

Mølleparken

A Settlement of the Fourth/Fifth Centuries AD at Løgumkloster, South Jutland

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In September 1978 Haderslev Museum was informed that a series of smelting-pits had been discovered during the laying of heating-pipes for the residential development 'Mølleparken' at Løgumkloster's northern edge. A trial excavation that autumn showed that remains of a settlement of the latest Roman/early Germanic periods were here, besides a number of slag-pits. A proper investigation took place the following summer, immediately before the area was built upon (1). About 10,500 sq.m. of the development area's western part were excavated, revealing 28 smelting-pits, 7 buildings, and a small number of less immediately determinable features. In general the settlement remains were substantially ploughed out. No culture layer remained, and in several places only a few centimetres of the post-holes were left. The area excavated is believed to cover the bulk of the original settlement. As the site-plan

shows (fig. 2), large areas without features were uncovered both east and west of the buildings, and trial trenches both north and south indicate that the limits of settlement in these directions have been found. The construction of nearby roads, sewers, and heating-pipes was watched in progress without further settlement traces being observed. Bearing recent years' investigations at Vorbasse in mind, however, it remains possible that this settlement site was a part of a larger village complex (cf. Hvass 1980 (figs. 6–7)).

THE BUILDINGS

The southernmost building – *Building I* – is a very unclearly marked long-house of ca. 9–10×4–5m. It is aligned E-W, parallel to Building II, with which it forms

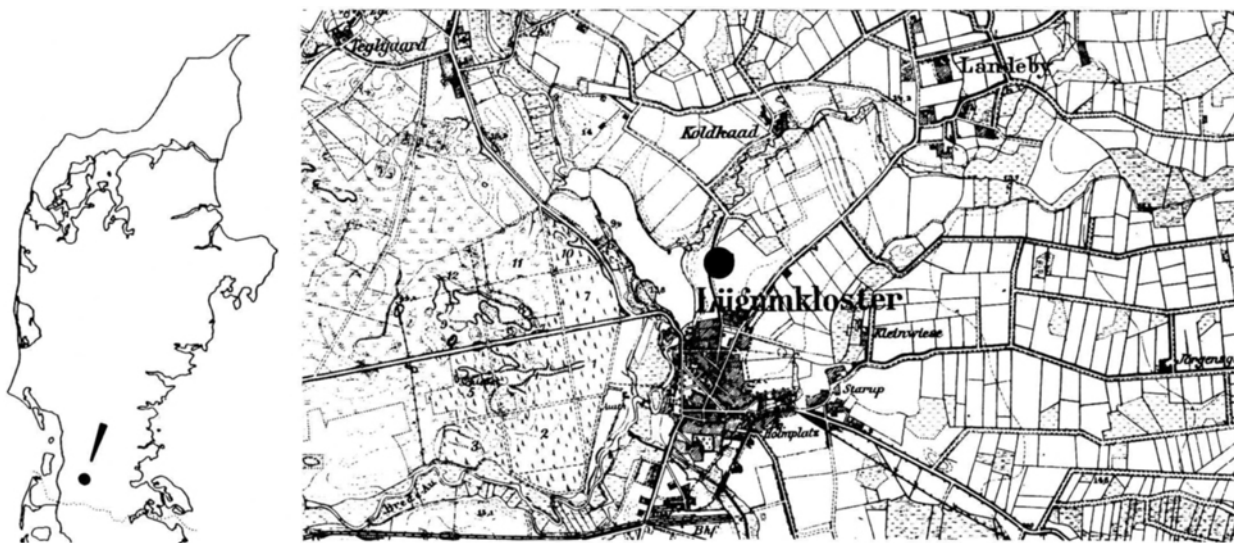


Fig. 1. The settlement is situated in the western part of the expanse of Tinglev Heath, an area with many low boggy tracts. From the 1877–80 map. The site is marked with a dot. Here scale 1:40.000.

