

From Central Space to Urban Place, seminar 1

Social organisation of land in South Scandinavia AD 400-1100

Methods, challenges and possibilities

Edited by Jesper Hansen and Mads Runge

ODENSE BYS MUSEER | ODENSE CITY MUSEUMS

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Report from an international seminar
in Odense, 24th May 2018

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Kulturhistoriske studier i centralitet
– Archaeological & Historical Studies in Centrality, vol. 2 2018

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www.museum.odense.dk/centrum

From Central Space to Urban Place (1:2)

Social organization of land in South Scandinavia AD 400-1100. Methods, challenges and possibilities

Odense City Museums, Thursday May 24 th 2018

10-10.30: Coffee/tea & introduction

10.30-12.30: Session 1: Landscape reconstruction. Methods, perspectives and challenges

10.30-10.50: Søren Munch Kristiansen (GeoScience, Aarhus University, Denmark): Reconstructing the Iron Age landscape. Possibilities and limitations in new methods from the natural sciences.

10.50-11.10: Lukas Banaszek & Dave Cowley (Historic Environment Scotland): Aerial Photographs, Remote Sensing and Landscape Understanding.

11.10-11.30: Per Grau Møller (University of Southern Denmark): Reconstructing the Iron Age infrastructure by historical and topographical sources.

11.30-11.50: Sofie Laurine Albris (The National Museum of Denmark): Place names as source for Iron Age organization of land.

11.50-12.10: Mogens Bo Henriksen (Odense City Museums, Denmark): Portable antiquities as source to organization of Iron Age landscape. Limitations and possibilities. Spatial and functional organization and dynamics.

12.10-12.30: Lene Feveile (Museums of Eastern Funen, Denmark): The dialogue between research and mediation of large scale Iron Age cultural landscapes.

12.30-13: Lunch

13-16.30: Session 2: Social organization and manipulation of landscapes in the period Late Iron Age to Early Middle Age. Background, methods, results and unused potentials in large scale projects of landscape archaeology

13-13.30: John Ljungkvist (University of Uppsala, Sweden): The Gamla Uppsala-project.

13.30-14: Frode Iversen (Museum of Cultural History, University of Oslo, Norway): The Assembly Project. Meeting-places in Northern Europe AD 400-1500.

14-14.30: Andrew Reynolds (University College London, England) (University College London, England): Non-urban vs urban social complexity in Anglo-Saxon England.

14.30-15: Coffee/tea

15-15.30: Mats Anglert (Archaeology in Lund and Scania, Sweden): Uppåkra, Lund, and the landscape.

15.30-16: Mateusz Bogucki (Polish Academy of Sciences, Warsaw, Poland): The Truso-project. From local landing place to Viking-Age emporium.

16-16.30: Mads Dengsø Jessen (The National Museum of Denmark): Reflections on the day related to landscape archaeology of South Scandinavia in the present and the future.

16.30-16.45: Concluding remarks

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Content

Introduction

Mads Runge and Jesper Hansen

The seminar *Social organisation of land in South Scandinavia AD 400-1100. Methods, challenges and possibilities* was the first of two international seminars associated with the project *From central space to urban place* which is being undertaken from 2017-2020 and is funded by the VELUX FOUNDATION (http://museum.odense.dk/forskning/projekter/from-central-space-to-urban-place).

From central space to urban place consists of both research and communication and learning elements. The project partners are, besides Odense City Museums as project owner, Museums of Eastern Funen, The Historical Museum of Northern Jutland, Moesgaard Museum, University of Southern Denmark, Aarhus University and University of Copenhagen. The project also has an advisory board comprised of specialists from the universities of Lund, Oslo, Bergen, Copenhagen and Aarhus.

The aim of the project is to shed new light on the earliest urbanisation processes in South Scandinavia within a chronological frame of AD 400-1100. The means, using Odense and Aalborg as case studies, is an exploration of the development from the central spaces of the Late Iron Age, defined as concentrations of archaeological localities characterised by wealth and functions such as trade, crafts, cult and defence, to the urban places of the Middle Ages, where the structures of power are concentrated in one location.

The project *From central space to urban place* is grounded in a new perspective on urbanisation, in which the inclusion of the hinterland, the space, is of outmost importance in relation to the creation of the towns and cities, the places. The theoretical dialogue between space and place is therefore a general perspective for the project, as it is in the two associated seminars. This seminar has a particular focus on *space*, while the second seminar will concentrate on aspects of *place* and the connection between space and place.

The first session of the seminar dealt with reconstruction and analysis of the social organisation of landscapes. The second session presented experiences from previous or ongoing large-scale landscape projects.

These themes, and the researchers who presented them, were chosen because they represent important building blocks for our project. Their work, be it in studies of specific details of the landscape or in attempts to see large-scale patterns, provided enormous inspiration when the *From central space to urban place* project was initially designed, and are highly relevant to the actual work in progress.

The many large-scale excavations undertaken in recent decades have resulted in the accumulation of a massive body of data. In combination with new methods and theories, these new data have made it possible to pinpoint important changes in prehistoric societies which constitute an ideal basis for further research.

The seminar had the two-pronged goal of presenting and discussing analytical results and, equally important, addressing the underused potential of both detailed studies and large-scale projects. We wanted the seminar to both provide a research status as well functioning as a source of inspiration for the *From central space to urban place* project and other future projects dealing with landscape archaeology in general. With this publication it is our hope and intention that the many excellent papers will have a life beyond the actual day of the seminar and function as a starting point for new discussions and perhaps even new international networks and dialogues between researchers.

We would like to thank all the speakers for a very inspiring day, as well as Mikael Manøe Bjerregaard and Jakob Bonde, both of Odense City Museums, for their summaries of the papers presented.


Historic Environment Scotland is
the lead public body set up in
2014 to investigate, care for and
promote Scotland's historic
environment.

Part 1:

Landscape reconstruction, Methods, perspectives and challenges

Reconstructing the Iron Age landscape: Possibilities and limitations in new scientific methods

Søren Munch Kristiansen and Thomas Ljungberg
(GeoScience, Aarhus University, Denmark)

Abstract:

In this paper we discuss methodology for tracing early urbanisation processes in Denmark, including the change from geographically scattered central functions to their consolidation in fewer discrete locations, in the period AD 400-1100. We present preliminary results from three study areas, where coastal development, landing sites and possible communicative lines-of-sight were studied in the central Limfjord area and near the town of Odense in eastern Funen.

Coastal infrastructure: In coastal areas with uplifted fossil beach ridges, these can be used as a proxy for coastline displacement through time. A number of uplifted fossil beach ridges are found on the Limfjord coast around Nørholm Bakkeø. Furthermore, it is known that the height above mean sea level of these ridges is more-or-less constant. This means that, by dating the beach ridges using optically stimulated luminescence dating (OSL), it is possible to estimate the local relative mean sea level, and thereby the location of the coastline in the eastern part of the Limfjord over the last few thousand years or so. The aim of this is to gain a better understanding of how the location of the coastline has affected the placement of the early coastal settlements found especially on the southern part of Nørholm Bakkeø. Preliminary results will be presented here, as OSL dates are not yet available.

Visibility: The area visible from a certain point in the landscape is called a "viewshed". With today's ever-increasing number of precise digital elevation models (DEMs), such viewsheds can be constructed in a geographic information system (GIS) program using an algorithm that calculates whether anything is obstructing the line-of-sight between a given observer and any other point within a given search radius. In this part of the project – the beacon project – GIS viewsheds were constructed for sites where a theoretical beacon could be set up in order to pin-point the exact spot where the inter-visibility between individual beacons is optimal. A DEM including trees, houses etc. was used for the analysis, since this reflects the obstructions in the contemporary landscape. This will, however, probably yield a too pessimistic impression of the extent of the viewsheds in the Viking Age and Middle Ages, when the beacons were employed in a more open landscape. A GIS analysis was therefore also conducted using a DEM from which contemporary houses, trees etc. have been removed. Although this model overestimates the viewsheds, we believe that it yields a better impression of the visibility of the prehistoric beacons. Viewsheds will be presented and discussed in respect to former visual communications possibilities in the landscape.

Infrastructure on land: In this project we have employed non-destructive magnetometry survey in the search for landing sites and pithouses in the areas around the lower part of Odense Å and Kertinge Nor. The hypothesis was that such finds would substantially aid an understanding of the infrastructure on the coast, as well as at sea, and thereby also the connection between the two. Magnetometry enables archaeologists to detect areas of past human activity, using magnetic enhancement of the soil as a proxy. Under the right soil conditions, it can be a powerful technique, enabling archaeologists rapidly and accurately to locate buried features. The preliminary data arising from this project will be presented.

RECONSTRUCTING THE IRON AGE LANDSCAPE: POSSIBILITIES AND LIMITATIONS FROM NEW NATURAL SCIENTIFIC METHODS

BY SØREN M. KRISTIANSEN

With a lot of help from: Thomas Ljungberg, David Stott, Mikkel Fuglsang, Jan-Pieter Buylaert, Niels Emil Søe, and many from the Velux Space-to-Place Project!

AU AARHUS UNIVERSITY
DEPARTMENT FOR GEOSCIENCE

SØREN MUNCH KRISTIANSEN
ASSOCIATE PROFESSOR

MAY 2018

COASTAL METHODS IN THIS PROJECT AND PERSPECTIVES FROM OTHER PROJECTS

Methods on-shore and in near coastal waters

- status from Velux coastal and landing sites
- Improved possibilities for “high-definition” dating

Remote sensing possibilities

- examples from Velux coastal and landing sites

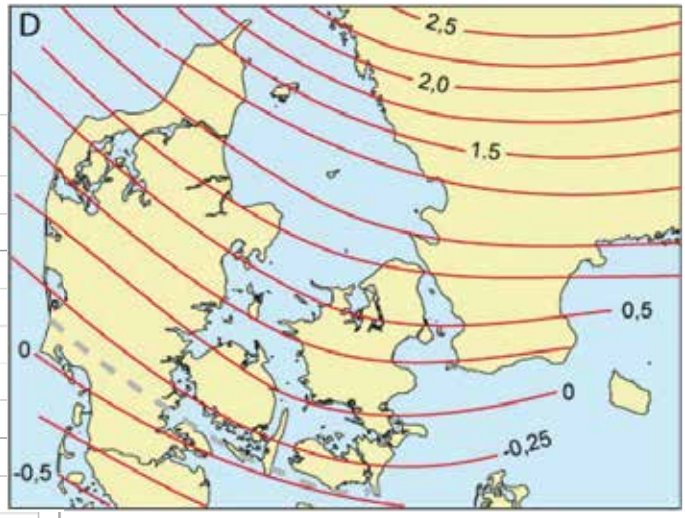
Geophysical methods – new possibilities

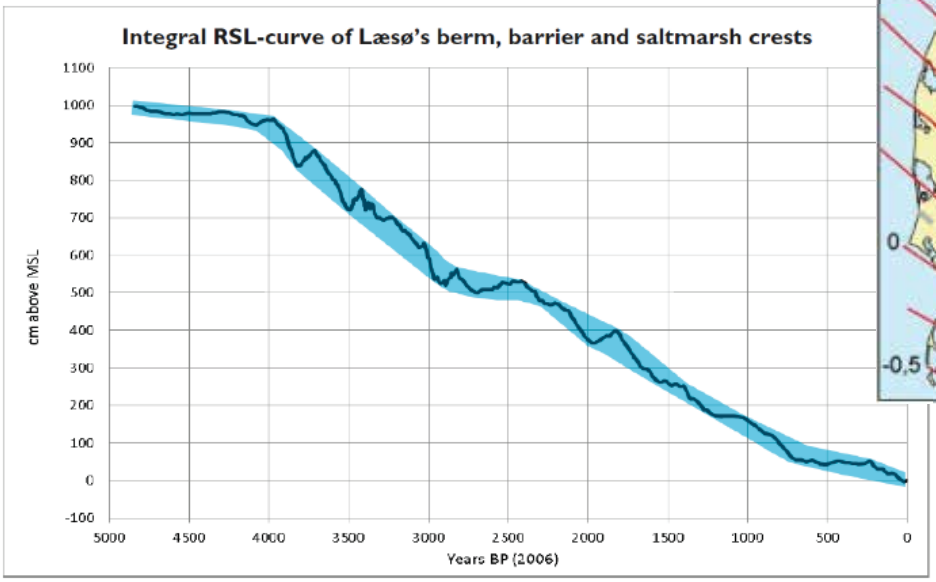
- Results in this project

Please be aware: NOT much archaeological interpretation here!

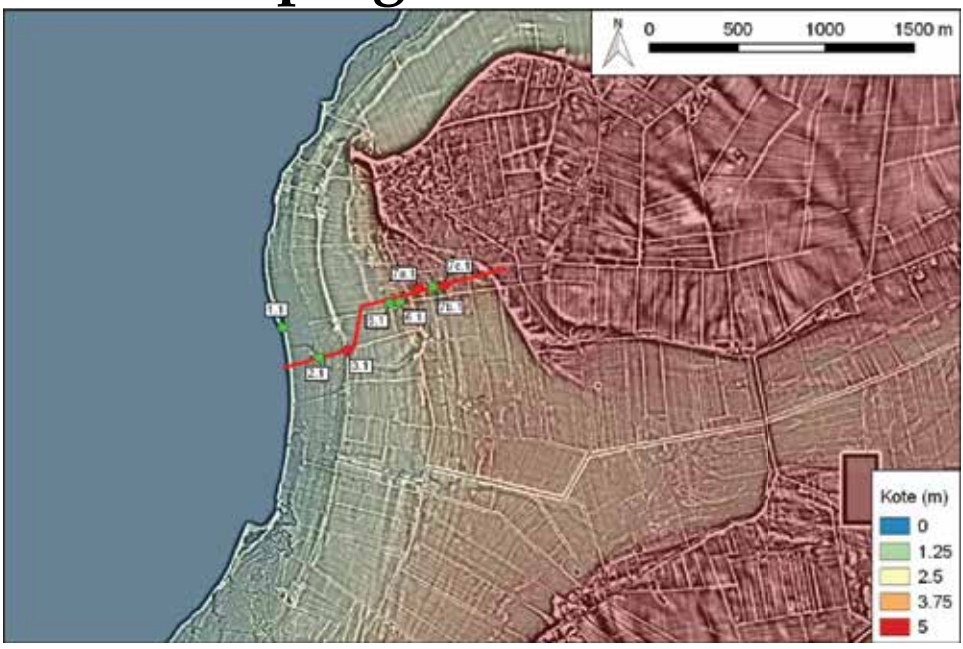
COAST LINES IN THE PAST

Relative sea level change mm/yr (recent)

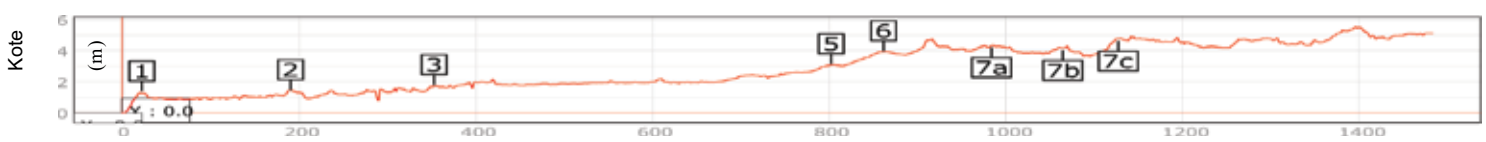




OSL-based age model for coast progression at Nørholm

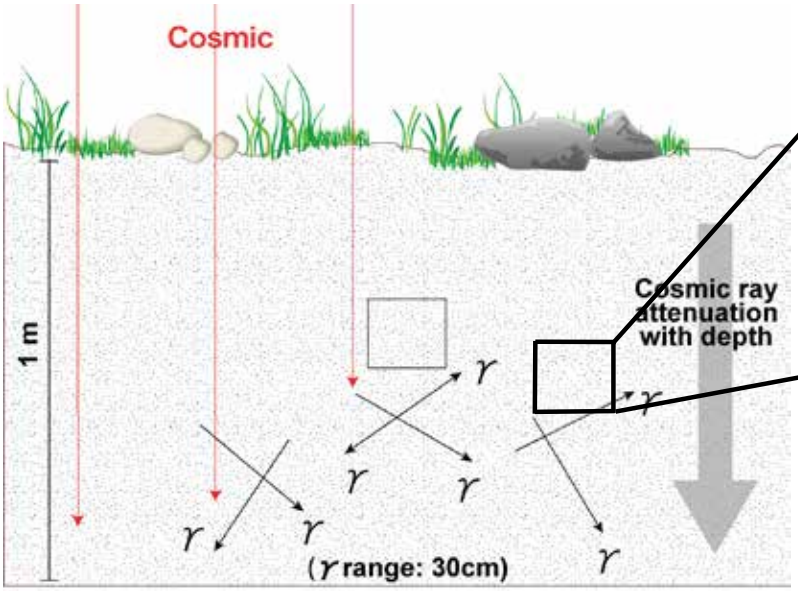


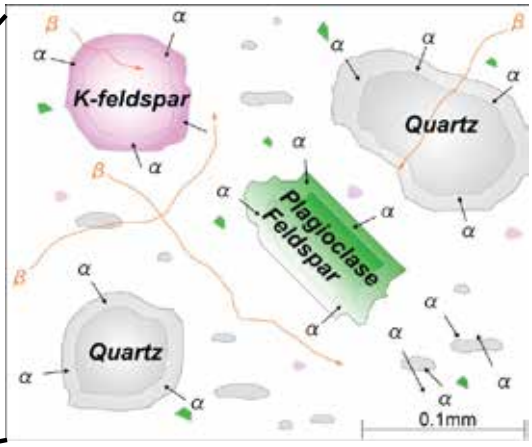
Afstand langs profil (m)



OPTICALLY STIMULATED LUMNISCENSE DATING

ENERGY ABSORPTION DURING BURIAL





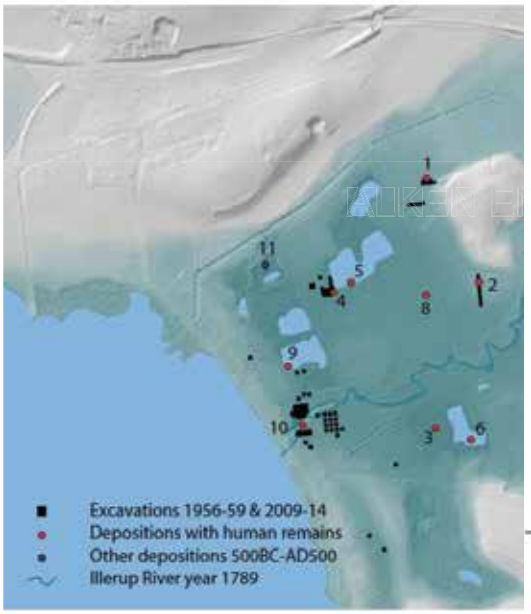
Ionising radiation

(α, β, γ) from the decay of

^{238}U, ^{232}Th, ^{40}K

PNAS

Direct evidence of a large Northern European Roman period martial event and post-battle corpse manipulation



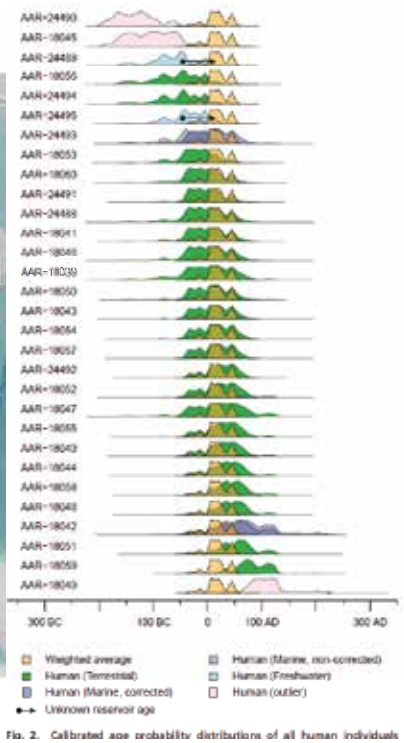
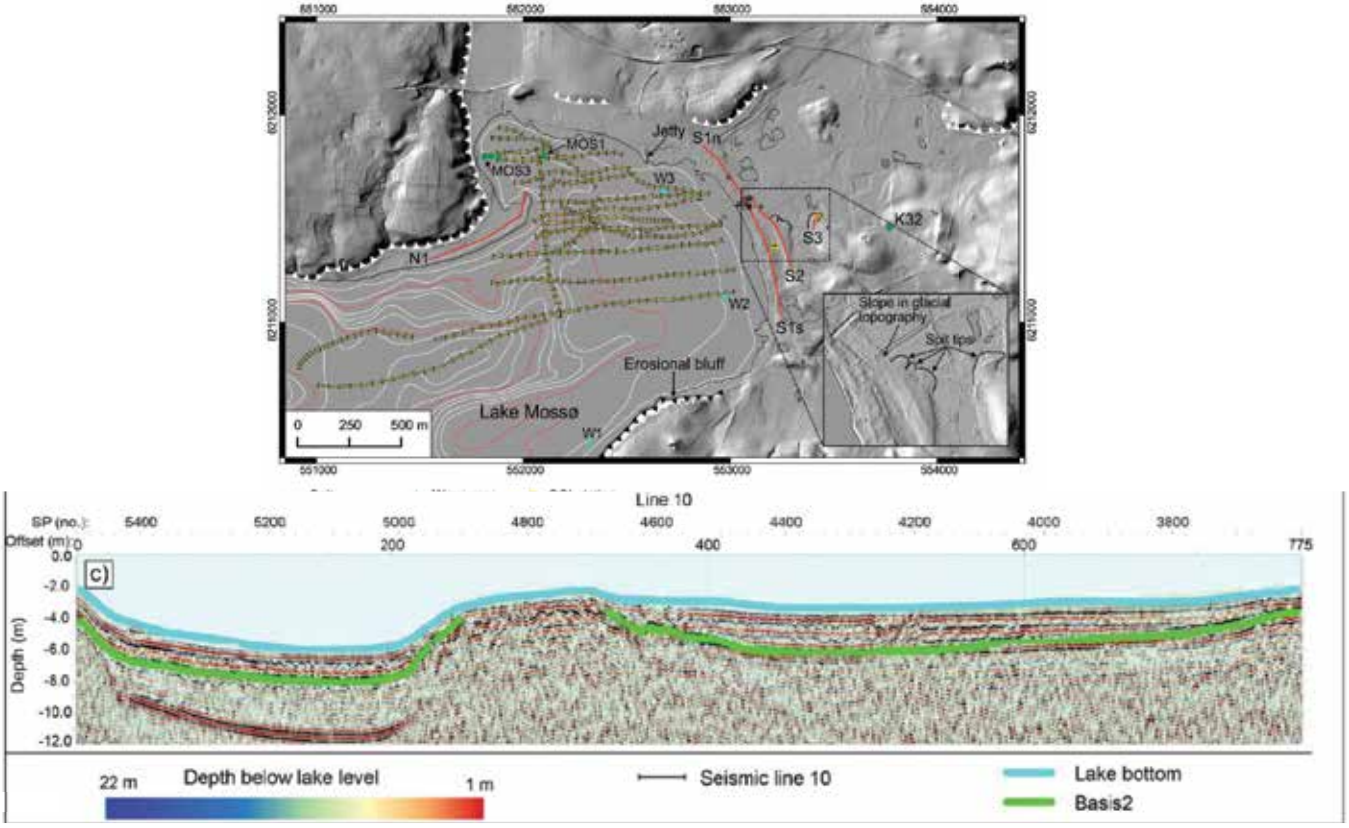
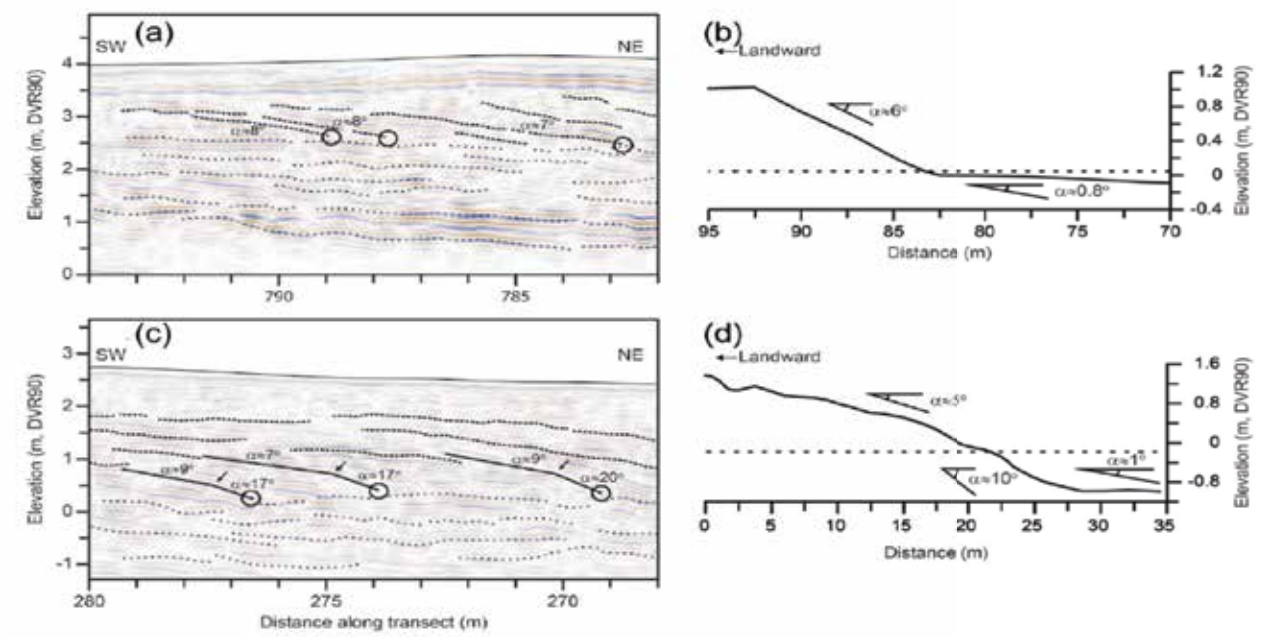


