

Bulbrogård, the first aristocratic complex at Tissø – and a new approach to the aristocratic sites

Bulbrogård, der erste Befund von Herrschaftsarchitektur in Tissø –
und ein neuer Zugang zu Herrschaftsplätzen

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With 6 Figures

Abstract: With its unique, highly skilled architecture and precise layout, the first aristocratic building complex on the western shore of Lake Tissø, Zealand, Denmark, is quite spectacular. Semiotic analysis of the use of the architecture as a means of communication demonstrates that its position in the landscape and the building materials employed, such as heavy roof-bearing posts and whitewash, symbolize the power and strength of the owner. All this has to be seen in connection with the rise of the early kingdom.

Key words: Denmark, Zealand, Tissø, Bulbrogård, Danish Late Iron Age, Aristocracy, Aristocratic architecture, Chieftain's farmstead, Semiotics, Symbols.

Inhalt: Der erste Baukomplex von Herrschaftsarchitektur am westlichen Rand des Tissø-Sees auf Seeland in Dänemark ist wegen seiner handwerklich hochstehenden Architektur und seiner klaren Struktur der Anlage äußerst eindrucksvoll. Die semiotische Analyse des Gebrauchs von Architektur als Kommunikationsmittel zeigt, dass die Wahl des Ortes in einer Landschaft und die Verwendung von Baumaterialien wie etwa außergewöhnlich starker dachtragender Pfosten oder ein Kalkanstrich die Macht und die Stärke des Besitzers symbolisiert. Das alles ist mit dem Entstehen des frühen Königreichs in Zusammenhang zu sehen.

Schlüsselwörter: Dänemark, Seeland, Tissø, Bulbrogård, Dänische Späte Eisenzeit, Adel, Herrschaftsarchitektur, Herrenhof, Semiotik, Symbole.

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1 Tissø – an overview

For several years now, the site of Tissø in the western part of Zealand, Denmark, has been known as one of the most important aristocratic sites in Scandinavia. The National Museum, under the leadership of Lars Jørgensen and in cooperation with the local Kalundborg Museum, has carried out fieldwork at the settlement from 1995 to 2003. The finds and other results from these excavations are now being studied by several researchers.

The Tissø site, located on the western shore of Lake Tissø, has a good strategic position with the lake to the east, wetland areas to the west and north, and the small river Halleby Å to the south (Fig. 1). The Halleby Å and Åmose Å rivers provide access to inland areas as well as to the sea, in all a network of waterways totalling 62 km (PEDERSEN 2004). Along the lakeshore a small ridge rises about 5 m above the present level of the lake, which has been partly destroyed by dredging for gravel.

The settlement covers an area of about 500,000 m², a 200-300 m wide and 1500 m long strip along the shore of the lake and up the river. Approximately 81,000 m² have been excavated and, over the years, more than 11,000 metal finds from the topsoil have been registered. The nine years of practical research can be summed up briefly as follows (Fig. 2).

In the middle of the 6th century AD, an aristocratic complex with two timber-built halls was erected in the northern part of the settlement area at Bulbrogård. The

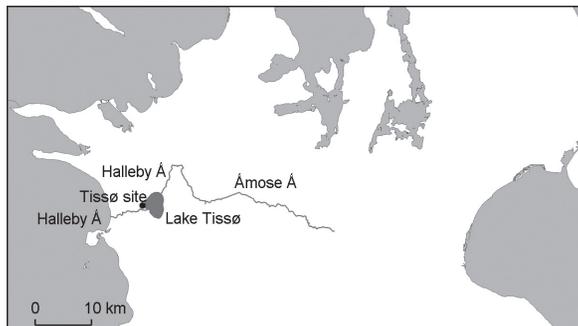


Fig. 1. Location of Tissø.

The site (black dot) is on the western shore of the lake, not far from the sea and with good access to inland areas (Graphics: J. Franck Bican).

complex was completed in a single phase and burned down to the ground sometime during the first half of the 7th century AD. A new complex, also with timber-built halls, was erected about 500 m to the south at Fugledegård during the second half of the 7th century AD. The complex increased in size and 3-4 construction phases can be identified. The Fugledegård complex existed until the middle of the 11th century AD when the buildings were torn down and the settlement areas left to decay (JØRGENSEN 2003; 2005; JØRGENSEN *et al.* 2004).

