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Lindebjerg and Røjle Mose

Two Early Bronze Age Settlements on Fyn

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INTRODUCTION

The large barrows of the early bronze age of Denmark are known so widely and in such large numbers that it seems the country would have resembled a single, enormous bronze age cemetery. In contrast to this, settlements from the period were for a long time almost completely unknown (1). In recent years, some regular settlements with houses have, however, begun to appear.

An extensive settlement area with three long houses and dating from the beginning of the early bronze age has been excavated at Egehøj on northern Djursland (Boas this volume). All the houses have a single row of roof-bearing posts, and a partially sunken floor. In terms of construction, these houses are reminiscent of those from the earlier late neolithic at Myrhøj in northern Jutland (Jensen 1972, p. 61 ff.).

The settlement at Vadgård in north Jutland consists of two settlements, from periods I and II of the bronze age respectively. The older settlement consists of three so far unpublished houses (see Lomborg 1980 p. 122). They do, however, appear to be the same type of house as those from the period II settlement, which consists partly of post-built houses with sunken floors (perhaps like the Egehøj structures), partly of the so-called O and C shaped turf-walled houses, and partly of post-built houses with two rows of roof-supporting posts. Traces of a presumed ritual area were also observed (Lomborg 1973 p. 5 ff., 1976 p. 414 ff., and 1980 p. 122 ff.).

Finally, a large post-built domestic structure has been found under a bronze age barrow at Trappendal near Haderslev; this probably dates from period II (Boysen and Andersen 1981 and this volume). This regular aisled longhouse bears comparison with the now numerous settlements of the late bronze age (Becker 1968 p. 79 ff, 1972 p. 5 ff, Lomborg 1977 p. 123 ff) (2).

This picture will be extended below by the publication of two recently excavated early bronze age settlements from northern Fyn. Both are on the northwest part of the island; Lindebjerg is near Bogense, and Røjle Mose is near Strib (fig. 1).

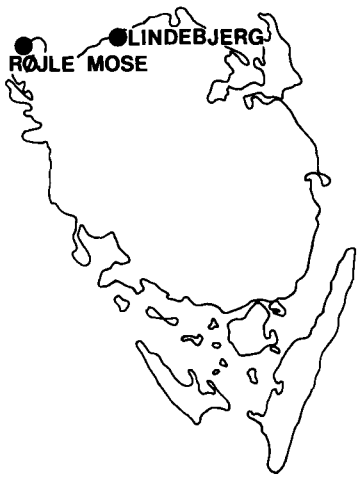

Fig. 1. The location of the two settlements.

THE LINDEBJERG SETTLEMENT

In the mid 1970's many flint implements, particularly scrapers and fragments of pressure-flaked sickles and daggers, were collected from a field at Lindebjerg, about 2 km south of Bogense.

The site was registered by the North Fyn Museum in 1974, as a settlement with surface finds of late neolithic/early bronze age type (3). The settlement apparently covers most of a low, 3000 m^2 sandy rise, surrounded on all sides by low, boggy ground (fig. 2). An ashy area measuring about 6 × 8 m was visible in the centre of the site. This area had a concentration of flint waste, tools and potsherds, and in the southeastern part several large fragments of loom weights.

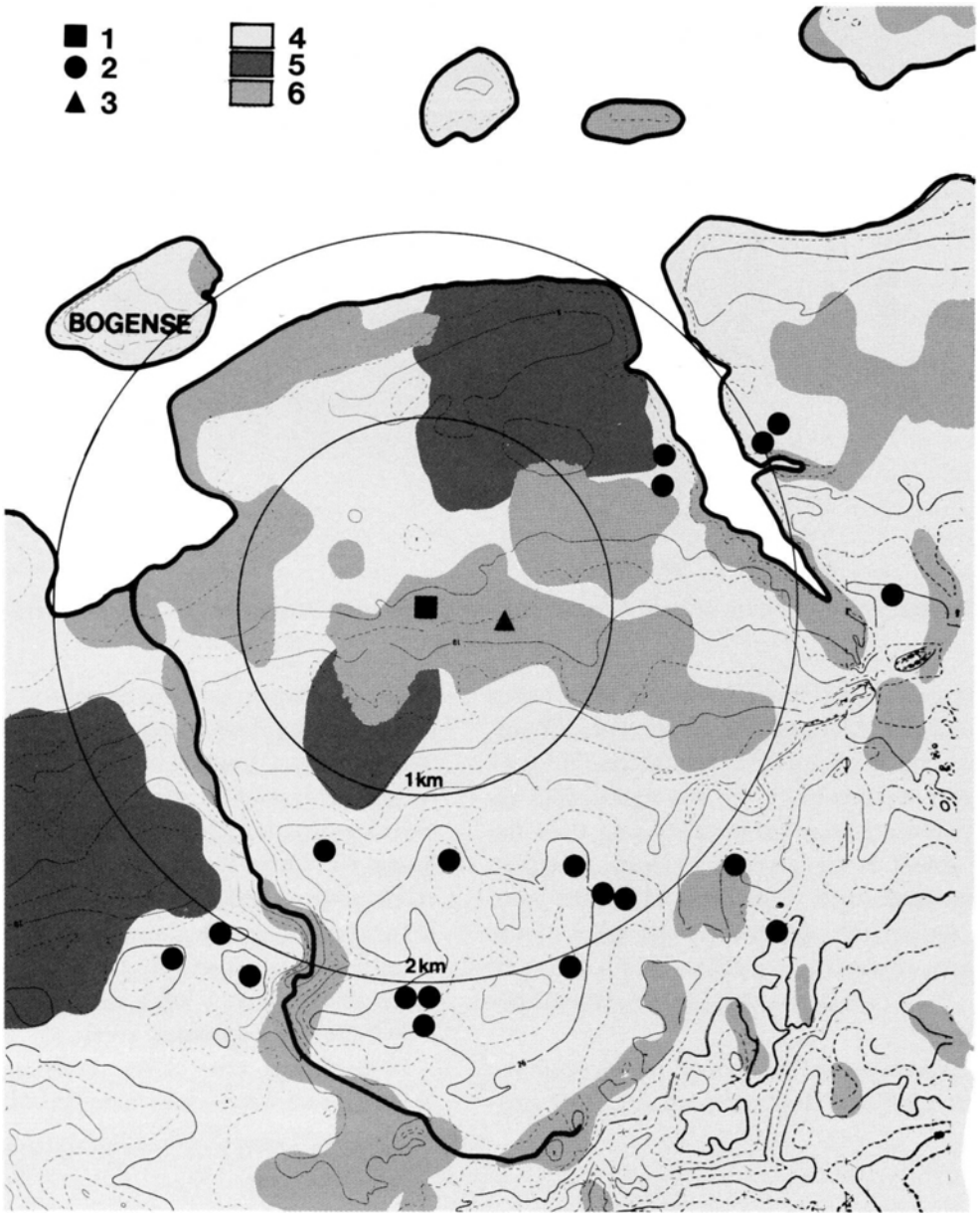

Fig. 2. Contour map of the area round Lindebjerg. 1, the settlement; 2, barrow; 3, hoard; 4, sandy soil; 5, clay soil; 6, wet area. The wet areas are defined on the basis of historical sources of around 1800 AD, and also of the soil maps of the Ministry of Agriculture. Drawn by Elsebet Morville (Reproduced by permission of the Geodetic Institute A. 524/83. Copyright). 1:40,000.

A trial excavation was carried out in the area of ash, and a pit-like structure was found; this had a row of posts along its north and west sides. The row to the north continued eastwards beyond the area of excavation. Single postholes could also be seen under the central part of the ashy area, but none were visible further south (fig. 3).