Fig. 2. Calibrated age probability distributions of all human individuals

MARINE SEISMICS

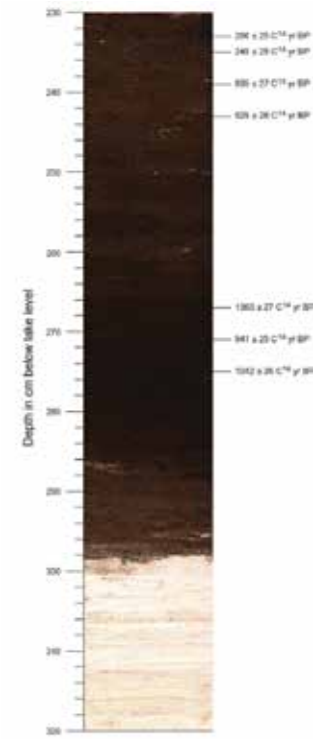


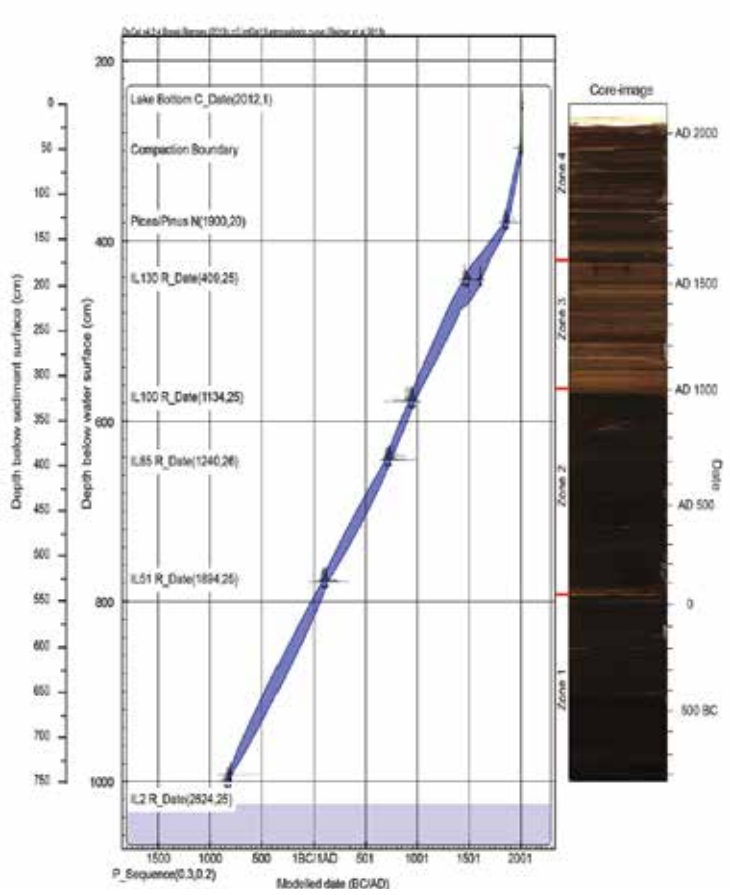
GROUND-PENETRATING RADAR, OSL AND SEA-LEVEL CHANGES



Hede et al., 2015

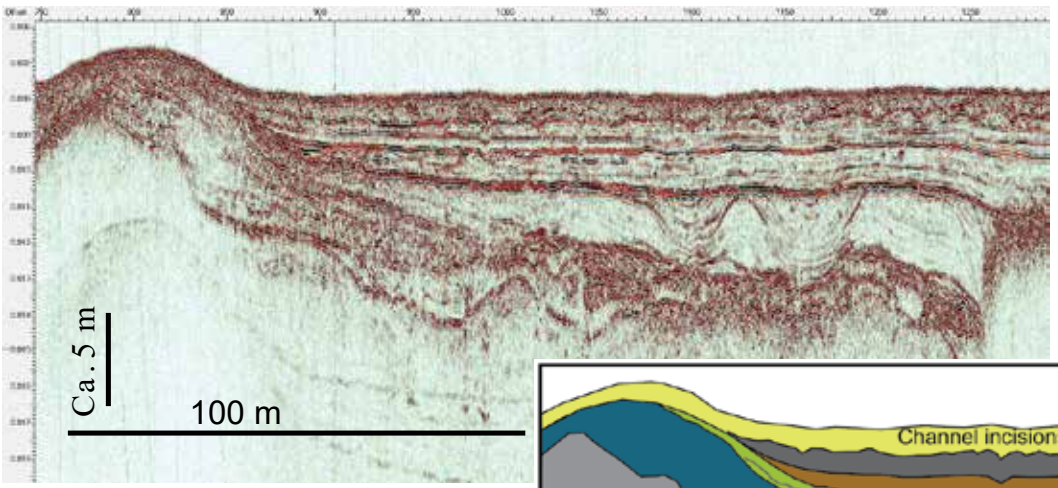
Age-depth models



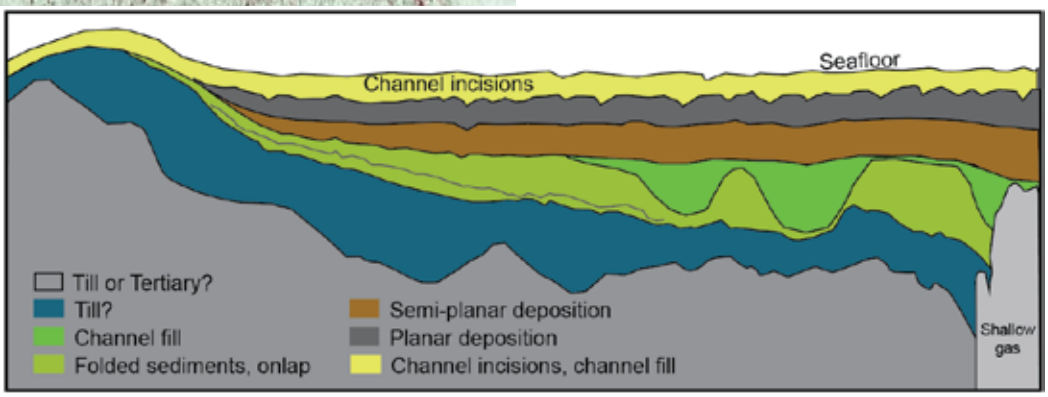


Søe et al., 2018; Søe et al. 2017

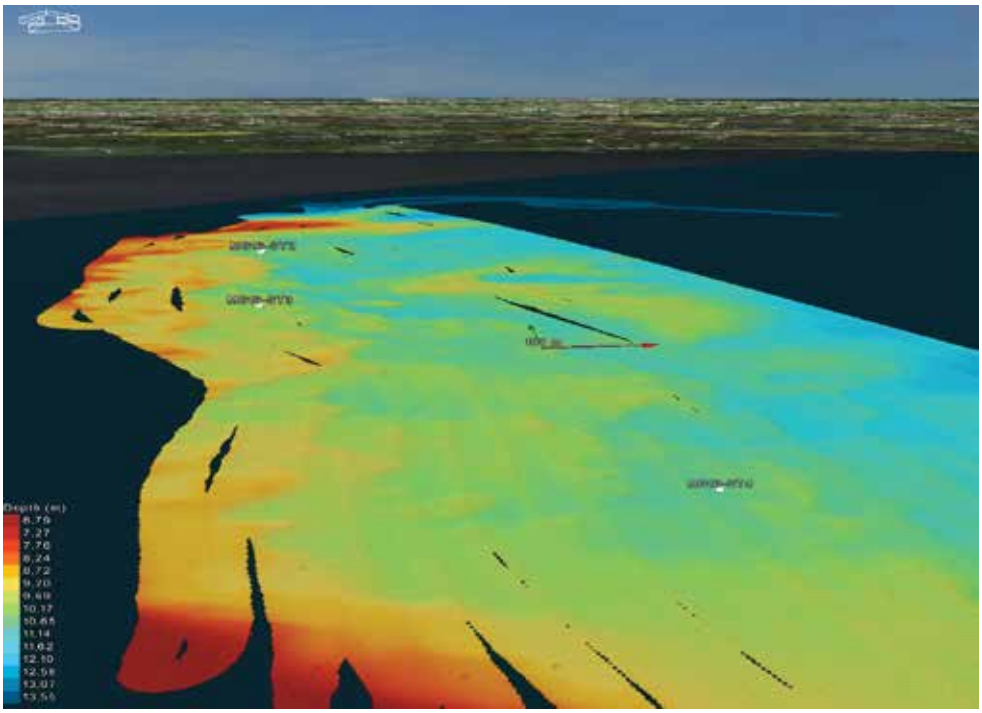
SUB-BOTTOM PROFILER



Example from Vejle Fjord with cm-resolution imaging of layers beneath the seafloor, 3D is possible

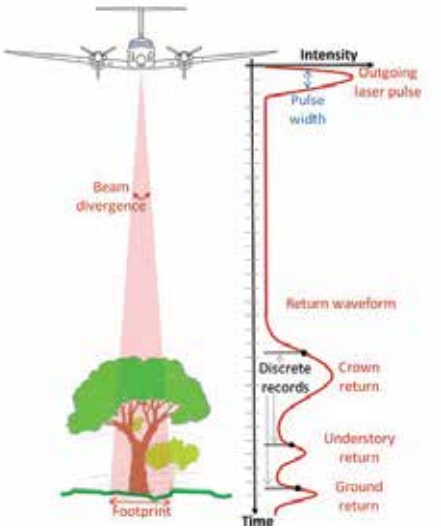


Multi-beam bathymetry



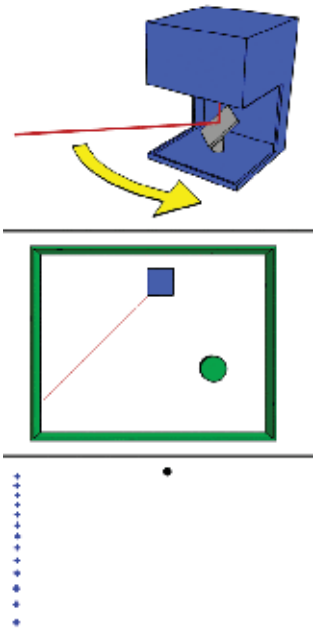
Data from Vejle Fjord

AIRBORNE LASER SCANNING



Fernandez-Diaz, J. C. (2011). Lifting the Canopy Veil - Airborne LiDAR for Archeology of Forested Areas. Imaging Notes, 26(2).

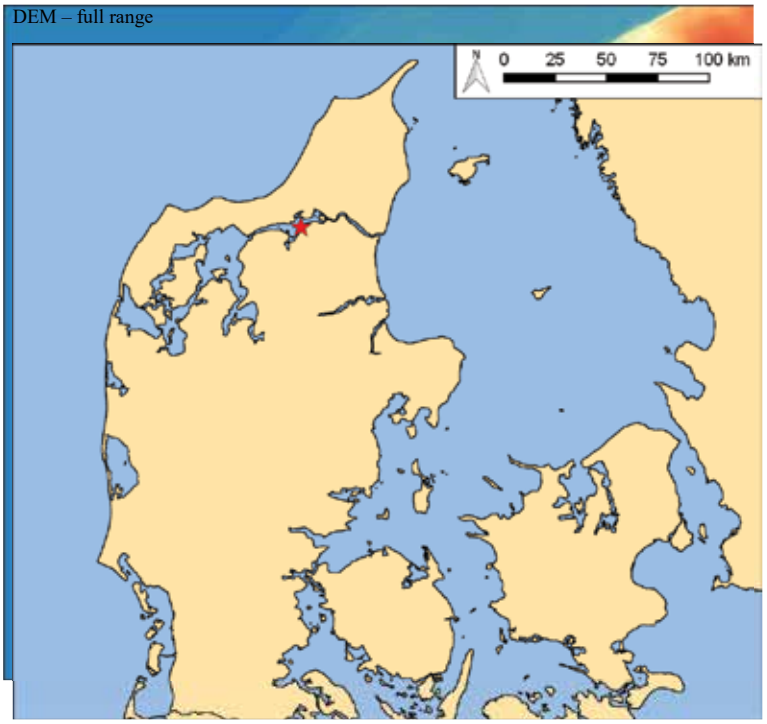
- Uses lidar (also LiDAR, LIDAR LADAR …):
  - Laser pulses emmited by instrument
  - Time of flight and intensity of reflections measured by the sensor
- Scanners cover broad areas using oscilating mirrors
- Returning pulse is digitised either as a waveform or discrete returns
- Position of reflections calculated:
  - RTK GNSS & IMU provide position and orientation of the aircraft
  - Scanner provides angle and time of flight for each returned pulse

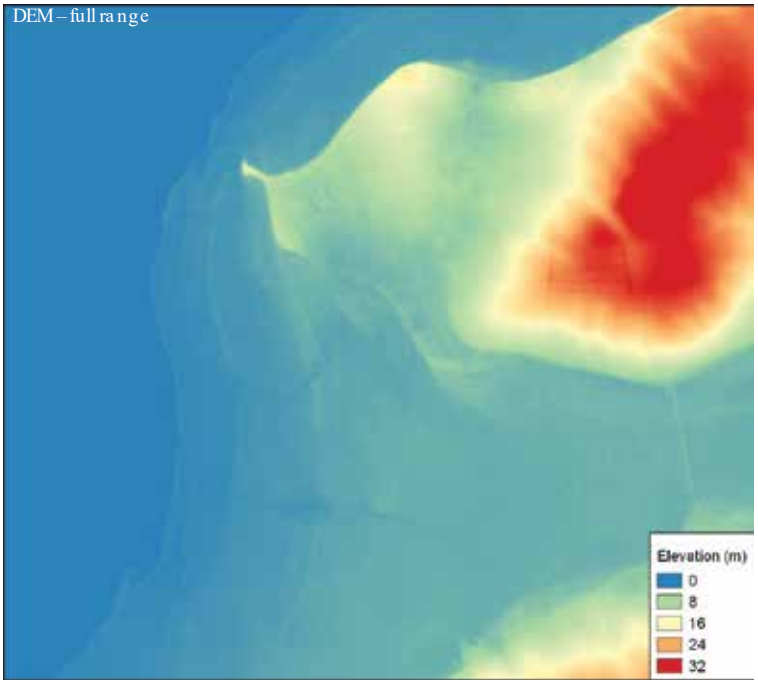


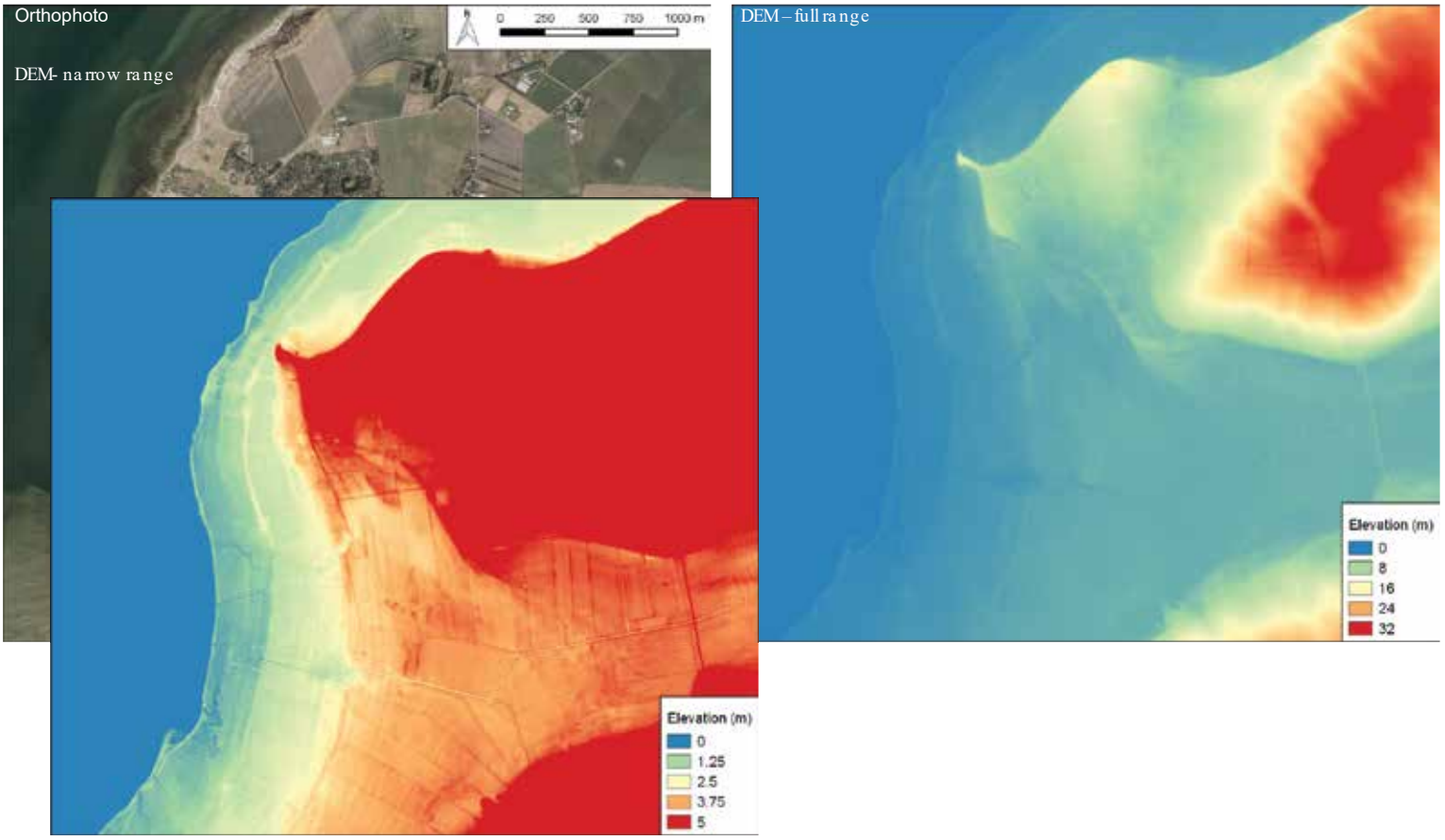
By Mike1024 (Drawn and animated by Mike1024)
[Public domain], via Wikimedia Commons

Orthophoto

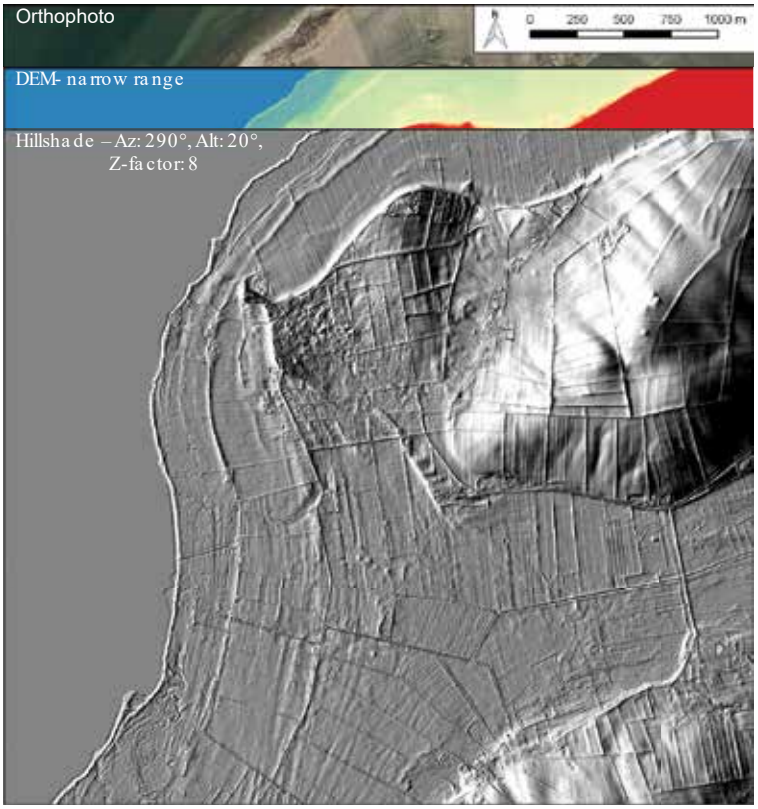
DEM – full range



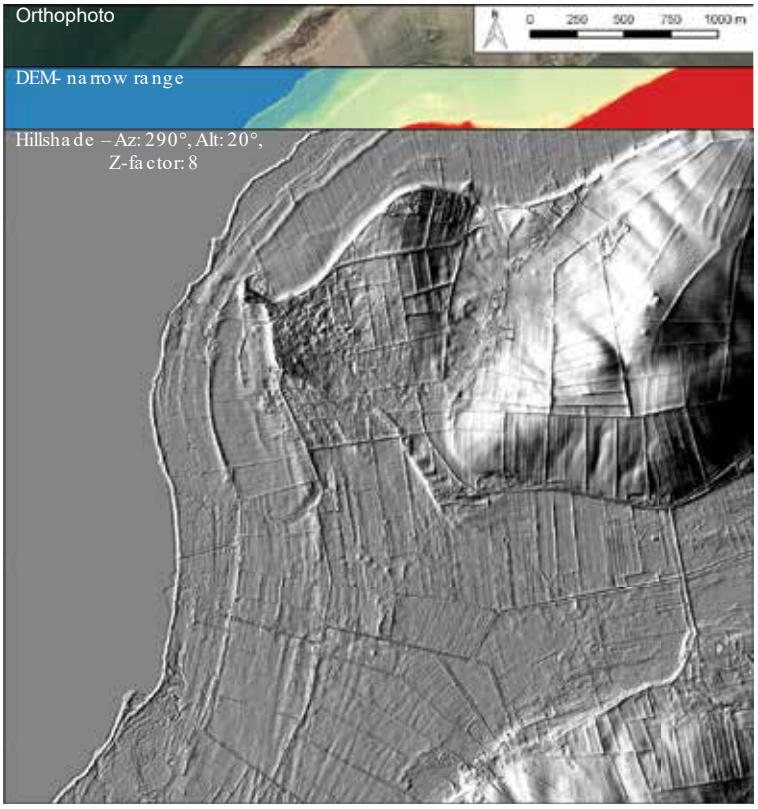


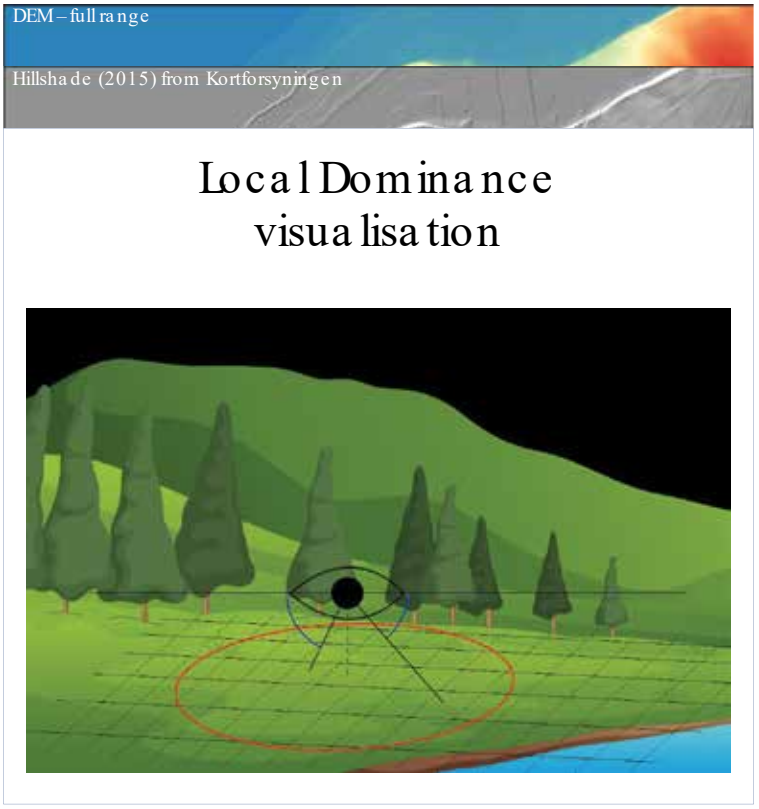

Orthophoto
DEM- narrow range
0 250 500 750 1000 m
Elevation (m)
0
1.25
2.5
3.75
5
DEM – full range
Elevation (m)
0
8
16
24
32

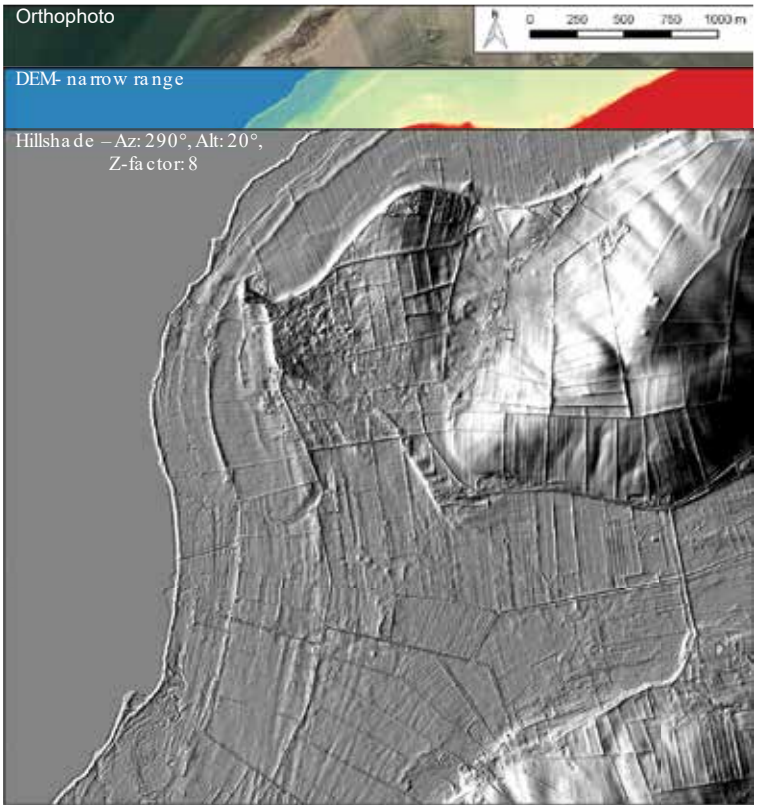

Orthophoto
DEM- narrow range
0 250 500 750 1000 m
Elevation (m)
0
1.25
2.5
3.75
DEM – full range
Hillshade (2015) from Kortforsyningen