Along the lakeshore there were workshops in the form of pit-houses and, along the Halleby Å to the south, there were numerous traces of both workshops and market activities. These activities also ceased in the middle of the 11th century AD.

2 Bulbrogård

In 1995, excavation began with trial trenches in the northern part of the settlement at Bulbrogård. Here, the southern part of a fence, part of a smaller fence and two roof-bearing posts with wall trenches were discovered. In view of these structures and the metal objects found in the topsoil at the same time, it was believed that the Bulbrogård site was just a normal farm of the late Viking Age (JØRGENSEN & PEDERSEN 1996, 29 f.; JØRGENSEN 2002, 225).

Consequently, excavation of the site was left to the end of the fieldwork in the research project. As a result, the end of the fieldwork unexpectedly revealed the very beginning of the site. The supposed late Viking Age farm turned out to be the first confirmed aristocratic building complex at Tissø.

The aristocratic complex at Bulbrogård consisted of two halls – a larger one (house 3) and a smaller one (house 4). Between these two halls was a rectangular fenced enclosure (fence BU2) with a small building (house 5) at its northern end. The whole was surrounded by a palisade (fence BU1). The complex had been built on ground that had not previously been used for building purposes (Fig. 3).

Most of the traces of the buildings are preserved in such a way that it is quite possible to have an idea of their layout and construction. The only problem faced in determining the exact size and layout concerns the surrounding palisade (fence BU1). This is preserved in its full length of 123 m only on the southern side; about 20 m remain of the eastern and 78 m of the western

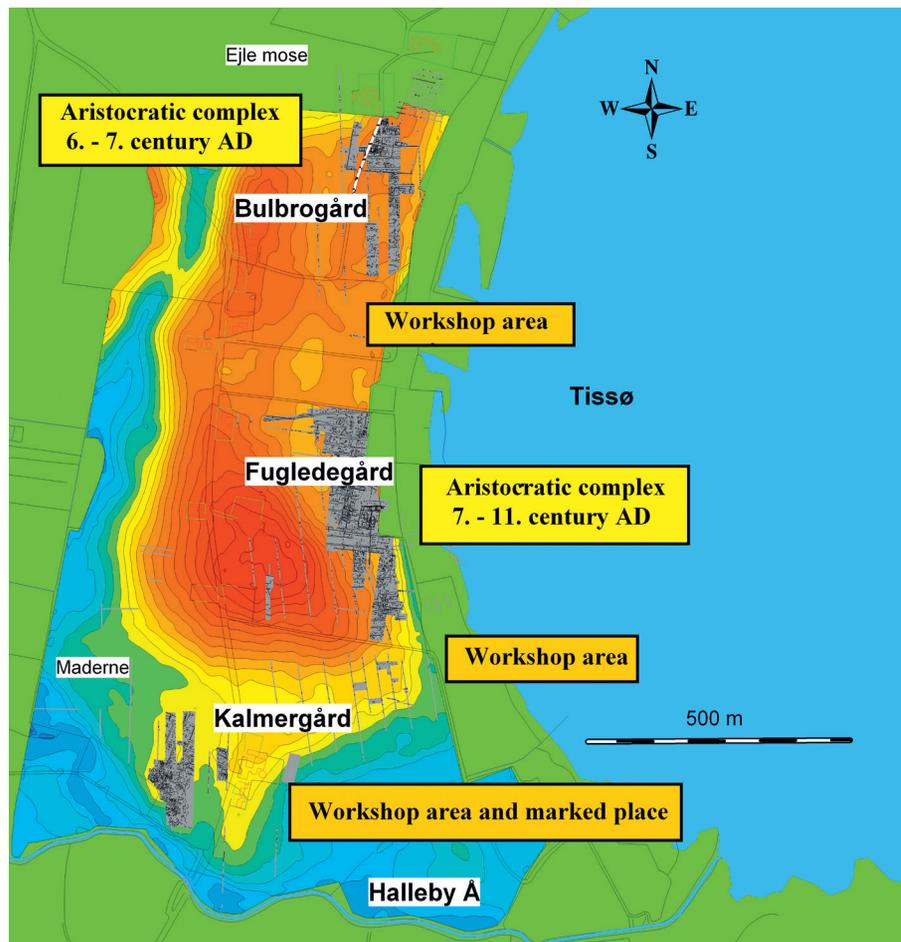


Fig. 2. The results of excavations between 1995 and 2003. About 81,000 m² (grey areas) have been excavated. The settlement was located on the shore of Lake Tissø near the small river Halleby Å. In its active period, the site was surrounded by wetlands to the north and west. The first aristocratic complex was built at Bulbrogård and later transferred to the site at Fugledegård. There were workshop areas along the lakeshore and, to the south but still north of the Halleby Å, there are traces of further workshops and a market place (Graphics: J. Franck Bican).