The area within the rows of posts appeared as a minor depression containing cultural deposits. Many pieces of flint waste, flint implements, pottery, burnt granite cobbles and charcoal were found in its upper part. In the southeastern area, one loomweight and fragments of others were found; these proved to belong to the pieces collected from the surface. Under this upper cul-

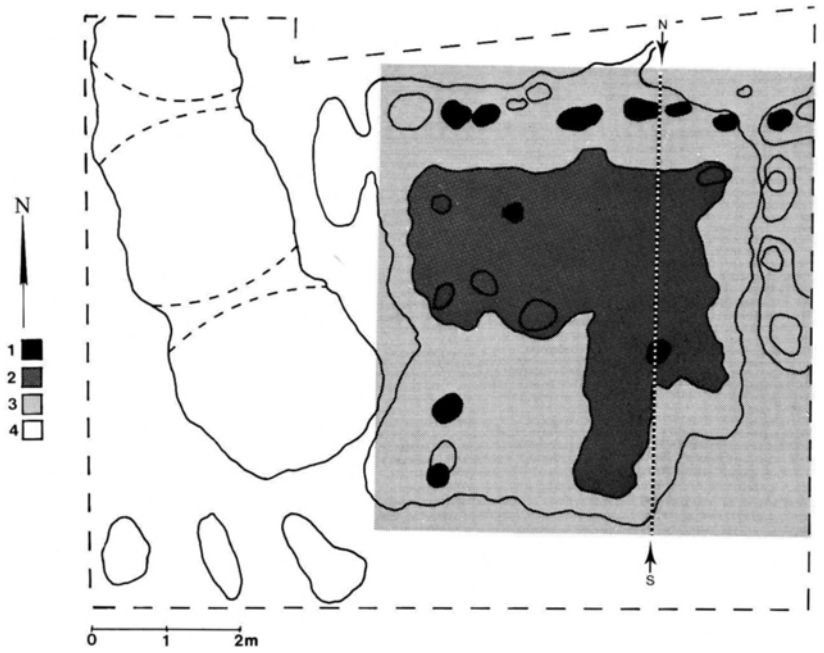

Fig. 3. Plan of the Lindebjerg house and pits. 1, posthole; 2, layer of carbonised cereal grains; 3, west end of the house; 4, pit. Drawn by Sven Kaae. 1:100.

tural layer and sealed by it was a 15–20 cm thick burnt layer. This contained charcoal fragments and carbonised cereal grains in such enormous quantities that they could literally be recovered by the shovel-full (fig. 4). This layer covered a somewhat smaller area than the cultural layer above. It was angular in shape, one portion projecting southwards to the area where the loom weights were found (fig. 3). Around the edge of the layer, particularly to the south, a zone of reddened sand testified to the existence of a major fire – but no proper hearth was found.

The feature is interpreted as a house, which seems to extend to the east beyond the excavated area. One possible explanation is that it is the west end of a longhouse with a sunken floor (Boas this volume). One or more of the central postholes, which are up to 60 cm deep, could be traces of roof-bearing posts. The layer of charred cereal grains indicates the floor level at the time the house was burnt down. Later the layer was covered by settlement material redeposited from nearby. 33 litres of carbonised cereals show the location of a major grain store in the northwestern part of the house, while the place where above 8 loom weights were found presumably indicates a spinning area.

Immediately west of the house a number of steep-sided pits were found, with depths of up to 90 cm. They

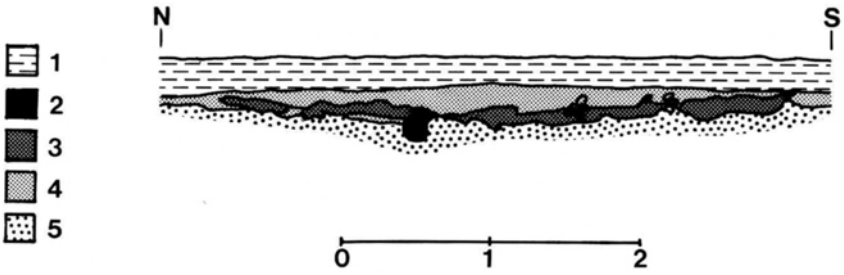

Fig. 4. Transverse section of the Lindebjerg house. 1. topsoil, 2. posthole, 3. layer of carbonised cereal grains, 4. upper cultural layer, 5. subsoil. Drawn by Sven Kaae. 1:50.

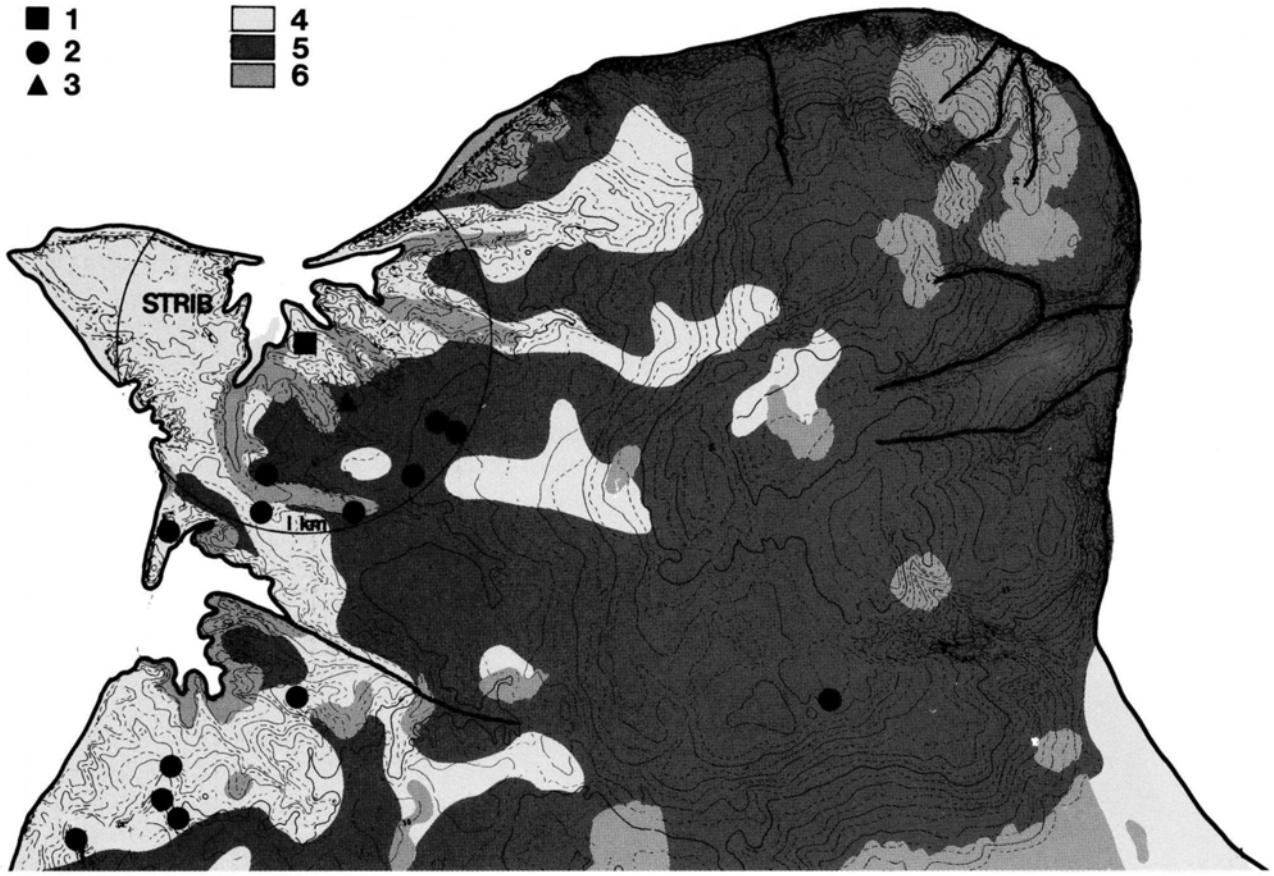

Fig. 5. Contour map of the Røjle peninsula. 1, settlement; 2, barrow; 3, hoard; 4, sandy soil; 5, clay soil; 6, wet area. The wet areas are defined on the basis of historical sources of around 1800 AD, soils also from Nordmann 1958 and the soil maps of the Ministry of Agriculture. Drawn by Elsebet Morville (Reproduced by permission of the Geodetic Institute A. 524/83. Copyright). 1:40,000.

contain largely the same sorts of finds as the house, but the quantity of carbonised cereals was considerably less. The pits are apparently linked to the structure, and are covered by the same layer of cultural deposits. The pits may have been used in connection with grain drying (Rowley-Conwy 1978 p. 162).