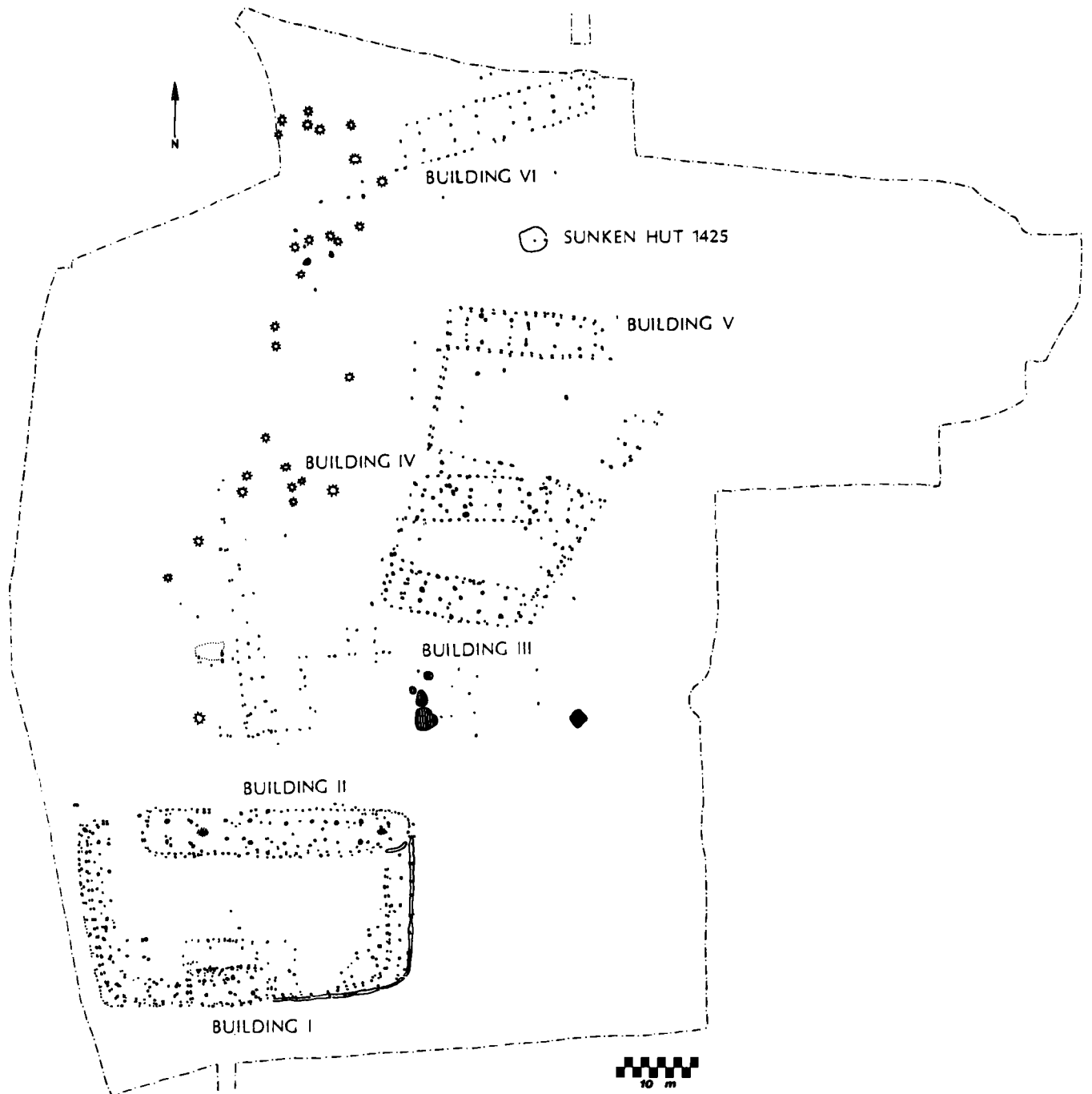


Fig. 2. General plan of the excavation. The slag-pits are shown with 'star' signatures (left).

a single building-complex (fig. 3). The building may be recognized principally from three sets of roof-bearing posts. The walls appear to have consisted of doubled pairs of posts, and the southern wall seems to have continued into the fence that enclosed the courtyard. No

signs of fire-places or a separate stall were found, and it is therefore difficult to say what the building's function was. But viewed together with Building II, it is most reasonable to regard it as some sort of outhouse.

