, Lille Borremose. The workers had cut through the stone-pavement of an Iron Age road. The local museum leader, Sigvald Vestergaard-Nielsen, called upon the National Museum, and the initial investigations were

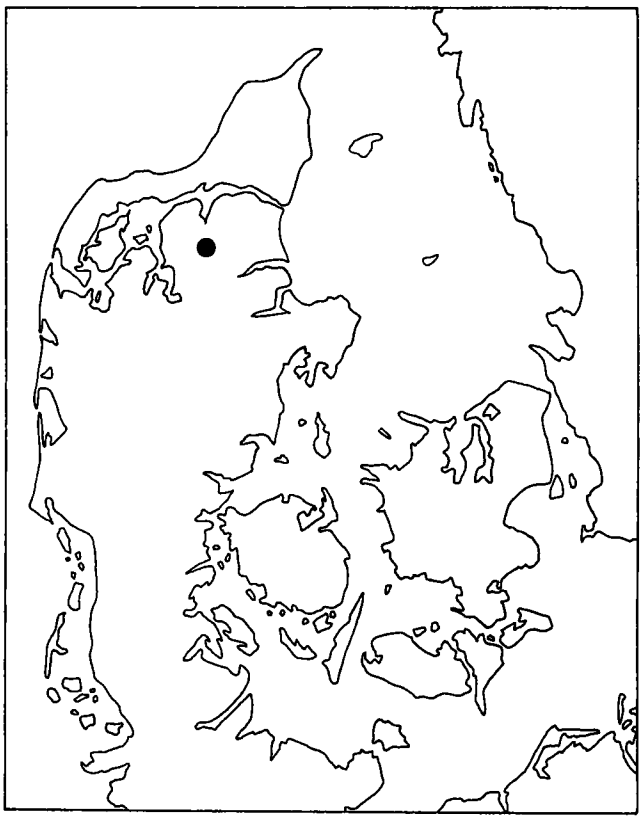

Fig. 1. The location of Borremose.

Fig. 2. The Borremose complex seen from the air. After the excavation the house-sites were marked out with earth banks.

conducted by Johannes Brøndsted assisted by P. V. Glob. Through this and the following season a well done and solid causeway was uncovered leading from firm ground to the small moraine islet in the middle of the fen. Minor sondage excavations proved that there had been a dwelling site here during the Late Pre-Roman Iron Age, the same date that was suggested for the road through the bog.

After a short break the archaeologists returned in 1935. Though Brøndsted was still in charge of the excavation, the daily leadership was from now on in the hands of Glob who under him had a large staff of students and workers. In the following 5 years they concentrated on the exploration of the moats which turned up to contain a lot of pottery from the Middle and the Late Pre-Roman Iron Age and a lot of so far unknown wooden tools. The total exploration of the moats was ended in 1939 leaving three minor parts untouched for future research (fig. 3).

From 1941 to 1945 the research concentrated on the village behind the ramparts. About 26 houses were discovered during the total unearthing of the village ground. The excavators provisionally dated the village to the third period of the Pre-Roman Iron Age and the beginning of the Early Roman Iron Age – the same date suggested for the upper part of the materials in the moats (Brøndsted 1936 p. 40). Later the date was modified to the Late Pre-Roman Iron Age "around the middle of the last century B.C." (Brøndsted 1960/1965 p. 90). The reason for this uncertainty was that the Pre-Roman pottery chronology at this time still was somewhat unknown.

From 1943 and onwards the geobotanical team carried out investigations of the moats and the surrounding bog. Two parallel ditches of about 30 meters each were dug into the bog at right angles to the moat east of the island. It appeared that the surface of the fen on this spot had been lowered by peat cutting during the Early Subatlantic. Archaeological remains found on the exploited surface related this event to the stronghold. In stead of using the pottery for a sharper dating, the researchers based their interpretation on the find of a so called 'wooden bayonet' (see Brøndsted 1965, fig. p. 52) which find its equals only in the bottom layers of the moats. Consequently it was believed that a shallow lake had been created by peat cutting around the islet at the time when the refuge was constructed *i.e.* in the Middle of the Pre-Roman Iron Age. Moreover a layer of

sterile sand in the moats separating older and younger material was taken as proof of an intermission between the stronghold period and the settlement period. This deserted period was further supported by pollen diagrams from the bog showing a short very high maximum of urtica which according to Iversen should prove that the islet had been deserted (Iversen 1959, Andersen 1977).

Also the newly founded Danish C-14-laboratory in Copenhagen became involved in the project. In 1951 Alfred Andersen carried out a minor additional excavation in connection with one of the bog sections in order to provide materials for a C-14 dating of the geobotanically dated layers. A series of wooden objects found on a so called ritual deposit supposed to be contemporary with the stronghold period gave the datings 310±110 BC (K-1399), 220±110 BC (K-751) and 20±100 BC (K-789). Another series made on peat found just below a sand horizon, assumed to mark the terminal date of the stronghold period (*i.e.* dating the intermission phase), gave the dates 230±100 BC (K-1398), 130±140 BC (K-828) and 40±110 BC (K-752). Due to the extreme dispersion those datings were never used (Andersen 1977 p. 116 f.).

The interpretation of the site, as it became known through literature, thus had to be this: In the middle of the Pre-Roman Iron Age a village or a group of villages around Borremose erected a refuge in response to the uncertainty of the times. The low hill in the fen was surrounded by walls and ditches, and the surface of the bog was sunk in order to create a lake around it. A subwater approach of pebbles connected the stronghold with the hinterland. The date was based on a presumably closed find of 12 pots found on a line in the north-eastern corner of the moat (fig. 18) and interpreted as a ritual deposit from just after the construction of the stronghold.

The use of the fortification became very short. Soon the ramparts collapsed and urtica took over the fertile soil. However the place did not lie deserted for long. Soon after the abandonment the site was used for a new purpose; as the foundations of a normal peace time Iron Age village. In order to make room for this the moats were filled up with the soil from the ramparts, and a stone-paved causeway was constructed in order to ease the access to the village. This happened in the late Pre-Roman Iron Age. The village did only exist through this period (Brøndsted 1965 pp. 48–55, 87–90, 388–391, 395, Glob 1943 pp. 103 ff., 1969 pp. 121 ff., 1971 pp. 237 ff. and 259 ff.).

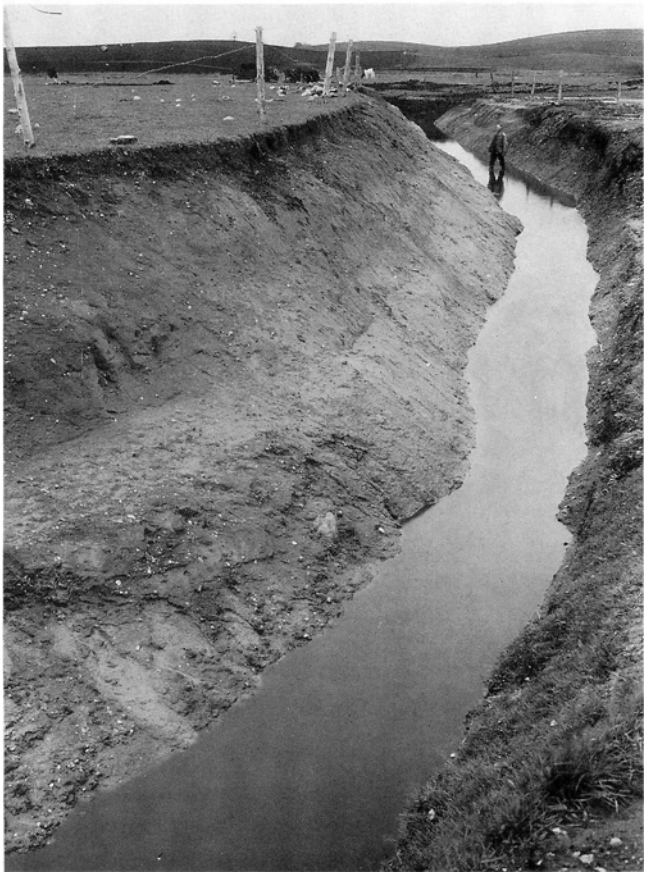

Fig. 3. A view of the excavated moat.

THE EXCAVATION OF THE SETTLEMENT

The excavators never finished a report on the investigations. The documentation left over is confined to brief notes in the diaries, photos, plans and newspaper cutouts. Especially the observations concerning the materials deriving from the moats are not without complications. Therefore the following will mainly concern the settlement and only briefly touch the problems concerning the dating of the other parts of the complex.

The settlement area was excavated during three seasons: 1941 to 1943 plus an additional round-up season in 1945. From the photos it appears that large areas were unearthed at one time (fig. 4). No general system of co-ordinates was applied. Instead every object was given trigonometric measurements and treated independently with its own system of measurement. This makes the coordination of the various detail plans rather complicated, as there was no standard scale.

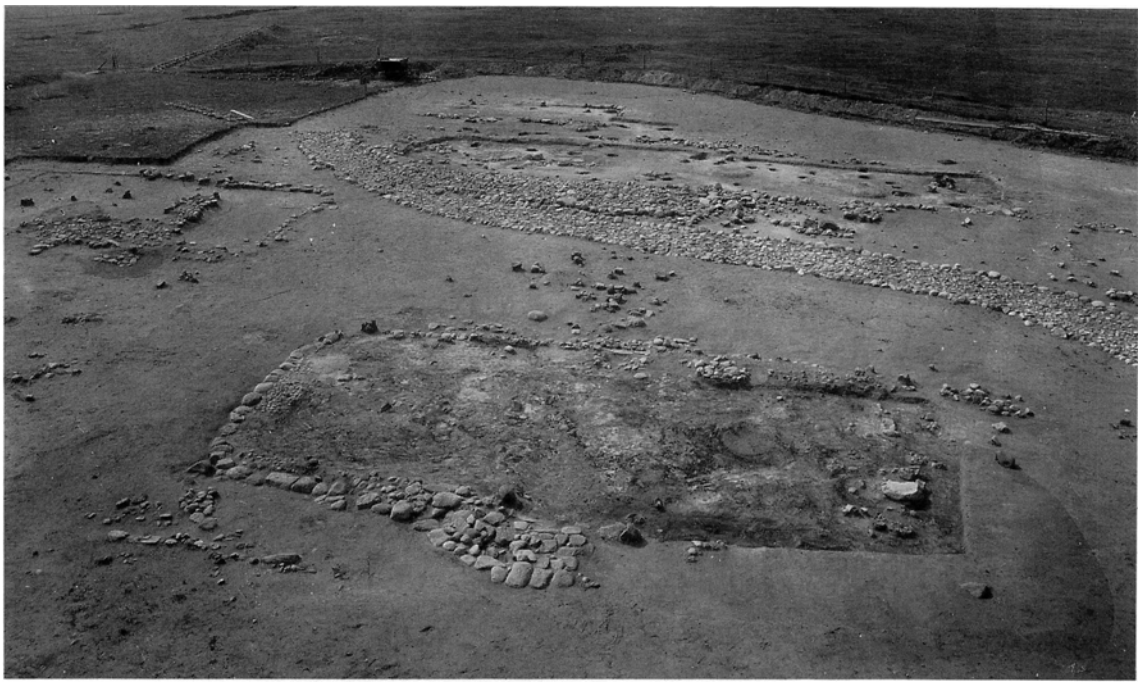

Fig. 4. Part of the settlement during excavation in 1942. House no. VIII is seen in the foreground.