The excavated features, with their traces of grain storage and spinning, and the large numbers of surface finds, together suggest a permanent settlement which probably consisted of more than one household.

THE RØJLE MOSE SETTLEMENT

The second early bronze age settlement from Fyn lies on a field near Røjle Mose (mose = bog) (fig. 5). Large numbers of flints had been collected from the surface over the years, and because of plans to build on the land, rescue excavations were carried out in 1974–77 (4).

In all, 5000 m^2 were excavated; several areas of cultural deposits and about 650 features were investigated (5). Two of the areas of cultural deposits, and many of the features (some of which grouped into 3 structure-like systems), could be dated to the early bronze age (fig. 6). The 3 structures were placed on a long hill running east to west; the land slopes evenly down to the north, more steeply to the southwest.

Construction A (fig. 7) was immediately under the ploughsoil and had a 5.5 × 3.5 m C shaped groundplan. The north side consisted of an irregular oblong feature; this curved round to the south-southeast to form the eastern side of the construction. A row of postholes marked the western side. A centrally placed pit with

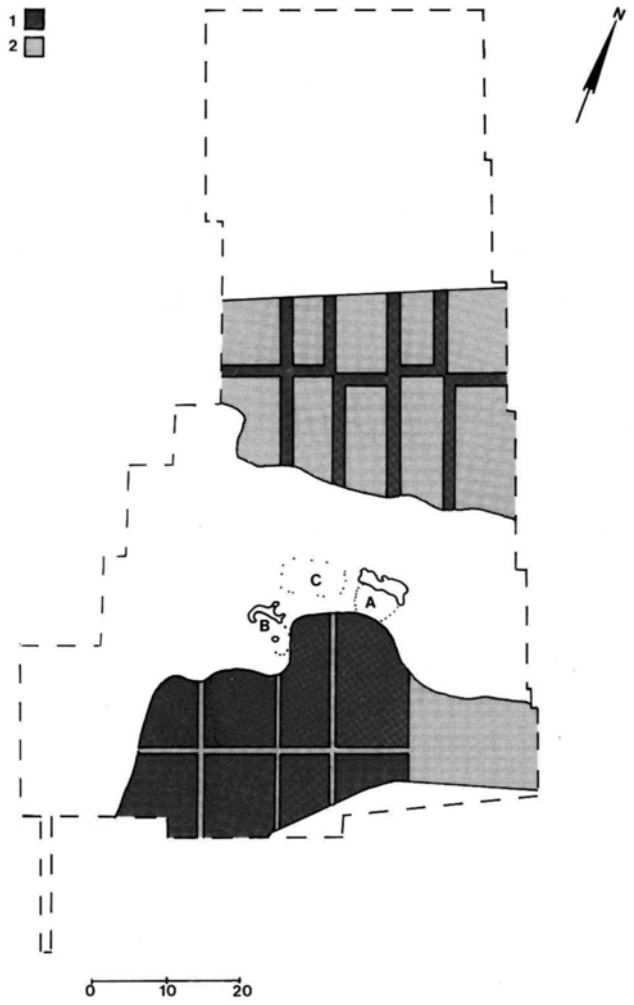

Fig. 6. Plan of the excavated part of the Røjle Mose settlement. A, B, and C, constructions; 1, unexcavated area of cultural deposits; 2, excavated area of cultural deposits. Drawn by Sven Kaae.

sides burnt red contained some charcoal and a complete flint sickle.

When viewed in section, the large northern feature turned out to be 120 cm deep; the south side was vertical, the north stepped. The bottom was flat in the centre, from where it rose sharply and then levelled out towards east and west (fig. 8). At a lower level, the east side of the construction was visible as a row of small posts.

Construction B had a similar C shaped plan, measuring 6.5 × 3 m and with its opening to the south (fig. 9). The northwest and west sides were marked by a curved, oblong feature, the others by a curved row of posts. In the eastern end was a possibly contemporary cooking pit.

In section, the large feature again had a vertical southern side and a stepped northern side. Its greatest depth of 55 cm was in the middle, from which it rose steeply and then levelled out towards the ends. Two deep postholes were visible in the bottom of the feature (fig. 10–11).

Construction C lay between the first two, in an area with a close concentration of postholes and pits (fig. 12). A number of postholes could be linked together to form the groundplan of rectangular shape, measuring 8 × 4 m and orientated east-west. The southwest part appeared immediately under the topsoil as a curved feature, in which postholes were visible at a lower level. None of the many postholes and pits inside the posthole setting could definitely be linked with it.

The closest parallels to constructions A and B are on the Vadgård settlement, mentioned in the introduction. C shaped constructions are represented there by one complete system, interpreted as the foundation trench of a turf-walled house (Lomborg 1973 p. 6 ff, 1976 p. 416 ff.).

However, in neither construction A nor B was any trace of turf walling observed in connection with the large ditches, and a foundation trench with a depth of up to 1.20 m seems excessive for a turf wall. As postholes were observed in the bottoms of these features, they should probably rather be seen as excavations to take a system of large posts; together with the rows of lighter posts which abut them, they would have formed wooden structures of curious irregularity. The absence of roof supporting posts and the fact that they are open towards the south does not offer any great support to the notion that they were used as dwellings; but the presence of a possible fireplace in construction A and of a cooking pit in construction B does suggest that they were used for some form of occupation or activity.

The closest parallels for post construction C are also at Vadgård, where several similarly lack roof-supporting posts (Lomborg 1976 p. 419 ff) (6). Despite this, they must be regarded as dwellings.

The 2 areas of cultural deposits which were mentioned above as being dated to the early bronze age, lie immediately below the constructions described above, one on the north slope and one on the south slope (fig. 6). The layers average 20 cm in thickness and together cover c. 2000 m^2. Of this, 400 m^2 were excavated by metre squares in 10 cm spits, while a further 150 m^2 were excavated by removing thin layers with a shovel. The layers

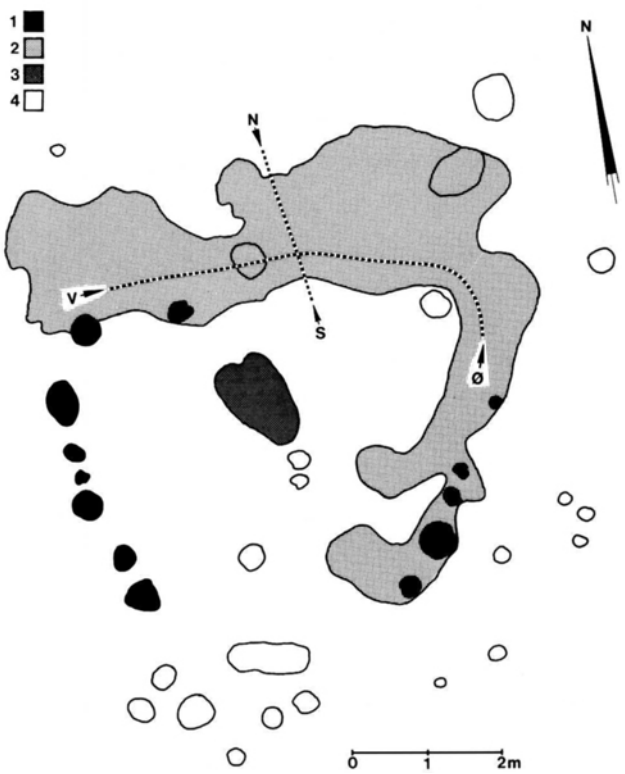

Fig. 7. Plan of construction A. 1, posthole; 2, main feature; 3, fireplace; 4, pit. Drawn by Sven Kaae. 1:100.

