Society and Nature – forests, trees and lures

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Since the 1980s the study of the attitude of prehistoric societies to the landscape has meant that new dimensions have been integrated in research. It is believed that the landscape was not used exclusively as an economic resource; the shaping of the landscape also had an important mental dimension. Considerable parts of the landscape were thus ritualised in some way. Through the construction of monuments and the utilisation of topographical conditions, people tried to achieve effects such as surprise, fear and affirmation. Archaeologists have also become more aware of the way that people’s world-view changed along with changes in the landscape. The study of the landscape as an active and interactive part of the world-view of people has become an important part of archaeological research. The composition of the vegetation could have had great importance for how natural parts of the landscape as well as artificial monuments were integrated in the cosmology. Different aspects of the relation between prehistoric societies and their physical environment are presented. These include the elm decline at the Mesolithic/Neolithic transition, the human impact on the forests during the Neolithic, and the marked ecological changes at about 1000 BC.

KEY-WORDS: landscape, palaeoecology, rituals, Mesolithic, Neolithic, Bronze Age

INTRODUCTION

Ten years ago the results of the project The cultural landscape during 6000 years in southern Sweden were finally published (Berglund 1991b; Larsson et al. 1992). As an interdisciplinary project between representatives of the natural sciences as well as humanities, the initiators were greatly influenced by studies related to problems typical of the New Archaeology when it started in 1982 (Berglund 1991a). There was a great interest in palaeoecological studies, since these were expected to lead to a better understanding of societal phenomena. Strangely enough, this interest chiefly embraced Stone Age studies. Palaeoecological research should really be of greater importance for archaeologists concentrating on the later part of prehistoric times, when the relation between landscape and society must have been much more noticeable and complex.

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Even if most of the research was conducted during the late 1980s, not much of
the post-processual thinking influenced the interpretation of the archaeological
aspects of the project. Most of the relations of human society with the environment
were looked upon as different modes of adaptation to changes of natural resources.

The replacement of the word adaptation by response might look like a change
of minor importance or even unnecessary—but it was a change of major import-
ce! The post-processual trend was in large measure a reaction against this view
of humankind as an inactive being on a par with the other mammals. More import-
ance is attached to societal relations, and the physical environment became some-
thing that humans exploited and manipulated (Hodder 1982). Sometimes the post-
processual orientation was taken so far that the significance of natural changes was
played down at the expense of cultural phenomena, and in some research camps it
was totally denied (Shanks and Tilley 1987; Thomas 1991). This meant that the
interest in palaeoecological research declined considerably.

Now there are clear signs to suggest that the Anglo-Saxon ideas which are of
such significance for Swedish archaeological research can once again view natural
conditions as being of interest for cultural scholars as well. Yet this does not mean
a return to the earlier situation. The new view of humankind and our physical envi-
ronment has become much more multifaceted. It is perceived as being more com-
plex, in a way that I hope will be evident in what follows below.

THE PERCEPTION OF THE LANDSCAPE

Since the 1980s the study of the attitude of prehistoric societies to the landscape
has meant that new dimensions have been integrated in research. It is believed that
the landscape was not used exclusively as an economic resource; the shaping of the
landscape also had an important mental dimension. The perception of the land-
scape is changed by human impact, but also as a result of natural processes, such as
shifting relationships between land and water in connection with transgressions and
regressions. But there are other aspects: for instance, the domestic in relation to the
wild environment also became an interesting structuralistic pair (Hodder 1990).

Human activities can be exemplified by studying the way in which it is believed
that the landscape was shaped when people built various kinds of burial monu-
ments, which in most cases were created to be seen, to exert dominion and mastery
in various ways (Bradley 1993). If a burial monument on a height is to impress, the
vegetation must give room for the dominant position to be obvious. If a monument
in a high position was located so that it could be associated with prominent natural
phenomena, such as remarkable cliffs, cave openings, or special places on the course
of a river, the man-made monument could be incorporated into nature’s own mon-
uments. Considerable parts of the landscape were thus ritualised in some way. Through the construction of monuments and the utilisation of topographical conditions, people tried to achieve effects such as surprise, fear and affirmation.