sides but none at all in the north because of modern disturbance. If the palisade had surrounded an area to just north of fence BU2 between the two halls it would have enclosed an area of about 10,000 m². If the smaller fenced enclosure had been placed exactly in the middle, the palisade would have enclosed an area of about 13,000 m². In both cases it would have surrounded an area several times larger than either ordinary contemporaneous farms or even larger than normal farms.

The palisade (fence BU1) was made in a way unseen so far. It consisted of three rows of posts. In the middle were vertically set planks, with rectangular posts on the inside and semicircular posts on the outside. The only entrance is located on the fully preserved southern side of the palisade: it is not more than 1 m wide with two

heavy posts on each side. If one had entered the complex through this entrance and continued straight on to the north, one would have walked directly into the big hall through its southern door towards the eastern end of the building (Fig. 3).

The big hall (house 3) was 38 m long and between 5 and 7 m wide due to the slightly curved long walls. It had six pairs of heavy roof-bearing posts. In each corner there were large posts slanting towards the ends of the house. The hall had a total of three doorways – one in the west and two in the east. The doors in the east were placed opposite each other – but not quite exactly. These doorways were the only parts of the complex that underwent reconstruction and modification. Inside the house, near the northern doorway, is what might be

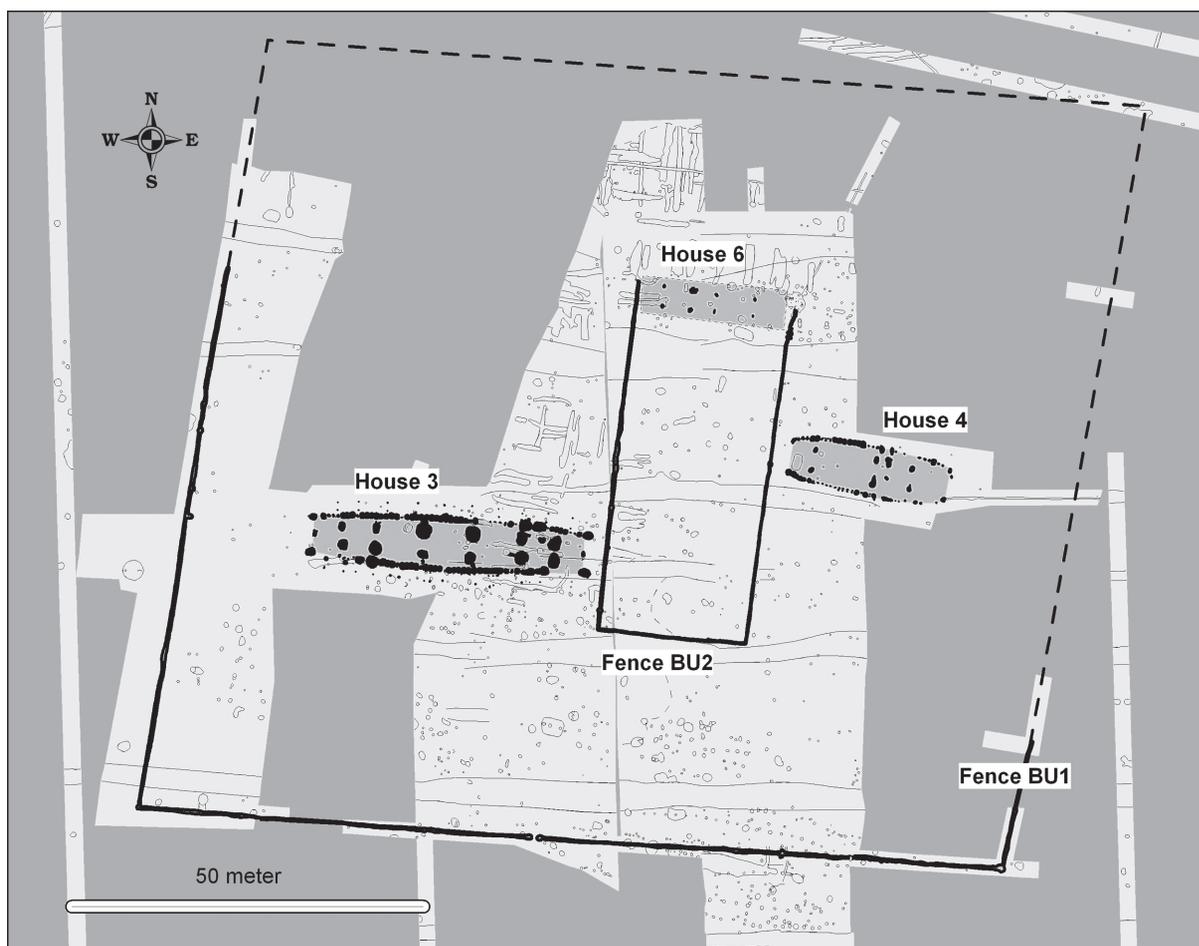


Fig. 3. The excavated areas at Bulbrogård: the aristocratic complex is highlighted (Graphics: J. Franck Bican).

interpreted as a mark left by a staircase or ladder. Outside the building were some posts in a more or less regular pattern, which could be interpreted as the remains of a terrace or platform.

The layout of the hall (house 3) indicates highly skilled and very precise architectural expertise. The construction and design of the building is unique but has recognizable elements.

Although there are no signs of room partition it is possible to make some suggestions. It is most likely that room partitions were designed in conjunction with the doorways. This means that there were probably small rooms – connected to the entrances – and maybe an additional, second, smaller room at each end of the hall. This would result in a large hall (German: *Saal*) with a length of 20 m in the centre of house 3.

The small fenced enclosure (fence BU2) was 50 m long and 21 m wide. The fence was made of quite heavy rectangular posts, 40 or 60 cm wide and about 15 cm