Further some detail plans got lost and therefore could not be transferred to the general plan when constructing it from the measurements. This concerns house nos. XII, XVb, XVII, XIX and some smaller features about which we know the position but lack the plans. Finally some objects were even not given trigonometric measures, so they are today totally lost from the plan. This concerns some minor features and house no. XVIII from which we have only a photo and some finds.

Cross sections were not made either through postholes nor through any other of the smaller features on the site. The only cross sections made derive from the fen, the moats and the village pond. In all other cases the object was emptied from above. This was the usual method at that time, when dealing with settlement archaeology. Postholes were only sometimes registered. This must be due to the excavation method. The aim being to preserve as much as possible for the planned reconstruction of the site, floor layers and stone pavements were left untouched and used as indicators of the extent of the houses. Most likely therefore many buildings lack the eastern end which is normally without a clay floor. It has even been suggested that the investigators only uncovered the first preserved floor layer and never dug as deep as to the virgin subsoil. Consequently previous phases of the houses would only become apparent, if the buildings had been moved a little during reconstruction. As it appears, this was often the case, houses nos. II/III, V and IX/X being the most obvious examples.

If we count every phase of the sites there are about 32 houses, one stone-paved street, one village pond, one pit with bog iron ore plus several pits and stone-pavements without obvious connections to any of the major objects (fig. 5). It is without doubt that the village or at least some parts of it has more than one phase. But which of the houses that were contemporary in the strict sense of the word is rather difficult to judge as long as we lack constructions connecting the various buildings such as fences (*cf.* Hodde, Hvass 1975, 1985).

The information about the various features called houses is scarce and of varying precision. In some cases the description in the notebooks can be quite detailed, whereas in others it is confined to a photo or a plan. This is a problem, when it comes to judgements about the extent of a house, how many phases it consists of and which materials that belong to what phase. In the three cases dealt with below there is no information about the floor layers or how the excavators determined the extents of the houses. However, these house were

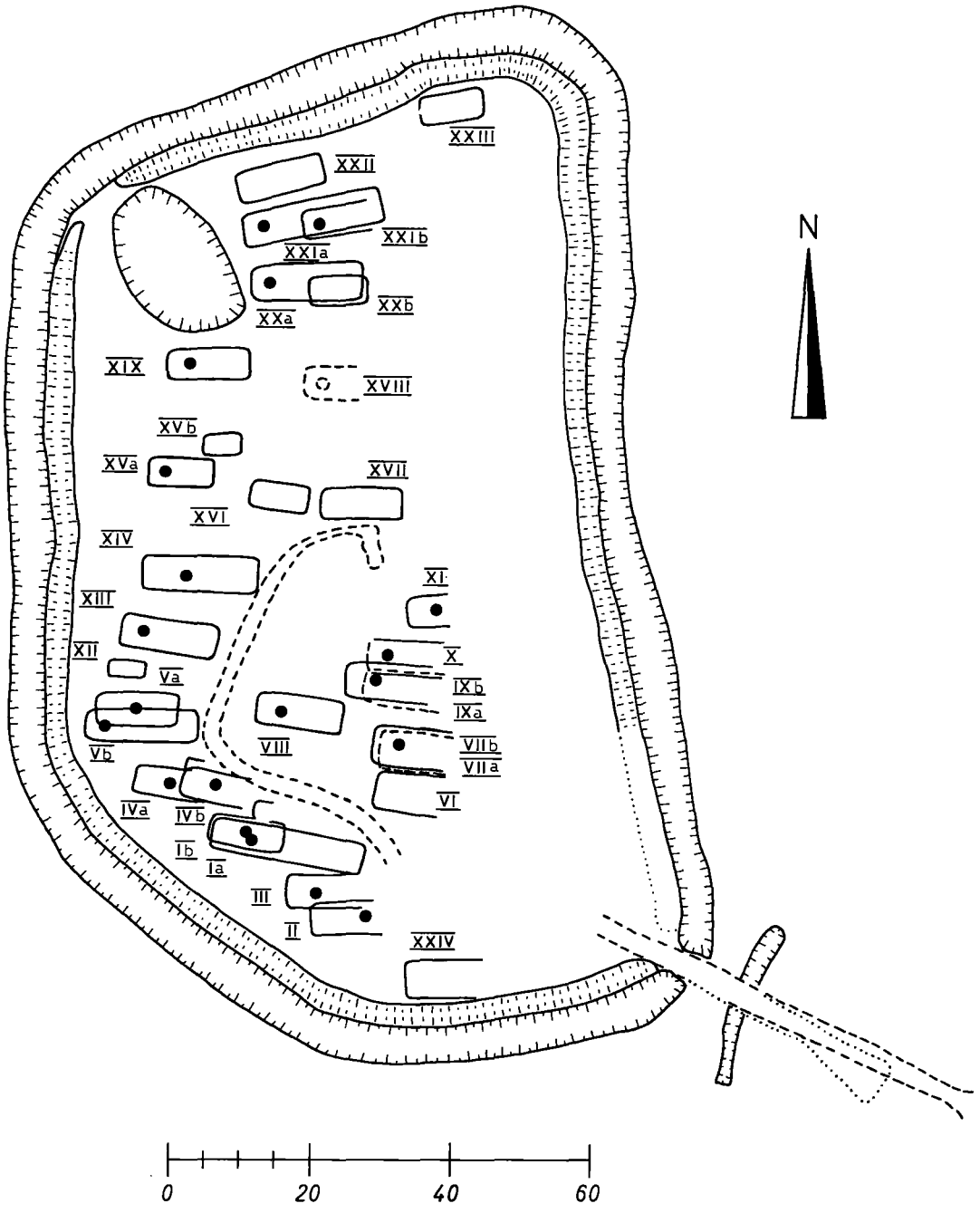

Fig. 5. Total plan of the settlement with all the investigated house-sites.

burned down and left with a thick occupation layer sealing them up to the day of investigation. Maybe even a fourth house (no. XV) has been burned down, but we lack more precise information. The majority of the other houses were covered by a thick occupation layer, and in many instances it appeared that the finds on the floor layers were found *in situ*. Of course only the pots dug down under the fireplace or found in a posthole can give some certainty about the dating of these houses. Even so an attempt has been done below to relate the

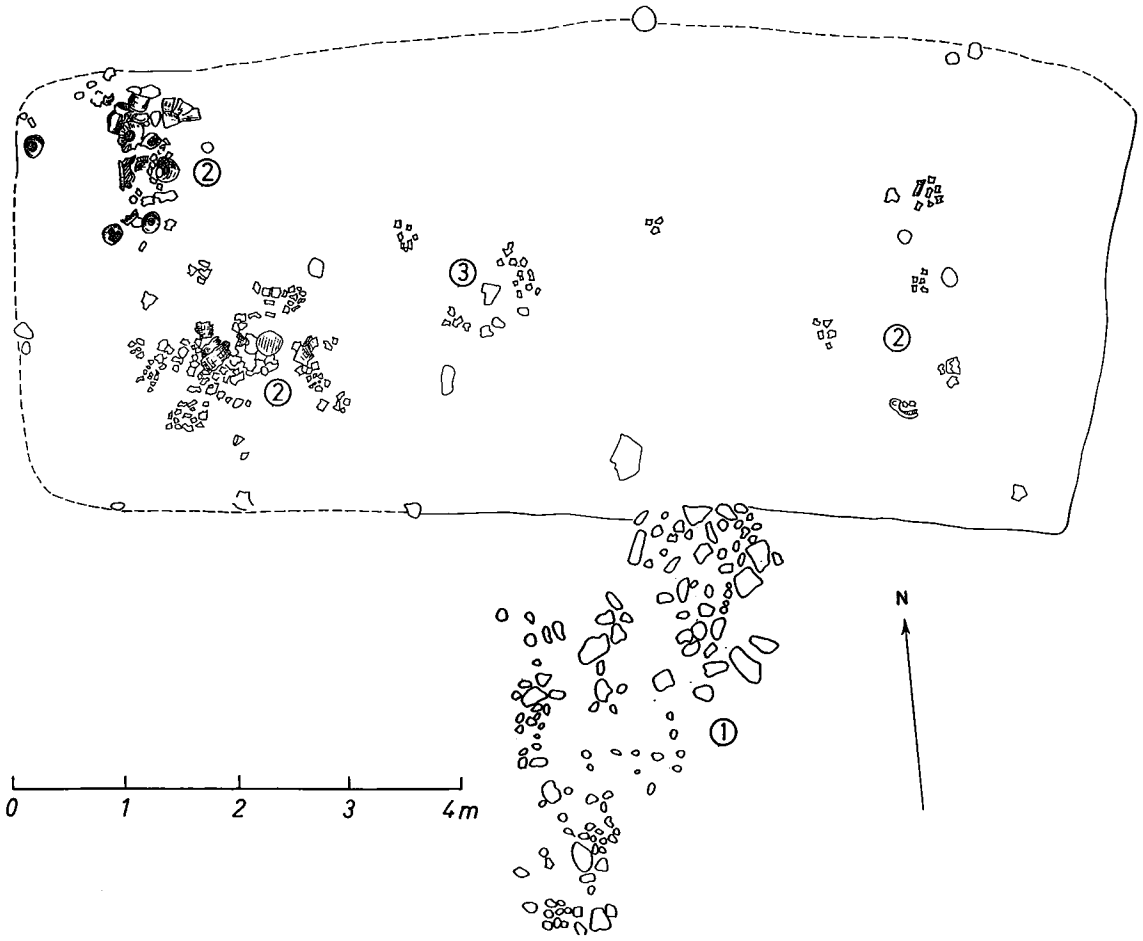

Fig. 6. Plan of house no. XXIII. Legend (figs. 6, 8 and 9): 1) Stone paving. 2) Whole vessel. 3) Potsherds. 4) Iron slag. 5) Fire-dog. 6) Post. 7) Wickerwork. 8) Quern. 9) Clay disc. 10) Hearth.

finds to the houses in order to illuminate the development of the settlement.

In spite of the shortcomings of the documentation, some general statements can be made. The house construction fits well with the North Jutland tradition of the Early Iron Age so well illuminated by the research of Gudmund Hatt (1938a). The houses are orientated east-west with entrances on the north and south side near the middle of the building. The average length is about 12½ meters, and the breadth is about 5 meters. The roof is carried by a double row of posts, and apparently the walls are made from turf covered on the inside by wickerwork. In the western end there is a clay floor and a hearth. The east end has an earthern floor

Fig. 7. Concentration of pottery in the west end of house no. XXIII.