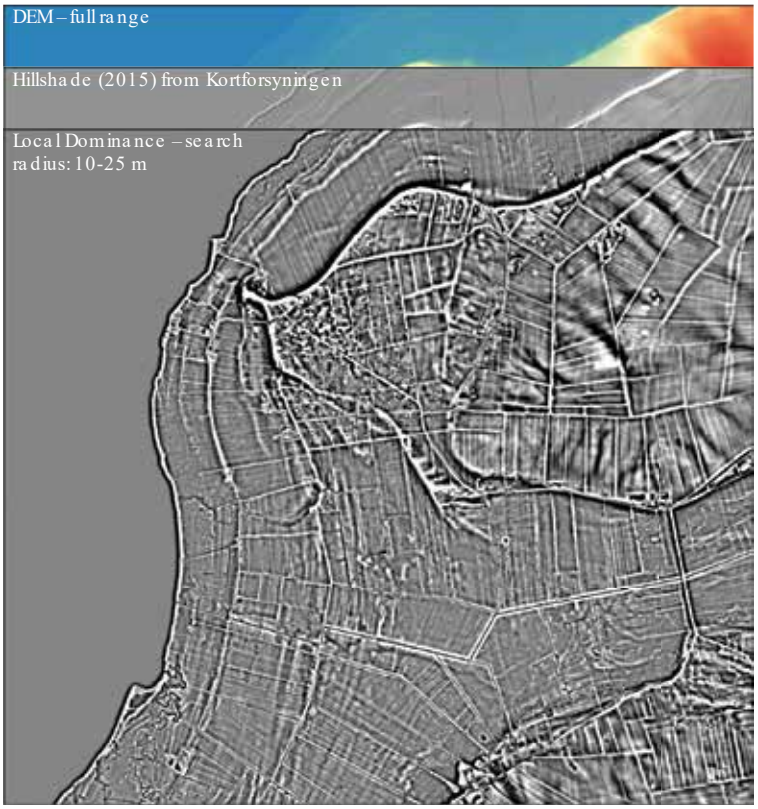

Orthophoto
0 250 500 750 1000 m
DEM- narrow range
Hillshade – Az: 290°, Alt: 20°,
Z-factor: 8


DEM – full range
Hillshade (2015) from Kortforsyningen

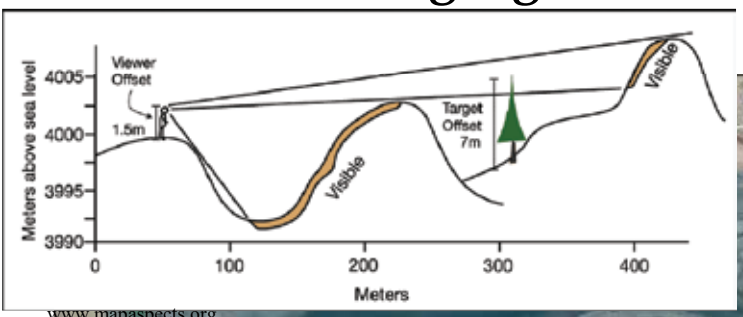

Orthophoto
0 250 500 750 1000 m
DEM- narrow range
Hillshade – Az: 290°, Alt: 20°,
Z-factor: 8


DEM – full range
Hillshade (2015) from Kortforsyningen
Local Dominance
visualisation

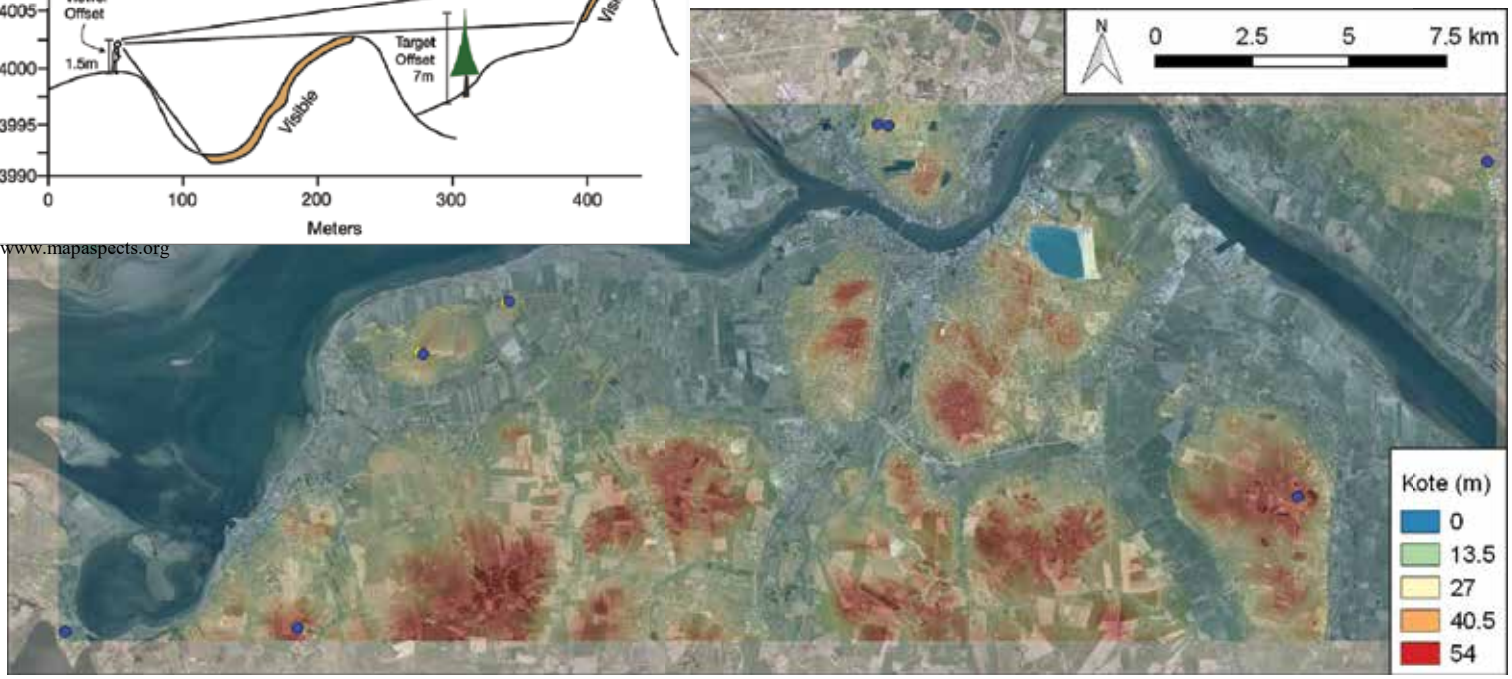




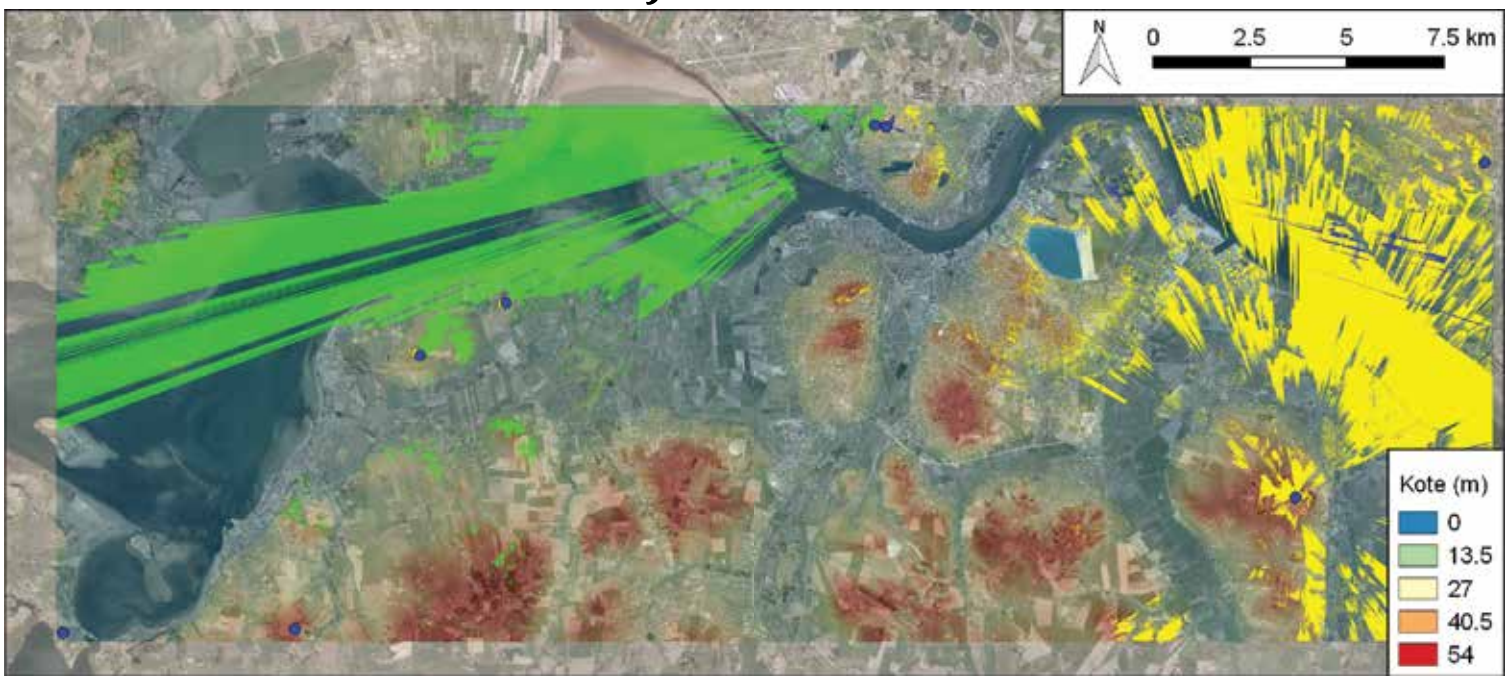
Viewshed-analyses for optimization of beacon sites in the Viking Age based on the modern LiDAR data



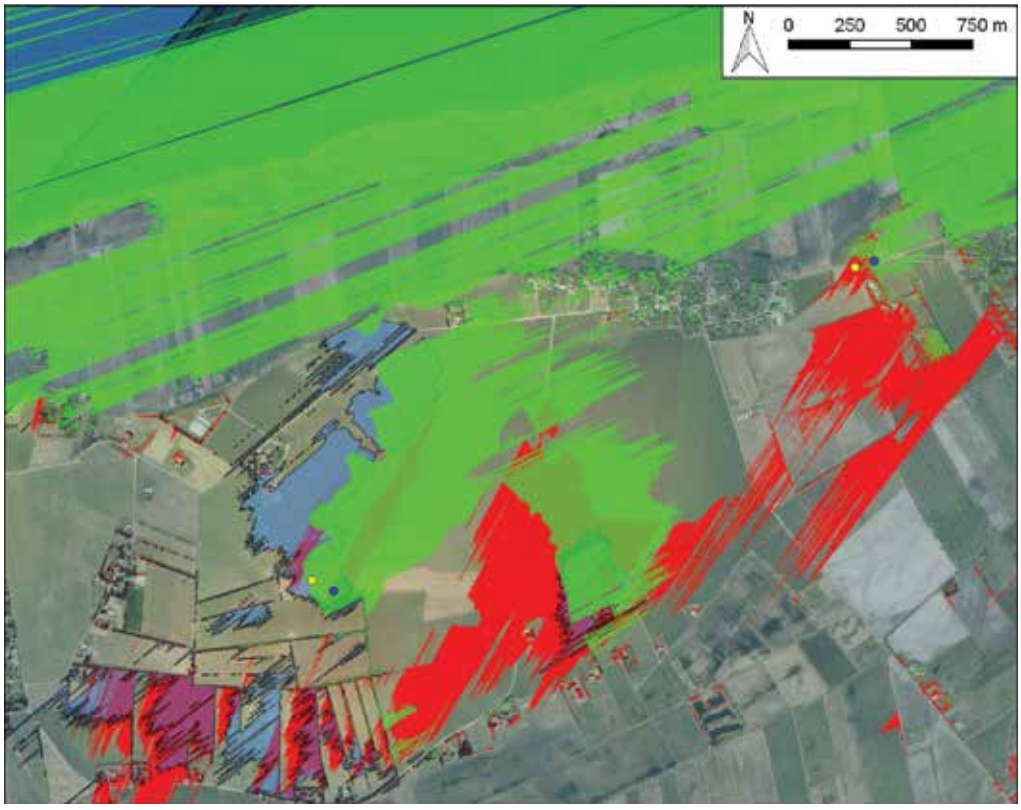
www.mapaspects.org



Viewshed-analyses of beacons along the eastern Limfjord' shores



Areas on Nørholm Bakkeø where one can see the beacons



Originally planned site

Optimal site for beacon

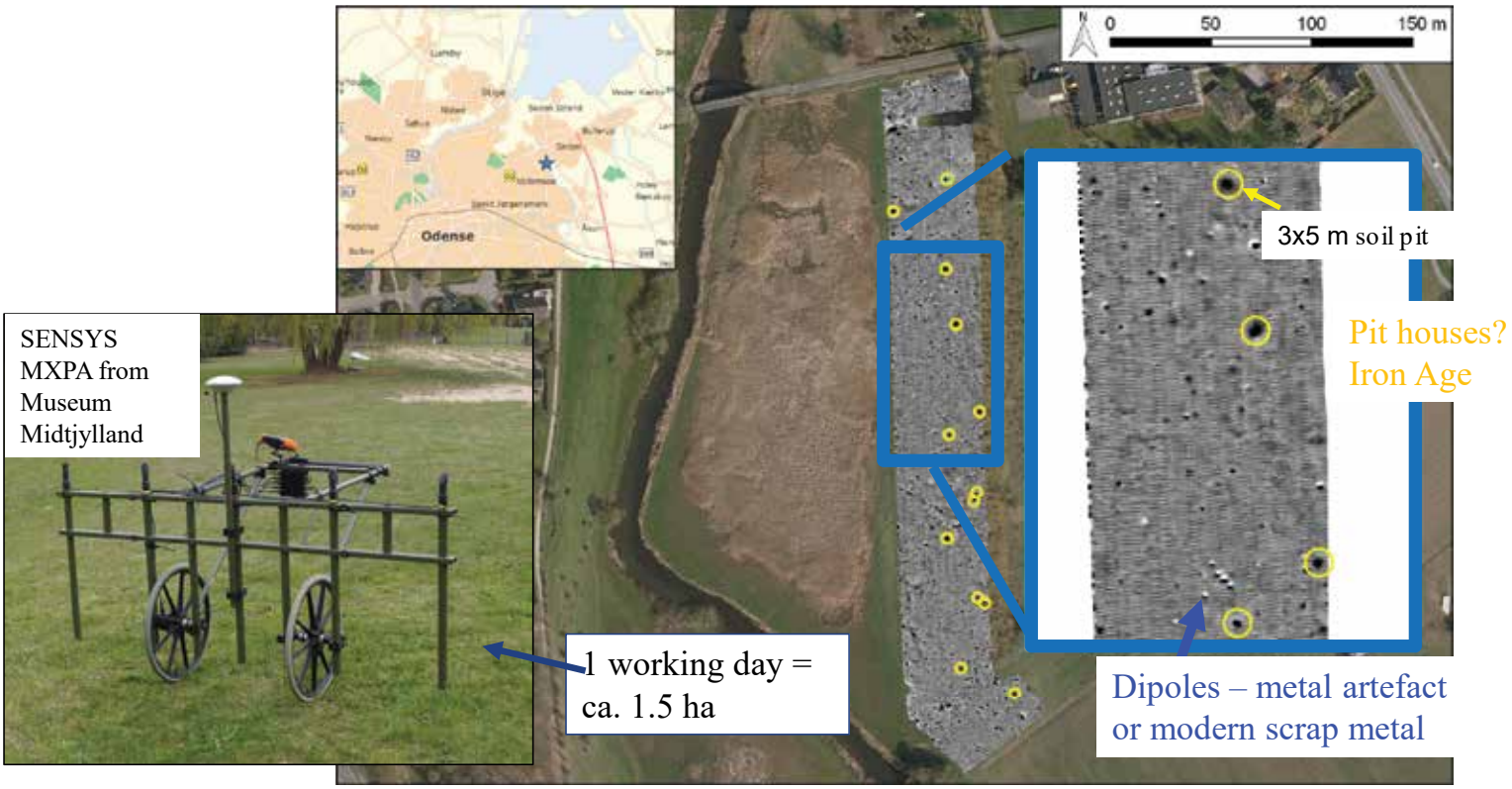
from Lindholm (green),

Vokslev (red)

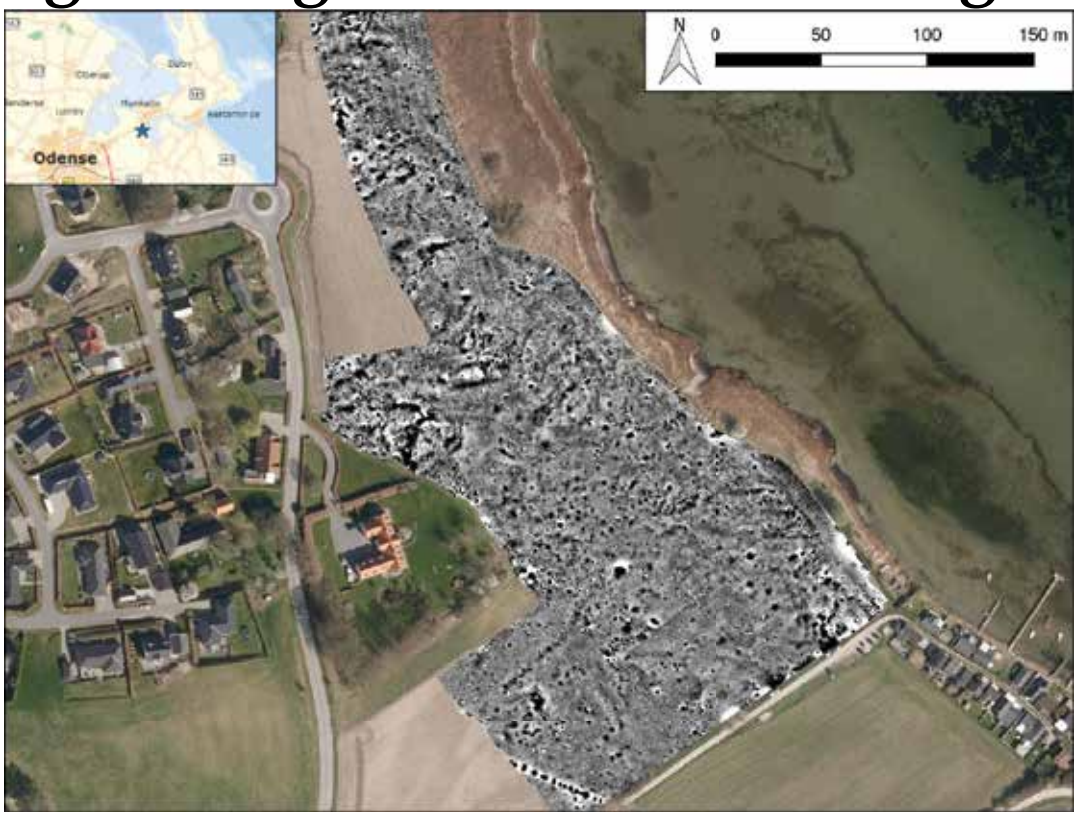
Skt. Nicolajs bjerg (blue)

GEOPHYSICAL PROSPECTIONS

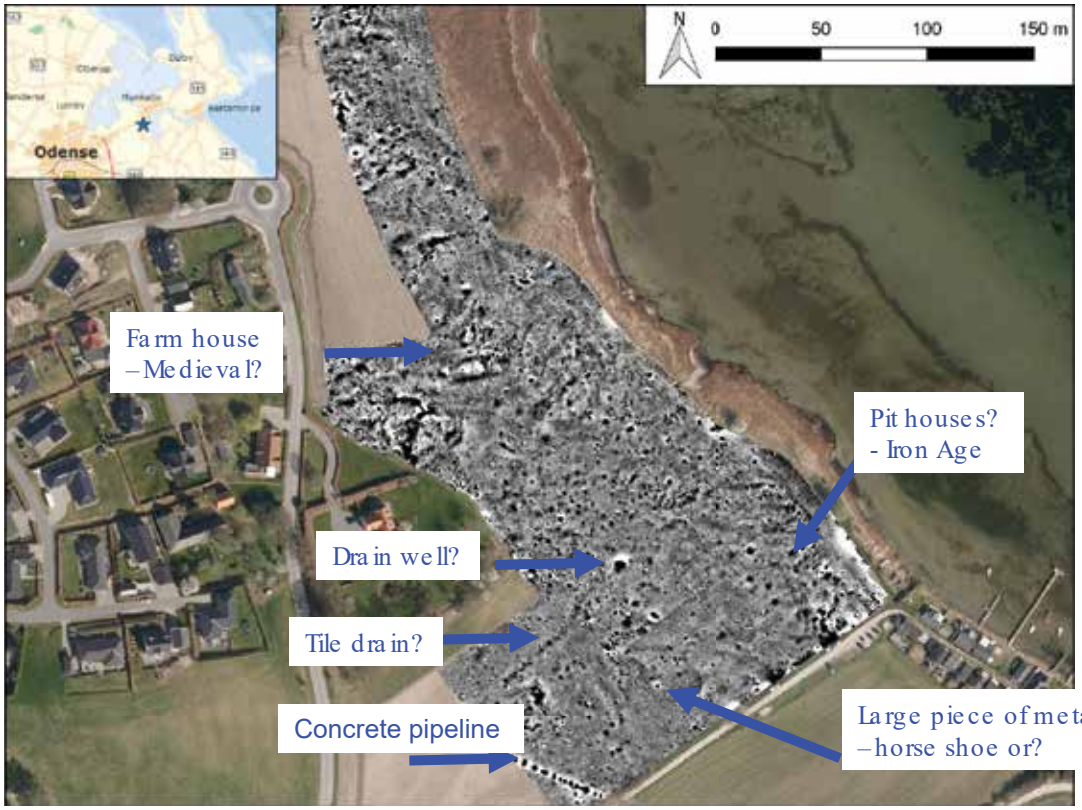
Fluxgate magnetometer investigations at Odense Å



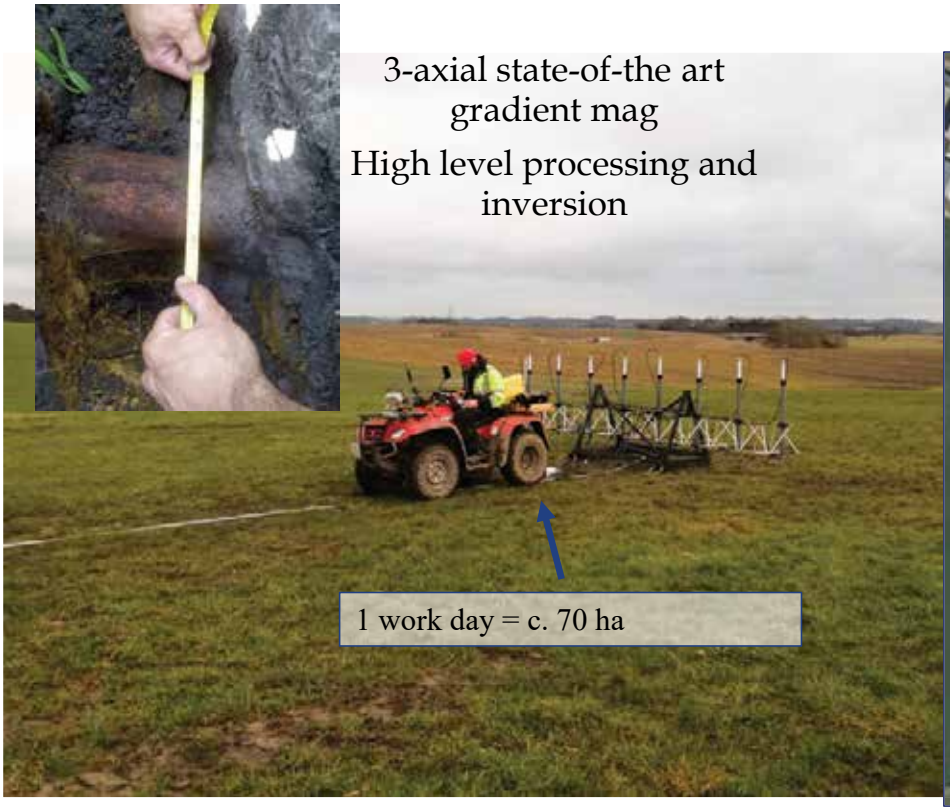
Fluxgate magnetometer at Kertinge Nor

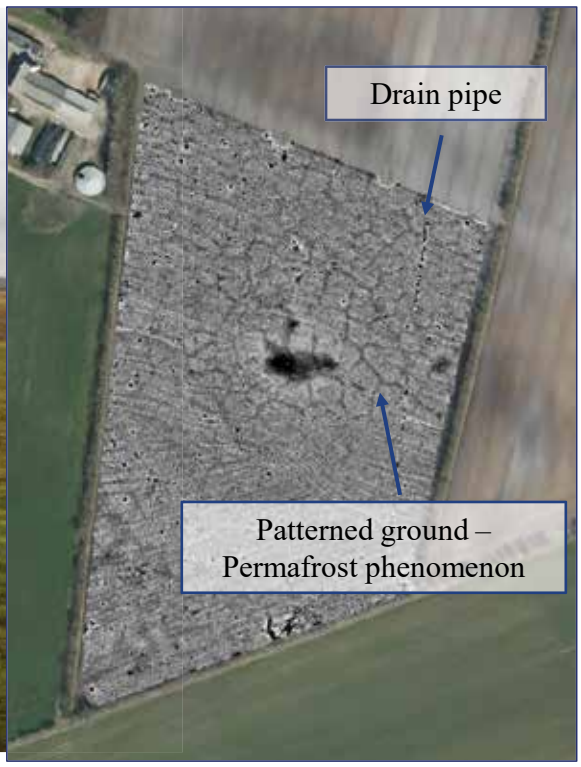


Fluxgate magnetometer at Kertinge Nor



NEW GRADIENT MAGNETOMETERS





PERSPECTIVES IN SPACE-TO-PLACE PROJECT

- Sea-level curve and thus shore lines will be assessed at one site only, but is useful though-out most of the eastern Limfjord area
- Landing sites very difficult to detect by remote methods, while geophysical methods can only add some pre-excavation information on the clayey soils of Funen.
- View-sheds analyses in GIS proved to be very useful for future studies of visibility of beacons in the past

Søren Munch Kristiansen and Thomas Ljungberg – **Reconstructing the Iron Age landscape: Possibilities and limitations in new scientific methods**

Summary by: Jakob Bonde and Mikael Manøe Bjerregaard

Introduction:
In this paper Munch Kristiansen presents the preliminary results of an investigation into the possibilities and limitations inherent in landscape reconstructions produced by modern scientific methods with regard to past coastlines in relation to prehistoric settlements. Improved methods for high-definition dating and new geophysical methods are also presented.