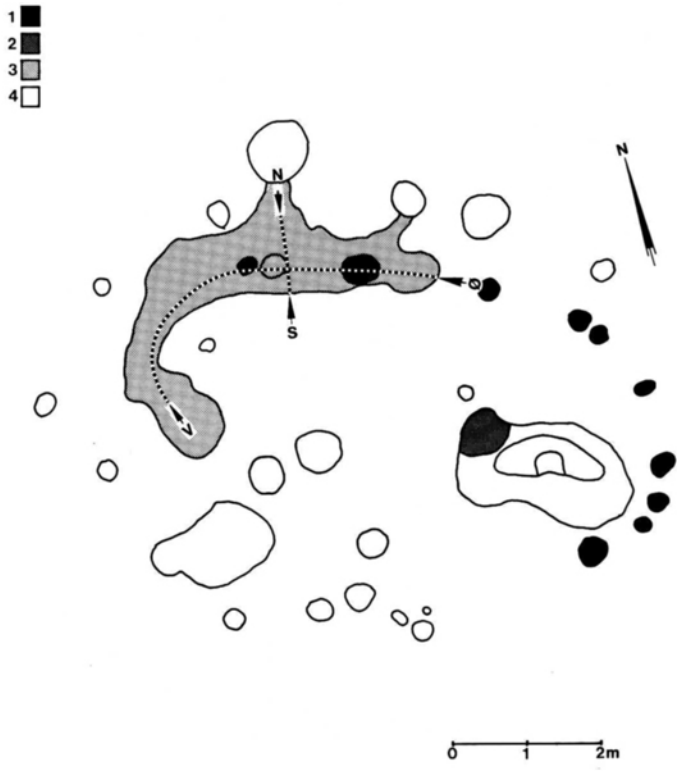

Fig. 9. Plan of construction B. 1, posthole; 2, fireplace; 3, main feature; 4, pit. Drawn by Sven Kaae. 1:100.

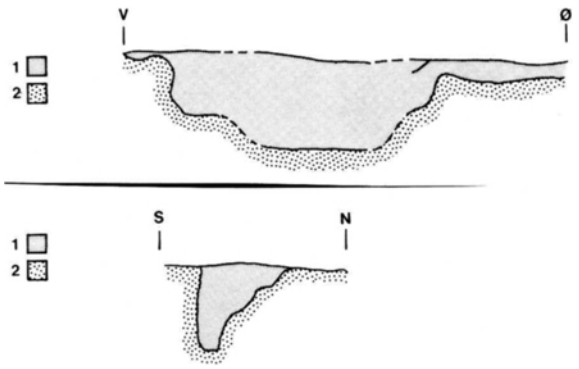

Fig. 8. Transverse and longitudinal sections through the main feature in construction A. 1, ditch; 2, subsoil. Drawn by Sven Kaae. 1:100.

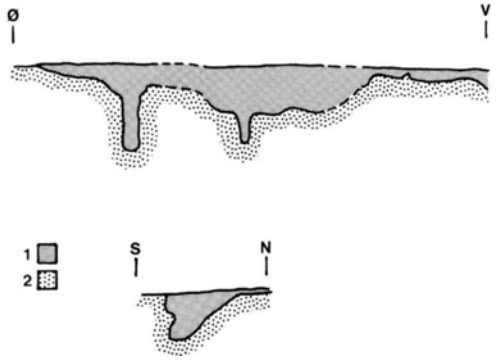

Fig. 10. Transverse and longitudinal sections through the main feature in construction B. 1, ditch; 2, subsoil. Drawn by Sven Kaae. 1:100.

contained many finds, in the form of flint artifacts and waste, pottery, stone tools and many burnt stones, see the inventory, Table I.

Spatial analysis of the distributions of individual tool types revealed no significant horizontal or vertical patterns; in both dimensions, flint waste, tools and pottery all had uniform and even distributions.

This type of distribution does not suggest that the layers were formed primarily by direct activities on the spot, or by natural erosion from the higher ground. It

Fig. 11. Section through a posthole in the bottom of the main feature in construction B.

seems more likely that they developed from the continual deposition of rubbish from clearing and cleaning the settlement and activity areas.

The presence of such extensive layers of cultural deposits with a large though chronologically homogeneous find inventory, as well as a settlement and activity area (all of which could well be part of a larger area of settlement extending east and west beyond the investigated area), testifies therefore to a permanent settlement of some duration, and presumably consisting of several households.

THE FINDS

The finds from Lindebjerg and Røjle Mose will in the following be treated together for practical reasons. The number of finds within each type from the two settlements is given in the inventory, Table I. The finds comprise in all respectively 1,119 and 14,704 items. To this must be added charcoal samples, burnt bone and carbonised grain.

Flint

Objects of flint form the most common find group. The raw material consists apparently only of small, locally available natural cores, mainly in the form of nodules.

The waste material is almost entirely irregular waste flakes. Only rarely are pieces found with the proportions of blades, and they are almost all irregular. Most

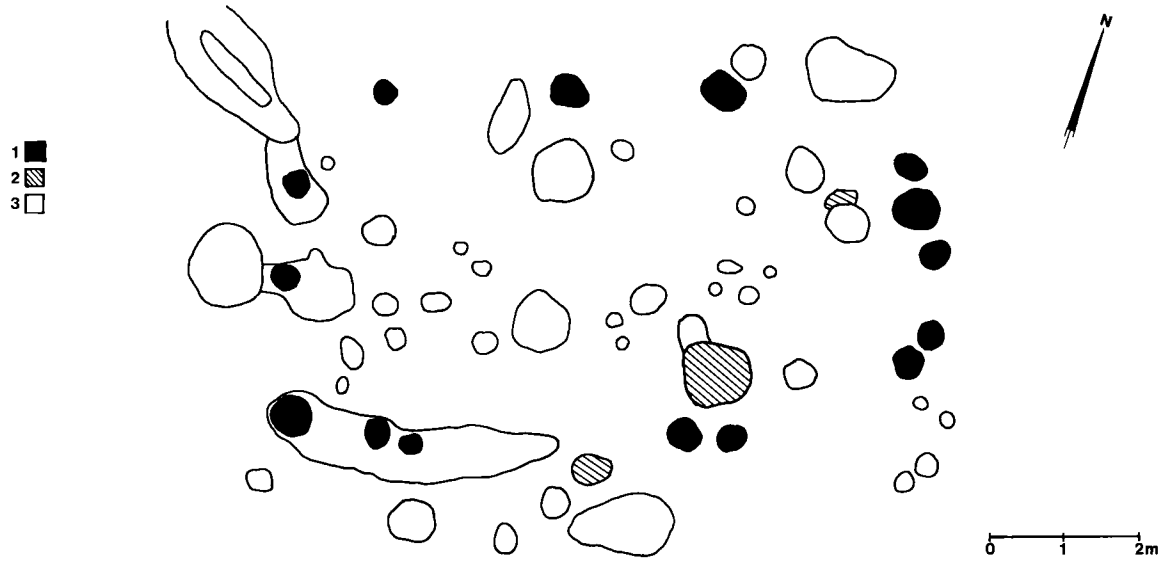

Fig. 12. Plan of construction C. 1, posthole; 2, stone; 3, pit. Drawn by Sven Kaae.