An example of this is the location of an Early Neolithic long barrow at Örnakulla in south-west Scania. From the west, even with a considerable amount of vegetation, the monument was visible within a narrow corridor more than two kilometres long, which ends at the location of what was perhaps the biggest settlement site in the period when the long barrow was built (Fig. 1). From the south, however, the monument was not visible until one had passed a hill less than a hundred metres away from it. The people living to the west thus had the monument in constant view, whereas those who approached it from the south, the only way to reach the structure dry-shod, did not see it until they were virtually right beside it.

![Fig. 1. The location of an Early Neolithic long earthen barrow (marked as a solid rectangle) at Örnakulla in south-western Scania. The broken line marks the visibility of the monument. The wetland in the vicinity of the barrow is shown as a hatched area.](image)

Archaeologists have also become more aware of the way that people's worldview has changed along with changes in the landscape: a landscape with narrow forests paths between open areas gives a completely different notion of the surrounding world than being in an open landscape where one can survey a considerable part of the environment (Barrett 1994).
The study of the landscape as an active and interactive part of the world-view of people thus necessitates that certain parts of the vegetation were kept short along certain lines of sight. Not many scholars have actually thought about the amount of labour that is needed to keep sometimes large areas free of high vegetation. Even if most of the clearing of land was the effect of pasture and arable field, it can hardly have been achieved without intentional changes to the forest.

FORESTS, TREES AND SOCIETY

There is very little evidence of primal effect on the vegetation by Stone Age society. We know from pollen analyses that people changed their environment. How it happened and how intensive it was is rarely exemplified. However, one example gives a hint of how people might have arranged not only the arable land or pasture-land but the forest as well. At Alvastra in central southern Sweden a construction consisting of two square wooden platforms joined at an oblique angle was built during the Middle Neolithic, about 5100 cal. BP (Browall 1986). These two square parts are in turn divided into several rectangular “rooms”, each with a hearth. Dendrochronological studies tell us that the structure was built on a single occasion, as the piles for the frame of the platform were all driven into the mire at the same time (Bartholin 1978). Activities on the platform went on for a total of 42 years, but this included long periods when parts of the platform were unused. The structure has been viewed as an assembly place for two social groups, for example, two kin groups, where each family had its own rectangular cell.

The dendrochronological study showed that there is an interesting use of trunks as support for the platform (Bartholin 1978). Apple trees and elm trees are the oldest trunks used, in addition to trunks from oak which seem to have started their growth about 40 years before the construction. Large amounts of hazel were used for the platform, and the size of the trunks indicates that they grew in the same open forest and are shoots from managed bushes (Bartholin 1996).

Later additions were made with the support of oak trunks that started to grow at the same time as those used in the initial construction. They originate from a forest that seems to have been more and more sparse, with the result that the trees grew larger. This has been interpreted as showing that the platforms were built of trees from the same part of a forest. This ought to mean that the planning of the platform building should be traced back about 40 years before it was realised, when an area with sparsely growing apple and elm trees was set aside for mainly oak trees to grow. It might have been an intentional choice of trees that were allowed to grow. This may be an example of the effect of people on the formation of new forests. By using axes, fire and later browsing or grubbing species of livestock, the “natural” forest could be intentionally structured.
From examples in late prehistoric Norse mythology we are familiar with trees or groves having had a special significance in the cosmology. Yggdrasil: the world tree as in other cosmologies; the first two humans were formed of a tree and named Ask (ash) and Embla (alder); Ydalir: the valleys of the yew-trees, the residence of the good Ull.

