

## **Abstracts: Landscapes**

Wednesday, 28<sup>th</sup> of November 2012

### Keynote address

Peter Emil Kaland, Department of Biology, University of Bergen

#### **The Coastal Heathlands of Europe – farming history and management**

The heathlands along the Atlantic coast from Portugal to the Polar circle in Norway are among the oldest cultural landscapes of northern Europe. The Neolithic coastal farmers utilized the mild winter climate to let the livestock graze outside all year round, and understood the value of the evergreen heather (*Calluna vulgaris*) as winter fodder. The heather is a light demanding species, and the farmers started the work to remove the forest of the coastal areas during the Neolithic time. In Western Norway it took more than 3000 years before the coastal area was completely transferred from a forested landscape to heathlands.

A series of farming activities belong to the heathlands. **Heath burning** was important to provide a mosaic between grass (summer pasture) and heath (winter pasture) vegetation. **Heath cutting** was collecting of extra winter fodder for the part of the livestock which was not winter grazing. **Peat cutting** for energy compensated for firewood in an open landscape. **Sod cutting** (Plaggenwirtschaft) provided humus or dry crumbled peat for use as bedding in the byre. All these activities have been dated back to prehistoric times.

The coastal heathlands were most widespread around 1850, but modern farming methods lead to a dramatic reduction. Today more than 80% of the heathlands have been transferred to cereal fields, grass pastures and forests.

### Use and Traces

Ditlev L. Mahler, Danish Prehistory

#### **The Neolithic Components: Shetland Islands 4000-3000 BC**

A comparison between the northern most Neolithic societies on Shetland and in South Scandinavia during the time mentioned above reveals many remarkable similarities. On the other hand there are as many local differences as one might expect. What is most characteristic of these early farming societies is the rising ritual behaviour over time depositing point-butted axes and on Shetland also special knives in wetlands and on “special” places; building monumental grave sites like passage-graves and finally the building of ritual enclosures or constructions, which on Shetland could be the Stanydale hall and its surroundings. The ritual behaviour could be due to the fact that the social economic organization in North West Europe develops along the same lines. Early Neolithic societies could probably have many elements in common with the “big man societies”, known from recent anthropology. The glue, which binds these societies together, is the rising number of different and increasingly work-demanding rituals.

Alison Sheridan, National Museums Scotland

#### **Shetland’s earliest farming communities, c. 3700–1500 BC: an overview**

Shetland’s Neolithic, Chalcolithic and Early Bronze Age archaeology is a rich, relatively well-preserved and invaluable resource whose potential has not fully been realised. Until the advent of the Nationalmuseet’s *Farming on the Edge* project, there had been relatively little focused research on these periods since the survey and excavation work of the 1940s–1960s, and our understanding

had largely been based on the conclusions of that work – tempered by the subsequent discoveries made at the Scord of Brouster, the Sumburgh cist, the felsite sources, the West Voe middens and, most recently, on and around the Hill of Crooksetter. The time is clearly ripe for a critical review of our current state of knowledge about the Neolithic of Shetland, and this is what this paper offers. Its narrative will extend beyond the conventional chronological cut-off point of 2500 BC to explore how developments continued until 1500 BC; this is important, since it is clear that many of the settlements that had previously been assumed to be of Neolithic date are in fact later. This paper will cover material culture, settlements, monuments and land use and subsistence issues and will attempt to present a broad-brush narrative. It will also suggest potentially fruitful lines of investigation. The story of Shetland's Neolithic (and succeeding centuries) is a fascinating tale featuring episodes of contact with the outside world (but not with Scandinavia!), punctuated by periods when a distinctively insular 'culture' and lifestyle evolved. Shetland's Neolithic will be compared and contrasted with that of the Orkney archipelago, where a very different story can be told.