LIST OF FINDS	LINDEBJERG House	LINDEBJERG Features	RØJLE MOSE Culture layers	RØJLE MOSE Features
FLINT				
Scrapers	5	6	128	8
Borers	1		67	
Burins			4	
Flakes with edge retouch	1	2	98	3
Multiple purpose tools			2	
Flakes, toothed or notched	11	12	403	18
Flakes with transverse retouch			7	
Flakes with continuous edge retouch	2	5	331	10
Daggers, strike-a-lights, spearheads	5	3	45	1
Sickles	1	1	14	6
Arrowheads	1	2	52	1
Hammer Stones			81	4
Other			28	3
Total tools	27	31	1260	54
Cores	13	15	168	8
Flakes	474	290	11677	549
Total flint	514	336	13105	611
STONE				
Tools			24	3
POTTERY				
Rim sherds	17	6	92	10
Side sherds	138	75	762	60
Base sherds	13	16	30	3
Other	4			
Total pottery	172	97	884	73
OTHER			4	
TOTAL	686	433	14017	687
OVERALL TOTAL	1,119		14,704	

Table I. Inventory of finds.

of the flakes resulted from direct, »hard hammer« blows. Small, thin waste flakes with very small striking platforms were presumably produced by indirect of pressure flaking.

The cores are generally very irregular, and are dominated by examples with three or more flake removal scars.

These factors give an impression of a direct, rather coarse and apparently unsystematic flaking technique, combined with a finer indirect or pressure technique. This impression is supported by the artifactual material, which is mostly made on irregular flakes quite heavily worked with angled or flat retouch.

Tools form about 10% of the total flint. In the following the most characteristic tool types will be briefly described (7).

Scrapers are characterised by pieces with and without partial edge retouch, and by spoon and pear-shaped hafted scrapers (fig. 13 h–i).

Borers are mainly produced on flakes with or without a shoulder, but narrow and broad types are also found.

Flakes with worked edges are a quite common but variable type, dominated by pieces with partial retouch along the long edge.

Notched or toothed flakes form the most common type. Most are characterised by one or more notches formed by a single powerful blow; these can be so widespread that the upper or lower face of the item is more

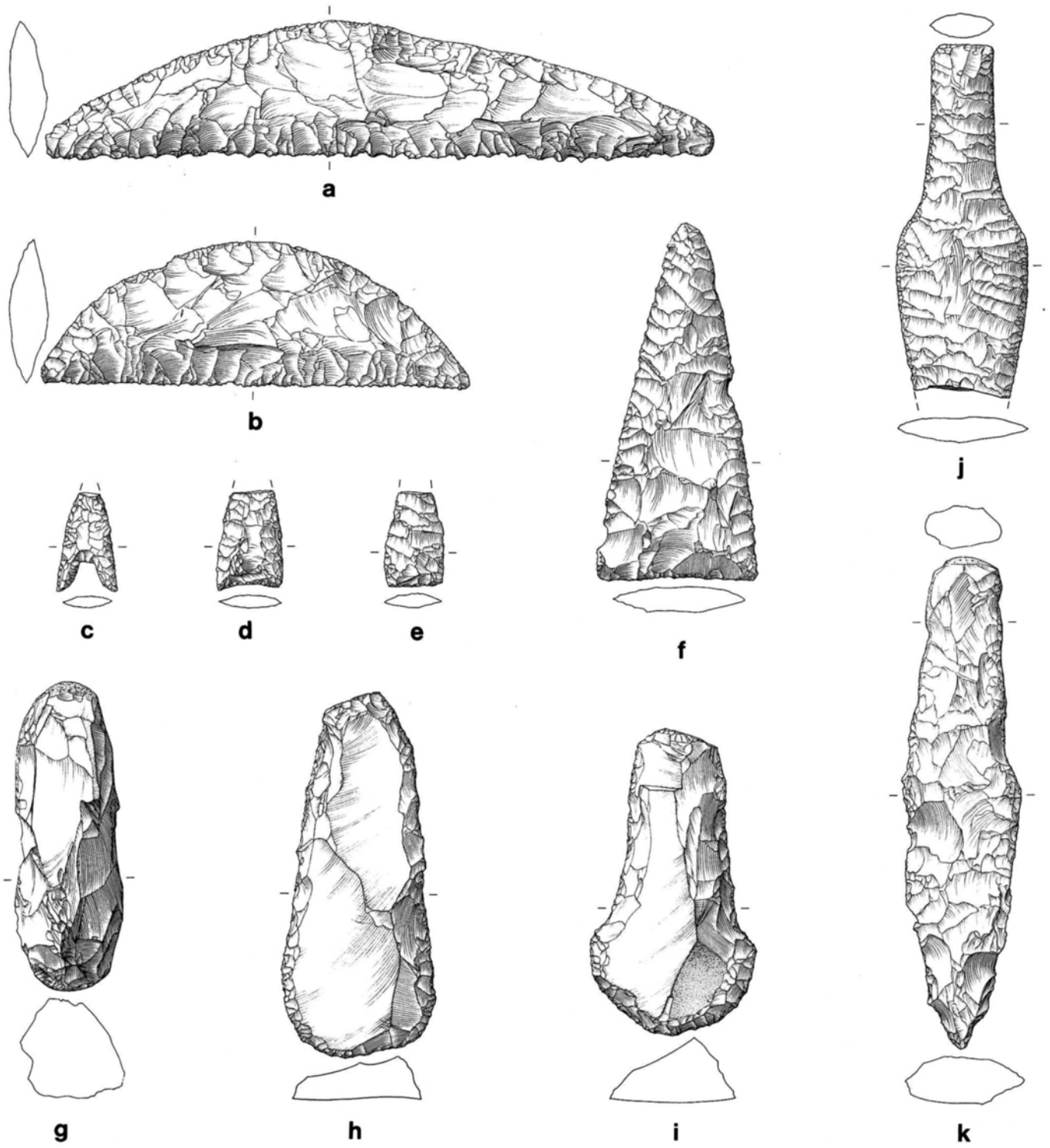

Fig. 13. Flint artefacts from Røjle Mose. a–b, sickles; c–e, arrowheads; f, spearhead; g, hammerstone; h, oval scraper; i, hafted scraper; j, dagger fragment; k, dagger roughout. Drawn by Orla Svendsen. 2:3.

or less completely covered by secondary flake scars. In such cases they are similar to the so-called roughouts.

Flakes with continuous edge retouch (the second most common tool type) consist mainly of quite small, thin flakes with irregularly placed fine retouch. They are presumably tools primarily used for cutting.

Daggers and pressure-flaked strike-a-lights all have one end shaped for the hand, with more or less parallel sides and lentoid cross section. The greatest width of the blade is towards the end nearest the hand (fig. 13 j).

Spearheads are all characterised by a triangular outline, with a wide, straight base and straight sides (fig. 13 f).

Pressure-flaked sickles appear in two forms; short, broad examples with straight, untoothed edges, and long, narrow types with straight or slightly concave edges which are often toothed (fig. 13 a–b).

The arrowheads are characterised by triangular or leaf shaped types with total or partial flat retouch, and/or nearly complete edge retouch. They occur with straight bases, or with rounded or angled basal notches (fig. 13 c–e).

Hammerstones may be either spherical or ovoid. The latter (which form one of the most common types at the Røjle Mose settlement) are flaked from 2 or 3 longitudinal edges and are pitted at one or both ends (fig. 13 g). The removals are generally fine, on some examples virtually smooth, and are often grouped round an unworked central area. On many pieces the smoother type of pitting continues up the adjacent long side surfaces. These hammerstones were most probably used for working stone (8).

In the category labelled »other« are among other things flakes with symmetrical, two-sided retouch on the long edges, and in a few cases with some rough polishing at one end.