As far back as the Mesolithic, poles of exceptional size had a special meaning. That huge poles might have been of ritual significance is indicated by the large post-holes found close to Stonehenge and dated between 9200 and 8100 BP (Allen 1995). A grave at Skateholm I, southernmost Scania, consisted of a pit, about 2 m in diameter and with a depth of more than 1 m. A small amount of cremated human bones was found at the outer edge of the pit. The shape of the feature corresponds to a huge post-hole (Larsson in press). One cannot avoid drawing parallels to the mortuary poles of the North American Pacific coast (Malin 1986). These poles had a cavity in which the cremated bones of chiefs were placed. A similar mortuary practice is known from northern Australia.

The composition of the vegetation could have had great importance for how natural parts of the landscape as well as artificial monuments were integrated in the cosmology. Just as monuments could be highlighted by a corridor or area with low vegetation, they could also be hidden by certain copses or even a few lines of trees. An example is the Neolithic cursuses in southern England (Tilley 1994; Whittle 1999). With just a few rows of trees the focusing of the area within the low walls of the walkway might have been intensified.

The impression that might be achieved by a line of sight through the vegetation or by using it for cover could easily be changed by deliberately letting the trees grow on some occasions or cutting them down on others. Using the vegetation to conceal the impressiveness of a monument could have been as efficient as tearing it down.

The Stonehenge Avenue has an interesting direction. For a certain distance it is oriented towards the west, in the wrong direction to the monument. But some 500 metres from the monument it takes a sharp turn and Stonehenge is in focus (Fig. 2). The main purpose was to orient the ceremonial road according to the summer solstitial sunrise (Burl 1987: 140f.). If trees covered the area between the avenue and Stonehenge, the overwhelming feeling or surprise on catching sight of the monument after the turn must have been intensified.

The importance of trees growing alongside a ceremonial road is also evident at Rössing in central Sweden, dated to the Viking Age (Pásztor et al. 2000). With high trees alongside the road running straight for more than 500 m, the effect at the winter solstice would have been remarkable (Pásztor et al. 2000: fig. 3).

These might be regarded as ideas of little worth since they may not be possible to test. But traces of trees, especially of tree falls, have been identified, so problem-oriented excavations where extra attention is devoted to spotting marks of trees and large bushes might in some instances give an answer to even seemingly unrealistic hypotheses.
The transportation and shaping of stones and their arrangements and rearrangements in monuments have been much-debated questions. That stone in most monuments was preceded by wood such as earthen long barrows and henges has not received the same interest. The same rules and ideas as attached to the stone might have been linked to the wood. Questions such as whether certain species of trees were used, whether different species of trees were arranged in special relations or if the wood for different constructions might have been transported from far away are rarely considered. As an example, Stonehenge has been described as the epitome of timber circles (Gibson 1998).

That parts of trees played an important role in rituals is also evident from the find of the henge named Seahenge, where a root placed upside down marked the centre of the circle (Miles 2001).

**NATURE AND CULTURE**

One may ask what is meant by natural resources in the present theme. Several different variables can be considered, but in view of the special character of this symposium, I will concentrate mainly on the resources which depend on different climatic conditions.
Even in this limited selection there are many aspects of the relationship between nature and culture. One such aspect is that, with the aid of counterfactual historical research, one can speculate about the significance that the development of the prevailing interglacial had for the development of culture. Some scholars consider that the last 10,000 years may have seen the least variation as regards climatic changes over the last 250,000 years. If the present interglacial had seen as much variation as the previous Eemian interglacial appears to have had, how far would human development have come? Would it have meant stagnating culture or phases of pronounced innovation to cope with rapid environmental changes?

One can see the result of the really obvious climatic changes during the Younger Dryas for the social structure in much of the world. They led to considerable transformations in the existing hunting and fishing cultures, which thereby had a significant direct or indirect influence on the development of agriculture and animal husbandry in several parts of the world. If these distinct changes had not occurred during the Younger Dryas, it is highly probable that the new forms of livelihood would have been greatly delayed.

The Mesolithic is often regarded as an unproblematic period as to the relation between society and environment. The changes of the latter are not viewed as an important or even noticeable agent for cultural changes. The interest has been focused on aspects of general importance for hunter-gatherer societies such as pure economic elements. Often the social-environmental situation is perceived as unproblematic. The question is whether this was the case.