Presentation:
In studies of past coastlines world-wide, it is important to undertake precise investigations of sea and shore locations (iso- and eustasy, respectively) during a specific period in order to understand the relationship between prehistoric settlements and the past coastline.

In the research area in northern Jutland, small sand ridges on raised sea floors were compared with dated settlements to reconstruct the precise development of the coastline in the eastern Limfjord area. On Funen, there has been no significant change in the relative level of the sea and land.

Optically stimulated luminescence dating (OSL) has been used to date the exact coastline. This method can determine the time of last exposure to light of sand grains within the ridges and is very useful for dating in coastal areas.

Radiocarbon is, in most cases, the most accurate method for dating palaeo-landscapes, and Munch Kristiansen gave, as an example, more than 20 radiocarbon dates for human bones recovered from a palaeo-lakeshore (Alken Enge, Denmark). The stable isotopic components of the material were also compared here, qualifying the material and calibrating the dates, thereby narrowing them down to one single event.

Furthermore, it is possible to use ground-penetrating radar (GPR) to detect changes in sea level on now raised shorelines. This is a precise method, in combination with OSL dating, which is however expensive and has not been used in this project.

Another method for exploring past sea- and landscapes is marine seismic survey, which can recreate palaeo-landscapes below present-day sea level and, for instance, detect submerged (disappeared) islands.

Another method employs age-depth models, using radiocarbon dates combined with sediment analysis of lake and sea sediment cores.

Using 3D-modelling, lake and sea sediment beneath the lake/sea floor can be measured off-shore with a sub-bottom profiler which can penetrate 10-15 m of sediment with a resolution approaching only a few cm. This is a very precise method for, for example, locating shipwrecks beneath the sea floor.

Airborne laser scanning (LiDAR) can cover extensive areas. Even 10 cm high ridges can be observed, making it possible to enhance understanding of past landscapes and shoreline displacement.

Three-dimensional (3D) modelling (viewshed based on LiDAR) has also been used for measuring visibility at km scale. The ability to see from one settlement to another is vital to an understanding of how the locations of settlements were planned in the landscape.

On Funen, geophysical prospection has been used in the search for possible landing sites along Odense Å. This investigation was not as successful as hoped, but at some locations, possible pithouses could be observed. At Kertinge Nor, a flux-gate gradiometer has also been used over a relatively large area to identify potential landing sites. Despite the detection of a few pithouses and a possible Medieval building, the outcome of this investigation could similarly not be characterised as positive but archaeological excavations are required before a final conclusion can be drawn.

As a final method, Munch Kristiansen presents novel developments in the use of the gradient magnetometer method, which can cover an area of about 70 ha in one working day. This method can, by high-level processing and inversion, not only show structures beneath the surface, but possibly also determine the depths of the signals.

Conclusion:
In conclusion, the methods presented above provide an informative way of dating and mapping past coastlines, especially in the northern part of the research area – along the Limfjord.

In the southern research area (Funen), it was found that landing sites are very difficult to detect using remote methods, while geophysical methods only can add some pre-excavation information on the clayey soils in this area.

Questions:
No questions.

Further reading:
Kristiansen, S.M. 2018. Fortidens Landskab set fra oven. Tema nr. om Geoarkæologi. *Geoviden 2/2018*. pp. 6-10.

Kristiansen, S.M. et al. 2018. Det nødvendige hvornår. Tema nr. om Geoarkæologi. *Geoviden 2/2018*. pp. 18-19.

Christiansen A.V., Pedersen J.P., Auken E., Søe N.E., Holst M.K., Kristiansen S.M. 2016. Improved geoarchaelogical mapping with electromagnetic induction instruments from dedicated processing and inversion. *Remote Sensing 8*, 1022; DOI: 10.3390/rs8121022.

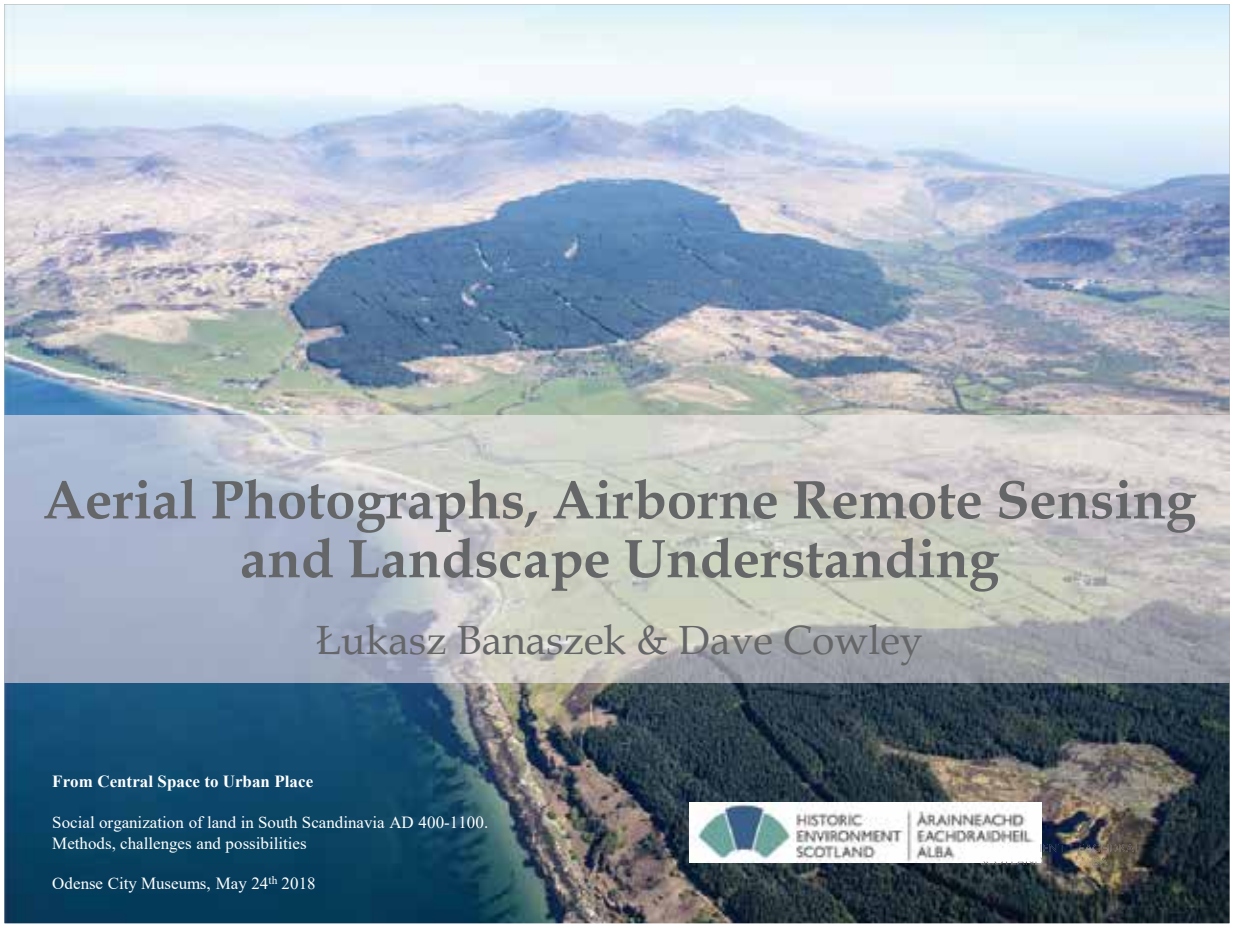
Hede, M.U., et al. 2018. Changes in Holocene relative sea-level and coastal morphology: A study of a raised beach ridge system on Samsø, southwest Scandinavia. *The Holocene 25*: pp. 1402-14.

Aerial photographs, airborne remote sensing and landscape understanding

Lukas Banaszek & Dave Cowley
(Historic Environment Scotland)

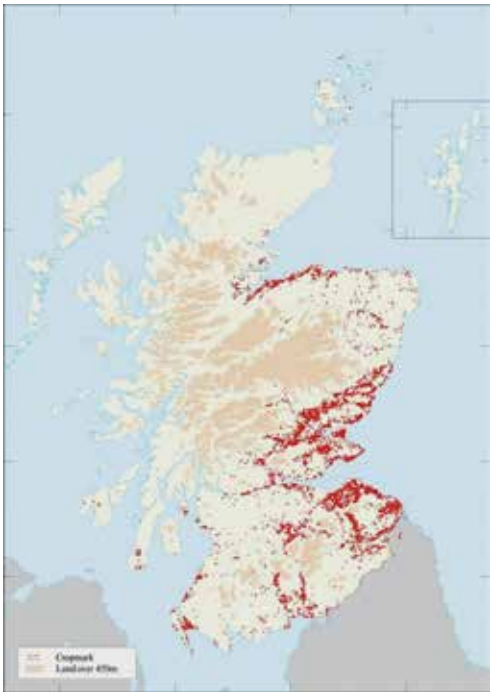
Abstract:

Airborne remote-sensed data, whether from laser scanning or traditional aerial photographs, has revolutionised archaeological knowledge in many areas, with multi- and hyperspectral imaging making an increasing contribution. This paper summarises the value of these datasets, discussing the issues of bias and representativity of data in attempting reconstructions of past settlement and land-use systems. By taking a landscape perspective informed by factors such as sensor and land-use induced bias, the assessment of the reliability of datasets derived from these sources is presented, with case studies from Scotland that span the 1st millennium BC and the 1st millennium AD. The importance of a holistic approach to landscape understanding framed by a comprehensive source-critical approach is stressed.



Historic Environment Scotland is the lead public body set up in 2014 to investigate, care for and promote Scotland's historic environment.

Landscape understanding and the structure of the archaeological record



Sources of patterning

Methods and source data

Modern and ancient land use

Soils

Survey strategy/conceptual frameworks

People

Weather

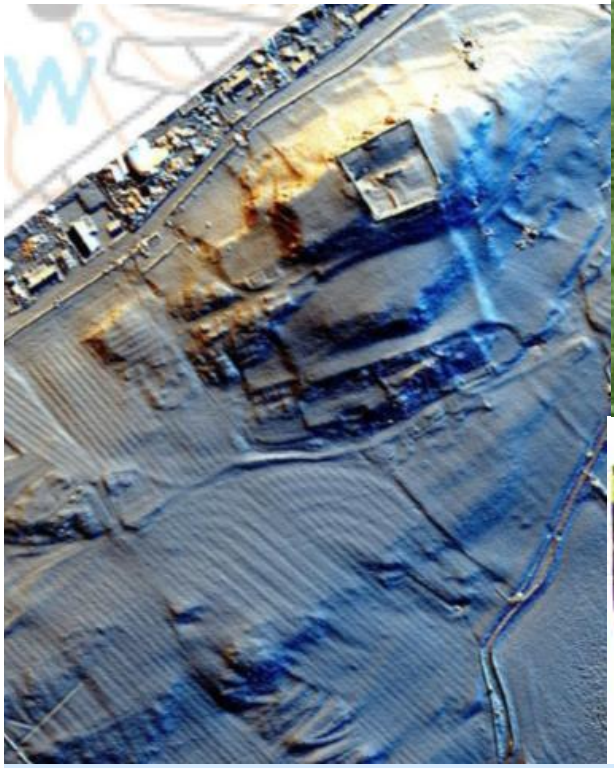
Expectations

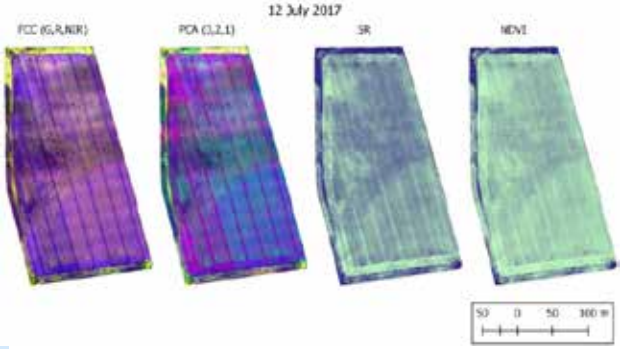
Etc. Etc. Etc. Etc. Etc. Etc. Etc. Etc.

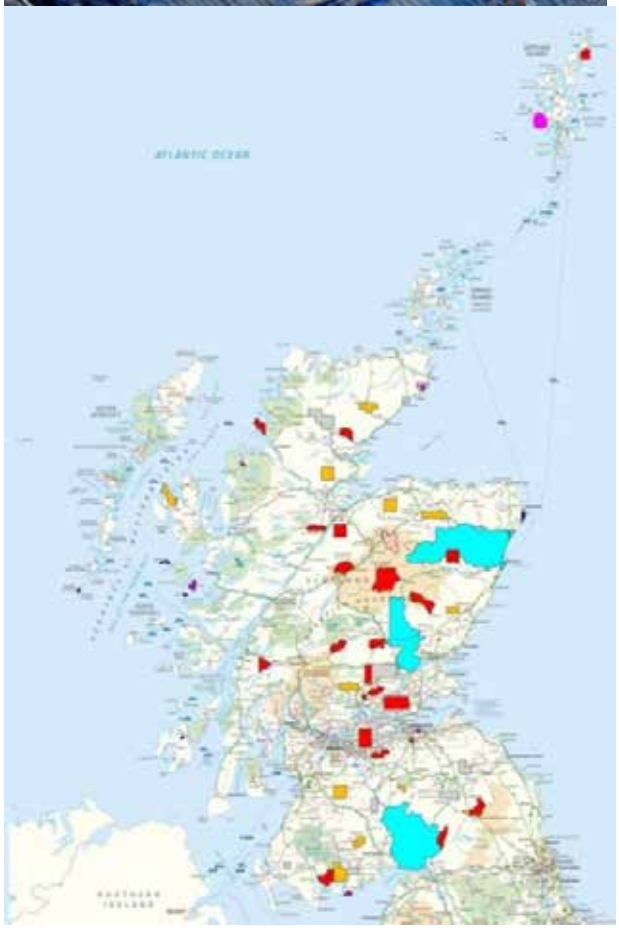
...oh and also!

What people did in the past

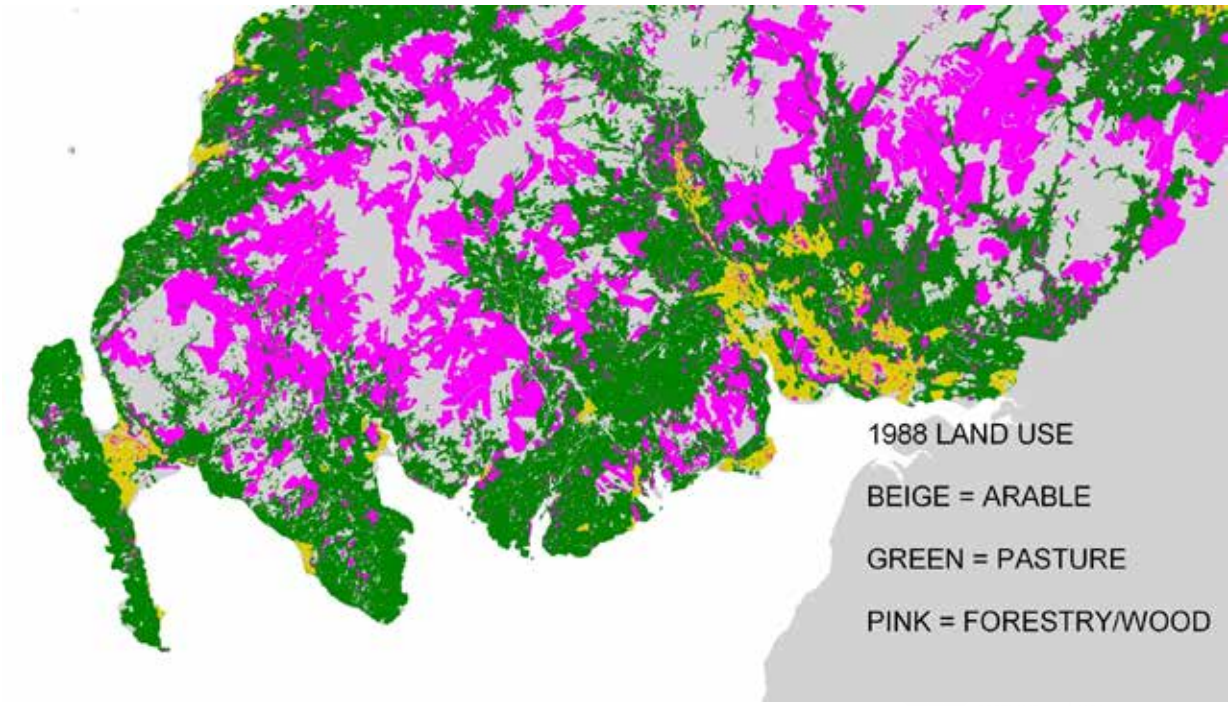
Methods and source data



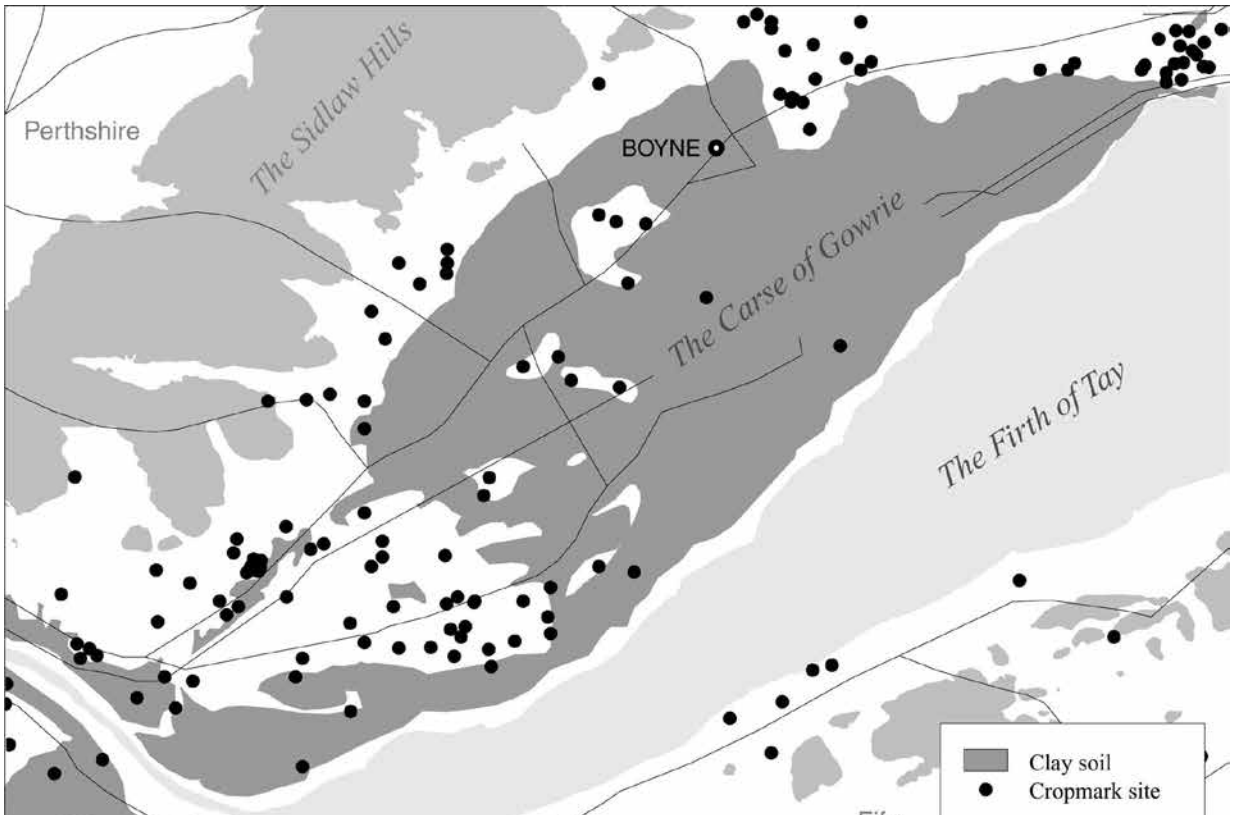


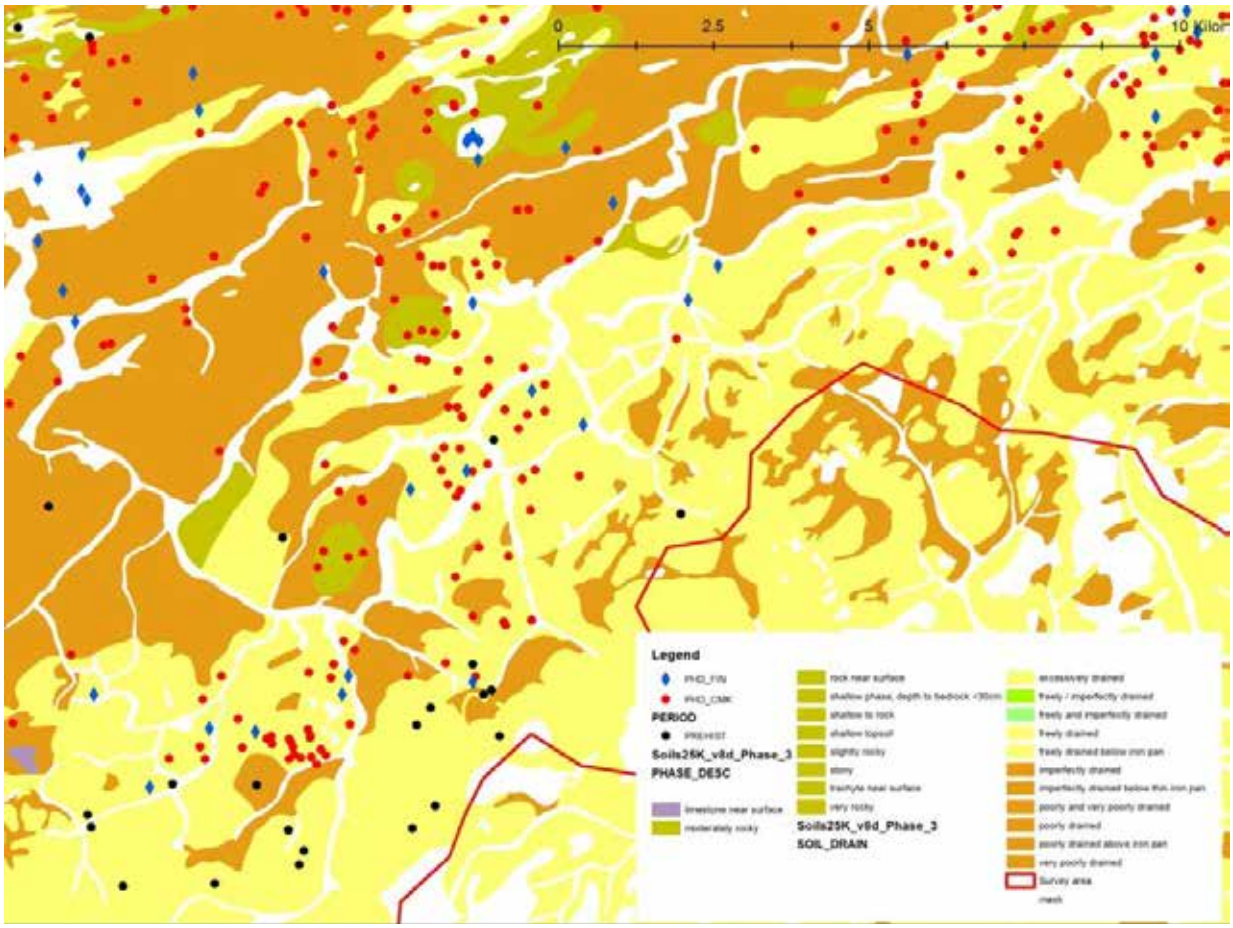


Modern and ancient land use

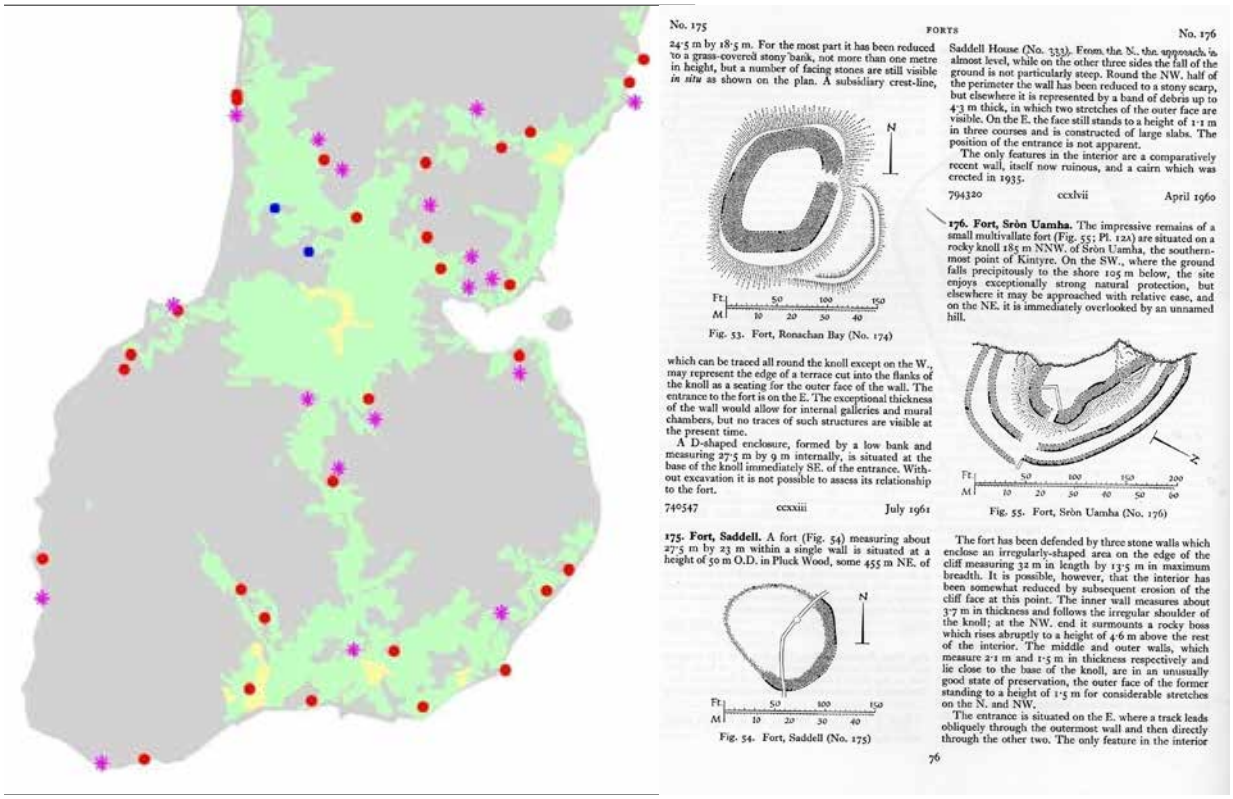


Soils


Perthshire
The Sidlaw Hills
BOYNE
The Carse of Gowrie
The Firth of Tay
Clay soil
Cropmark site



Survey strategy/conceptual frameworks



No. 175 FORTS No. 176

24·5 m by 18·5 m. For the most part it has been reduced to a grass-covered stony bank, not more than one metre in height, but a number of facing stones are still visible *in situ* as shown on the plan. A subsidiary crest-line, which can be traced all round the knoll except on the W., may represent the edge of a terrace cut into the flanks of the knoll as a seating for the outer face of the wall. The entrance to the fort is on the E. The exceptional thickness of the wall would allow for internal galleries and mural chambers, but no traces of such structures are visible at the present time.