Building II measures about 35.5×5.5m. and is aligned

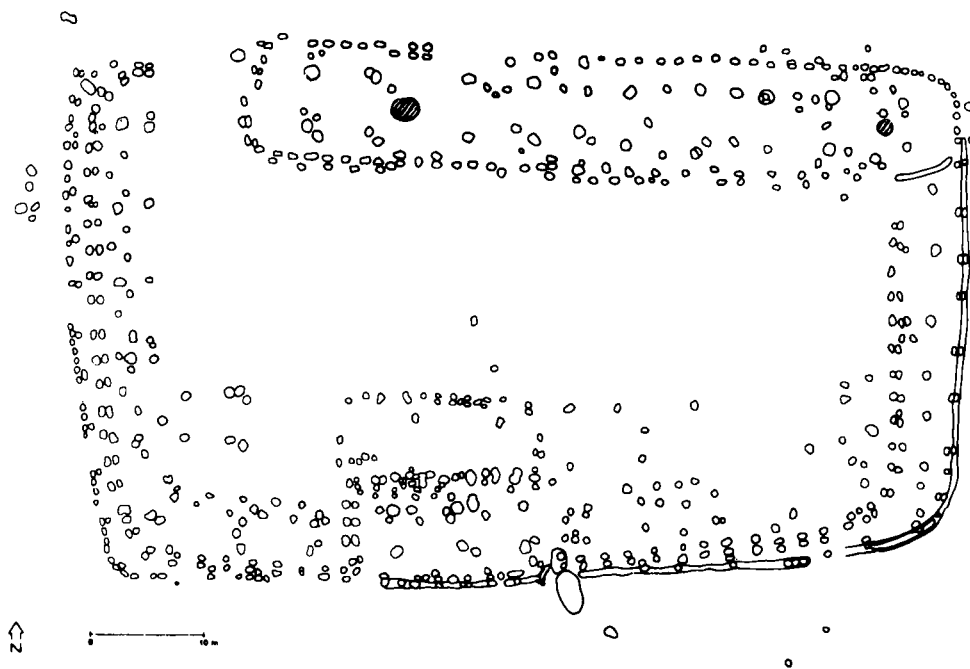


Fig. 3. The complex with Buildings I and II.

E-W. It forms the northern boundary of the above-mentioned building-complex. It had straight sides and rounded gables, and the roof was carried by 9 pairs of posts. The walls appeared partly as a single row of post-holes, and partly as a double row. This variation need not reflect various forms of wall-construction, but could result from uneven preservation of the post-holes. There is a wide gap in the northern side which can probably be attributed to the same causes. The entrance to the building seems to have been in the middle of the southern side. The building had two fire-places, one at either end. The westernmost consisted of a compact layer of burnt clay above a pit which was filled with sand burnt red and a number of potsherds. The easternmost hearth was a rather more complex construction: at the base, an oval pit with dark burned sand, below a compact layer of sherds from one or two vessels, and at the top a layer of clay about 1cm. thick, which unfortunately was incompletely preserved. Traces of straw could clearly be seen on the underside of the clay layer.

The two hearths indicate that both ends were lived in, which is not the usual notion of the internal arrangement of Iron Age buildings. But it is not suggested that the whole building was residential. Contemporary long-houses include examples with the middle section

used as a stall, and this cannot be ruled out for building II if one bears in mind the state of preservation of the building remains (cf. Hvass 1978).

As was stated, buildings I and II belong to a single building-complex, enclosed by a substantial fence. The enclosed area is about 900 sq.m. The fence appears to have been renewed at some stage. The phase which appears to be the earlier consisted partly of single and partly of paired posts. In the second phase the whole fence was shifted slightly eastwards, perhaps in connection with a putative extension of Building II with one pair of roof-bearing posts. This fence is clearly more substantial than its predecessor. It consists of a row of double-posts which were supplemented on the inner side by large upright posts of the same size as the buildings' roof-bearing posts. It is uncertain, however, whether these large posts were really part of the fence, or if it was a case of a sort of lean-to construction connected to the fence (2). Both phases of the building complex had their entrance in the north-west corner, by the western end of Building II.