In several palaeoecological studies of north-western Europe a dramatic climatic decrease has been found at ca. 6200 BC cal., which in uncalibrated values is equal to 7400 BP. Interestingly enough, this date is contemporaneous with the transition from the Early to the Late Mesolithic. The earliest large base camps on the coast as well as in the inland and cemeteries appear at this time. These elements indicate the increasing complexity of the social structure. A link between climatic change and social change cannot be proved, but the chronological relation is of such interest that further analysis should be undertaken.

Attention should also be paid to the fact that Mesolithic occupation layers are found in several Scanian lakes at a level of one to two metres below the present water level. One has to consider that the present level is the result of intensive drainage since the 19th century, which caused a lowering of the water level by one and often two metres. Judging by the location of the late Mesolithic sites with an even lower water table, most lakes were missing or had a very reduced outlet. This situation must have made the coastal zone even more attractive for habitation in order to give a foundation for social changes. Climatic changes occurred during the Mesolithic, and their social implication should not be neglected.

At the same time, we have to take into account the indication of human influence on the environment. An intentional deforestation by burning of the vegetation
in order to clear the way for grazing and browsing has been discussed for several years (Jacobi et al. 1976: 315f). Deliberate, frequent and controlled burning of the reed belts around shoreline settlements is indicated already during the Pre-boreal in order to increase reed production (Mellars and Dark 1998).

That people deliberately changed the forest for their own purposes in the Mesolithic is also evident from the choice of small trunks used for fish traps. In certain cases with excellent preservation, long fish-catching arms of wattle stabilised by trunks have been found. Straight shoots of hazel and lime are rare in an unexploited forest. The large number demands clearing and cutting of trunks, in order to facilitate the growth of new shoots from the stump (Christensen 1997).

THE ELM DECLINE AS A SIGN FROM THE GODS

In research into the relation between human activities and changes of the environment in the Ystad Project, mentioned in the introduction, the study by Björn Berglund (1969) had a major impact for a multicausal theory. The identification of four prehistoric expansion phases is still of great importance for the study of the relation between natural resources and human responses (Fig. 3).

![Diagram showing the timeline and plant distribution for Bjärsjöholmssjön in southern Sweden with the identification of four prehistoric expansion phases. From Berglund 1969.](image)

In Scandinavian archaeology there is general agreement today that the social changes in the Mid-Holocene showed considerable dynamism. The main differences of opinion, however, have concerned the interpretation of different excavation results (Rowley-Conwy 1984; Jennbert 1986; Zvelebil 1986; Larsson 1987; Madsen 1987; Nielsen 1987; Price et al. 1995).
In many surveys of European prehistory one can glimpse surprise on the part of scholars that tillage and animal husbandry did not spread to Scandinavia earlier than the Mid-Holocene (Hodder 1990; Whittle 1996). Agricultural societies in the form of the Linear Band Pottery culture existed as early as 5000 BC (cal.) in the northern parts of continental Europe. The suggested explanation is that the agricultural communities were confronted with hunter-gatherer communities with a large population and very stable conditions based on a good supply of food which was the foundation for a well-functioning social system. The introduction of farming required much more labour, for which there was no incentive for many generations.

In all societies there are not only economic conditions but also a world-view with direct and indirect application to the social order. The world-view can withstand a great deal of change caused by internal conflicts and external influence. One or usually several interacting factors can lead to increased pressure on the preconditions – both actual and mental – for the existing social structure, so that a society is forced to accept such radical changes that they cannot be accepted within the given social framework. This leads to the formation of new societies based on new conditions and a revised world-view. This appears to have happened during the Mid-Holocene.