thick. These posts were positioned with c. 40 cm gaps between them, so it is hard to say anything about the exact construction. In the north, the fence joined the western and eastern walls of a building (house 5) with four pairs of roof-bearing posts in such a way that this house actually formed part of the fence. This fence, too, is a unique construction and the heavy posts indicate that its purpose was somewhat different from normal.

The smaller hall (house 4) to the east of the fence was 23 m long and between 4.5 and 6.5 m wide. It had only three pairs of heavy roof-bearing posts with a distance of 9 m between the pairs in the western end. The small hall also had posts in each corner, but here they were standing upright rather than slanting. The only other parallel to the big hall (house 3) is that the small hall also has a mark left by a staircase or ladder, positioned in exactly the same place inside the northern doorway.

Other than the corner posts and house ends, the two halls were constructed in the same way. However, the big hall is better preserved.

3 The architecture and building materials

The roof-bearing posts in both halls were inserted to a depth of 1.5 m below the surface. The posts in the big hall (house 3) were between 70 and 85 cm in diameter, except for one pair where the posts were 108 and 116 cm in diameter. These measurements tell us, that this was a building of impressive height. In the small hall (house 4) they were “only” 65 cm in diameter, which is still much heavier than the roof-bearing posts in average buildings of the Iron Age and Viking Age.

The filling in all the post-holes in both halls consisted of three layers:

1. a compact layer at the top made up of burnt building material, mainly wattle and daub, plus some charcoal – this was the only layer containing finds;
2. the imprint of the decayed post;
3. the filling at the base of the post – this layer was totally sterile.

The posts in the big hall (house 3) consisted of half tree trunks below ground, trimmed into rectangular posts above the surface. The posts in each pair slanted slightly towards each other. This is not a coincidence or the result of decay, but a conscious decision based on highly skilled building expertise. The purpose of the slanting posts can be part of the structural design as well as an architectural trick – the first does not necessarily exclude the second. Slanting the posts would stabilize the construction and thus make the building stronger. The architectural trick is that the room would seem much higher than it in fact was because of the slightly slanting posts. This, of course, requires an open inner roof. In this case, one can visualise this great hall (German: *Saal*) with the roof-bearing posts rising to an impressive height. It must have been a sight that