North East of the Buildings I and II site are three buildings, *Buildings III, IV, and V*, which are very similar to one another both in size and form. All are aligned E-W, though Buildings III and V are slightly angled SE-

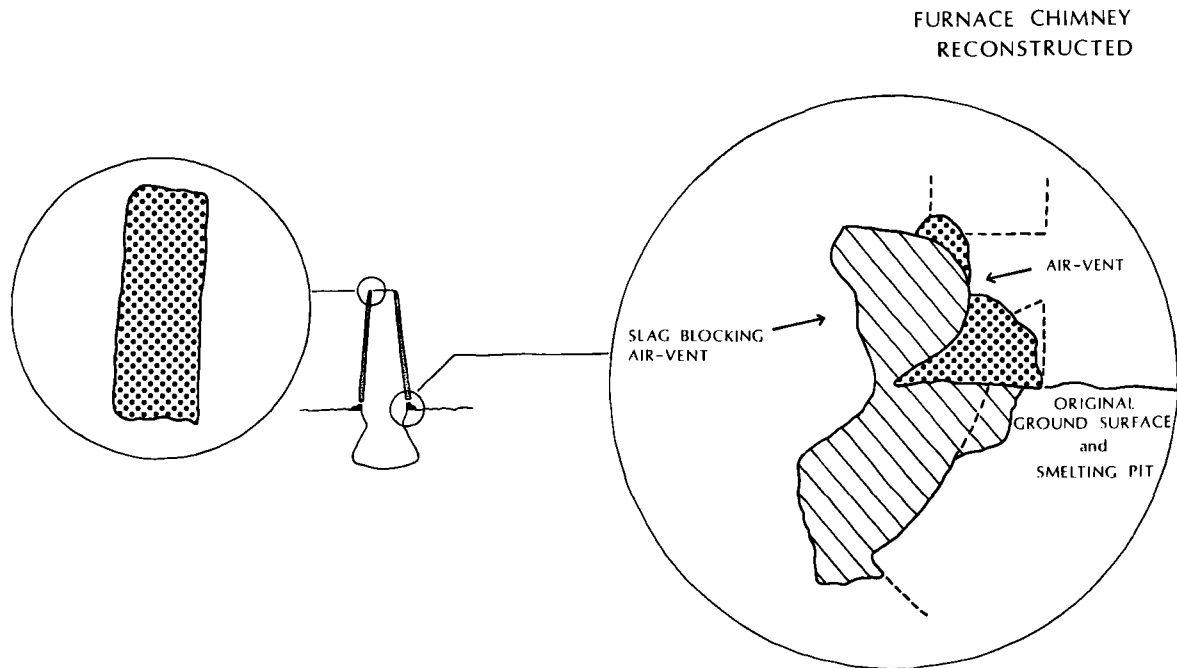


Fig. 4. Sections through slag-lump 538 and shaft fragment 1374. The position of the pieces are indicated on the schematized reconstructions. Clay stippled, slag hatched. Scale 1:2. Drawn by Jørgen Holm.

NW. They are between ca. 16 and 18m. long, and 5 and 5.5m. broad. Buildings III and IV have walls formed of single posts while those of Building V had doubled posts. Two or three transverse partition walls can be seen in Building V. All three buildings have straight sides and rounded gables.

The number of sets of roof-bearing posts are 5, 4, and 5 respectively. The three buildings are connected to one another by fences but do not form a single building-complex. It was unfortunately impossible to determine which buildings were contemporary by stratigraphic observations, so the interpretation of the relationship between the three buildings can only be based upon the ground-plan. Probably there are two building-complexes, each with a trapezoid courtyard. Fences consisting of double posts can be followed for some 13m. north of either gable end of Building III, the ends of which are connected by another fence. Immediately north of this complex is a fenced-in area of about the same size, bounded to the north by Building V, and to the east and west by rows of double posts which are direct continuations of the fences pertaining to Building III. This building-complex has a large opening in the north-east corner, but this can be attributed to poor preservation

in this area. On the basis of the continuous line of the fences, the two building-complexes are considered to be contemporary. But it is uncertain where to place building IV in this context.

Building IV is wholly inside the courtyard belonging to Building III, and in the west ends right at the enclosing fence. This implies that the building has been added to this complex, but its slanting position relative to Building III leaves it possible that this is a coincidence, and that Building IV could be earlier or later than the building-complex.

None of these three buildings have hearths or traces of stalls, so it is impossible to say anything about what functions the different parts of the buildings had.