What, then, are the factors that have been perceived as significant for changes during the Mid-Holocene? Elm disease plays an important part in the discussion about the introduction of agriculture. Today, the elm decline is interpreted as a result of elm disease. This phenomenon can be detected all over northern Europe (Frieman 1997). Moreover, analyses of cow dung from an early agricultural site in Switzerland have shown that elm was not the primary tree for fodder: ash, lime, and willow were totally predominant (Rasmussen 1991). Since humans did not cause the elm decline, it does not mean that this change had no significance for the spread of agriculture. Elm grows in nutrient-rich soil, casts a broad shadow, and was one of the most important trees in the forests of southern Scandinavia.

As southern Sweden at the present time is suffering from elm disease, it has become possible to follow its effects, which in some places are very obvious. Within a few years a forest afflicted by elm disease will be transformed into an area of dead tree trunks with rapidly flourishing bushes and other undergrowth (Fig. 4). Burning the dead trees was a labour-saving way to acquire large areas for cultivation and pasture. A thunderstorm in areas with large amounts of dry wood might have had tremendous consequences.

In most cultures signs from supernatural agents are regarded and accepted as of great or often decisive importance for the outcome of difficult decisions – it may affect the faith of a single person or the society as a whole.

The Mid-Holocene elm disease arrived in a turbulent period. Ideas from the south about cattle breeding and agriculture and especially aspects of a new world-view which was linked to the new economy had been partially accepted or were at least known to most people. Old traditions were confronted with the new behaviour.
Fig. 4. A forest at Örup, south-eastern Scania, affected by elm decease.

The ravages of elm disease may have seemed like the interference of supernatural forces, probably as a sign from the gods that the people should intensify the change to a new social order. This might be the most important aspect of the elm disease for the spread of the Neolithic in large parts of northern and north-western Europe. Who could withstand the signs of the gods?

According to the indications provided by the level of the tree line in the Finno-Scandian mountains, the Atlantic-Subboreal transition was marked by an increase in temperature (Karlén and Kuylenstierna 1996: fig. 2; Karlén and Larsson in press). If this is true then another important natural change facilitated the introduction of agriculture. With a change of a couple of degrees the growing season would have been extended by half a month or a full month. Cereals used to growing in a warmer environment should have yielded better harvests than before.
THE GREAT CHANGE AT 1000 BC

In Berglund's presentation of the expansion phases, the second one is dated to the late part of the Neolithic. This was in good agreement with the indications in archaeological research of an expansion of society, especially during the Late Neolithic. In a local as well as a regional perspective there are several proofs of expansion – for the first time grave monuments are erected in the inland of southern Sweden and the material culture is well represented on the coast as well as in the inland.

The results of the research originating from the palaeoecological studies as a part of the Ystad Project provide a somewhat different picture. The human influence on the landscape increases during the late part of the Neolithic, but no distinct expansion phase can be recorded (Fig. 5). Instead a marked change was identified and dated to the middle part of the Bronze Age.

Fig. 5. A synthesis of long-term changes in the landscape based upon research within the Ystad Project. From Berglund et al. 1991.

In studies of vegetation during the Holocene in Zealand, the same change in vegetation is as distinctly marked as in the analyses from the Ystad area. A special study was based on samples from several small lakes (Odgaard and Rasmussen 2000). Pollen assemblages dated to around 1800 were compared with the situation at each sampling spot since the introduction of agriculture. The vegetation around 1000 BC shows a strikingly different composition. From the situation around 1000 BC there is an almost continuous process of change during the rest of prehistoric times, leading to increasing similarity to the state around 1800. Another interesting
finding is that around 1000 BC there was the same variation from woodland to heathland in the landscape between the different sampling points than was the case around 1800. An intensification of the sedimentation can also be registered at about 1000 BC (Løvberg and Odgaard 2000).

If this noticeable change can be dated to 1000 BC, it cannot be associated with the pronounced phase of innovation and supposed expansion which is detected around 2000 BC in the archaeological analyses.