A D-shaped enclosure, formed by a low bank and measuring 27·5 m by 9 m internally, is situated at the base of the knoll immediately SE. of the entrance. Without excavation it is not possible to assess its relationship to the fort.

740547 ccxxiii July 1961

Fig. 53. Fort, Ronachan Bay (No. 174)

175. Fort, Saddell. A fort (Fig. 54) measuring about 27·5 m by 23 m within a single wall is situated at a height of 50 m O.D. in Pluck Wood, some 455 m NE. of Saddell House (No. 333). From the N., the approach is almost level, while on the other three sides the fall of the ground is not particularly steep. Round the NW. half of the perimeter the wall has been reduced to a stony scarp, but elsewhere it is represented by a band of debris up to 4·3 m thick, in which two stretches of the outer face are visible. On the E. the face still stands to a height of 1·1 m in three courses and is constructed of large slabs. The position of the entrance is not apparent.

The only features in the interior are a comparatively recent wall, itself now ruinous, and a cairn which was erected in 1935.

794320 ccxlvii April 1960

Fig. 54. Fort, Saddell (No. 175)

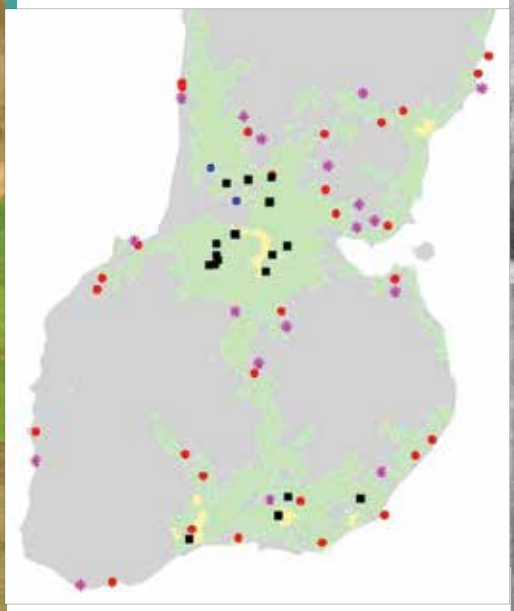
176. Fort, Sròn Uamha. The impressive remains of a small multivallate fort (Fig. 55; Pl. 12A) are situated on a rocky knoll 185 m NNW. of Sròn Uamha, the southernmost point of Kintyre. On the SW., where the ground falls precipitously to the shore 105 m below, the site enjoys exceptionally strong natural protection, but elsewhere it may be approached with relative ease, and on the NE. it is immediately overlooked by an unnamed hill.

Fig. 55. Fort, Sròn Uamha (No. 176)

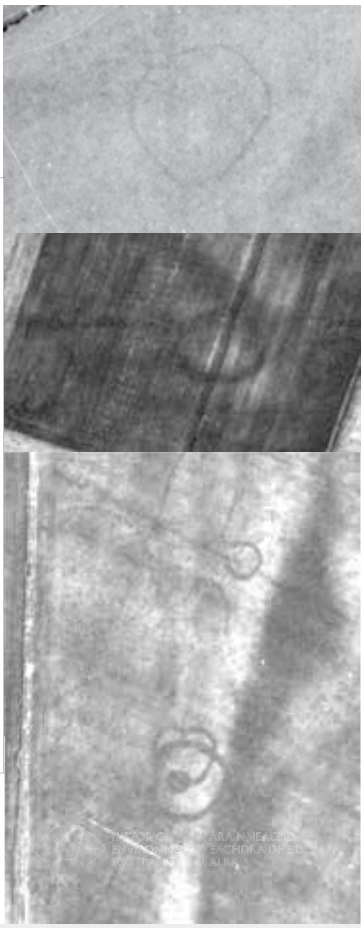
The fort has been defended by three stone walls which enclose an irregularly-shaped area on the edge of the cliff measuring 32 m in length by 13·5 m in maximum breadth. It is possible, however, that the interior has been somewhat reduced by subsequent erosion of the cliff face at this point. The inner wall measures about 3·7 m in thickness and follows the irregular shoulder of the knoll; at the NW. end it surmounts a rocky boss which rises abruptly to a height of 4·6 m above the rest of the interior. The middle and outer walls, which measure 2·1 m and 1·5 m in thickness respectively and lie close to the base of the knoll, are in an unusually good state of preservation, the outer face of the former standing to a height of 1·5 m for considerable stretches on the N. and NW.

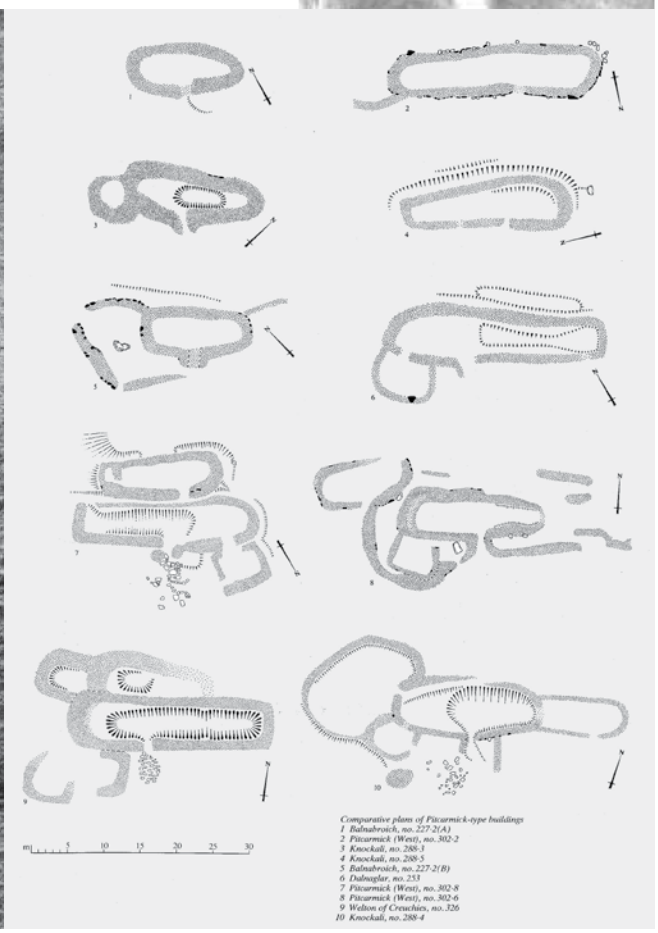
The entrance is situated on the E. where a track leads obliquely through the outermost wall and then directly through the other two. The only feature in the interior

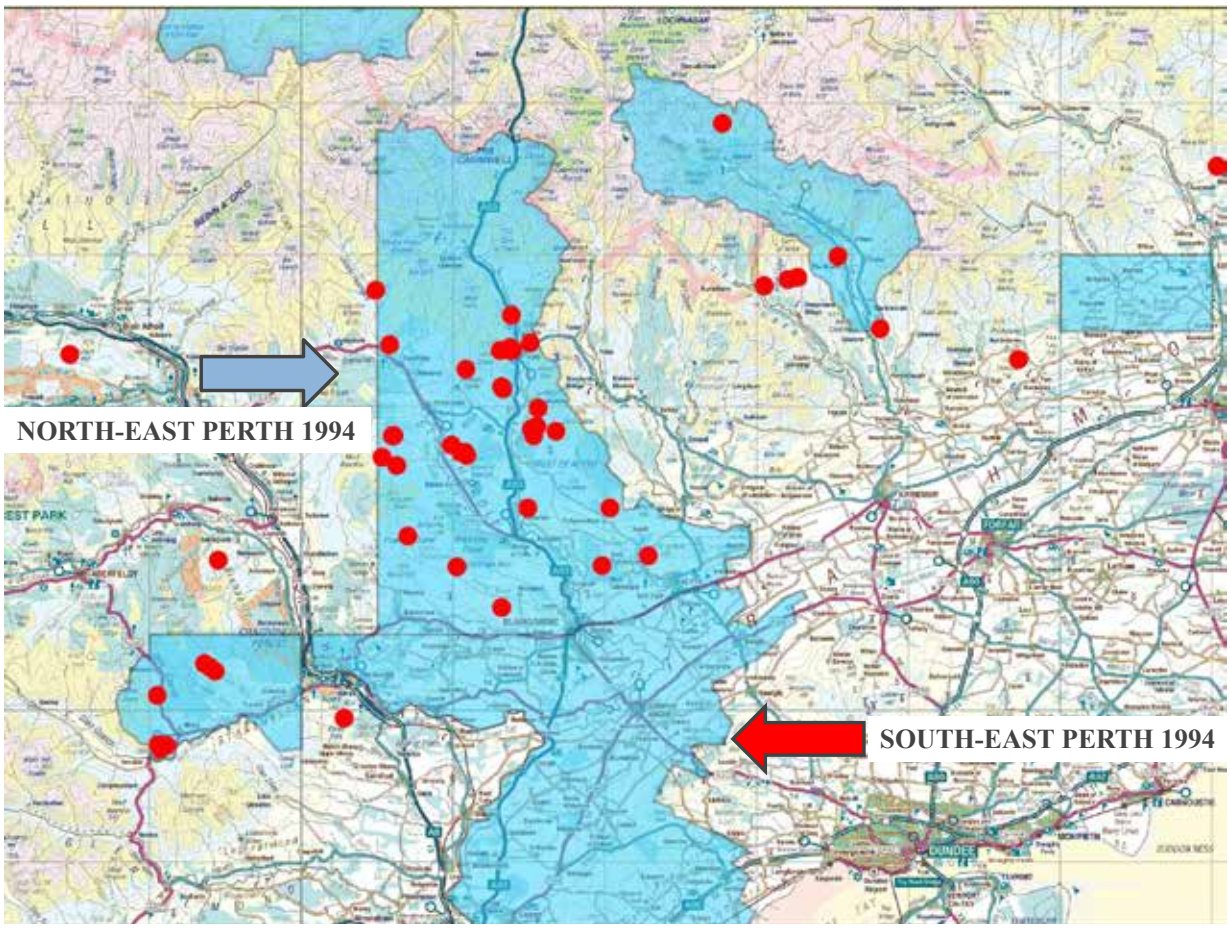
76



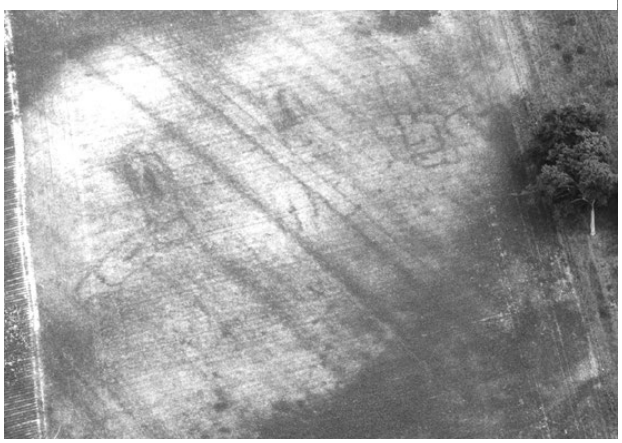
2008 1976/7



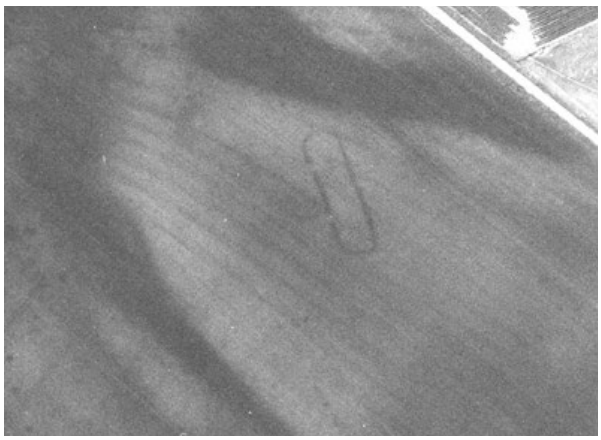

Comparative plans of Pitcarmick-type buildings
1 Balnabroich, no. 227-2(A)
2 Pitcarmick (West), no. 302-2
3 Knockall, no. 288-3
4 Knockall, no. 288-5
5 Balnabroich, no. 227-2(B)
6 Dalnaglar, no. 253
7 Pitcarmick (West), no. 302-8
8 Pitcarmick (West), no. 302-6
9 Welton of Creuchies, no. 326
10 Knockall, no. 288-4



timber halls

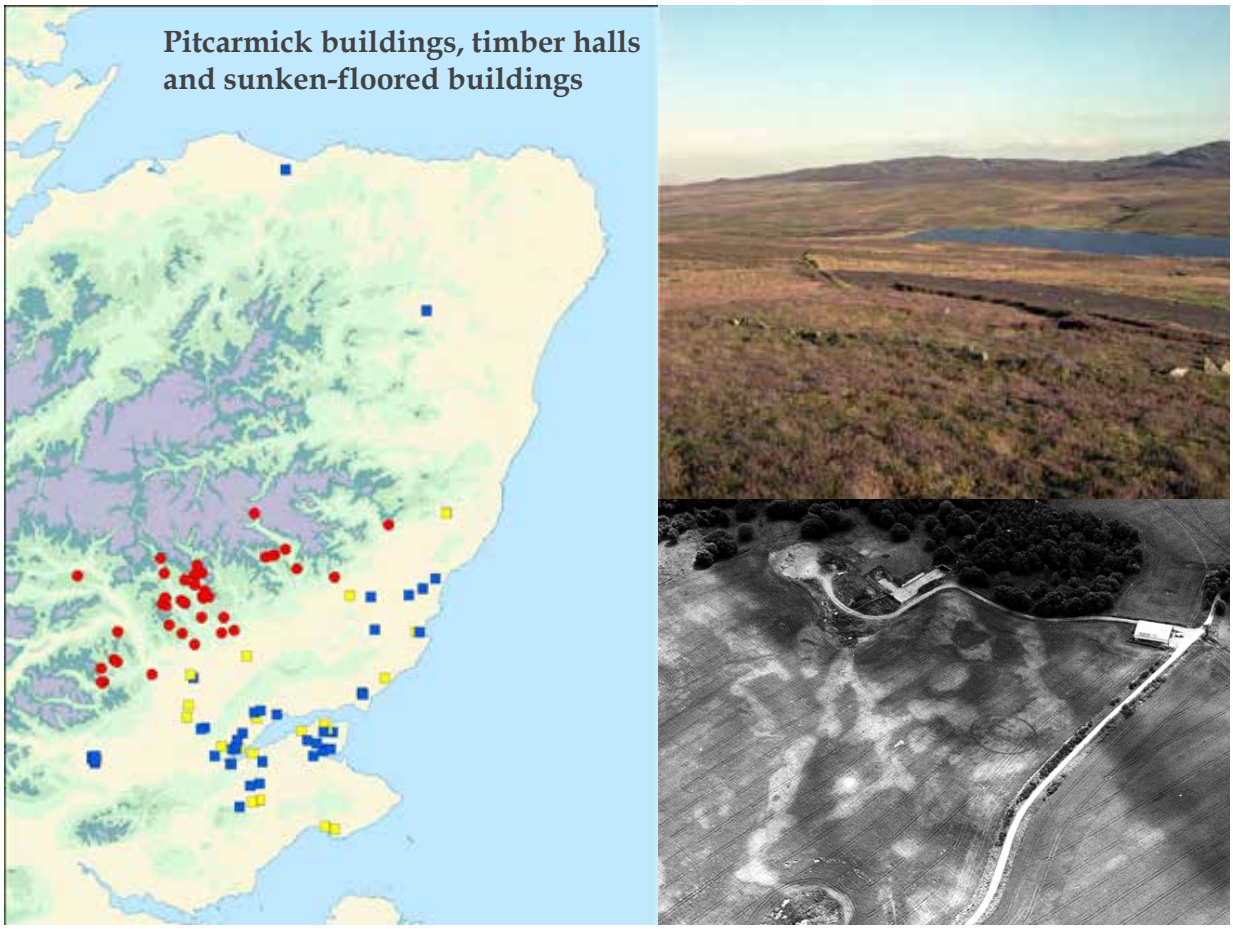


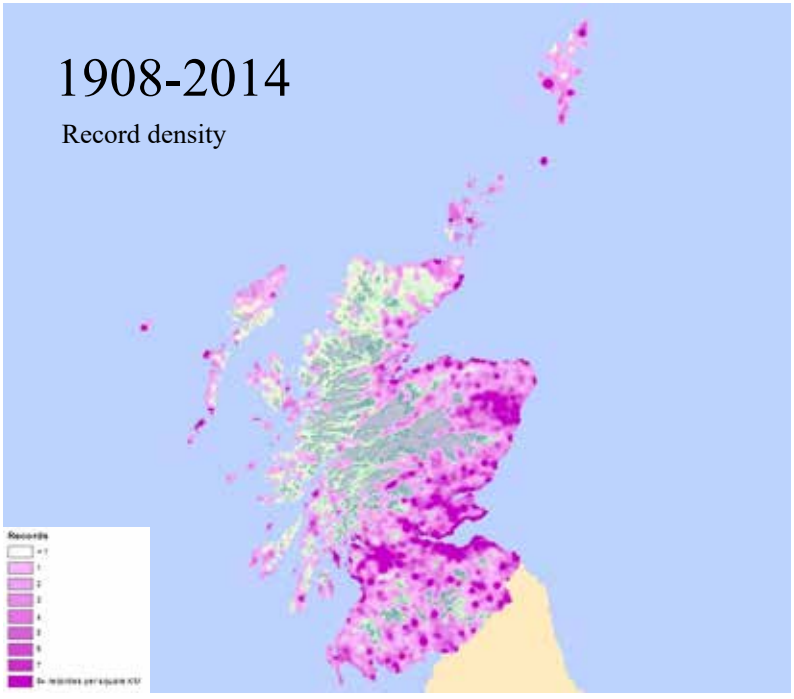
possible building or mortuary enclosure



timber building

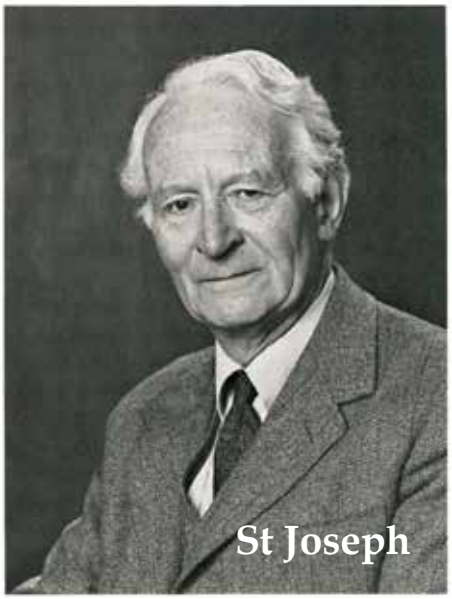
sunken-floored buildings


Pitcarmick buildings, timber halls
and sunken-floored buildings


1908-2014
Record density

People

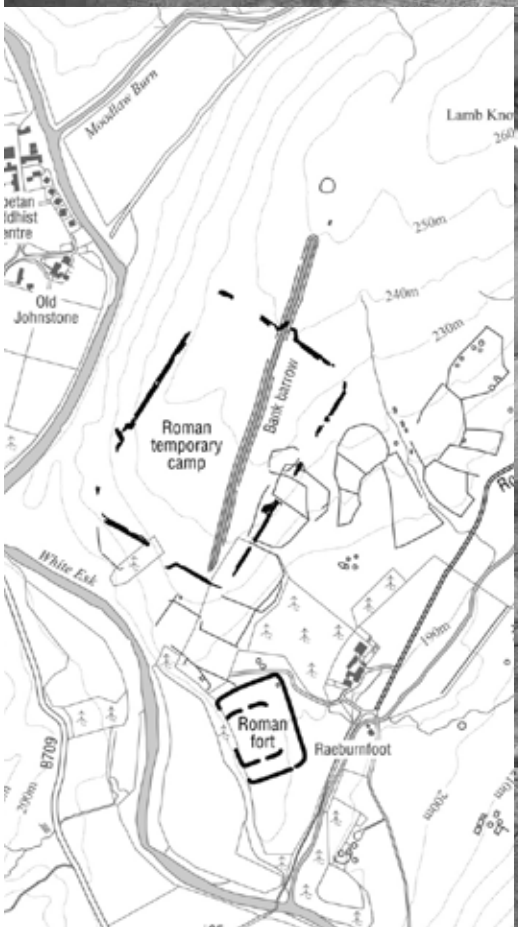
‘...discoveries in the single year 1949 have literally changed the map.’
St Joseph 1976, 7