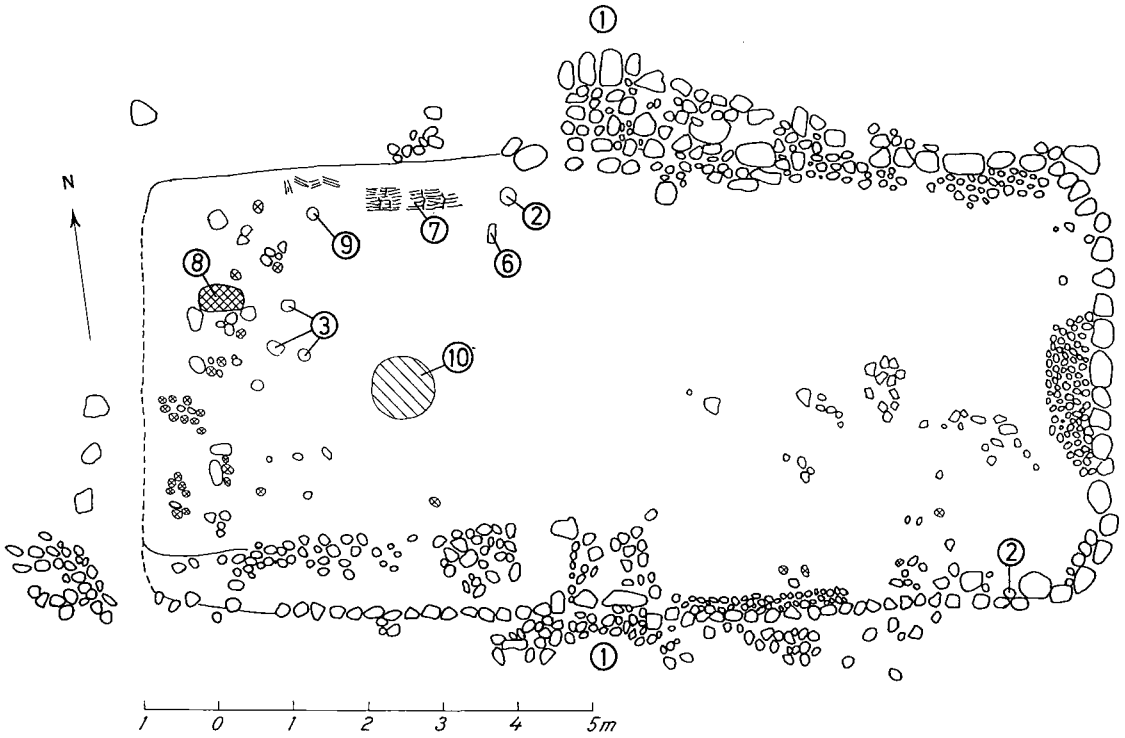

Fig. 8. Plan of house no. VIII (legend, see fig. 6).

and is in one case sunken (house no. XIV), but due to the lack of postholes its function is unknown. Most likely here was a cattle shed like in other houses of the same type throughout Jutland, but so far we lack the proof.

THE DATING OF THE SETTLEMENT

Important for the dating of the settlement is the fact that three of the house sites show obvious signs of having been burned down, *i.e.* nos. VIII, XVI and XXIII. These sites appear to have no second phase and were abandonned after the fire. Thanks to their dramatic ends they contained a lot of pottery useful to illustrate the style variation during the existence of the settlement. Oldest is the material of house XXIII, as we always meet its counterparts in the lower layers of the multi-phased houses.

House XXIII. (figs. 6–7)

The house is situated in the northeasternmost corner of the village so close to the rampart that the northern wall must have been affected by it and perhaps even built together with it. This is why the house only had a southern entry as indicated by a pebble pavement. The lines of the walls are marked by the extent of the floor layer measuring 9.3 m × 4.2 m. There are no traces of postholes, but most likely the house belongs to a minor group of buildings with only 2½ meters between the rows of the roof carrying posts, the standard being about 3 meters. The excavators found no trace of a hearth. The entry is so close to the eastern end that there seems no room left for a cattleshed. Even so the pottery is concentrated in the west end lying on the floor surface (fig. 7).

House VIII. (fig. 8)

This house which is already known through literature (Glob 1942 photo 107, 1971 p. 238 f.) is situated in the centre of the village. The inside measures about 12 × 5 meters. It has a northern and a southern entrance almost exactly placed in the middle of the long walls as indicated by the entrance pavements. The thickness of

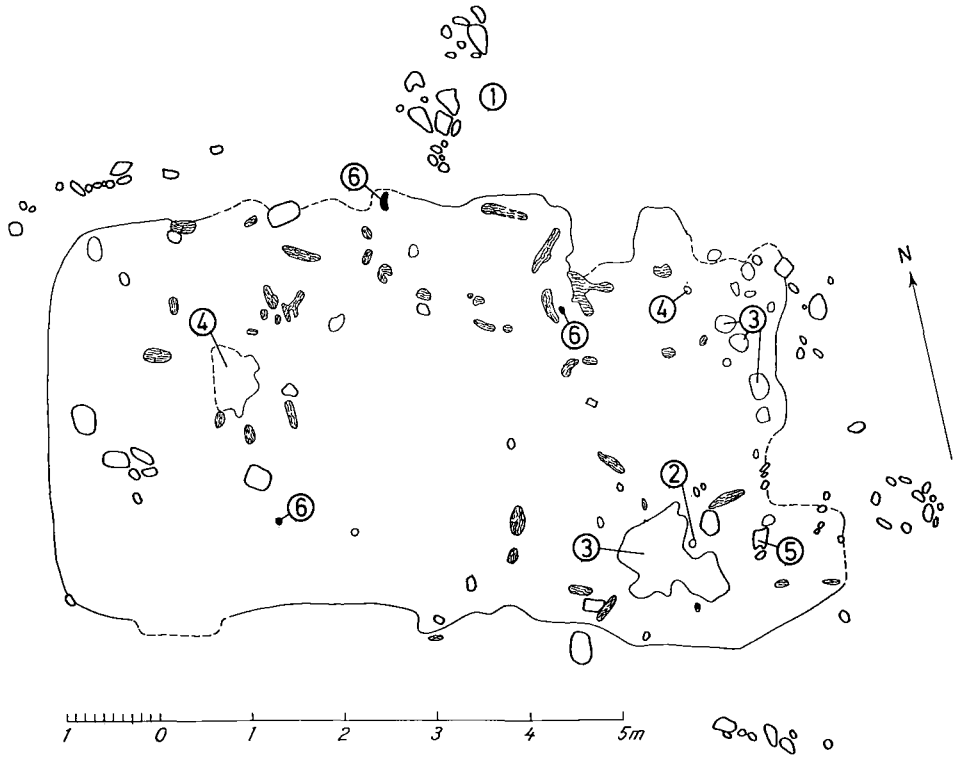

Fig. 9. Plan of house no. XVI (legend, see fig. 6).

the turf walls is suggested by a surrounding row of stones and "benches" of pebbles. A fragment of charred wickerwork illustrates how the earthern walls were supported from the inside. Postholes were not registered. The east end of the house was almost without finds except for the fragments of some handled cups and a large ornamented storage jar (VIII-1) sunken under the wall in the southern corner. There are no finds which could indicate the use of this end of the house. The hearth is found in the centre of the west end and west of this is a larger concentration of artifacts. A grinding stone, hammer stones and a lot of pottery were lying on the surface of the floor.

House XVI. (fig. 9)

The last house that became prey of fire is situated at the northern end of the village street in the centre of the islet. The building is as indicated by the floor layer of modest dimensions: 8 × 4½ meters. A few charred roof carrying posts were preserved in their holes suggesting a distance of about 2½ meters between the rows. The doorway in the centre of the northern wall is indicated by posts and a fragmentary pavement on the outside, whereas the position of the southern entrance is less conspicuous. If any, it might be indicated by a few posts and seems to be a little displaced in relation to its northern counterpart. The thickness of the earthern walls is distinctly marked by pebbles in the southeast and northwest corners and fits to the general pattern of about ½–1 meter. The house has no hearth, but on the spot in the west end, where the fireplace ought to be, a larger pit of bog iron ore was found. Another abnormality was that the pottery was concentrated in the east end of the house, where it was lying on the surface of the floor between pieces of charcoal. Most likely this house therefore did not have a cattleshed.

The pottery of the oldest phase (figs. 11–13)

Beginning with house XXIII we are provided with a wide and rich sample of pottery. The general traits are as follows: The brim is most often thin or is simply thickened and cut off at the widest point (fig. 10, upper

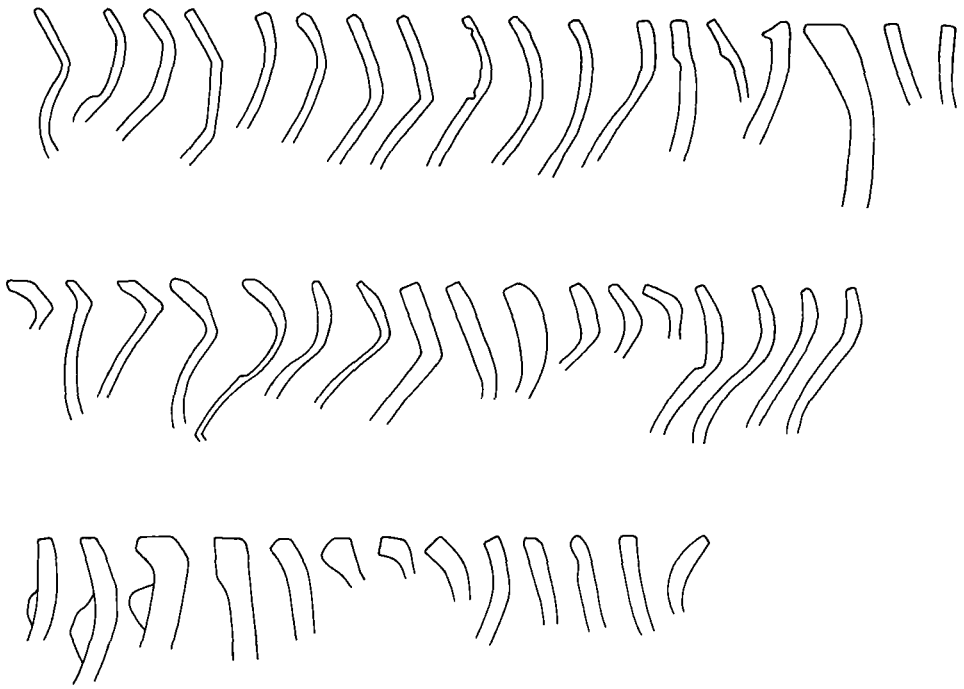

Fig. 10. Characteristic rim sections of the two ceramic phases. Upper row: House XXIII. Middle and lower rows: Houses nos. VIII and XVI. Scale c. 1:2.

row). The collar is broad and softly turned out into a wide mouth. The neck is narrow and might be indicated by a line or a ledge. The belly is softly rounded and might have a slight convex-concave profile. The base has generally a smaller diameter than the neck. The handles are broad and thin with parallel sides. Some have a slight depression on the back. One has a roof shaped back. The position of the handles varies with the type of the pot, but they are generally vertical and placed on the upper part of the belly. In one instance however the handle is horizontal, in another the handle is only a knob. Ornaments are rare and confined to hatching at the edge of the rim.