About 20m. north of Building V is the last of the excavated long-houses, *Building VI*. Unlike the others this is not associated with any courtyard. It is aligned ESE-WNW, and measures 25×5m. The sides were straight and the gables rounded. The roof rested on 7 sets of posts, and it can also be seen that there was an entrance to the building in the middle of the southern side.

Besides the long-houses, there was also found a *sunken-hut*, (excavation no. 1425) positioned between Buildings V and VI. It appeared as a large oval feature

measuring 3.35×2.95m., and 50cm. deep. The sides of the pit were slightly curved inwards, and the bottom was just about flat. A particularly pronounced and clear post-hole was found at the east end, which went 46cm. deeper down than the bottom of the sunken-hut, while at the west end was a much disturbed feature which possibly marks a post-hole. There was also an oval post-hole about 18cm. deep in the middle of the hut. Loom-weights of unburnt clay and a number of potsherds were found in the fill of the hut.

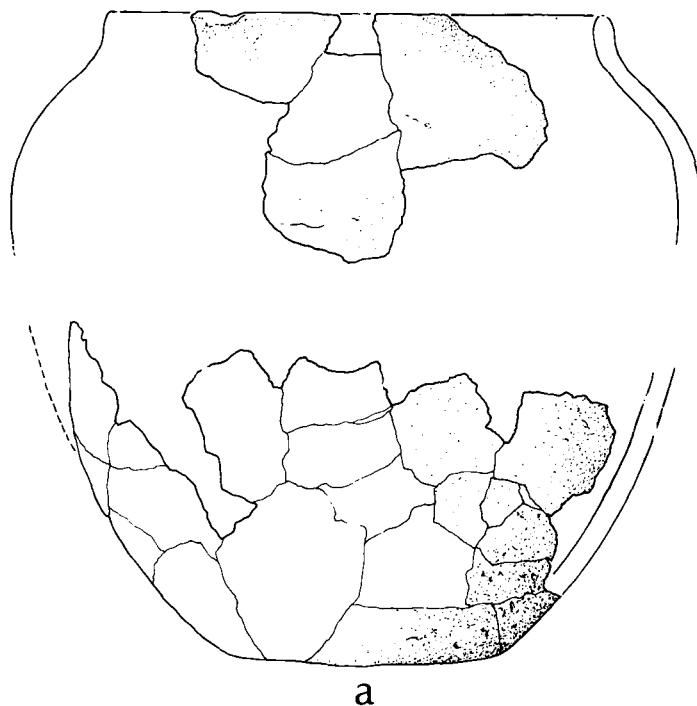
FEATURES ASSOCIATED WITH IRON-EXTRACTION

As was described, the initial occasion for the excavation was the discovery of some slag-pits. These features are situated on the edge of the site in a row west of Buildings III-VI. There can therefore be no doubt that they are contemporary with the buildings. 28 pits were investigated in all, with diameters varying from 50cm. to 1.05m., and depths between 10 and 50cm. The slag content varied from 3.5 to 156.5kg. In general the features were in a very poor state of preservation. Either they were largely ploughed out, or more or less disturbed. Only in a few cases were larger lumps of slag found in their original places. As far as one can judge, all the constructions are of the usual type, with a subterranean collection-pit for the slag (see Voss 1962).

A lot of charcoal was mixed up with the slag in several of the pits, together with bog-iron remains, rather small amounts of charred straw, and more or less scorched fragments of the furnace's clay cover, including a piece of the top of the funnel.

Remains of the funnel's base could also be seen on one substantial piece of slag, with the trace of one of the air-vents. The associated slag-pit was totally disturbed and tells very little about the construction of the furnace, but a cross-section of the interface between the funnel and the pit can be reconstructed from the piece of slag (fig. 4). From the curvature of the piece of slag the diameter of the furnace can be reckoned as about 55cm., and in its narrowest place the slag-pit was about 45cm. in diameter. Unlike other furnaces, there appears to have been no cylindrical section between the upper and lower parts of the pit.

The site of this iron-extraction complex was well chosen. The many meadow-lands of the area were undoubtedly rich in bog-iron. During the excavation, for



example, bog-iron was observed in the dredging of Kisbæk, some few hundred metres north of the settlement site.