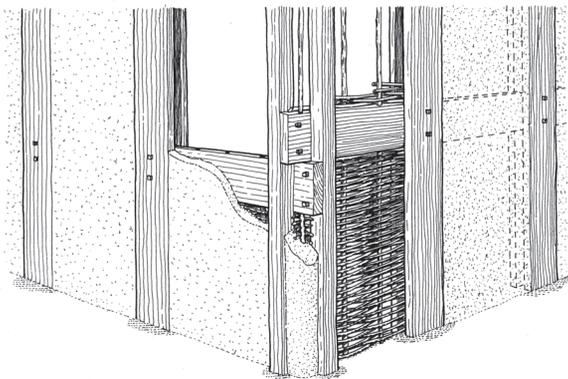


Fig. 4. The walls of the halls at Bulbrogård were constructed on the same principle as the reconstruction of the wall of house B4 at Cowdery's Down (after MILLET & JAMES 1983, 228 Fig. 59).

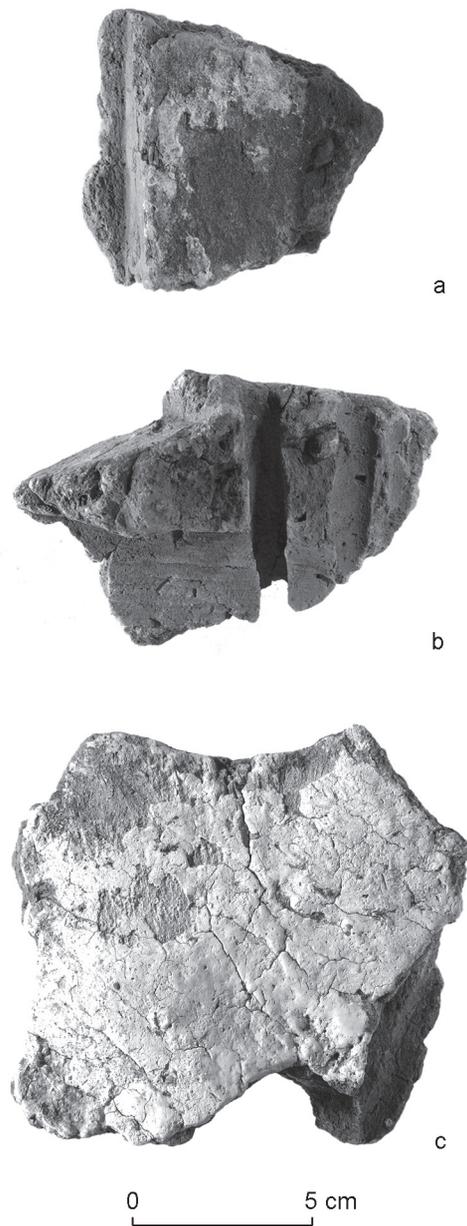


Fig. 5. Examples of wattle and daub from the big hall, house 3, at Bulbrogård.
a Wattle and daub with the remains of whitewash and the imprint of a plank. –
b A piece with plank and wickerwork imprints. –
c On some pieces the whitewash is well preserved with a thick layer consisting of several coats
(Photo: Pia Brejnholt Jacobsen, National Museum, Copenhagen).

aroused admiration on the part of any visitors. In connection with the great height of the building (actually both halls), the ladder or staircase at the northern door

could have led to some kind of gallery, from which one could look down on the activities that were taking place in this spectacular room.

The long walls in both halls were constructed in the same way, but they are better preserved in the big hall (house 3). Pairs of planks with gaps between them were set in a ditch at intervals of about 20-30 cm. Between the planks was mud-covered wickerwork. A wall constructed on the same principle (house B4, period 4) was discovered at Cowdery's Down in England (Fig. 4 – see MILLET & JAMES 1984, 205 ff., 227 ff.).

A large number of well-preserved pieces of wattle and daub from the layer containing the building debris in the postholes have imprints of wickerwork and planks (Fig. 5). The pieces of wattle and daub were covered with whitewash on the flat side. After an examination of the pieces, it can be fairly confidently said that the

walls were painted with whitewash both inside and outside.

An analysis of the wattle and daub pieces, carried out by the Conservation and Restoration Laboratory at The National Museum of Denmark, shows that the painting technique was the handiwork of skilled craftsmen. A layer of whitewash was applied while the mud was still wet. Because the mud was still wet, it combined with the whitewash and thus provided good adhesive surface for the whitewash (CHRISTENSEN & SCHNELL unpublished).