The single-handled vessel or cup is by far the most numerous type amongst the pots, represented by 12 specimens. Although the variation is considerable some common traits can be pointed out: the rim is as mentioned above, the neck is narrow and might be marked, the belly is round, the lower part can show up some concavity, and the handle is connecting the upper part of the belly with the collar (fig. 11). Similar forms are known from houses Ia and XXIa. An atypical specimen has a short collar sharply turned out and a handle with a roof-like back (XXIII-28). The latter is more typical of the following phase.

Well-done vessels without handle form a second major group (fig. 12, XXIII-2, -4, -20, -31). A softly curved belly is typical – the maximum width approximately placed on the middle of it. The wide collar is gently turned out. This type has no counterparts on the islet.

Storage jars are less numerous. The small version is only apparent as fragments (fig. 12, XXIII-16), whereas we have a complete example of the large type (fig. 12, XXIII-19a). This is a tall, beautiful specimen with a wide mouth, a simply thickened rim, slightly S-shaped profile, low, narrow shoulders and a narrow, concave foot. The rim is ornamented by finger imprints. Fragments of a rim of a further jar are depressed and hatched (fig. 12, XXIII-12). Only the lowest parts have been preserved of an extremely large specimen – the diameter of it's base being 45 cm! The shape of the vessel, the form of the rim and the height are unknown.

Double-handled jars are occuring in three examples (fig. 13, XXIII-9, -18b, -21). The profile is once again gently curved, the collar softly turned out. The handles are placed on the upper part of the belly below the neck.

They are narrow and thick – one with a depression in its back. Possibly related to this group are fragments of two further jars (fig. 13, XXIII-9b, -19c), but on these specimens the handle has an atypical position being directly attached to the rim.

The last form possible to reconstruct is a tall, open bowl with convex sides and a thin rim. It is found in two versions: one very open with a handle(s) formed as a flat knop (fig. 13, XXIII-8), the second more closed with a vertical handle(s) (fig. 13, XXIII-17).

The remaining pieces of pottery are too fragmentary to illuminate more than general traits of this the early style on the islet.

The pottery of the later phase (figs. 14–15)

Pottery from the houses no.s VIII and XVI have the following general traits: the rim is often thickened, either rounded or with broad facets (fig. 10, middle and lower rows). However thin rims are still occuring. The collar is short and sharply turned out. The neck is narrow but generally wider than the base and might be marked by a ledge. The body has a tendency to be shaped like a pear turned upside-down. The handle is mostly x-shaped and sometimes facetted. Handles of the older style are however still occurring. They have their outset from the rim or just below on the neck. Ornaments are becoming more popular in this phase and though hatching on the brim still occurs it expands to the neck as plastic cordons either hatched or with finger imprints. The belly of the storage jars is often roughened by applying extra clay, by mounting small knops, by finger imprints or by scratches forming a network pattern. More elaborate decoration is found on the well-made single-handled vessels, where it is carried out in a delicate scratch technique and forms metopic, geometric patterns in narrow horizontal friezes. Compared to the earlier phase the general impression is that of continuity and gradual change of fashion, although differences occur. Only a few new forms are introduced.

Single-handled vessels and cups are known in a number of four (figs. 14–15). One of these (VIII-9) belongs to a special group of well made black vessels which are found scattered on the settlement and in the moats. The surface has been specially treated, so it has become smooth and shining. Due to a reduced firing the colour is black. The rim is wide and thickened with broad facets. The collar is softly turned out from a narrow neck which is indicated by a ledge. The belly is shaped like a pear turned upside down with a strongly concave lower part. On the specimen from house VIII the lower part is not totally preserved, but on other pots of the same type the base is very narrow, and on the shoulder of the vessel (between the neck and the belly maximum) a horizontal band of metope-like geometrical patterns is found. A strongly x-shaped and broad facetted handle usually connects the collar with the upper part of the belly. Counterparts to this pot are found in houses Vb, X, XI, in the village pond and in the moats. A very similar shaped vessel is known from the remaining materials of house VIII (VIII-1a). It differs, however, on two points: the ware is not black and smooth, and the neck is not marked. A further specimen (VIII-1b) from the latter house related to the same group has a quite atypically shaped body. From the fragments it appears to be almost hemispherical with a low, marked foot. These vessels represent a form that is rather hard to derive from the older material. However the cup XXIII-13b (fig. 11) and a few cups from the moats might be pointed out as the 'ancestors'. In the Borremose material the narrow, concave and tall foot is, however apparently confined to the younger phase. The same goes for the slender body, the tall, rather sharp shoulders and the short, sharply turned out rim.

The single-handled vessel left over (fig. 15, XVI-5) has a short, sharply turned out rim, slightly thickened, and facetted. The neck is narrow but wider than the base, the belly has a curved convex profile. The handle is x-shaped and placed just below the collar. From houses nos IX and XV similar vessels are known. This type can easily be derived from the small handled cup XXIII-3, the only major difference being the shape of the rim.

Well-done vessels without handle are only represented by a single specimen (XVI-6, fig. 15). This is a low pot with an almost spherical body and a round base. The broad rim is sharply turned out from the body and is slightly thickened. The surface of the vessel is smooth and red. Counterparts are rare but may be found on the islet. This form is another novelty in the material, the earlier forms being taller and more narrow (XXIII-31, fig. 12).

A small amphora-like jar with a tall, cylindric neck and only one handle (VIII-6a, fig. 14) could be interpreted as a miniature of a form which is occurring in full-scale on the floor of house 1b (I-26, fig. 16) and in the

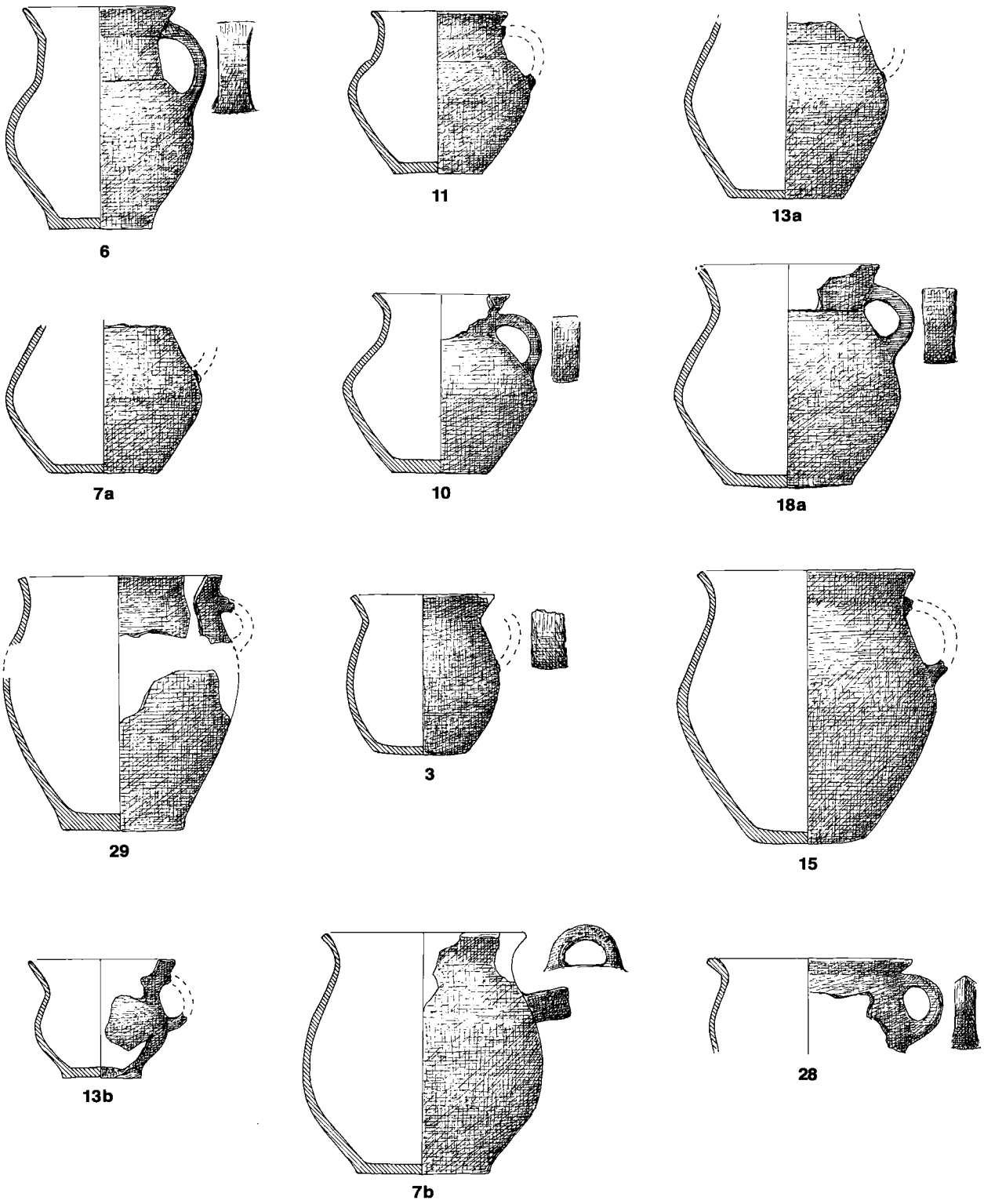

Fig. 11. Finds from the house no. XXIII; handle-cups and -vessel (H. Ørsnes *del.*). 1:4.