PITS, etc.

Besides the slag-pits and the post-holes a small number of further features of varying sizes and depths were found. All contained some potsherds and may therefore be regarded as rubbish pits, although they could of course have originally had another purpose. The pits were particularly concentrated in the area south of Building III.

ARTEFACTS AND THE DATING OF THE SETTLEMENT

Apart from the remains of iron-extraction activity, only a very scanty find-material was produced by the excavation. In the main it consisted of potsherds, but a few iron fragments were also found, and a few burnt bones, a glass bead, a loom-weight, bits of burnt daub, and various grinding-, quern-, and whetstones. None of these artefacts can be closely dated, however, and the

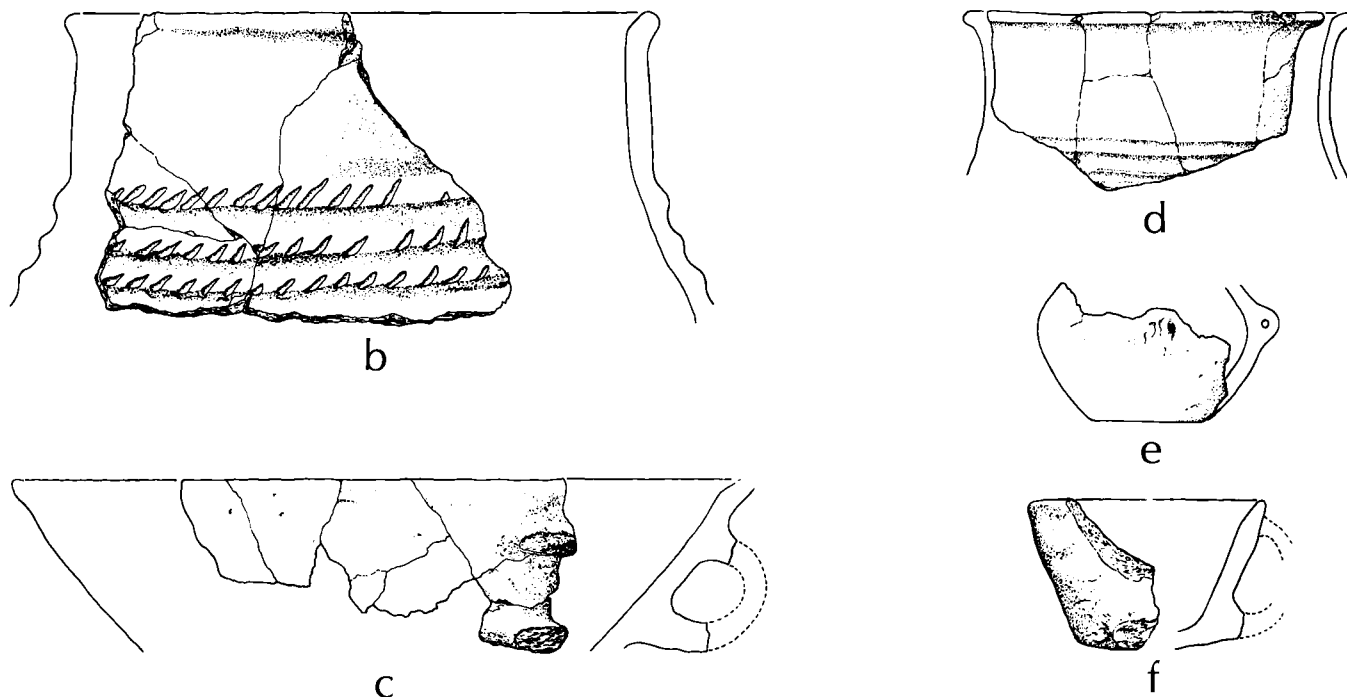


Fig. 5. Pottery from the settlement. d was found in the sunken-hut 1425, while b and e are from Building II. The others are not associated with any features. Scale 2:5. Drawn by Jørgen Holm.

dating of the settlement is therefore based exclusively on an assessment of the pottery (fig. 5).