Stone

Worked stone only forms a small part of the inventory. Hammerstones, arrow shaft smoothers, fragments of querns, grindstones and shafthole axes were found; besides these, mention must be made of two stones, oval in outline and cross section, with two grooves running round them parallel with the long axis (fig. 14). These

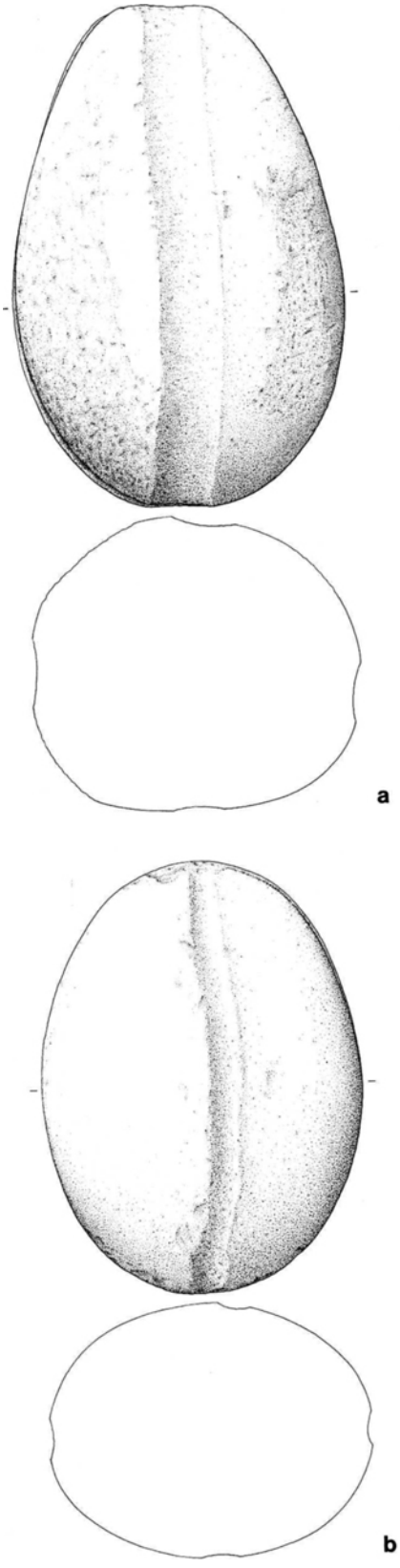

Fig. 14. Stone weights from Røjle Mose. Drawn by Orla Svendsen. 1:2.

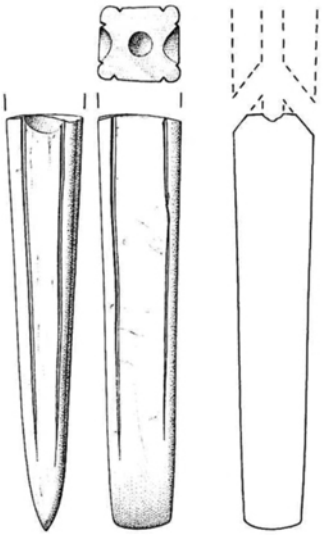

Fig. 15. Slate pendant from Røjle Mose. Drawn by Orla Svendsen. 1:1.

stones have weights of c. 1 and 1.5 kg, and are too heavy to be net weights. They were presumably used as weights in longline fishing in deep or running water (cf. Svabo 1959 p. 96, Petersen 1951 p. 263 ff.).

A decorated, chisel-shaped slate pendant was also found at Røjle Mose. It had a Y-shaped perforation in the now broken end from which it was hung (fig. 15).

Pottery

Most of the pottery consists of sherds characterised by an uneven, bumpy surface, caused by the usually very coarse tempering material – apparently mainly crushed stone. Thickness is generally about 1 cm, is rarely above 1.5 cm and never below 0.5 cm. Besides this, there are also a few sherds of finer thinwalled pottery, with even and relatively smooth surface, and finer tempering material.

The sherd material is very fragmentary, so vessel shapes cannot be distinguished. From Røjle Mose alone, the rim sherds probably represent more than 100 pots.

The rim sherds fall into the following types: 1. everted rim with sharp angle immediately below the rim itself; 2. everted rim with even curve below; 3. everted rim with step immediately below; 4. vertical rim with straight and/or convex sides; 5. vertical rim with step immediately below; and 6. inverted rim (fig. 17).

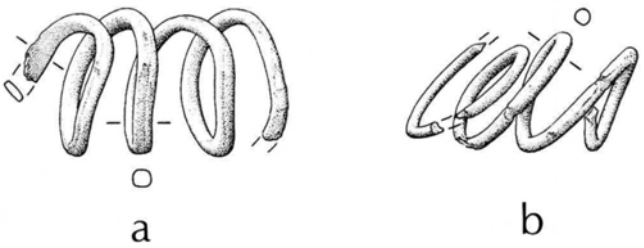

Fig. 16. Spiral finger ring of bronze from Røjle Mose. Drawn by Orla Svendsen. 1:1.

The shape of the basal sherds suggests that about half the pots were footed.

Finally, 8 loom weights were found in the Lindebjerg house; these were elliptical in cross section. 4 had a diameter of 8.5–9 cm, the rest of above 10 cm. The clay is coarse, tempered with quite large pieces of crushed flint and stone, and contains impression of straw etc. (fig. 18).

Metal

In one of the areas of cultural deposits at Røjle Mose two spiral bronze finger rings were found; both were wound 4 times (fig. 16). They were made of a thin piece of tubing, D-shaped in cross section and hammered flat at the end.

Organic materials

Both settlements produced carbonised cereal grains, and also scattered pieces of charcoal and burnt bone.

The grain find from Lindebjerg, one of the largest of its type, comes from a store inside the house and from presumed drying areas immediately to the west. The grain from the house consists of naked 6-row barley and emmer in the proportions 3:1, and a few grains perhaps of bread wheat; the material from the pits on the other hand is dominated by emmer (Rowley-Conwy 1978 p. 159 ff.). The composition and nature of the find clearly implies systematic agricultural practices; the absence of weeds and chaff indicates that winnowing had already taken place, the pits are probably where the cereals were dried, and the processed crop was finally stored in the building.