To set the framework within the archaeological discussion, other innovation periods can be recognised. The first is linked to period II of the Bronze Age (1500-1300 BC). A large number of barrows are built in southern Scandinavia and the primary burial contains a number of bronze grave goods, which reflect high-quality local or regional bronze artefact manufacture. Southern Scandinavia is established as an independent region within Bronze Age Europe. During the same period a marked change in the design of houses was implemented, from houses with a two-aisled structure to a three-aisled type – a layout which was to become totally dominant for long-houses throughout prehistory. Building of barrows, high skill in bronze manufacture, intensive contacts with other parts of Europe and a new house type reflect social changes of major importance. This is sometimes interpreted as reflecting the formation of a new elite and enforcing the ritual and social significance of a chiefly lineage.

By 1000 BC the social organisation should have been consolidated. In about 900 BC a new legitimation crisis appeared, partly caused by a degradation of land (Kristiansen 1998). Increased intensity of hoarding might reflect an increase in ritual (Fig. 6).

Compared with what we know about the deposition of wealth in graves and hoards in the time around 1000 BC, the transition between periods III and IV seems to be the period during which the smallest amount of bronze objects were invested in graves as well as hoards. If one examines the variety of types and decoration, the bronze artefact production seems to lack the creativity evidenced both before and after. The period around 1000 BC lacks marked symbols in the material culture as well as the formation of monuments.

From an archaeological point of view, the time around 1000 BC seems somewhat dull. According to the pollen diagrams, however, this period turns out to be the most dynamic phase in the whole of prehistory.

The reason why very few people have been doing research about the event is that for a long time the dating of the change could not be trusted. I thought that it was contemporaneous with either period II or period V. But according to the firm statements of my colleagues in palaeoecology, we have to accept the fact – or must we?

But how are we to understand this transformation of the landscape? A small number of bronze types appear during the time in question, such as socketed axes
and sickles – forms which can be directly linked to domestic activities in contrast to most bronzes which should be related to different expressions of power.

A demographic expansion cannot explain the major transformation of the vegetation. According to the study of the coastal as well as the inland settlement of the Ystad region, no firm indication exists of any marked expansion into virgin or extensively used areas (Olausson 1992). So what remains? The expansion has been interpreted as based upon innovations such as manuring or the introduction of new crops such as hulled barley. The importance of manuring might have been overestimated (Lageras and Regnell 1999). As a whole, it is questionable whether such a major increase of human influence was caused by these changes.

Something took place in eastern Denmark and southern Sweden, including the northern part of Götaland. An archaeological explanation would be to view the change as caused by social interactions but with manifestations of another character than during the Early and Late Bronze Age respectively (Skoglund 1999a). The houses became smaller, probably as a result of new social system based on a nuclear family organisation. The importance of the nuclear family in society facilitated the colonisation of new land.
Large barrows and rich grave goods evidenced the rise of and probably conflicts between chiefly elites. During the time in question no new barrows were built and the number of grave goods was small, partly caused by a decreasing metal supply (Kristiansen 1998). Even if the chiefdoms were consolidated, there may still have been competition and conflicts in a regional or local perspective.

When monument building possibly went out of fashion and the production of bronze artefacts decreased, the demand for other expressions of power might have been sought at a level of the interaction between society and nature which could be very difficult to recover. The vegetation change at 1000 BC was more effected by increasing pastures than by arable fields. The importance of pasture land can also be noted for the inner part of southern Sweden, since the large cairns dating to periods III-IV were erected not close to the arable land, as the earlier gallery graves had been, but on pasture land (Larsson 1994).

One explanation should be an interest in increasing the number of livestock or the crop to create a surplus. According to the osteological material, the stocks of sheep and pig increase in numbers except for large settlements with a special political power, where cattle increase (Kristiansen 1998). In the Celtic expression of power cattle played a very important role. The competition of elite groups might have been expressed in keeping large stocks of cattle used for exchange, great feasts or bull-baiting.