As is usual on settlement-sites, the potsherds are greatly broken up, and only a few pieces of pots have been reconstructable. This has produced two small pottery cups, vessels with a high neck and out-turned rim, and large, globular vessels with a slightly flaring rim. Particularly characteristic of the ornament are broad grooves, and applied ridges with diagonal hatching can be seen on one neck-herd. But a very large part of the material is undecorated. Looked at as a whole the material has to be assigned to that broad group which is generally reckoned as the pottery of the 4th. and 5th. centuries. If the absence of characteristic 5th.-century elements such as narrow beakers with tripartite profile, vessels with pierced horizontal lugs, and vessels with high shoulder is taken into account, the find belongs to the first half of this period, although the scanty artefact-material does not encourage one to make a particularly close dating.

In contrast to the pottery, C-14 dates of charcoal from four of the slag-pits however indicate a slightly later date for the settlement:

K-3846 (Slag-pit 533) : 1510 ± 70 BP.

K-3847 (Slag-pit 532) : 1560 ± 70 BP.

K-3848 (Slag-pit 1363): 1500 ± 70 BP.

K-3849 (Slag-pit 1370): 1550 ± 70 BP.

Following Clark's calibration (*Antiquity* 1975) the dates fall into the calendar years between 420 and 470 A.D., while the same datings following Stuiver's calibration (*Radiocarbon* 1982) become a little later: 435–555 A.D. (3). The samples' own age must be added to this, which it has not been possible to say anything about.

If one takes the margins of uncertainty of both pottery dating and C-14 dating into account the divergence between the two forms of dating is not alarmingly large.

CONCLUDING REMARKS

The buildings at Mølleparken fit nicely with the increasingly large number of buildings from the 4th. and 5th. centuries which have been excavated in southern Jutland in the last 25 years. Mølleparken has in particular many features in common with the extensive 4th.-

and 5th.-century settlement at Vorbasse. This is not just a matter of the size and form of the buildings, but also the whole character of the site. Thus Mølleparken's regular building-complexes (Buildings I/II) with a long-house and (?) a smaller out-house are paralleled in several places in the Vorbasse settlement, and the peculiar fence construction, with heavy posts on the inside, also has close parallels at Vorbasse (4).

The most important economic foundation for the Mølleparken settlement was undoubtedly animal husbandry. Although no signs of stalls were found in any of the buildings, the situation alone, close by good pasture lands, shows that animal husbandry must have had great significance. A secondary activity was iron-extraction in furnaces. For this too the area has the natural prerequisites. The surrounding meadows produced bog-iron, and the meadows of the area were probably rich with trees for charcoal-production. The combination of animal husbandry and iron-extraction is again paralleled at Vorbasse, and also on other newly-found settlement-sites of the 4th. and 5th. centuries.

Translated by John Hines

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NOTES

1. Haderslev Museum parish register no. 71, Løgumkloster parish (Løherred, Tønder a.). The find was discovered by Niels Sterum. The excavation was financed by Løgumkloster Kommune. Gunhild Busch, Jørgen Christoffersen, Ole Grøn, Jørgen Holm, Flemming Rieck, and Niels Sterum took part for varying lengths of time.
2. A corresponding structure is known from Vorbasse, cf. Hvass 1978 p. 64f.
3. According to a letter from the Copenhagen C-14 Dating Laboratory of 3-1-83. Thanks are given to Dr. Henrik Tauber for permission to publish the results.
4. cf. note 2.

REFERENCES

- HVASS, S. 1978: Die völkerwanderungszeitliche Siedlung Vorbasse, Mitteljütland. *Acta Archaeologica* vol. 49. Copenhagen.
- 1979: 5 års udgravning i Vorbasse. *Mark og Monte* 1979. Esbjerg.
- 1980: Die Struktur einer Siedlung der Zeit von Christi Geburt bis ins 5. Jahrhundert nach Chr. *Studien zur Sachsenforschung* 2. Hildesheim.
- 1983: Vorbasse. The Development of a Settlement through the First Millenium A.D. *J.D.A.* vol. 2.
- JENSEN, S. 1978: Overgangen fra romersk til germansk jernalder. *Hikuin* 4. Århus.
- VOSS O. 1962: Jernudvinding i Danmark i forhistorisk Tid (*Prehistoric Iron Smelting in Denmark*). *Kuml* 1962. Århus (1963).