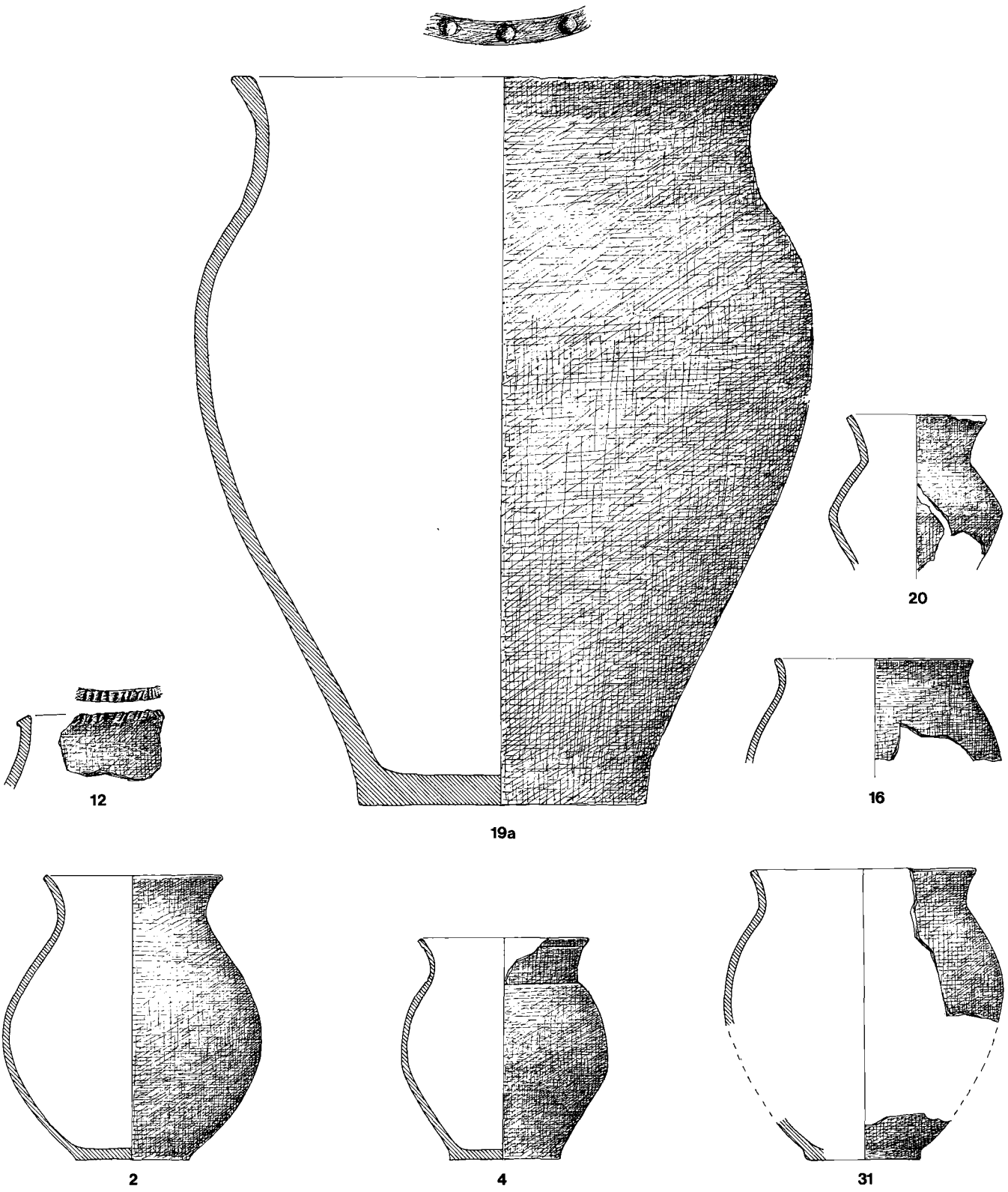

Fig. 12. Finds from house no. XXIII; storage jars and finer vessels (H. Ørsnes *del.*). 1:4.

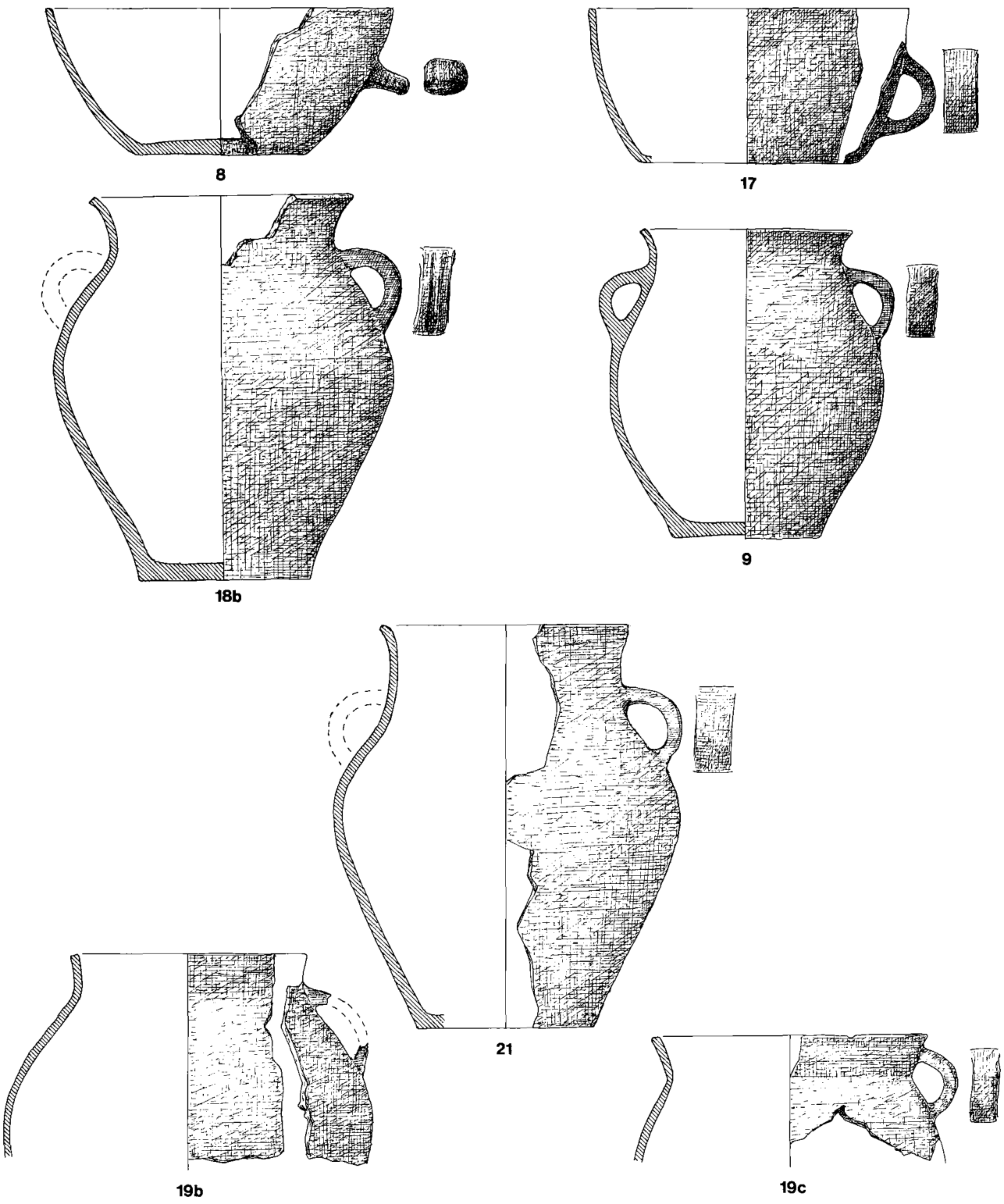

Fig. 13. Finds from house no. XXIII; bowls and handled jars (H. Ørsnes *del.*). 1:4.

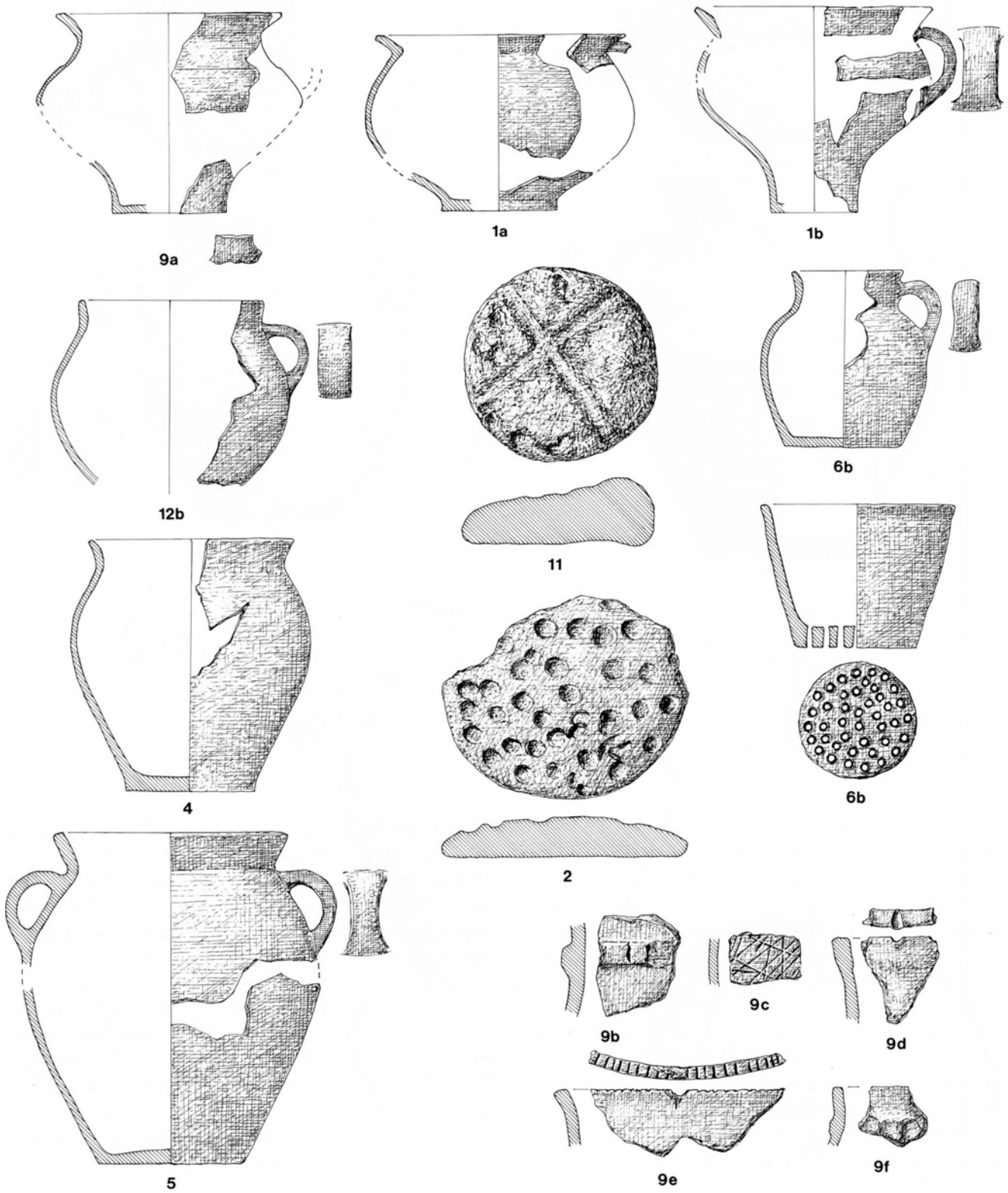

Fig. 14. Finds from house no. VIII (H. Ørsnes *del.*). 1:4.