The posts and how they were employed as well as the construction of the long walls and the layout of the buildings demonstrate that an expert architect and highly skilled craftsmen were involved. Their aim was certainly not only to erect a spectacular building complex but also to communicate an ideology.

4 Aristocratic architecture and its communication – a semiotic analysis

The focus on aristocratic complexes in Scandinavia from the late Iron Age and the Viking Age, has so far concentrated mainly on out of the ordinary artefacts made of precious metals or artefacts and structures that can be associated with religious activities. In publications relating to such sites, i.e. aristocratic complexes, the halls have generally been discussed from the point of view of their function.

Another approach to understanding these sites and their buildings is to examine the communication lines within these aristocratic complexes themselves. Here, the principal theoretical method to achieve this will be Umberto Eco's theory regarding architecture and semiotics. Semiotics is the study of signs and symbols. Eco is of the opinion that every cultural phenomenon can be seen as a system of signs and, furthermore, that culture is first and foremost communication (Eco 1972, 295 ff.).

A sign contains within itself another sign, which in semiotics is described as denotation and connotation. Denotation represents the relationship between the expression and its content – and connotation can be described as the meaning of the sign beyond its basic purpose. In architecture, the basic purpose is to be functional. As architecture can be seen as a cultural phenomenon, it follows that it has both a denotative and a connotative content, i.e. a literal and a symbolical meaning – in architectural terms that will be the practical function and the ideology the building communicates. The connotative meaning can be understood as a system of codes, which can be comprehended as

what can be understood without being spoken. The unspoken is the kind of understanding a person has in the context of the time, the culture and the society in which he or she lives. This means that it is of the utmost importance that the message to be communicated be in a "language" that the receiver can understand. For example, it would not have made sense to build a pyramid or a Chinese palace on the western shore of Lake Tissø around 550 AD. The messages and symbolical meaning in pyramids and Chinese palaces would not have been comprehended by the people in the area or in the region as a whole.

In a semiotic analysis, a site like Bulbrogård communicates on more than one level. The site itself can be seen as a symbol of the owner or the ruler. Furthermore, the architecture on the site can communicate the owner's ideology. This is done by using different kinds of architectural effects. One such effect lies in the placing of the buildings in the landscape. A symbolical sense of power is achieved by placing the halls in an elevated position. This not only transmits a symbolical message but also communicates in a physical sense because one has to look up to see it and walk uphill to get there. Thus, the landscape and the placing of the complex are a part of the architectural effect.

Another aspect of the symbolical meaning in the architecture concerns the building materials. One of these is wood. The building complex at Bulbrogård stands out as a resource-demanding place and the consumption of trees must have been enormous. As an example, the

outer row of posts in the surrounding palisade (fence BU1) consists of halved logs. If the minimum size of the palisade is considered, i.e. an enclosed area of around 10,000 m², and the posts are estimated to have a length of 2 m, it would have been necessary to cut down 426 trees – and this for only one of the three rows in the palisade. It is already the equivalent of a small forest.

One thing is the quantity of building materials, another is the quality. Examples are the posts that stand out because of their extreme size, or the roof-bearing posts in both halls at Bulbrogård. The posts in the big hall (house 3) were between 70 and 85 cm in diameter, except for one pair with diameters of 108 and 116 cm. The roof-bearing posts in the small hall (house 4) were “only” 60 cm in diameter. All these posts are much larger than ordinary posts, and analyses show that they were made of oak. This is no surprise as oak is a very elastic and durable type of wood and therefore a very suitable building material (JACOBSEN *et al.* 1944, 30; ZIMMERMANN 1998, 50 ff.).

Trees of such dimensions need ideal conditions in order to grow to the right height and diameter. They must not be allowed to grow too thin or too twisted, so somebody has to take care of their environment and ensure that the trees have adequate space to grow tall and straight. Moreover, the trees must not be cut down before they have reached the right height and diameter. It is impossible to estimate the age of the trees used for the roof-bearing posts at Bulbrogård, because the diameter of a tree very much depends on the growing conditions: soil type, weather conditions, local climate etc. Oak trees from the Bregentved estate, Jutland, for example, are 85 years old and have a diameter of 52 cm at chest-height. On the Corselitze estate, Falster, 115 year-old trees are 25 m tall with a diameter of 48 cm at chest-height (MØLLER 1965; HOLMSGÅRD 1999). These examples give an indication of the age of the trees used at Bulbrogård for roof-bearing posts and the symbolical meaning attached to the use of trees of such dimensions. Their size and use as roof-bearing posts carry a message about ownership, rights, domain and power – regardless of whether they were a practical necessity for the existence of the building. The person who owns and controls the trees controls the resources.