Christian Koch Madsen, Danish Middle Ages and Renaissance  
**Norse Settlement and Pastoral Farming in Vatnahverfi, South Greenland**

The existence and abandonment of the Norse Eastern Settlement, South Greenland, has been a topic of archaeological research for more than 200 years. However, detailed insights into settlement dynamics, organization, and resource exploitation has often stranded upon the fragmentary and diverse archaeological evidence, as well as lacking understanding of the immense environmental changes unfolding throughout a settlement period, c. A.D.985-1450, spanning from the Medieval Climate Optimum to the beginning of the Little Ice Age. The 'Northern Worlds' PhD.-project *'Landscape and Livelihood, Hierarchy and Economy: Pastoral Farming in Norse Greenland'* is a regional archaeological study that provides such a detailed developmental narrative of Norse pastoral farming, herding, and hunting in the changing landscapes of the Vatnahverfi-peninsula by bridging the rich body of prior and new archaeological evidence with the accumulating environmental evidence and climate proxies. In turn, the Vatnahverfi case study allows for discussion of broader settlement dynamics and debates on societal responses to climate change.

Cosmos and Perception

Flemming Kaul, Danish Prehistory  
**The northernmost rock carvings belonging to the Scandinavian Bronze Age tradition, Norway**

One of the projects under the research initiative *Northern Worlds*, has as its main topic the expansion of agrarian economy in the North. The coastal zone facing the Atlantic represents an important part of the research area. Here, the northernmost finds related to the Nordic Bronze Age culture have been followed.

In the coastal areas of Nordland, close to the Arctic Circle, there is good evidence of Bronze Age activity. Even though the cultural remains are relatively few in comparison with Southern Scandinavia, a broad spectrum of find categories is represented, particularly around Alstahaug in Helgeland. There are burial cairns containing grave furniture of typical Nordic Bronze Age character, there are votive depositions of bronze objects, and there are rock carvings. The rock carvings on the islands of Tro and Flatøy will be examined. The ships on the rocks cover both the Early Bronze Age and the Late Bronze Age – a continuity of respect. As far north as Alta in Finmark we find a few rock carving ships of a late part of the Bronze Age.

Landscape analyses has demonstrated that the rock carvings, as well as the other finds related to the Nordic Bronze Age culture, are all situated close to the best arable land of today, underlining their agricultural context.

Lars Jørgensen, Danish Prehistory

**Norse religion, rites and ritual sites in Scandinavia in the 6<sup>th</sup>-11<sup>th</sup> century. A research project 2010-15**

The pre-Christian religion in the North in the Late Iron Age and Viking era consists of much more than just myths and legends about the anthropomorphic figures of the period. A credible account of the interplay that took place between the population then and the pre-Christian cult, and the underlying organizational structure, requires an analysis that encompasses not only the written remains, but in particular includes the now extensive archaeological source material that is accessible today.

Ulla Odgaard, Ethnographic Collection

**Archaeology of the hunt – Hunting rights, hunting ethics and "waste".**

In Denmark ownership of land gives rights to hunt terrestrial animals. In Greenland there is no private ownership of land, and everybody can go hunting where they want, except from in protected areas. Alongside this principle of "common rights" is an ancient and contradictory principle of the preference of the kin – a kind of usufruct. Studies in a modern camp has provided new models for interpretations of the organization of ancient camps and hunting rights.

In modern times it has been said about the hunters that they are careless about their waste and they have been accused of overhunting. We met, however, a totally different set of hunting ethics during our ethno-archaeological studies. The so called traditional principle of "nothing is wasted" leaves only small, white and clean bone splinters. At some old sites the bone pattern resembles this principle, at others – however – the animals have been utilized to a much smaller degree. These patterns, the ideas behind them and the concept of "waste" are the focus of this study.

Environment and Change

Morten Fischer Mortensen, Danish Prehistory, Unit of Environmental Archaeology

**Colonizing the unknown: early man in Denmark and the environmental preconditions**

Modern humans migrated into southern Scandinavia for the first time during the late glacial climatic warming. The earliest known traces belong to the hunters of the Hamburgian culture and date to the Bølling warming (GI-1e). The timing of the migration of these pioneer cultures into these newly formed hunting grounds, and the cultural shift we see in the archaeological material, must be seen in the context of the enormous environmental and geographical transformations occurring during the late Glacial period.