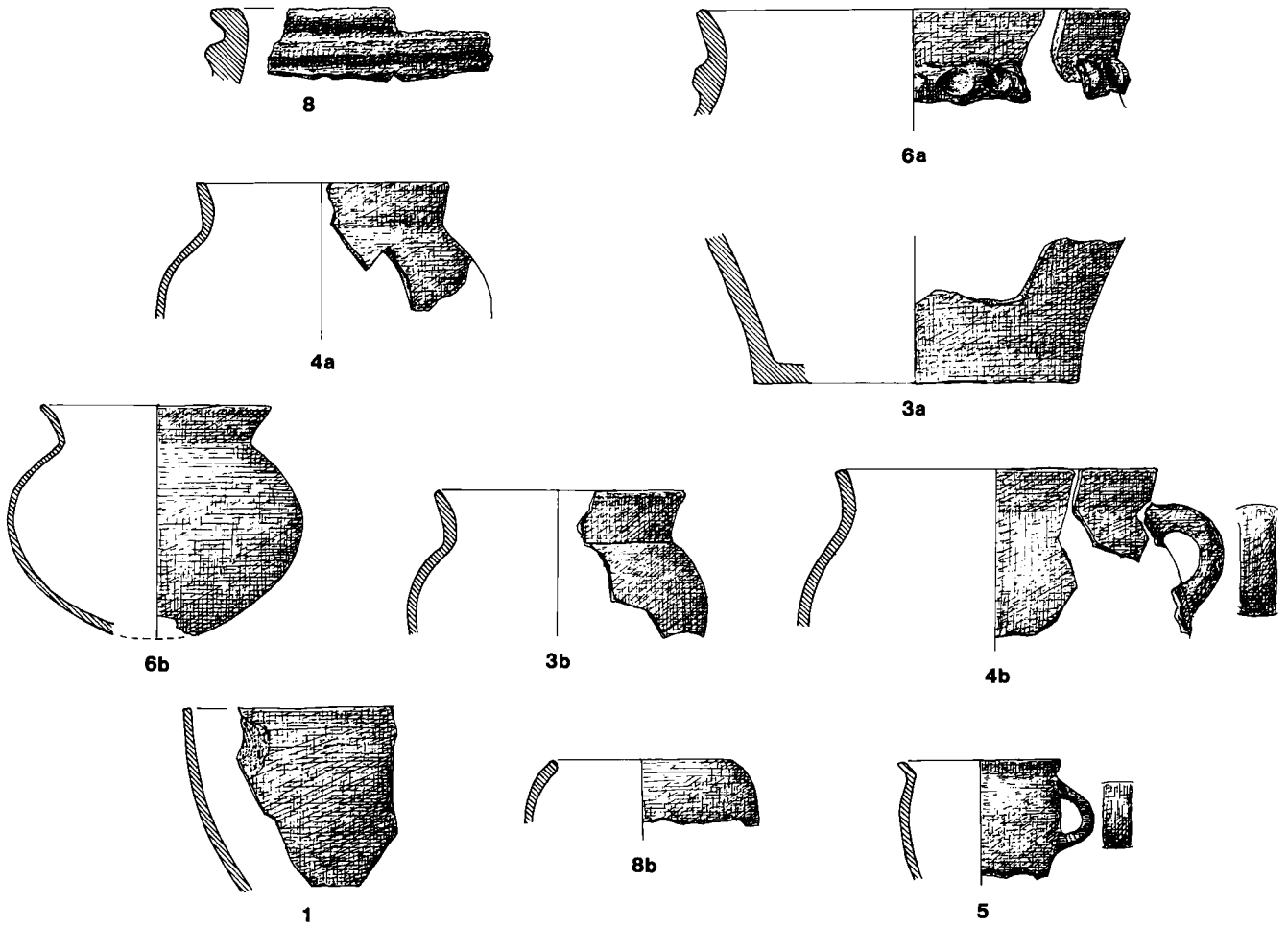

Fig. 15. Finds from house no. XVI (H. Ørsnes *del.*). 1:4.

materials from the moats. The highly placed shoulders constitute the broadest point of the body, the base is narrow. The profile of the belly below the shoulders is either a straight line or slightly concave. The handle connects the collar with the shoulder. It appears to be the later development of the jug-like handled vessel from the previous phase (XXIII-6 and S17-148/7, figs. 11 and 19).

Another special group are unhandled vessels with necks marked by a ledge (XVI-3b, fig. 15). Only the upper parts of the pots are preserved and show a low, rounded shoulder, a vertical, marked neck and a short rim which can be slightly thickened. Fragments of a similar pot is found in house XVIII. The type is not known in the early phase.

Storage jars possible to reconstruct only occur in the smaller version (VIII-4, XVI-4a). Unfortunately only a few of these are complete. The rim is short, sharply turned out and slightly thickened. The neck is narrow, the body is shaped like a pear turned upside-down. The base is not as wide as the mouth. The form is popular, and is found in several houses on the islet, even in the larger version (*e.g.* the two specimens sunken below the floor of house no. Ib, I-14 and -15, fig. 16). The latter is here only represented by fragments – but often with ornament in the way described above (i.e. XVI-6a + 8). These forms easily find their roots in the former phase (fig. 12), the difference again being that the late jars have a taller, more slender body with high shoulders and a short, sharply turned out rim.

Two-handled jars occur, but only fragmentarily (VIII-5, -3, XVI-4b). The mouth is wider than the foot,

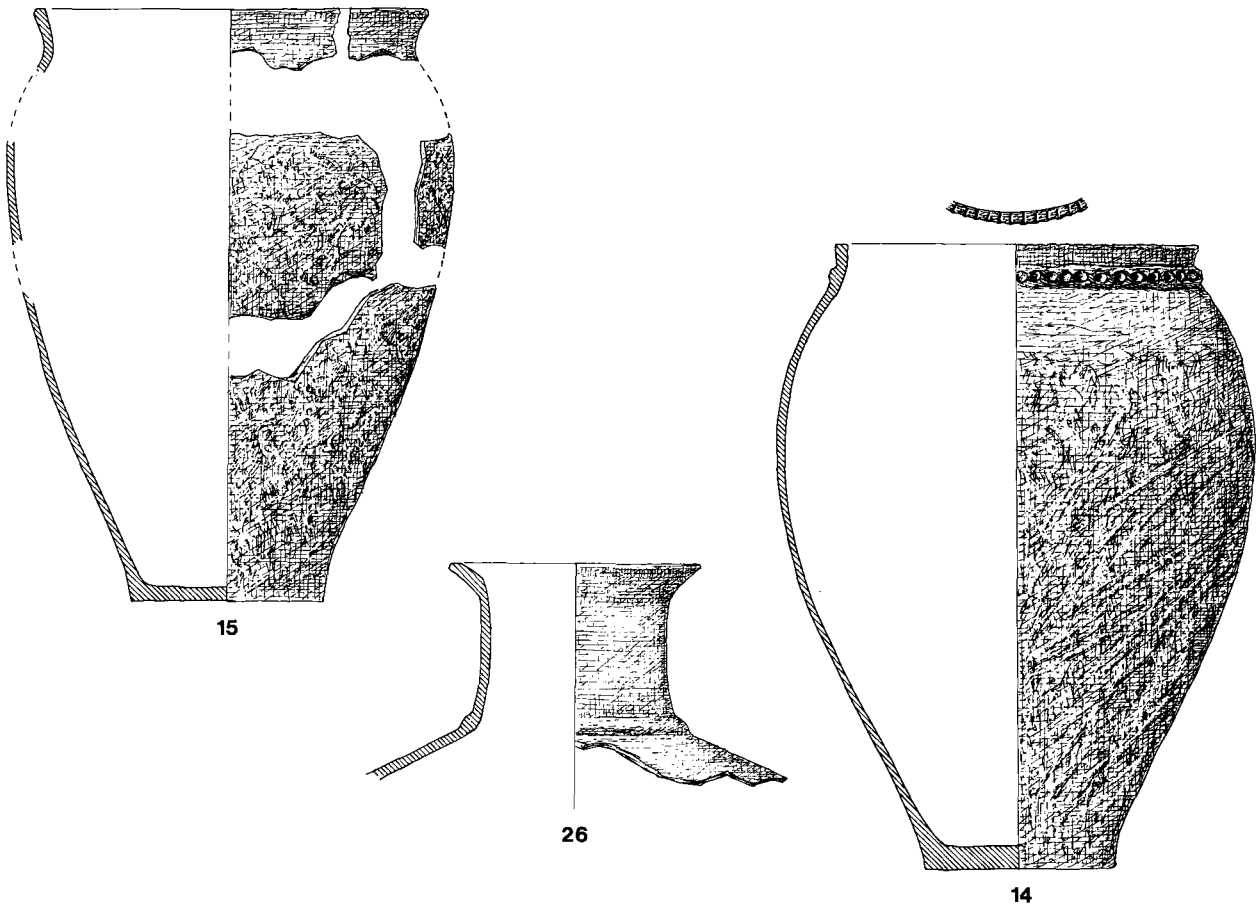

Fig. 16. An amphora and two sunken storage jars from house no. Ib (H. Ørsnes *del.*). 1:4, storage jars 1:8.

the collar being sharply turned out and slightly thickened. The neck is narrow, the shape of the body a little similar to an egg turned upside-down. The x-shaped handles are connecting the shoulders with the neck. This form is quite popular in the houses from this period. A familiar form, perhaps single-handled, has a shorter cylindric neck and rim (VIII-12a, -12b). Also this form has clear ancestors (fig. 13). The difference is again mainly the shaping of the rim and the handles.

Bowls are poorly represented in the two houses, but from other houses and the moats we have a type with straight sides, two-x-shaped handles and a large, concave base with a big central hole. Footed bowls with thickened rim also occur. Fragments of the former type are known from house XVI (XVI-1). Both types of bowls might be foretold from the two bowls of house XXIII (fig. 13).

Special forms are numerous, *i.a.* a sieve formed like a cup (VIII-6b), two ornamented plates (VIII-2, -11), and fragments of a cup with a thin rim turned inwards (XVI-8b). From house XVI we know about a firedog, but apparently it is lost. None of these forms have any counterparts in the earlier material.

A synchronization with the chronology of South and Central Jutland

What remains is to date the two ceramic phases described above within the Pre-Roman Iron Age. In order to do this it is necessary to make a synchronization with the pottery chronology put forward by C. J. Becker for the southern and central parts of Jutland (Becker 1961).

The material from house XXIII does not in its tota-

lity fit in with his definition of per. I (Becker 1961, p. 203 ff.). However, some pots, like XXIII-21 (fig. 13), would, if not for the context, be ascribed to this period. In the other materials on the island such early traits are rather uncommon, but in the moats a few appear (see further below).

The general impression of the oldest phase has a lot in common with Becker's per. II (*ibid.* p. 224 ff.). This concerns the profile of the pot, the shaping of the rim and the handle, and the ornaments. Especially the single-handled cups and vessels find their equals for instance in the material from Gørding house III (*ibid.* pl. 72–74). The other types are less distinctly defined especially in relation to the pottery of per. I, but refering to their general traits they fit in with the just proposed dating.