A semiotic analysis of the dimensions of the roof-bearing posts enables us to read a political message of domain and control in the consolidated power symbolized by the age of the trees.

If we return to the wall construction and building materials, the final material used was whitewash. To

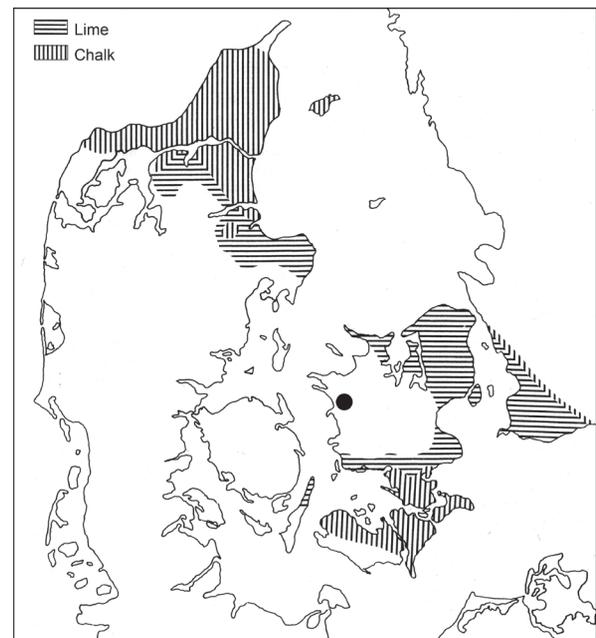


Fig. 6. Distribution of chalk and lime in Denmark.

Black dot: Bulbrogård.

As can be seen, Bulbrogård is situated in an area devoid of lime (after KJÆR 2001, 8).

make whitewash, limestone is needed, which is first burned and then slaked. To slake the burned limestone, water must be added. When these two materials are combined, a process begins that is not without danger. The mixture gets so hot that there is a risk of serious burns if touched. The slaked lime then has to mature in an airtight container for at least two years but, like wine, the longer the better. The transportation of the whitewash also requires airtight containers and the long maturing process also demands a good deal of planning.

Whether whitewash was reserved for the highest strata of the society, the aristocrats and the wealthy, cannot be said with certainty. Whitewash has been known in Denmark almost since the Bronze Age but in very small amounts and only from a handful of locations. However, the idea of some organized or controlled use of this material is appealing.

Indeed, if the distribution of limestone deposits in Denmark is considered, it is unmistakably clear that there are no sources of lime near Bulbrogård (Fig. 6). It might therefore be possible to argue that the building materials also reflected the power of the ruler: the whitewash as well as their position in the landscape made the halls more visible. The existence and use of whitewash – with the long and complicated production process also in mind – delivers a message about the possibilities and character of power.

5 Conclusion

The aristocratic complex at Bulbrogård must undoubtedly be seen in close association with the origin of the kingdom in Denmark around AD 550. The Bulbrogård complex reflects a new kind of power – the kingdom. To emphasize this new form of society, manifestations of power like Bulbrogård were built on virgin ground in southern Scandinavia to communicate the message of the new order. In these manifestations are messages of strength and power, and placing them high and visible in the landscape acts as a part of the architecture.

The Bulbrogård complex is much larger than the average dwellings of the period. It has a very strict and precise layout and appears to be a well-planned and highly estimated architectonical work. Bulbrogård must have

stood out for its impressive consumption of resources and as a monumental structure. The complex seems unique but, at the same time, certain building elements are recognizable. This recognition is the key to the communication of ideology as transmitted through the architecture. If you do not understand the language, you do not understand the message.

It is this early kingdom that is described in Beowulf, and it is with reference to this society with its cross-country alliances and contacts that we shall look at the Bulbrogård complex. This is the society that we see represented in Bulbrogård, from which we must decode the messages waiting to be discovered in the architecture.

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