The cereals from Røjle Mose come from the two large

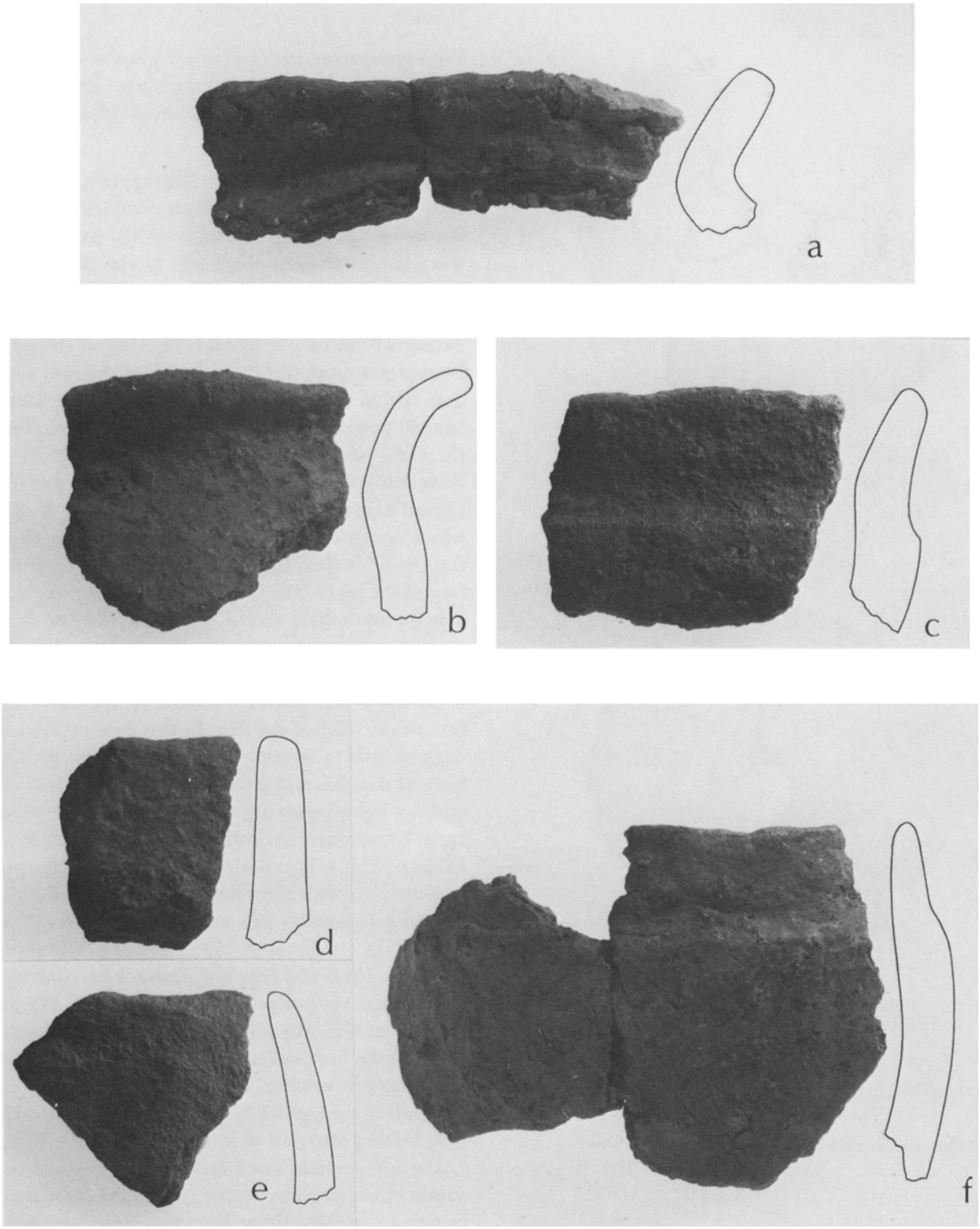

Fig. 17. Rim sherds from Røjle Mose. Photo: Mette Sommer. Drawing by Orla Svendsen. 1:1.

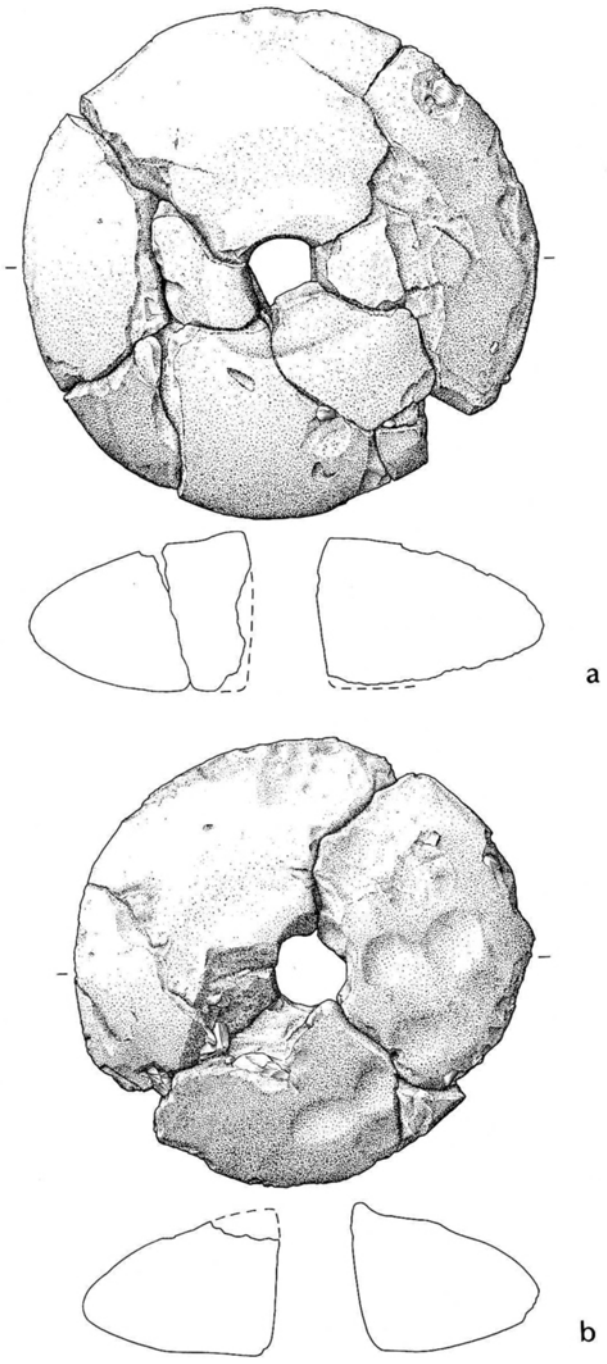

Fig. 18. Loom weights from Lindebjerg. Drawn by Orla Svendsen. 2:3.

features forming the main parts of Constructions A and B, and consist of 11 grains of naked barley and 1 of hulled barley (9).

DATING

The layers, structures and other features described here are all referred to the early bronze age. This section presents more information about the datable objects.

Lindebjerg. The dating of Lindebjerg rests primarily on a type VI dagger found in the pit complex to the west of the house (Lomborg 1973a p. 69 ff.). As no difference was visible between the finds in the pits and in the house, it is reasonable to refer the whole settlement to an early stage of the early bronze age. More precise dating within this is difficult because of the relatively limited material, but two aspects of the find suggest a date within the later part of period I: 1) the absence of beaded pottery, which belongs to the late neolithic and the early part of period I (Persson 1975 p. 31 ff. and Boas this volume); 2) the presence of only one not very typical sherd of pottery of mainly period II–III date, which has a characteristically shaped step under the rim. Besides this, the material collected from the surface of the rest of the low hill shows that there was only a major settlement on the site in the early bronze age.

Røjle Mose. The finds from the rich cultural layers at Røjle Mose provide a good basis for a closer examination of the date of the site. In this connection the flint daggers play a leading role, because the presence of type VI daggers and the closely related pressure-flaked strike-a-lights unanimously place the settlement in early bronze age periods I/II (Lomborg 1959 p. 161, 1973a p. 69 ff.). This dating is supported by the pottery, because pots with steps immediately below the rim (fig. 17) almost certainly first appear at the start of the early bronze age (cf. Persson 1975 p. 33 ff.). The slate pendant (fig. 15) is of a type not known from contexts later than bronze age period I (Hasselmo 1972 p. 17); and the absence of typically late neolithic beaded pottery (still in use in the first part of period I) (Persson 1975 p. 31 ff. and Boas this volume) combines with it to suggest that occupation took place in the later part of period I, possibly lasting into period II.

The above-mentioned fact that no vertical or horizontal clustering was visible within the individual artifact types in the culture layers suggests chronological homogeneity.

Constructions A–C are to all appearances contemporary with the areas of cultural deposit. The finds from

the features making up the structures are identical with those from the cultural deposits. Again, the nearest parallels are with the early bronze age (see above).

A thermoluminescence date of 1860 B.C. from burnt stone from one of the areas of cultural deposit confirms the archaeological dating (Mejdahl, Bell and Winther-Nielsen 1979 p. 150). Considering that there is an uncertainty margin of around 200 years, there is reasonable agreement between the TL date and C14 dates from other early bronze age contexts (op. cit. p. 150, Boysen and Andersen 1981 p. 27 note 9).