The younger phase corresponds to Becker's per. IIIa (*ibid.* p. 232 ff.). This regards especially the general traits like the profile of the body, the shape of the rim and handle and the ornament style. The single-handled vessel or cup is once again the most significant type, when discussing the dating. Three of the examples easily find their equals in Becker 1961 fig. 205, 206 and 211. However, even the other types fit in with this dating finding counterparts many places in Southern Jutland.

Traits typical of Becker's per. IIIb do not occur in the materials either on the island or in the moats (*ibid.* p. 241 f.).

In conclusion the island has been settled from per. II to per. IIIa of the Pre-Roman Iron Age. The per. I traits in house no. XXIII suggests an early date in per. II – similar to the one Becker gives to the Gørding houses nos. II and III (*ibid.* pp. 90 f.). The sample of pots presented here is large enough to provide such a date but too small and too fragmentary to discuss local style deviation in comparison with the more southerly material. However, the moats contain so large an amount of vessels that this material might offer a key to the local chronology of Himmerland and its regional variation.

Comparison with the Early Iron Age Pottery of Himmerland

Although Himmerland is one of the richest landscapes in Denmark, when speaking of the Early Iron Age, and was the scene of many of the earliest settlement excavations, little is published concerning its pottery. We only get an impression of it indirectly through the publications by Gudmund Hatt. Even in recent years only a few works have been published on ceramics from this region and they mainly concern the late Bronze Age and the transition to the Early Iron Age. In the following we are thus confined to scattered illustrations in works dealing with other problems.

Pottery corresponding to the early phase of Borremose is not so uncommon in Himmerland as it seems judging from literature. The majority of the material derives from refuse pits without connections to village structures and this might explain why so little has been published so far. Settlement material is not too well known either, but Gudmund Hatt (1938a fig. 111) and Jens N. Nielsen (1980 fig. 13) published a few fragments from Malle Degnegård. To this come some pots from a settlement near Gedsted (Bro-Jørgensen 1973 fig. 6–7). Further materials deriving from a settlement at Nørregård, Skals Parish, have recently been published (Mikkelsen 1987 pp. 289–91). To this must be added two pots from the Celtic field system at Vindblæs Heath (Hatt 1931 fig. 17).

Handled cups are published from Gedsted and Nørregård. These specimens represent both the type with a marked conical neck like XXIII-11 and the more simple ones like XXIII-13b. In the Nørregård material a jug-like vessel is found corresponding to XXIII-6 (fig. 11) and S17-148/7 (fig. 19). This might prove to be a local type confined to Himmerland or even the southwestern parts of this landscape. Storage jars are less well known. A specimen from Malle Degnegård (Hatt 1938a fig. 111) is however quite close to the jar from house XXIII (XXIII-19a). The two handled jars from Vindblæs Heath (Hatt 1931 fig. 17) resemble very closely several specimens from Borremose – among those published here especially XXIII-9 and -21a. To conclude the early Borremose phase appears to be fitting very well into the general view of the period in the landscape.

The later phase is represented rather well by finds from the village at Skørbæk Hede (Hatt 1938a fig. 18+28) i.e. houses nos. G and H. The materials from Malle Degnegård house P appear to be in the later per. IIIb/IV style, judging from the photo (Nielsen 1980 fig. 14). Typical specimens were found in two wells from the raised bog Lille Vildmose in eastern Himmerland (Marseen 1956 fig. 5), whereas the pots from Nørregård belonging to this phase are quite atypical (Mikkelsen 1987 p. 290). However, again the rather poor material that has been published certainly does not correspond

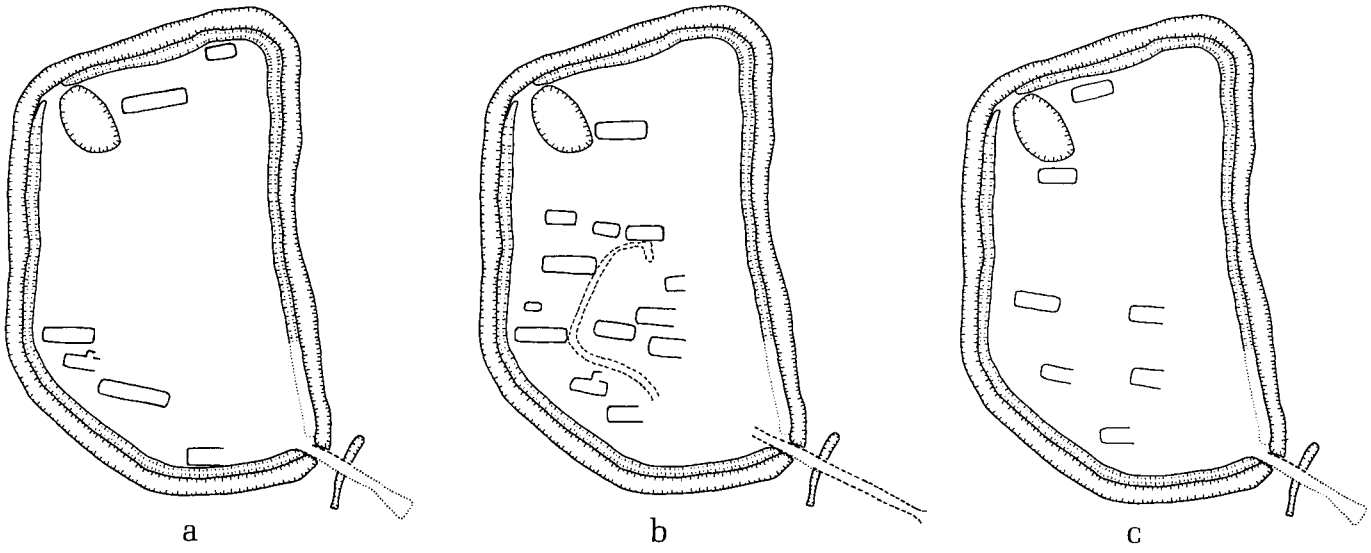

Fig. 17. Plan of the settlement according to ceramic phase, a) early, b) late, c) undeterminable.

to the amount that has been found. In this period the area was densely populated, and ceramics form the dominant type of artifact in the settlement material.

Handled cups of the specially treated kind like VIII-9 are found in Skørbæk Hede house G and H (Hatt 1938a fig. 28b and c). The type from house XVI (XVI-5) is less convincingly parallelled by a cup from Skørbæk house H (*ibid.* fig. 19) and Lille Vildmose (Marseen 1956, fig. 5). On the other hand the storage jar (fig. 16 I-14) is matched by a specimen from Skørbæk house H (Hatt 1938a fig. 18a), and the same goes for the two-handled jars (VIII-5) that find almost identical counterparts in Lille Vildmose (Marseen *op.cit.*) and Skørbæk house H (Hatt *op.cit.*). On the base of this scattered material there seems to be no basis for discussing local style. The most important result from this analysis is the negative statement that decoration on the pottery here is as rare as further south in Jutland thus leaving the more richly decorated Kraghede-group with its many special forms as a purely Vendsyssel phenomenon (Klindt-Jensen 1950, Becker 1980).

THE HISTORY OF THE BORREMOSE SETTLEMENT

On the base of a pottery chronology one can determine the relative dating of a settlement feature, but it is impossible to give it an absolute date and to prove what is contemporaneous in the ultimate sense of the word. For such a purpose constructions like the fences in Hodde would be needed, but nothing of that kind has been recorded from this settlement. From our material we can only state which buildings exclude others, otherwise we are confined to the ceramic datings. Even these are not always too trustworthy, as one can discuss the way the pottery is related to the feature in question. In spite of these objections we shall make an attempt at describing the development of the settlement.

The older phase of the village includes houses nos. Ia, Va, XXIa+b, XXIII and XXIV. More doubtful are VIIa and IXa whose extensions are unknown. The buildings seem to follow the shape of the fortification leaving an open space in the center (fig. 17a). The younger phase includes the houses nos. Ib, III, Vb, VIIb, VIII, XIb, XI, XII, XIV, XV, XVI and XXa+b. The village plan is more closed now, leaving the north end of the islet almost uninhabited. Meanwhile the "central square" has become occupied (fig. 17b). The site of house XVII fits in with this village plan and is therefore suggested on the plan. The remaining houses show traits from both phases which can be due to mixed materials or perhaps a medium phase. These sites (houses nos. Ib, II, IVa+b, VI, IXb, X, XIII, XVb, XVIII and XXII) and two houses without materials are suggested on the last plan showing up a plan that is resembling the early village (fig. 17c).

Conclusions based on this cannot be far reaching, but one thing seems to be certain: the village has been re-

structured in the later phase, when the center of the islet is becoming occupied, creating a dense settlement to the south, leaving the north-end almost deserted. Most likely the village street is from this period. Comparing the village plan with other totally excavated sites from the same period it resembles the Grøntoft type (Becker 1965, 1982) rather than the Hodde type. The layout may, however, be determined by the restricted space on the islet.

THE HISTORY AND DATING OF THE FORTIFICATIONS

The find of about 11 pots in the moat at the northwest corner of the islet has been ascribed great importance for the dating of the moats (figs. 18–19). According to the excavators the pots were put down on the very bottom of the moat as a ritual deposit made just after finishing the construction of the stronghold (1).

The general traits – thin brim, broad collar, wide and flat or narrow and thick handle with parallel sides and a softly curved profile – seem to correspond to the pottery from the older phase on the islet. Especially among the numerous single-handled cups and vessels there are specimens that are almost identical. The jug-like vessels (XXIII-6 and S17/148-7) have been mentioned above. The two-handled jars are not identical but the shape of their body is closer to those of the earlier phase (*e.g.* s17/148-11 and XXIII-18b) than the one of the later phase. Fragments of a small storage jar (S17-148/10) can be compared to XXIII-16. However, this form is not one of the types that provide an unquestionable date, as it could be compared to VIII-4 as well, but the shaping of the rim seems to support the early date.

The last form represented – a simple storage jar with three circular knops on the shoulder (S17-148/9a) – has no counterpart in the material from the settlement. According to Becker this ornament should be typical for the Late Bronze Age and per. I of the Pre-Roman Iron Age (1961 p. 245, pl. 49-f). Although it is an indication of an earlier date, further analysis is needed. It would not be justifiable to redate the settlement or the moats on the basis of just this one pot. However, it supports the early per. II date provided by parts of the material in house XXIII.

Fig. 18. The ritual deposit in the north-east corner of the moat, seen from the north.

The 'lake'

The part of the complex remaining to be dated is the peat cut that was supposed to have created an open water around the fortification. As mentioned above, the geologists used a wooden "bayonet" as argument for dating this great undertaking to the phase of the bottom layer in the moats. Then it meant "before the village", now it should mean "during the early phase of the village". However, the reason why the wooden objects are confined to the lower layers of the moats can be several. The most obvious explanation is that the condition for preservation was better here, since it was still under water, whereas the upper levels could dry up during dry seasons. Thus it would be very uncertain to base a dating on wooden objects using the position of the finds from the moats as an argument. It would be more natural to use the pottery collected from the bottom of the peat cuts.