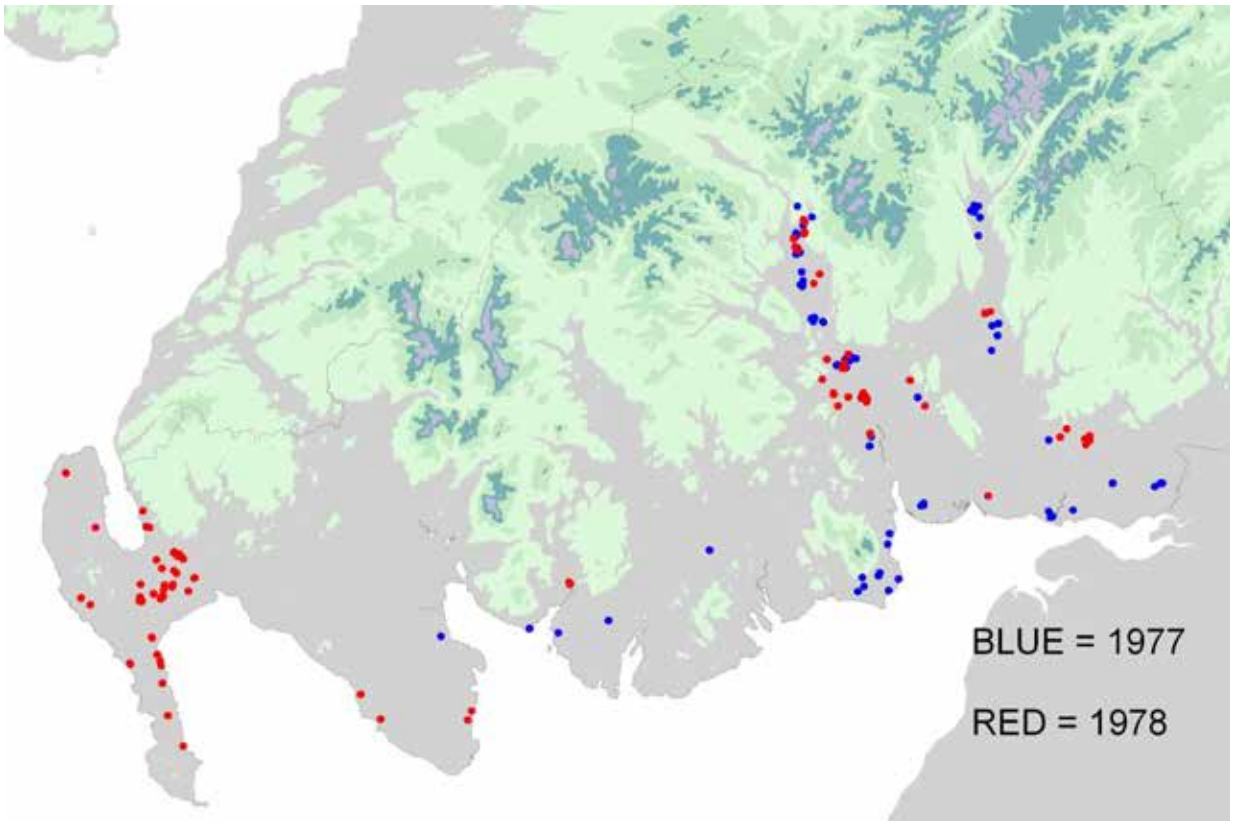
Dalswinton 6 July 1949

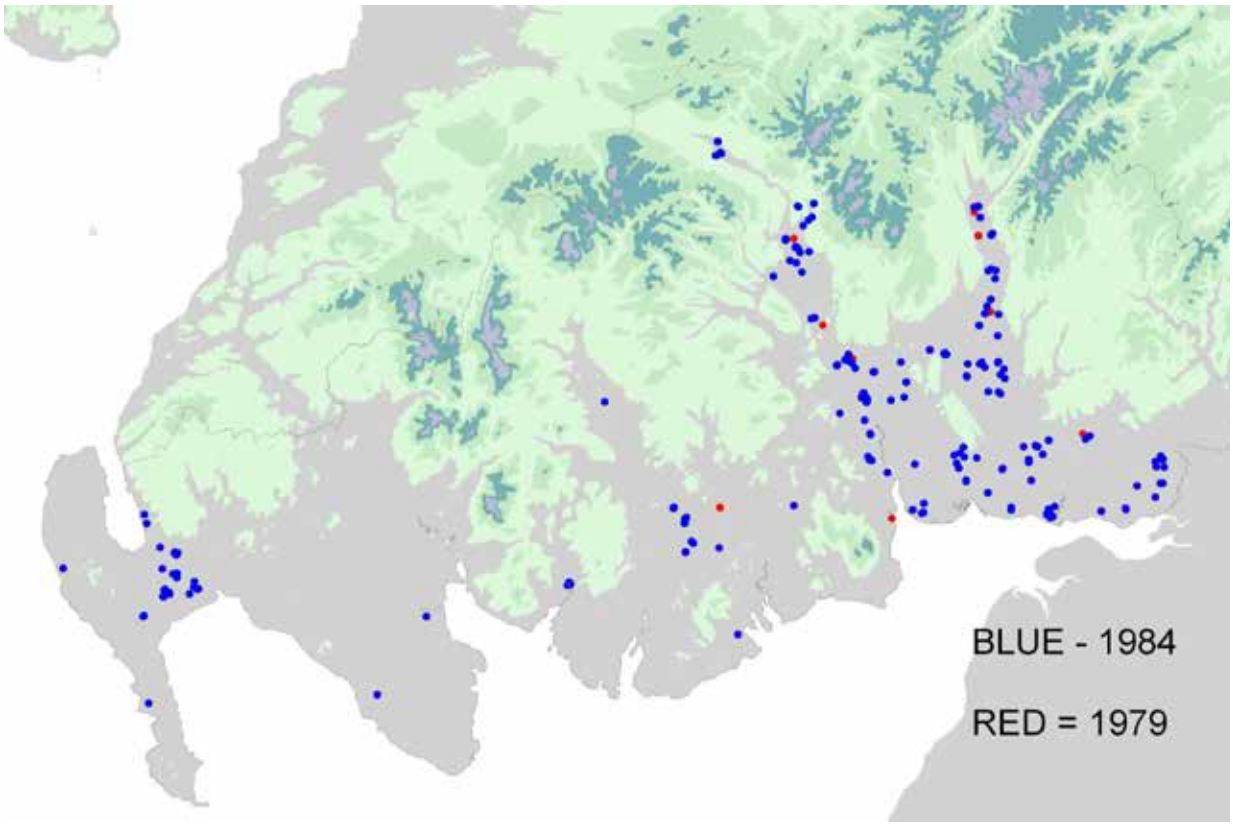
Gatehouse 11 July 1949

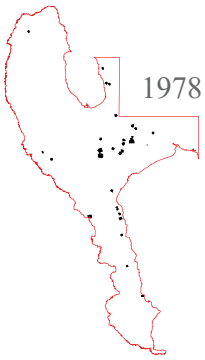
Carronbridge

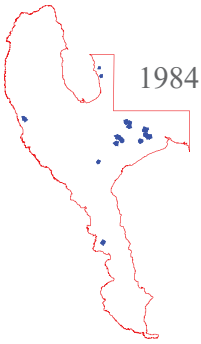

Meadlaw Burn
Old Johnstone
Roman temporary camp
Bank barrow
White Esk
Roman fort
Raeburnfoot
8709
250m
240m
230m
190m

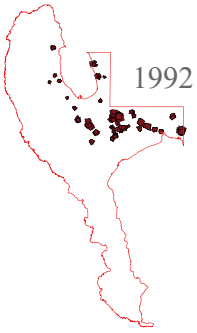
Weather

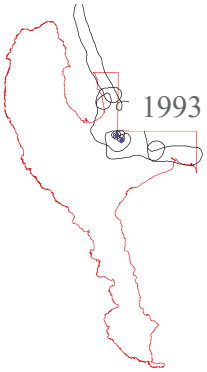


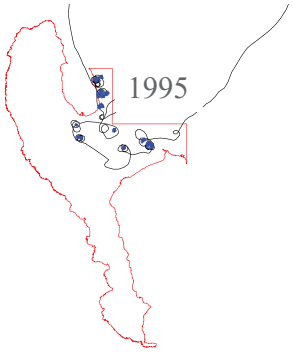


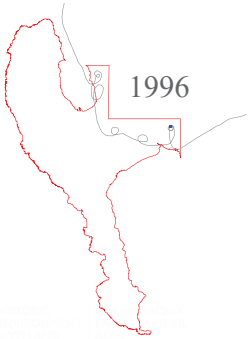








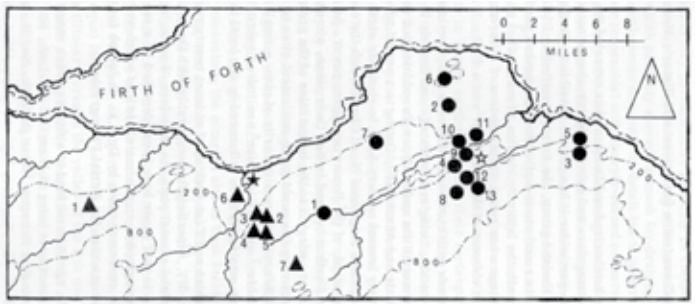


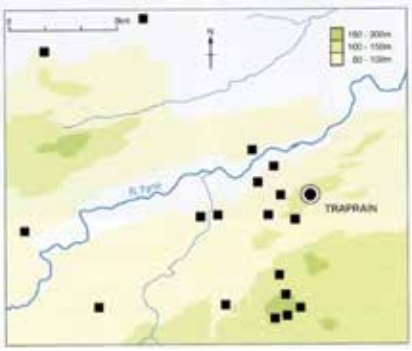


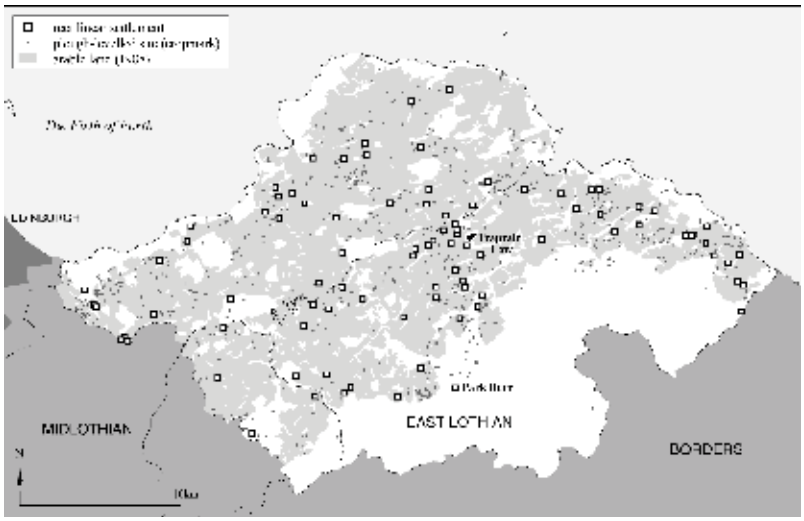
Expectations

Empty?

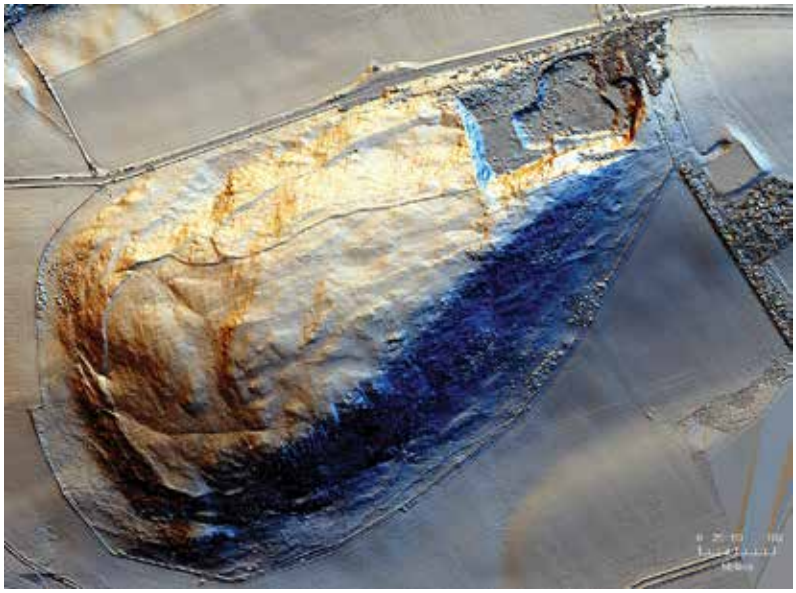
Full?

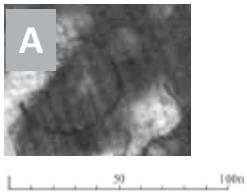


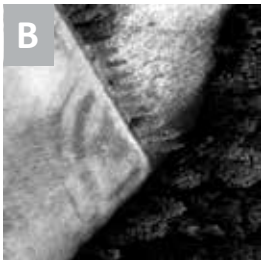


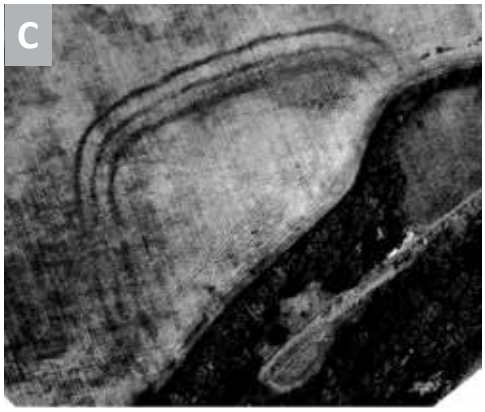


Traprain Law **Neolithic**: Ritual/burial
LBA: Settlement
Pre-Roman Iron Age: periodic activity (?gathering place)
Roman period: Settlement



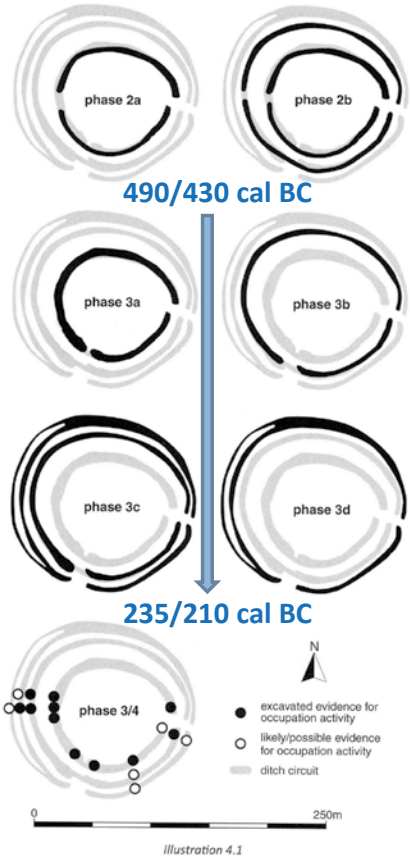






Standingstone Whittinghame East Linton

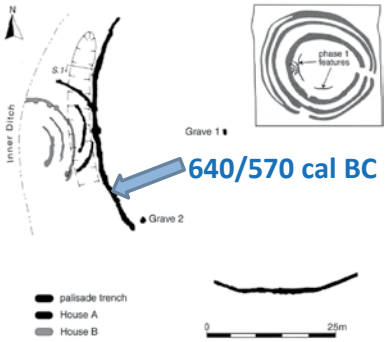
Haselgrove 2009: The Traprain Law Environs Project



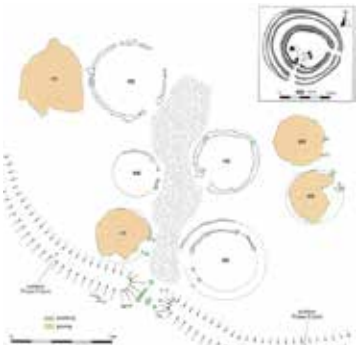
Broxmouth

Armit, McKenzie 2013: An Inherited Place

- Persistent place
- Dating models assume continuity

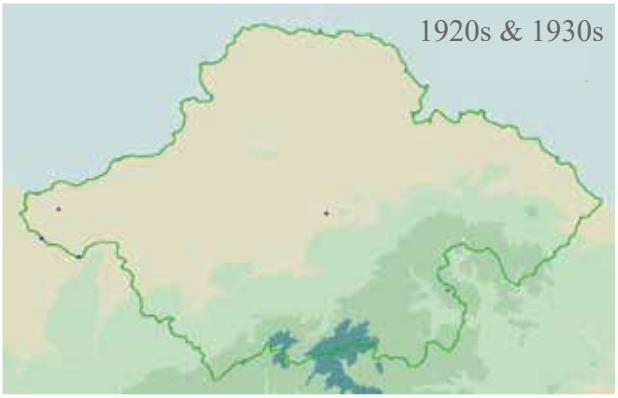


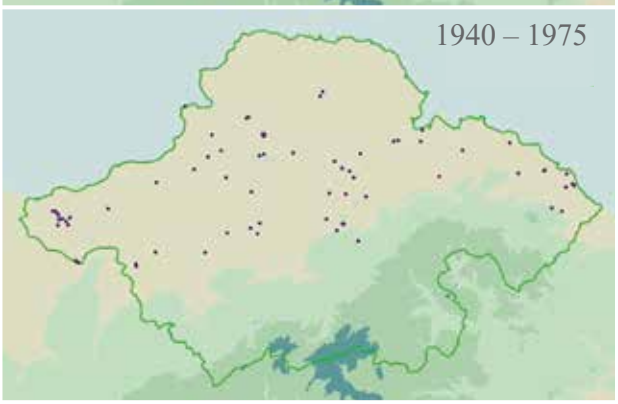
100/60 cal BC – cal AD 155/210

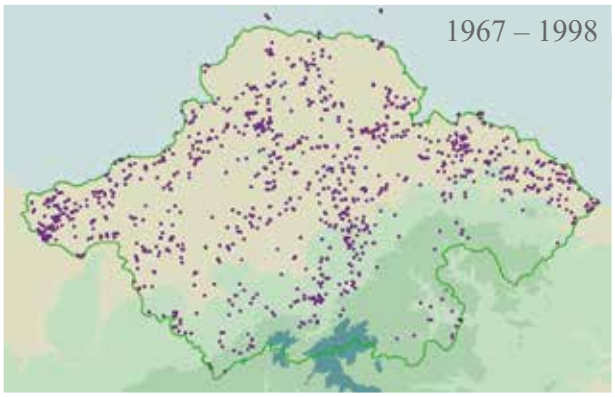


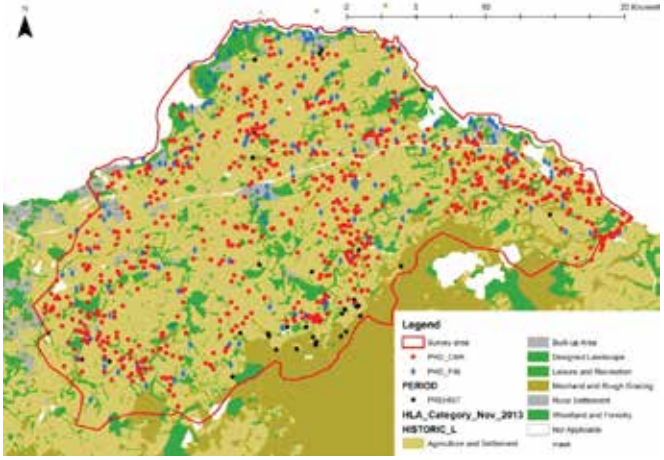
Phase 1 (**actually 2 phases**) Phases 2-4 Phase 6

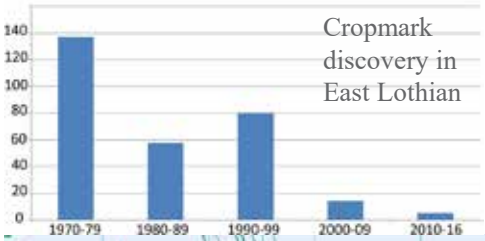
A cumulative record – beyond sites to the landscape







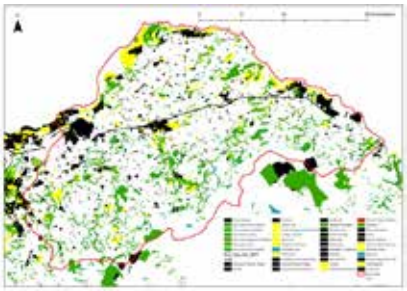




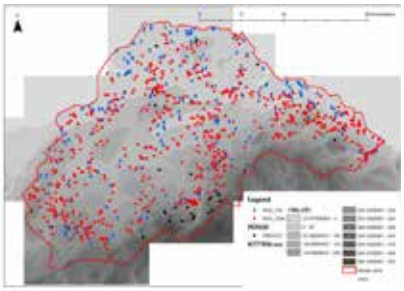
Cropmark discovery in East Lothian

- Survey data is heavily conditioned by survey methodology and historic/modern land use
- Repeatedly surveyed from the air for many decades

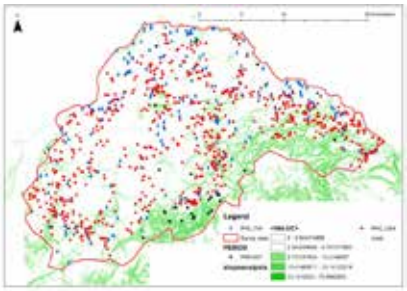
- How representative is the survey data?
- Do patterns reflect past activity?



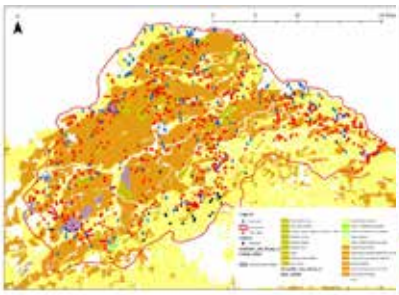
Constraints (urban areas etc.)



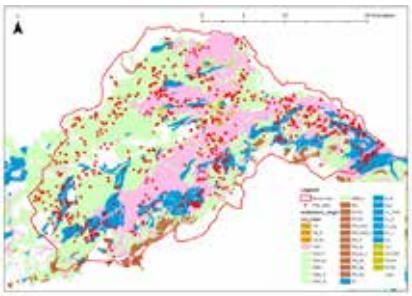
Topography (lowland/upland)



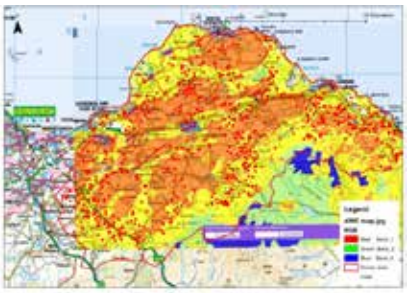
Slope (flat/steep)



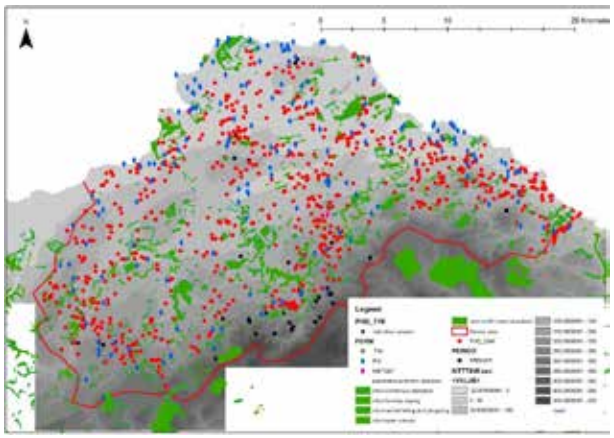
Soils depth/drainage

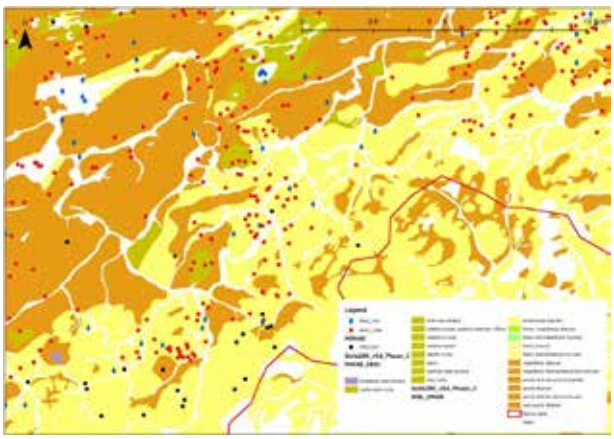


Soil texture

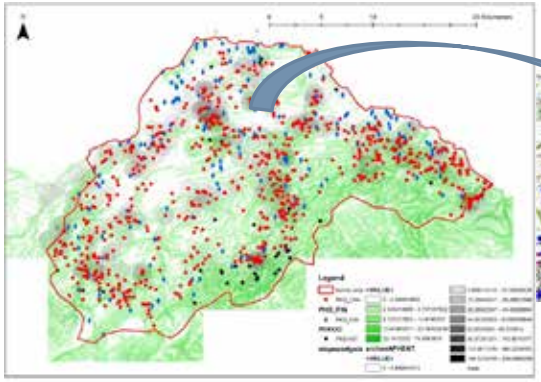


Soil average water content

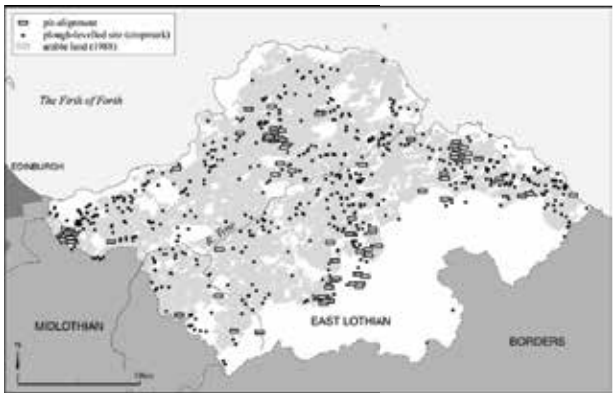


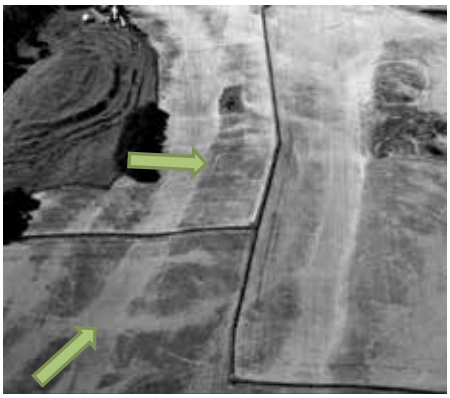


No simple relationships, but there are ‘real’ gaps. Multiple factors at play.