THE SETTLEMENT

Lindebjerg. The settlement is, as mentioned, located on a low rise in the ground (fig. 2), measuring 85 m east-west and 60 m north-south and covering about 1/3 ha. The rise is in the western part of a large wet area, which in prehistory was probably watermeadow or bog, and probably flooded periodically. In this area a hoard of early bronze age date has been found (Aner and Kersten 1977 p. 135 no. 1890) (10).

On three sides the settlement area is naturally bounded at a distance of about 1.5–2 km from the site. The sea forms the northern margin, a narrow fiord the east, and a steep-sided river valley the western boundary. Along the southern edge of a circle of the same radius are about 10 grave mounds, which may be partly contemporary with the settlement (11). If this is so, it would seem reasonable to suppose that at least the more intensive exploitative activities took place within this radius. Here the landscape is quite flat and has numerous wet areas; apart from these the soil is mainly sandy, but in the northeastern part of the area and also immediately south of the settlement are large areas of more clayey soil (fig. 2).

The resource potential of this limited territory, the settlement location, and the artifactual material combine to give some indication of the economic basis of the settlement.

The large grain find shows that cultivation was carried out from the site. The low rise in the ground would have presented limited possibilities for arable, as its small area would not provide space for other than domestic activities. Cultivation must therefore have taken place on the dry sand and/or clay areas away from the wet patches which surround the settlement. Within a radius of 1 km the maximum area of sandy soil is 156 ha, and of clay soil 50 ha.

The site location and artifact inventory suggests that hunting and gathering would have been of low importance. In order to exploit coastal and marine resources, it would be necessary to travel more than 1.5 km from the settlement (12).

Neither arable agriculture nor hunting and gathering can have been the main reason for placing the site on a low rise in the middle of a wet area. Factors such as defence may have played a part, but it seems most reasonable to suggest that stock keeping was the dominant economic activity. Both the extensive wet areas round the site and the presumed existence of woodland would have provided much grazing and the potential for hay and leaf fodder collection.

Røjle Mose. The settlement lies on a promontory projecting into the Røjle Mose bog (fig. 5). The bog is cut off from the sea by a large dune to the north, and in prehistory would probably have been a shallow fiord. The settlement would therefore only have been immediately accessible from the south. The bog at the time extended further inland to south and east, and so further cut off the settlement area; within a radius of 1 km, it would only have opened onto dry land to the southeast.

It is noteworthy that all the known barrows in the area group along the periphery of the 1 km radius (13). One of these can definitely be dated to the beginning of bronze age period II (Berglund 1978 p. 43 ff.), so that possibility cannot be dismissed that barrows and bog between them give the limits of at least the most intensively exploited area. It must also be mentioned that a large bronze hoard dating from period II was found a few hundred metres south of the settlement (Thrane 1972 p. 17 ff.).

As can be seen from fig. 5, the area round the settlement is strongly hummocked. About 250 m to the south the terrain becomes more even, and at the same time changes from morainic sand to heavy morainic clay.

The resource area delimited above presented a number of economic options. The coastal location allowed several kinds of hunting and fishing. For example, the stone weights suggest that line fishing was carried out. That this fishery had a degree of importance is suggested by the unusually large numbers of ovoid hammer stones, which could, as mentioned above, have been used to produce the stone weights.

Cereal cultivation, the existence of which is suggested both by the carbonised cereals and sickles with gloss, could have been carried out both on small areas of gently sloping sand around the site and on the areas of morainic clay further south. When wet and steeply sloping areas are excluded, the potential arable area amounts to 15 ha sandy soil and 47 ha clay soil. The possibility of grazing and fodder collection would have existed in the wet areas in the woodland presumed to have grown around the site.

CONCLUSION

These two settlements from Fyn, dating from the later part of bronze age period I and possibly extending into period II, are both so located that consideration of the contemporary situation allows a reconstruction of the site territory, and thus of the nature of the sites themselves. Both Lindebjerg and Røjle Mose are in areas which are naturally bounded on three sides by the sea, a steep valley and wet areas, at distances of 1.5–2 km and 1 km respectively. As the adjacent and perhaps partly contemporary barrows cluster at about the same distances on the »open« sides of these territories, it seems reasonable to view them as territorial markers (14). This is not to say, however, that all activities were necessarily carried out within these areas. Presumably the territories only represent those over which the group had inherited particular rights. The barrows might thus have lain at the edge of (for example) larger areas of woodland with common access (15).

Taking the above-defined territories, the site locations and the finds into account, it seems possible that the economy at Lindebjerg was based upon agriculture, particularly domestic stock; while fishing probably contributed an important supplement to the stock rearing and presumably less important arable economy at Røjle Mose. A similar combination of activities probably took place at near-coastal Vadgård (see above), while Lindebjerg's stock and to a lesser extent arable based economy also occurs at Egehøj (see above) and in the area of inland settlement in northwest Jutland (Kristiansen 1978 p. 328 ff.).

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NOTES

[1] Until the discovery of the Egehøj settlement (Boas this volume) in 1969, the only published »settlement« of early bronze age date was the flint-knapping site of Mellemholm (Grantzau, Marseen and Riismøller 1953 p. 121 ff.). Besides, this, another flint-knapping site, Fornæs on Djursland (Glob 1951 p. 23 ff.) probably also includes finds from the early bronze age.

[2] A similar and approximately contemporary house is known from Handewitt near Flensburg (Bokelmann 1977 p. 82 ff.).

[3] Skovby parish, Bogense commune, Odense county. Fyns Stiftsmuseum journal no. 1701.

[4] Strib-Røjleskov parish, Middelfart commune, Odense county. Fyns Stiftsmuseum journal no. FSM 1304.

[5] The other features and cultural deposits date from the late Single Grave and Pre-Roman iron age periods. It is intended that the settlement should be completely published in a forthcoming volume of Kuml.

[6] See also the house from Hemmed Kær (Boas 1980).

[7] The flint material has been typed in accordance with Tixier's criteria and terminology (Tixier 1963 p. 24 ff.). Additional definitions have been necessary in some cases.

[8] Personal communication from Bo Madsen, who is of the opinion that they could among other things have been used to produce the grooves in the stone weights.

[9] Recovered and identified by Peter Rowley-Conwy, Cambridge.

[10] The point in the bog where the find was made has since been established. Similar spearheads are often found in hoards (Becker 1964 p. 115 ff.).

[11] The National Museum's list by parishes, Skovby parish no. 3–4, 33–40 and Guldbjerg parish no. 15 and 2. Near the last-mentioned barrow, traces of a period I flat grave have been found (Aner and Kersten 1977 p. 133 no. 1882).

[12] A stone weight found in the wet area just below the rise could be contemporary with the site.

[13] The National Museum's list by parishes, Vejlby and Strib-Røjleskov parish nos. 17, 20, 21, 27, 30 and 31. 6 other mounds – parish list nos. 1 and 8–12 – which cluster around a similar area of branched fiords and wet areas a little further south, may indicate another settlement area (cf. fig. 5). A find of a period III grave is believed to derive from the northernmost of these (Aner and Kersten 1977 p. 143 no. 1932).

[14] Furthermore, a barrow functioning as a territorial marker need not be contemporary with a known settlement, because a group of barrows may indicate the cemetery area of both older and younger settlements (cf. Strömberg 1975 p. 35 ff., and the flat grave mentioned in note 12).

[15] Similar factors were presumably operating in northwest Jutland, where there seems to be a clear connection between the settlements, which are probably mainly on sandy soils near watercourses and wet areas, and the barrows, which cluster along the transition to the higher clay hinterland; the clay is largely devoid of finds and therefore was presumably wooded (Mathiassen 1948 p. 97, 100 ff., Pl. XXIV–XXV, Kristiansen 1978 p. 328 ff.).

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