The middle part of the Bronze Age is the period when stalling of cattle is presumed to have been introduced because of the structure of the houses with one part as a dwelling section and an almost equal part as a stable (Årlin 1998). Besides the interpretation of climatic change as a cause for stalling animals, a change from collective to individual ownership has also been presented (Pearson 1984; Barker 1999). The cattle might have been of greater ideological importance and a more important part of the cosmology (Olausson 1999). It had become accepted to involve cattle in the same living quarters as humans. It may be that just part of the herd was stalled, such as the milk-producing cows or special animals of high value needing protection and supervision. The importance of the cattle must be viewed not only in a quantitative perspective but also qualitatively as well. Especially when cattle might have achieved a value in ritual life, special animals like large bulls or those with special markings might have been highly ranked.

I happened to take part in a meeting when replicas of bronze lures were blown. It took place at a local zoo with cattle, and the reaction of the bull to the sound made by the lure was amazing. He recognised the sound as the presence of a competitor and started to search for him in a very agitated mood. It is precisely during the middle part of the Bronze Age that bronze lures – an internationally well-known signature of the Scandinavian Bronze Age – started to be made (Broholm et al. 1949). They are supposed to have been used in ritual performances – and bull-baiting could be one of these. There might be a link between the vegetation change and the emphasis on bronze lure production.
That the introduction of new plants might be caused by new aspects of social life rather than by agricultural technological change is exemplified by a study related to changes from the Early to the Later Bronze Age (Skoglund 1999b). During the Bronze Age an increasing weed content in the domestic area has been noted. Hulled barley became dominant and flax as well as gold of pleasure were introduced. Instead of marking a change of agricultural technology it is interpreted as an increasing interest in cooking weeds instead of grinding for baking. Houses for just one family become more frequent and cooking as an activity closely connected with the hearth is one of several aspects of the social change. This is viewed as one of several processes that were introduced as a package in contact with the Urnfield culture.

There is a need for further analysis of these great changes of human influence at about 1000 BC. Let us hope that this common interest in the relation between society and nature might form the platform for a multidisciplinary and international project in the near future.

CENTRALITY IN THE LANDSCAPE

In the results of palaeoeological studies within the Ystad Project, expansion phase 3 as distinguished by Berglund, and dated to an early part of the Roman Iron Age, does not seem to be very marked. The settlement seems to have been more consolidated and landscape use more stable.

In archaeological studies the middle part of the Iron Age, especially the Migration Period, was looked upon as a time of misery and disaster. Terms such as war, agrarian crisis, plague and desertion were often used when describing the period (Näsman and Lund 1988). That a climatic deterioration was proved by palaeoecological studies gave extra fuel to the presentation of the Migration Period. But the period also included a large number of gold hoards and masterly craftwork in fine metals, which indicated wealth and prosperity.

Today the Migration Period is regarded as the transformation stage when a society was shaped which was later to expand during the Viking Age. The new aspect is mainly based upon the identification of central places of political, economic and religious importance. These centres seem to have played an important role in the transition from tribal community to national state formation. One of these locations is Uppåkra to the south of Lund (Hårdh 2000; Larsson 2001). The information about these sites with a longer or shorter duration is mainly based on metal detector surveys and archaeological excavations. Based upon the new information from Uppåkra, it is not possible to detect any decrease in either internal activities or external contacts. The problem with most of these central places is that the ecofacts are badly preserved. The use and relations to the local as well as regional natural
resources has so far been the most important main of research. But the identification of plants like turnip and gold of pleasure, regarded as garden plants, could possibly mark the occurrence of kitchen gardens (Regnell 2001). Indications like these and others seem to relate functions typical of later urban settlements to the central places. Nor do we know much of how the settlement in the neighbourhood was linked to a central place. For the future an important perspective in understanding these places will be to study how they are related to the landscape and how the landscape is used to maintain these examples of power concentration.

The decrease or stagnation in human activities during the middle part of the Iron Age might instead reflect some kind of consolidation.

To sum up, there is a new and accelerating interest in the relation between the physical environment and human societies. The material culture and other remains of human activities are today viewed in a more contextual framework. This also includes the environment. In asking new questions I am confident of continuous co-operation between palaeoecologists and archaeologists.

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