A1– relatively high proportion of Neol/BA ritual sites

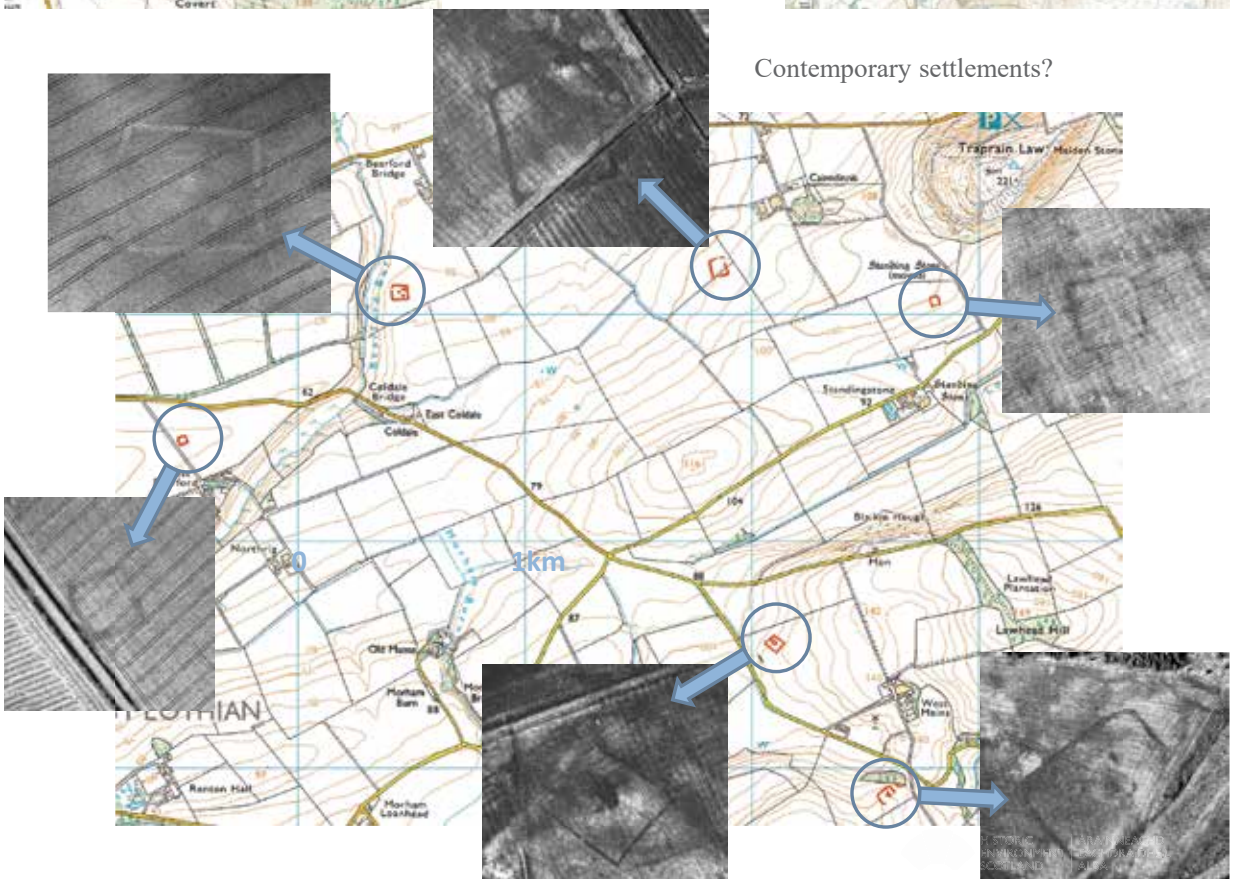




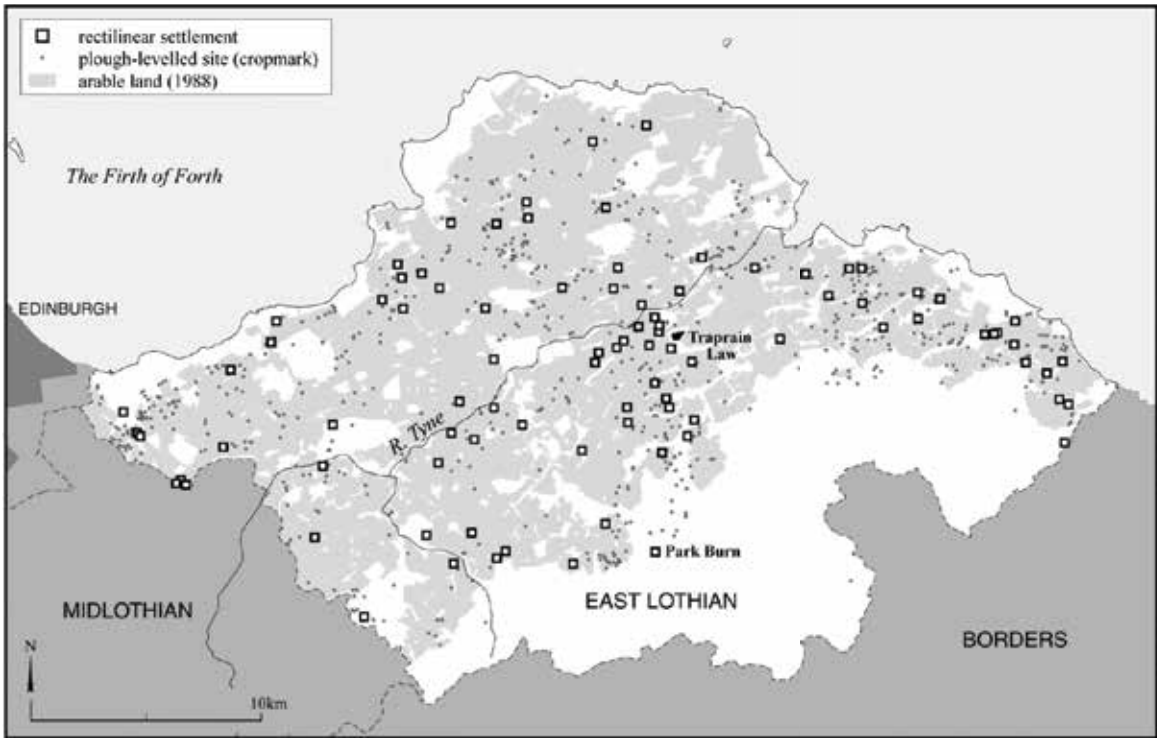
Non-random site distributions

Mid 1st millennium BC?

Contemporary settlements?



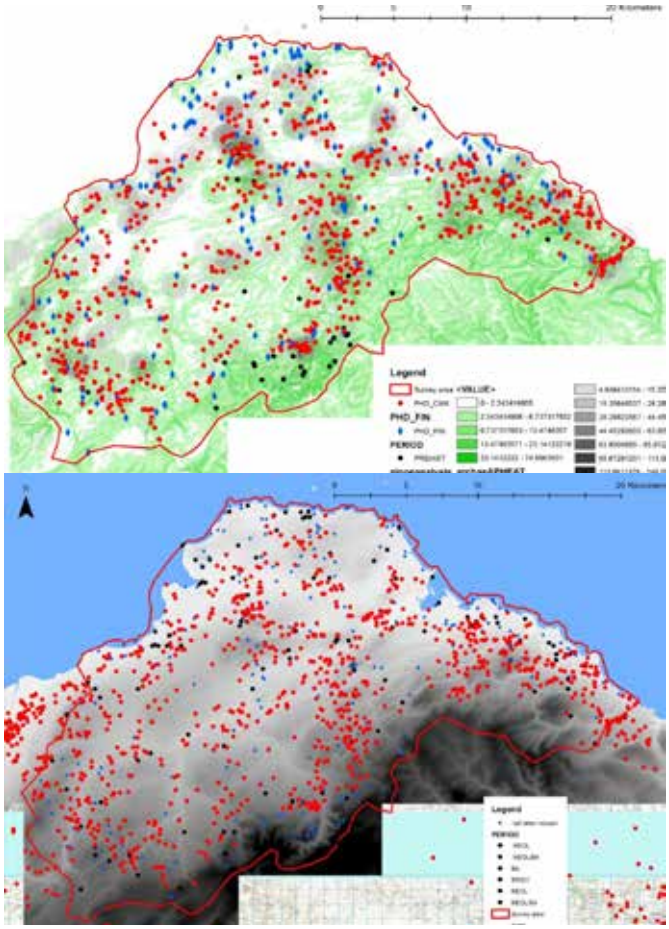
Pre-Roman Iron Age Rectilinear settlements


rectilinear settlement
plough-levelled site (cropmark)
arable land (1988)
The Firth of Forth
EDINBURGH
Traprain Law
R. Tyne
Park Burn
MIDLOTHIAN
EAST LOTHIAN
BORDERS
N
10km


Sylvie Castle (restored)
92
37
Shaft
Carberry Hill
Hillhead
149
Queen Mary's Mount
Backhill
Railway Walk


Parkend
64
71
51
82
50
Begbie Wood
Bolton
76
70


78
Pendrochin
66
Seaton Law
The Vaults formerly Seaton Castle (remains of)
Barney Mains
Barney Hill
109
Abbey Mains



Landscape Patterning

At least some clusters/gaps are real

Zoning in intensity/character of activity

Broad pattern originates in Neol/BA?

Persistent structure/framework

Local/periodic specialised land use

Łukasz Banaszek & Dave Cowley – **Aerial photographs, airborne remote sensing and landscape understanding**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
Historic Environment Scotland (HES) is the lead public body with responsibility for investigating, caring for and promoting Scotland's historic environment. Set up in 2015, HES holds an extensive archaeological survey archive spanning over a hundred years and undertakes a range of survey activities: in the air, in the field and desk-based.

Before we can understand the social organisation of a historical environment, we need to understand the archaeological landscape and the archaeological record. A combination of various archaeological and geographical surveys and datasets provide us with a comprehensive understanding of the landscape, which in turn leads to a discussion of what people did in the past. Each of these datasets is biased in different ways but by integrating various methods a less biased understanding can be achieved. Banaszek draws attention to the bias that can affect the outcome of different methods, before presenting the East Lothian region east of Edinburgh as an example of how an integrated approach to datasets provides better results.

Presentation:
The main source of information for landscape analysis in the lowland area of East Lothian has been aerial photograph research, mainly by in-

terpreting data from crop marks in arable crops. However, new methods such as lidar scans and hyperspectral satellite imagery now also provide data from other types of landscapes.

The traditional topographical archaeological surveys undertaken over the last century cover only around 8-10% of Scotland, as this is a time-consuming method. However, the number of known archaeological sites is increased dramatically by surveys.

Instead of simply juxtaposing various methods, different sources of information should be integrated.

The modern Scottish landscape is only partly cultivated, with pasture and woodland covering a larger area: The latter influences the visibility of archaeological features. In addition, the disposition of different crops affects visibility, as does the distribution of soil types. For instance, in one area along the Forth of Tay it seems that clay soil does not produce crop marks, but this is probably not a reflection of the past situation, but rather a limitation in the method. Even so, concluding which soil produces the best crop marks is not straightforward either. Furthermore, the different ownership of the land, leading to different types of cultivation, leads to different levels of visibility for archaeological remains.

Another bias in the data sets arises from the survey strategies and conceptual framework behind the individual surveys.

Moreover, identical features detected in different surveys might be classified differently even though they are, in fact, identical.

The weather is another factor that affects the results of surveys. For example, topographic survey of the Kintyre peninsula in the 1960s yielded good results in terms of many archaeological sites surviving as earthworks in unimproved land but did not add to our knowledge of lowland areas. The exceptionally dry summer of 2008 led to aerial survey filling out of many of these gaps as previously unknown features became visible as cropmarks. In turn, this led to reinterpretation of historical aerial photographs taken for map-making in an equally dry year in the 1970s and the identification of additional sites as crop marks.

The influence of personal research interests can also be seen. For example, St. Joseph was one of the pioneers in aerial reconnaissance in Scotland. His surveys during an extremely dry summer in 1949 changed the map of known archaeological sites. Since St. Joseph was mainly interested in the Roman period, he found many sites along Roman road lines, as these were a major focus of his surveys. Personal interests and expectations as to what to look for and find in a survey constitute a bias in our datasets. For example, are upland areas empty of archaeology while pasturelands are full of it, or does this just reflect our expectations?

Conclusion:
In the case of the East Lothian area – because it has been so heavily surveyed – the accumulated body of diverse data allows researchers to see beyond the biases described above.

Regarding the various biases in the data sets, it can be investigated which gaps in the material are "real" – i.e. that they reflect a reality in past society. If the gaps do not follow patterns such as soil, weather or other biasing factors, they are likely to be interpreted as true gaps and may reflect decisions made in the past and not derived from bias in the surveys.

Questions:
No questions.

Reconstructing Iron Age infrastructure using historical and topographical sources

Per Grau Møller
(University of Southern Denmark)

Abstract:

The infrastructure of past times is a very delicate issue, especially if you have no precise sources. Infrastructure such as roads tends to follow the same tracks in the landscape. This means that very few traces are left from each period; instead they are overlain and destroyed by later activities. Unless you have written sources, such as maps, giving spatial information on the infrastructure. But maps are not reliable before the 18th century, even if these earlier maps are available. Traditional written sources seldom give more information than the endpoints.

The solution is therefore to reconstruct the infrastructure based on landscape studies. One means is to undertake retrospective analysis of more recent infrastructure (typically known from maps). Another is to include archaeological remains, as well direct indications of the infrastructure (bridges, road constructions) and settlements and burial sites, indicating places where people had to go.

This study area encompasses the surroundings of two Danish towns, Aalborg in northern Jutland and Odense on Funen. Both towns were established at the end of the Viking Age, and the question is whether studies of the infrastructure can give any indications of how the landscape appeared at the end of the Iron Age. Was transport by land more important at this time or is sea transport more significant when evaluating the founding of towns? In other words: can we obtain any idea of whether the hinterland was important for the new towns that can be seen as central places in the landscape, or were the towns perceived as parts of international networks, illustrating a network theory?

This paper will attempt to illustrate the methods and sources relating to the infrastructure and try to give answers to the questions raised above.

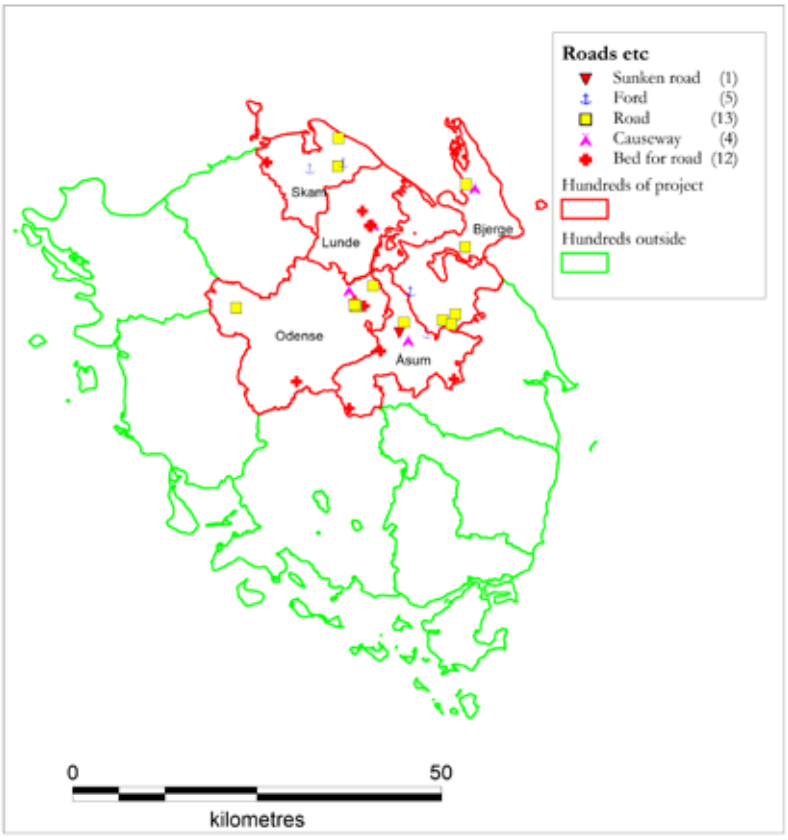
Reconstructing Iron Age infrastructure – by historical and topographical sources

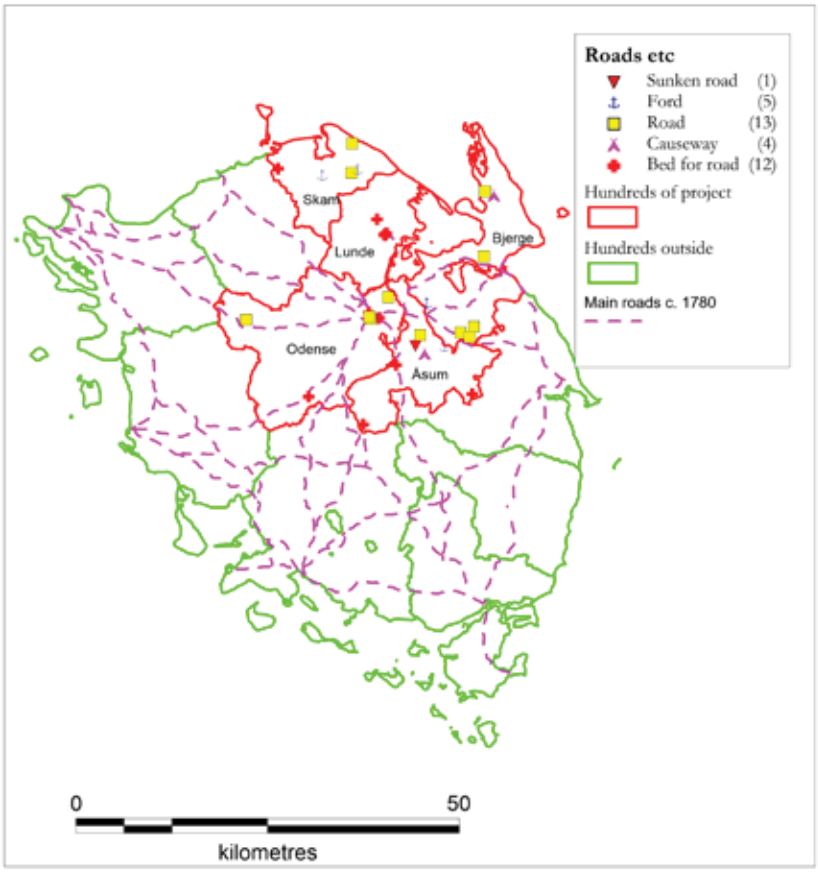
Per Grau Møller
Institute of History
University of Southern Denmark

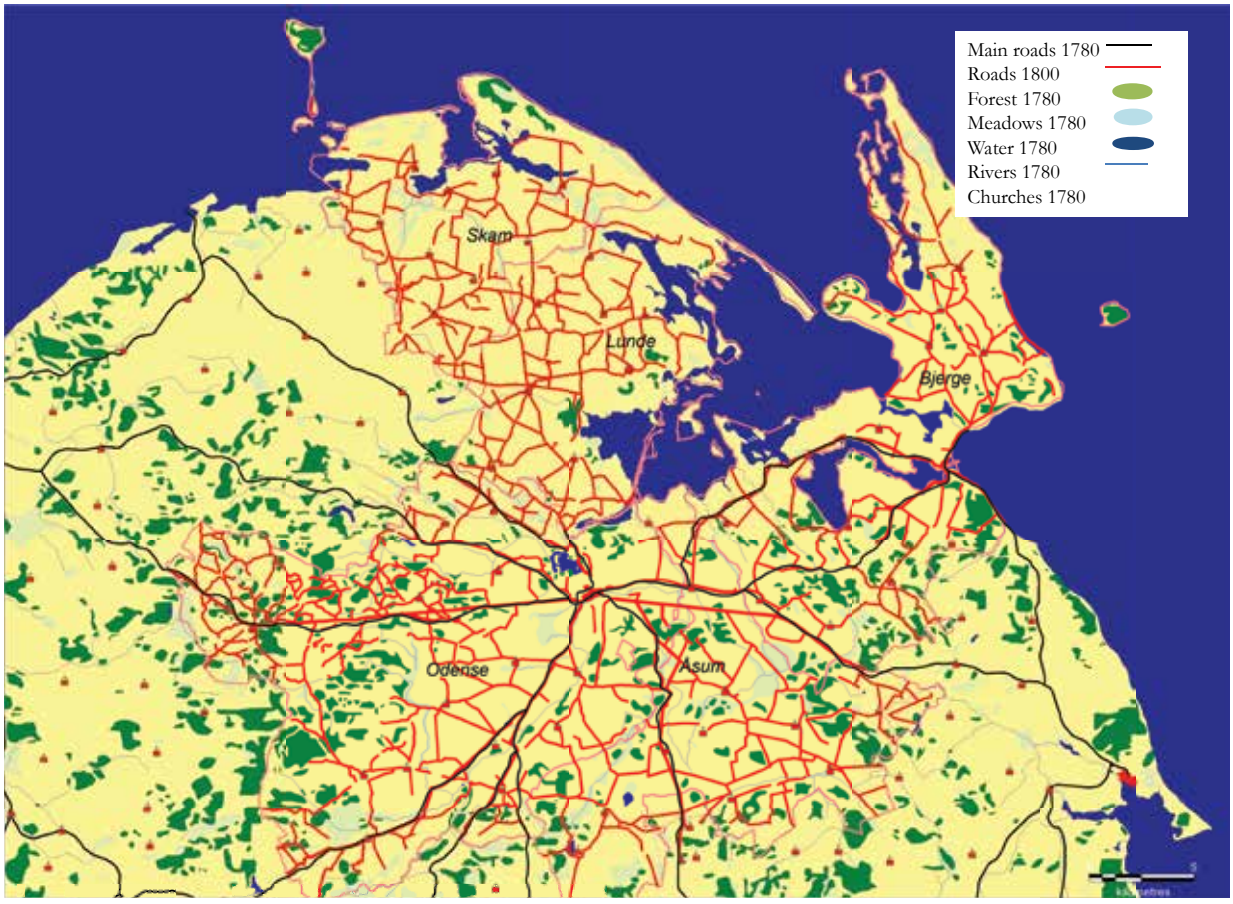
SDU

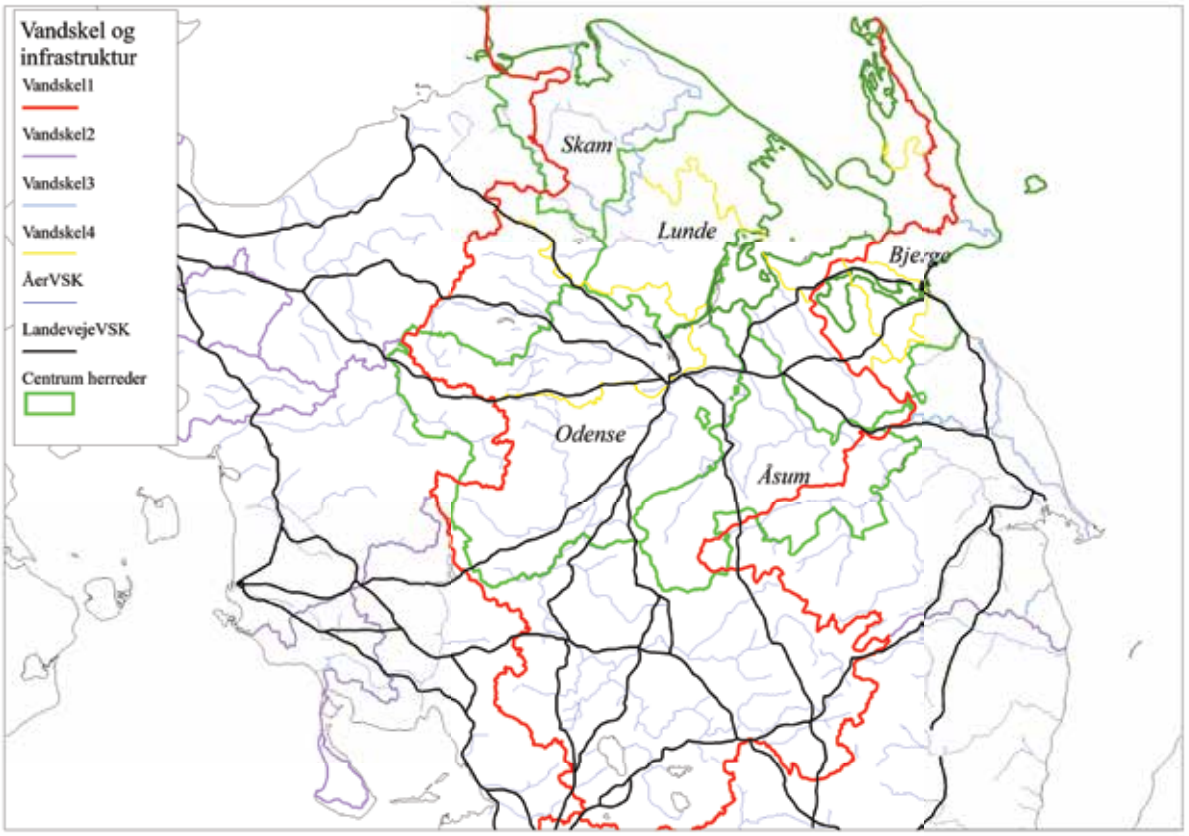
Infrastructure - sources

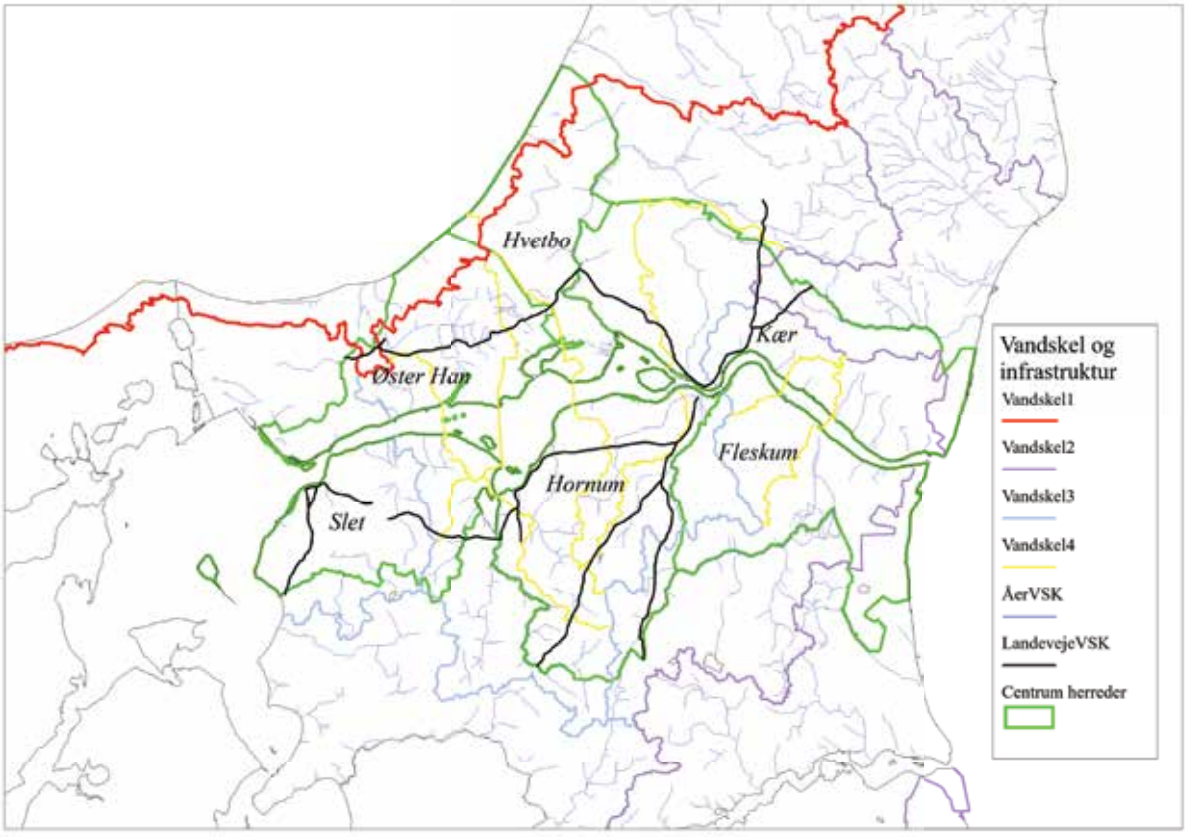
- Archeological
  - Bridges, roads etc.
- Written sources
  - Documents - Normally only endpoints
  - Maps – more elaborate roadstructures
- Retrogressive Landscape studies
  - Possibilities - hindrances