In 1951 Alfred Andersen made an additional dig in

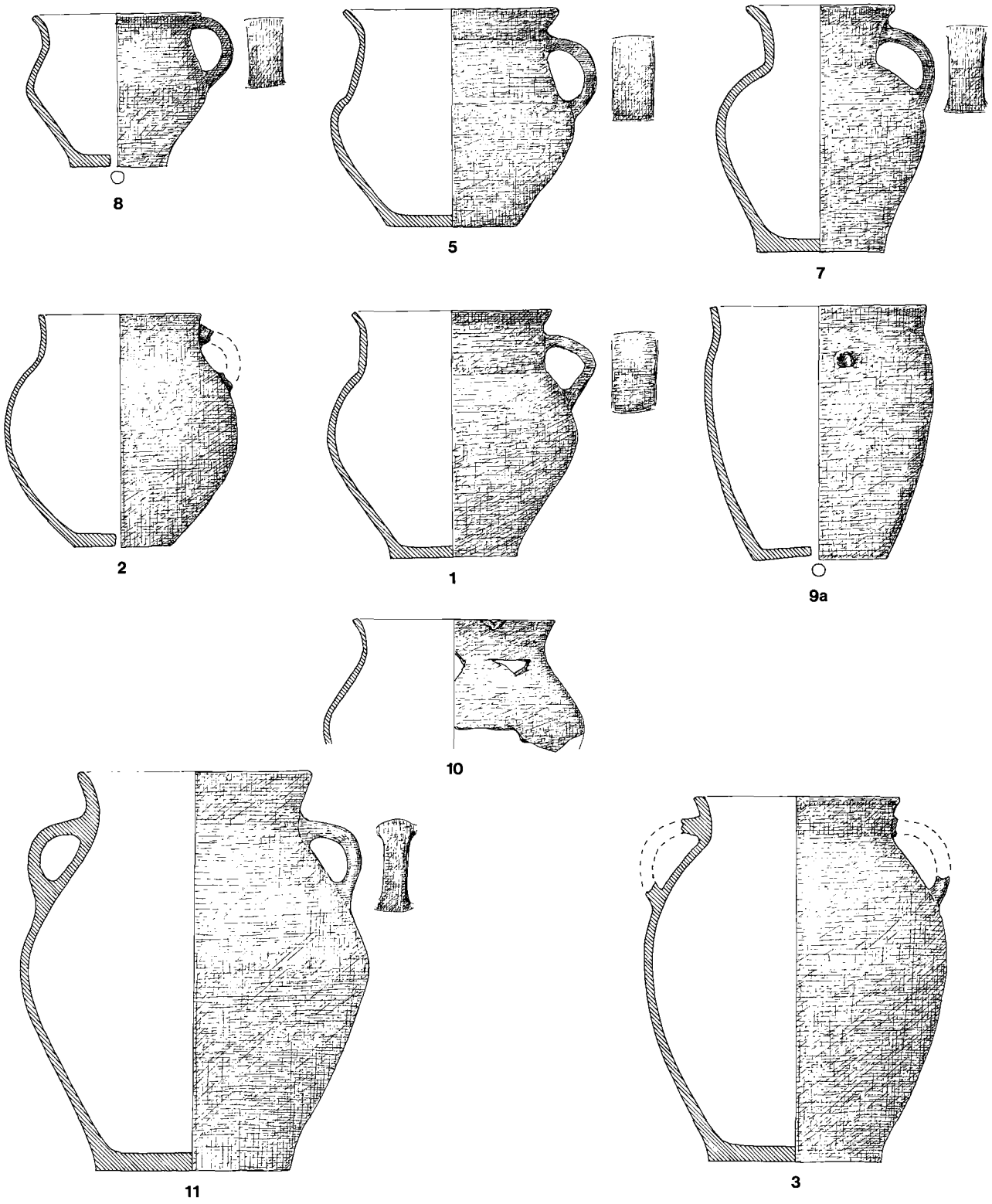

Fig. 19. Pottery from the ritual deposit in the north-east corner of the moat (H. Ørsnes *del.*). 1:4.

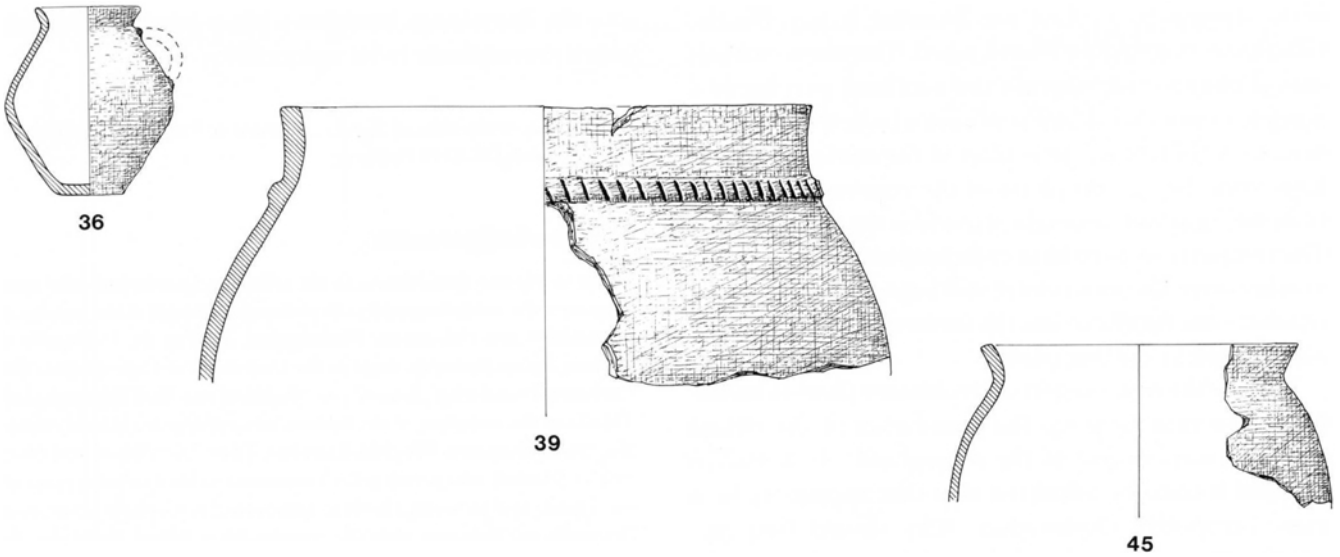

Fig. 20. Finds from the ritual deposit in the bog (H. Ørsnes *del.*). 1:4.

the bog and hit by accident a spot with a minor concentration of potsherds (fig. 20). The area was excavated very carefully and was by the investigator interpreted as a ritual site (Andersen 1977 p. 106 f.). This interpretation might seem a little too extensive when considering the material including just a few fragments of pots, some birch bark and an ox horn. After all, the place is close to a settlement and the finds could well be waste from this site. Three vessels could be partially reconstructed from the finds: The handled cup (B2-36) has a rim and a profile that strongly reminds us the younger phase on the island. The rim of a storage jar (B2-39) with a hatched plastic cordon on the neck supports this impression. The remaining fragments (B2-45) derive from a vessel of the type of small storage jars that could be dated to both phases.

From an earlier geological excavation in the bog derives a thickened, broadly facetted brim and the fragments of a black, smooth single handled vessel with similar outline of the rim (not illustrated here). Also these sherds point to the later phase of the settlement. If the lake or peat cut was dug in the early village period, we should expect to find waste on the lowered surface from that time as well, but this is not the case. In conclusion, it seems, we have to accept that the lake – if any – was created in the late village period. However, we still lack proof that there was a lake and that it surrounded the island.

A further point is the sand horizon which the geologists found in the bog some centimeters above the 'lake bottom'. The investigators related it provisionally to the intermission phase contemporary with the sand layers in the moat and interpreted it as a result of sand drift from the collapsing ramparts of the deserted stronghold. However, no artifacts have been found above this line, whereas several pieces of pottery of the late village style have been related to the layers below it. Besides the line is dated by C-14 to a time that must be later than the settlement. This confirms the above suggested date of the peat cut. As the archaeologists mention that the village was covered by a layer of drifting sand, it would be logical to relate the sand horizon to the same event, *i.e.* after the termination of the settlement. This date seems to be confirmed by other observations in the area suggesting a sandstorm around the birth of Christ (St. Borremose, Andersen 1977 p. 103 + pl. 1, Tholstrup, Hatt 1928 p. 248 and Mogens Hansen 1982 p. 255).

CONCLUSION

As it appears from what has been said above, we have to rewrite the history of the Borremose settlement. Early in Becker's per. II a road was made of pebbles leading out to a dry hill in the swampy forest covering Borremose. Around the elevation moats were dug and ramparts erected from the soil deriving from these. In the center

of the stronghold a village was founded. In per. IIIa the village was thoroughly restructured. The north end was almost abandoned, whereas the southern part became densely populated. The street seems to be from this period, as it follows the new plan of the settlement. Perhaps even the second phase of the causeway is dating from this time as it strongly resembles the village street. The ramparts seem to have collapsed in some parts, but in other areas the moats were still kept open. In order to reinforce the fortifications the forest was cut and a lake was created by cutting peat.

Thus in the new version of the history there is no difference in time between the foundation of the village and the construction of the stronghold. As a second thought it must be admitted that this appears to be a more acceptable explanation: Why should Iron Age people choose a spot like a deserted stronghold in the middle of a bog for the purpose of founding a normal, peacetime village? There are several places in the surroundings that are much better suited for this!

PERSPECTIVES FOR FUTURE WORK

Several questions remain unanswered. Some of them are due to the material being so large that much further work is needed. This concerns especially the materials from the moats. The sample of pottery deriving from these is so large that it can become of great importance for the understanding of regional variation in pottery style in the Middle and Late Pre-Roman Iron Age. Besides the large amount of wooden objects here left unmentioned may provide new insight in a still badly illuminated part of the Pre-Roman world.

The possibilities for carrying out new excavations at the site are, however, more important for the interpretation of the settlement. Many questions remain unanswered due to the excavation techniques of those times. Was there room for cattle in the houses? Were there fences on the site offering a possibility to decide what is contemporary? How were the fortifications constructed? Today there is no information at all available on this subject. Did the lake encircle the islet or did the geologists just by chance hit a prehistoric peat cut? These questions are of importance for understanding the nature of the site. Was it a stronghold or an ordinary village just extraordinarily situated? Only further investigations on the site can answer these questions and give the Borremose complex a place in our prehistory which corresponds to its uniqueness.

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NOTE

The interpretation of this find as a ritual deposit has been strongly rejected by Becker (personal communication). He argues that such a deposit could not have been so well preserved, if it had been placed in open water and slowly covered with mud. He suggests that it is more likely that the pots, if they are to be considered as one single deposit, were dug down into the mud after a period of use.

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