This paper presents some of the results generated from the multi-disciplinary research project "Early Man in Denmark". Here we have analysed several new Palaeolithic sites and reconstructed the environmental preconditions present during the colonization of early man in Denmark.

Kevin J. Edwards, Departments of Geography & Environment and Archaeology, School of Geosciences, University of Aberdeen, Aberdeen, UK

**Early farming, cereals and landscape impacts from northern Europe to the North Atlantic: conundrums**

Ever since the morphological codification of cereal-type pollen by Franz Firbas (1937), pollen analysts have used the detection and identification of cereal pollen as a key cultural indicator when reconstructing land use history. This process is not always simple given the relative scarcity of Cerealia pollen in pollen assemblages and the difficulty of separating cultivated from wild species of grasses on the basis of their pollen. This paper begins by considering the technical problems involved in cereal pollen detection and it addresses issues surrounding the interpretation of data. The determination of farming activity from sub-fossil remains goes well beyond pollen of course, and discussion will also involve agricultural practice, plant types, movement of human populations, archaeology, soil erosion and the spread of peat. The geographical focus will be northern Europe and more especially the North Atlantic area (e.g. Shetland, the Faroe Islands, Iceland and Greenland), while the temporal focus will be from Mesolithic/Neolithic times onwards including the period of Norse settlement.

Boulanger-Lapointe, Noémie, University of British Columbia, 2329 West Mall Vancouver, B.C., Canada V6T 1Z4

### **From Tundra to Forest? Impacts of Current Climate Changes on High Arctic Vegetation**

Modification of plant abundance and distribution, especially shrubs, has been predicted by warming experiments and confirmed by aerial photography analyses and land based observations in the Low Arctic. In the High Arctic, even though satellite image analyses suggest an increase in plant productivity and warming experiments have had a positive effect on shrub cover, little is known about natural system responses. We hypothesized that Arctic willow (*Salix arctica* Pall.), a structuring species in these harsh environments, could induce noticeable vegetation cover changes by increased growth of established individuals and colonization of new sites. To test this hypothesis, we evaluated size and age structure of populations through field measurements and dendrochronological analysis. We performed vegetation cover survey and compared current data with historical records. Our results suggest that Arctic willow has heterogeneous population dynamics in the high Arctic. Glacier forelands, which are currently experiencing rapid ice retreat and plant colonization, and some sheltered sites will probably benefit from current and predicted increase in mean summer temperature. However, water availability, herbivory, as well as length and quality of the growing season remain strong limiting factors to recruitment and growth.

Richard Oram, Department of History, University of Stirling

### **From 'Golden Age' to Depression: land, lordship and environmental change in the medieval Earldom of Orkney**

The period 1000-1300 is seen conventionally as marking the apogee of the Scandinavian earldom of Orkney, reflected in a prolonged episode of agricultural expansion and population growth. After 1300, Orkney experienced significant population decline and protracted economic depression lasting into the 16<sup>th</sup> century reflected in falling rents and contracting settlements. Traditionally, this rise and fall has been discussed principally in political and economic terms, consequent on Orkney's increasing marginalisation in the kingdom of Denmark-Norway and the parallel growth of Scottish influence, and shifts in North Atlantic and northern North Sea commercial networks; non-human agency had no currency in the discussion. Approaching instead from an environmental history perspective, this paper will re-examine these political-economic processes in the context of the climatic influences of the MCA and its aftermath, and the impact of epizootic and epidemic disease in the 14<sup>th</sup> and 15<sup>th</sup> centuries. It will explore evidence for medieval agricultural practice in Orkney, particularly regarding expansion into environmentally marginal districts and the soil-

enriching strategies employed, and the maintenance of investment in anthrosol formation into the late and post-medieval period. The paper will conclude with a brief consideration of wider resource management practices and pressures across the period and assess the resilience of Orcadian peasant society in the face of human- and climate-driven environmental change.