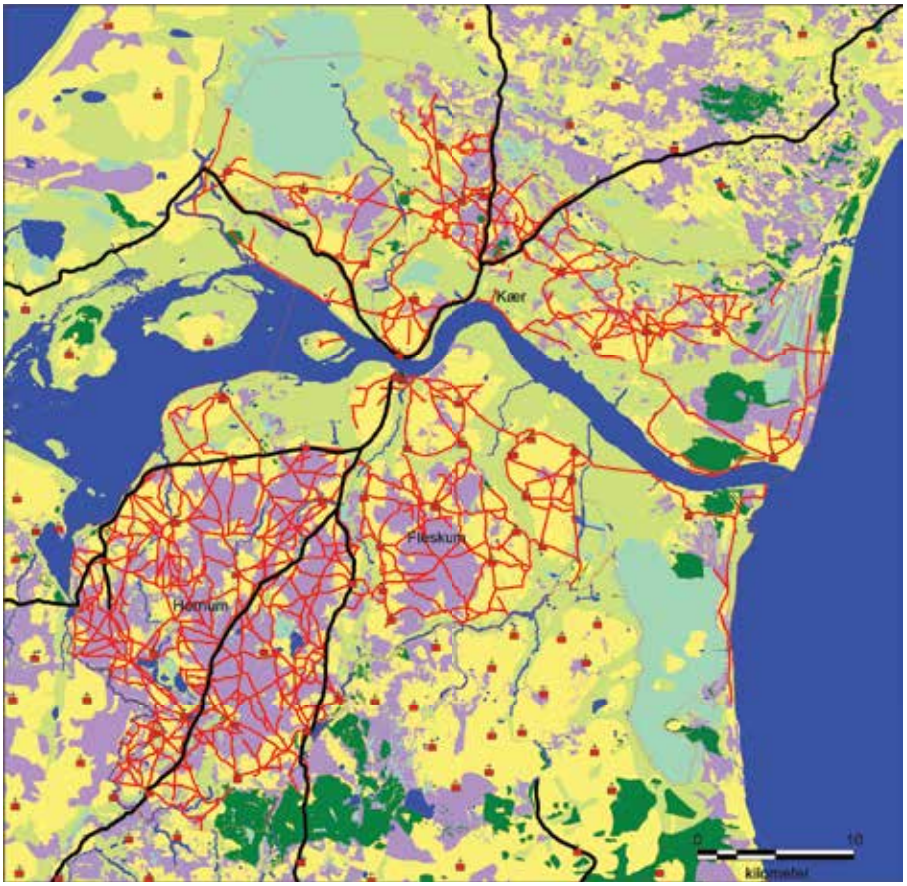



Roads etc
Sunken road (1)
Ford (5)
Road (13)
Causeway (4)
Bed for road (12)
Hundreds of project
Hundreds outside
Main roads c. 1780
Skam
Lunde
Bjerge
Odense
Åsum
0
50
kilometres


Main roads 1780
Roads 1800
Forest 1780
Meadows 1780
Water 1780
Rivers 1780
Churches 1780
Skam
Lunde
Bjerge
Odense
Åsum


Vandskel og infrastruktur
Vandskel1
Vandskel2
Vandskel3
Vandskel4
ÅerVSK
LandevejeVSK
Centrum herreder
Skam
Lunde
Bjerge
Odense
Åsum


Hvetbo
Kær
Øster Han
Fleskum
Hornum
Slet
Vandskel og infrastruktur
Vandskel1
Vandskel2
Vandskel3
Vandskel4
ÅerVSK
LandevejeVSK
Centrum herreder


Kær
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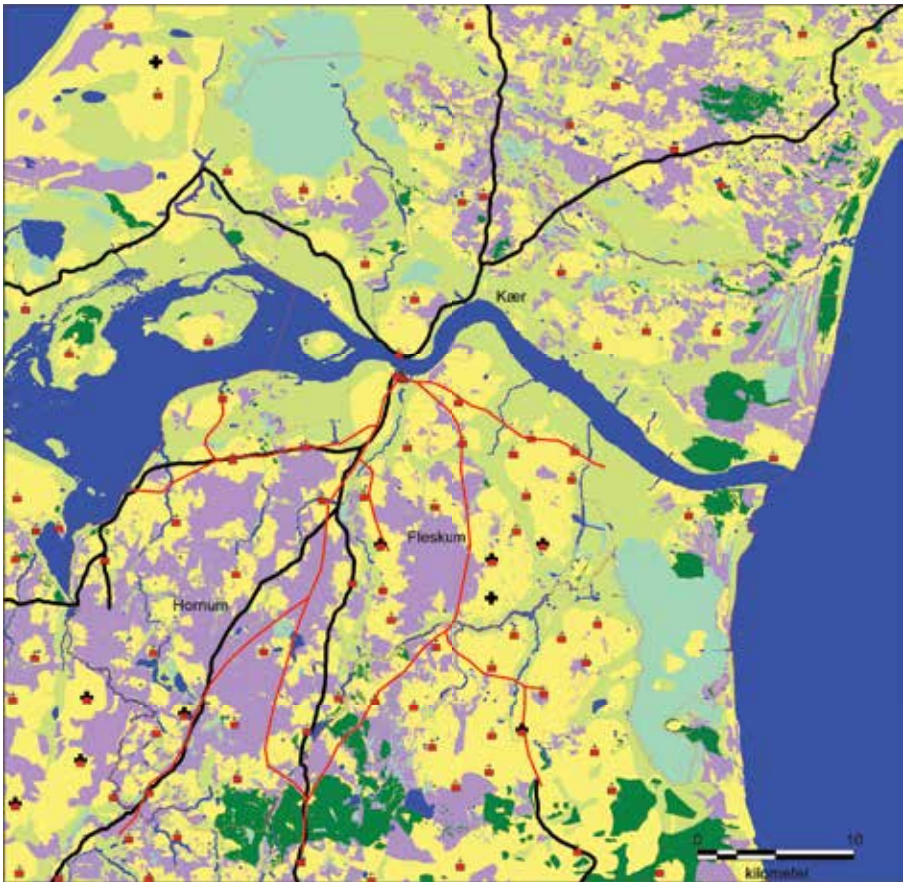
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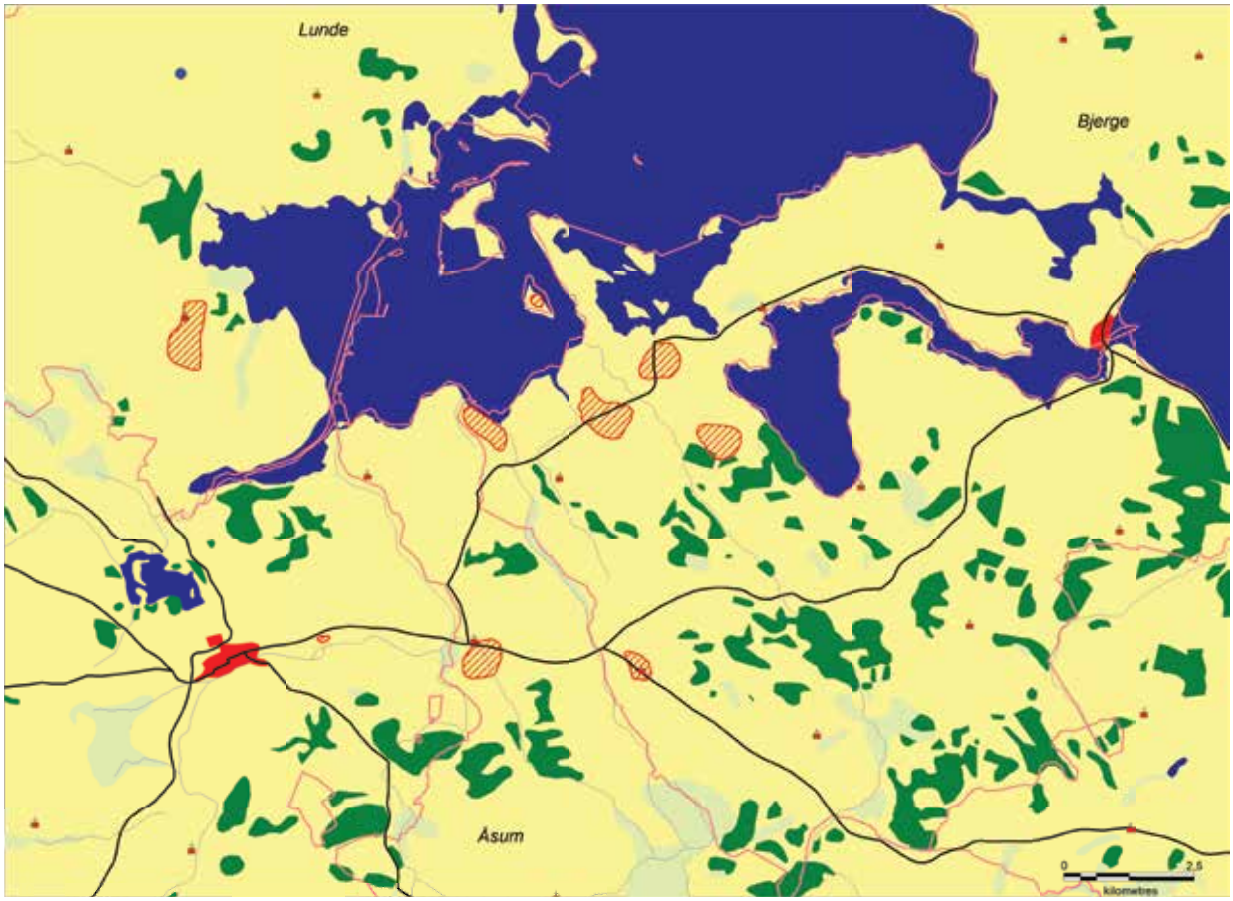
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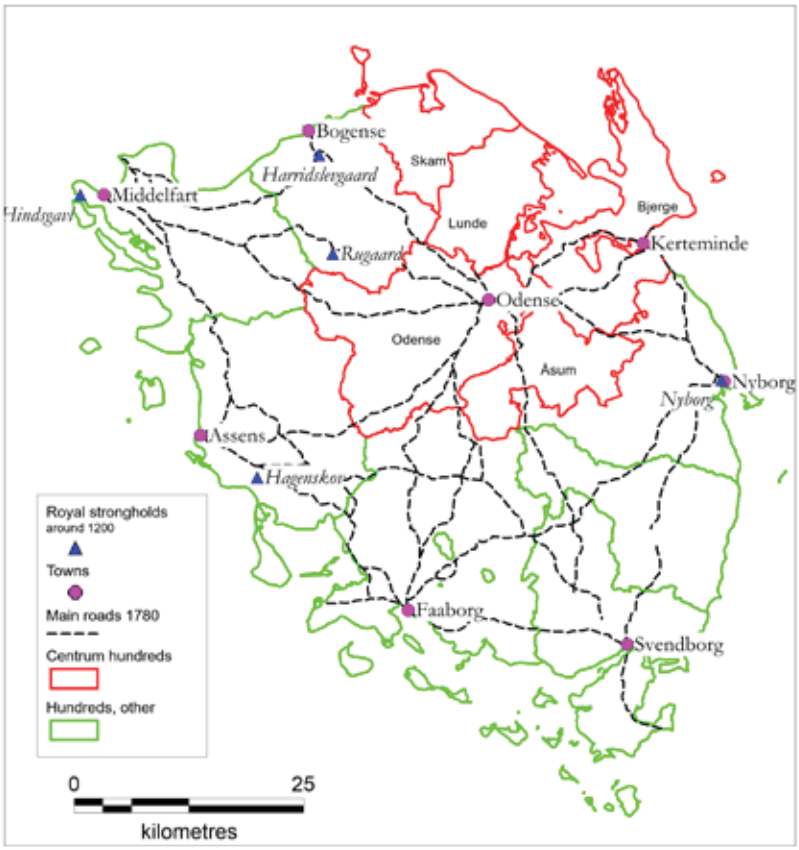
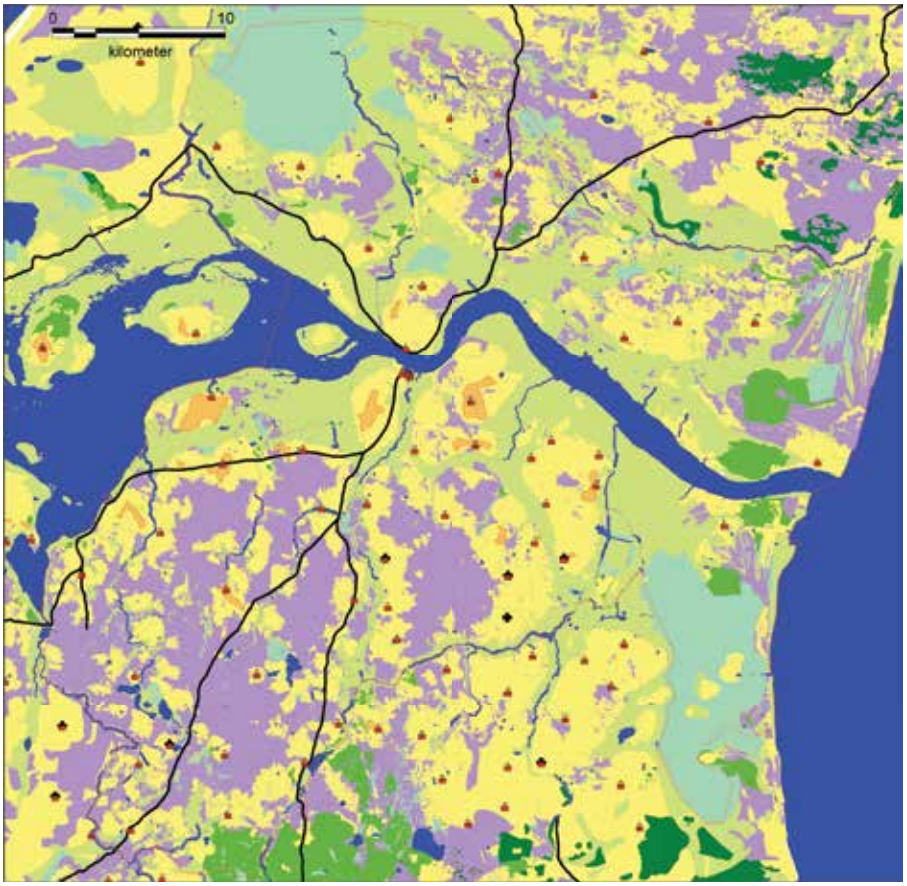

Bogense
Harridslevgaard
Skam
Middelfart
Hindsgavl
Lunde
Bjerge
Kerteminde
Rugaard
Odense
Odense
Åsum
Nyborg
Nyborg
Assens
Hagenskov
Faaborg
Svendborg
Royal strongholds
around 1200
Towns
Main roads 1780
Centrum hundreds
Hundreds, other
0
25
kilometres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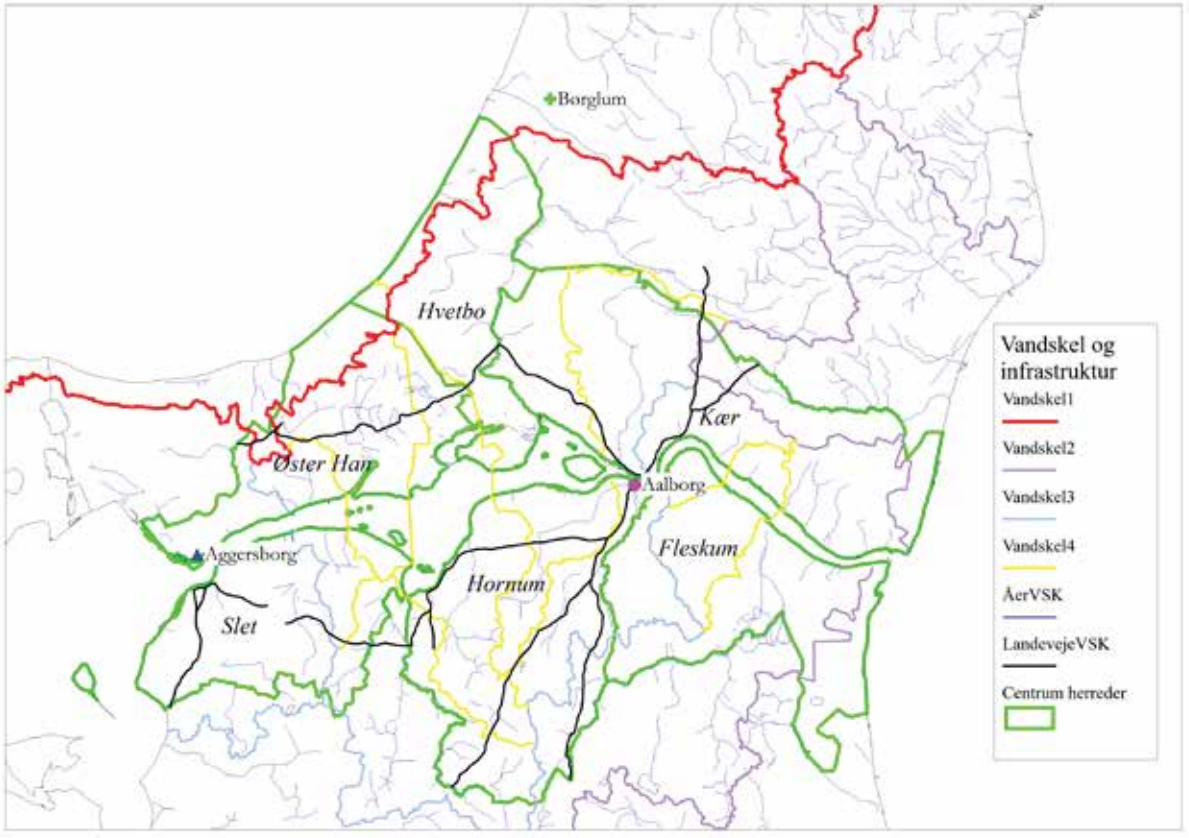
Børglum
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Øster Han
Aalborg
Aggersborg
Fleskum
Hornum
Slet
Vandskel og infrastruktur
Vandskel1
Vandskel2
Vandskel3
Vandskel4
ÅerVSK
LandevejeVSK
Centrum herreder

Conclusion

- Dating of Infrastructure is a very difficult matter – only indirect evidence normally exist.
- Indications of two different situations when towns were established:
  - Central place in the surrounding landscape – Odense
    - Roads were ‘streaming out’ in all directions.
  - Network places – Aalborg
    - Roads are not essential in relation to the surrounding landscape.
    - Instead waterways are important for contacts outside – Limfjorden.

Per Grau Møller – **Reconstructing the Iron Age infrastructure using historical and topographical sources**

Summary by: Jakob Bonde and Mikael Manøe Bjerregaard

Introduction:
The conclusions presented in this paper result from a collaboration between Per Grau Møller (University of Southern Denmark) and Niels Haue (The Historical Museum of Northern Jutland). The paper discusses the possibilities of mapping prehistoric infrastructure in two research areas (Odense/Funen and Aalborg/northern Jutland) using various sources, ranging from archaeological remains (bridges, roads etc.) to written sources (documents and maps) and retrogressive landscape studies (the possibilities for movement in the landscape).

Presentation:
The main question addressed by the paper is how people moved around in the landscape. The hypothesis is that the topographic elements in every landscape have presented a specific range of possibilities for movement, which have thereby had a direct influence on the infrastructure in time and space.

Using the national Sites and Monuments database (*Fund og Fortidsminder*), and extracting all data relating to roads and road-like elements, Møller is attempting to establish a connection between historical and prehistoric roads/infrastructure. As he points out, this is a very difficult task, and to verify the connection, Møller therefore compares the location of known prehistoric sites to roads marked on historical maps. Furthermore, he includes watersheds in the analysis, which he uses to underline the importance of topography in relation to the prehistoric (and historical) infrastructure.

The results of the analysis differ somewhat between the two research areas: On Funen, it is difficult to tell how far back in time the historically-mapped infrastructure extends. However, there are examples of how the location of metal-detector sites from the Iron Age northeast of Odense correlates well with the routes of historical roads in this area. Furthermore, the location of known royal strongholds from the 12th century on Funen indicates a direct relationship with the historical road structure here.

The same picture is evident in northwest Himmerland, where the historical roads run close to known metal-detector sites dating from AD 400-1100. However, north of Aalborg there is no such evidence, and here it seems that the major watersheds had a direct influence on the infrastructure.

Conclusion:
Møller emphasises the difficulties in reconstructing the infrastructure based on the archaeological record and in dating infrastructure based primarily on historical maps. Nevertheless, the sources reveal two different situations: On Funen, the roads are associated with a central place (Odense) in the landscape, with the infrastructure extending out in all directions in a star-like pattern, while in the Aalborg area the infrastructure was associated with the Limfjord – the immediate surroundings not being as important as more distant contacts by sea.

Questions:
Torsten Lehm (Schloss Gottorf) asked to what extent the analyses have included the positions of burial mounds in relation to the infrastructure. Møller answered that this had been investigated and that a correlation between burial mounds and road lines can only be seen in some parts of the research areas. Furthermore, the analyses have attempted to include rune stones, but without any positive results.

Torsten Lehm (Schloss Gottorf) followed up with a question about the possibility of integrating into the analyses a method for calculating least-cost paths for moving through the landscape, to which Møller answered that it is the intention to include these issues in the future.

Further reading:
Henriksen, M.B. 2017: Odenses naboer – metalrige bopladser vest og øst for Odense Fjord. I *Knuds*

Odense – vikingernes by. red. Runge, M. & Hansen, J. Odense Bys Museer pp. 5-11.

Korsgaard, P. 2006: *Kort som kilde*, København.

Kristensen, H. Krongaard & Poulsen, B. 2016: *Danmarks byer i middelalderen*, Århus Universitetsforlag.

Porsmose, E. 2015: *Kongen kommer. Nyborg – Danmarks Riges hjerte I*. Nyborg – Østfyns Museer.

Place names as a source for the Iron Age organisation of land

Sofie Laurine Albris
(The National Museum of Denmark)

Abstract:

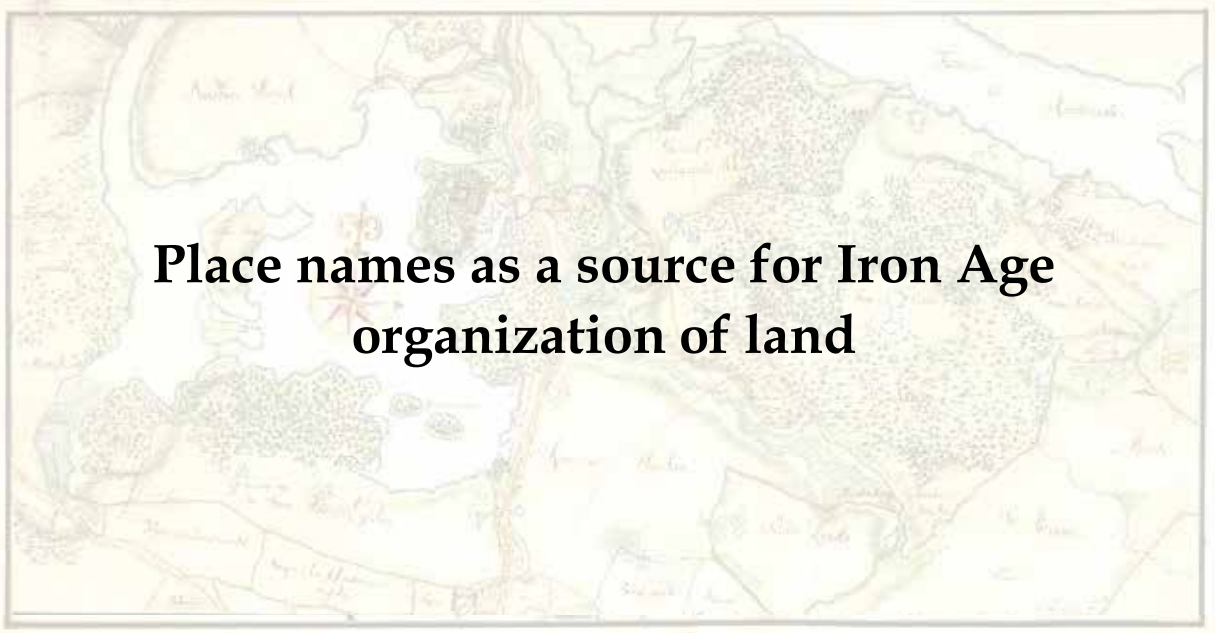
Place names are products of collective communication about the landscape and can be seen as a reflection of common perceptions of the landscape and formations of concepts, symbols and collective memories about places that have been active in the past. Names therefore provide a linguistic counterpart to archaeological information about settlement and landscape. Incorporation of place names into discussions of the archaeological record gives us a wider scope for assessing problems of settlement development, production, elites, power, ideology and religion.

In Scandinavian place-name research, a theory about certain "place-name environments", formed on basis of central Swedish place names, has been a leading element in relation to the organisation of Iron Age society, power relations and central places. However, investigations and research into south Scandinavian place names, integrating recent archaeological knowledge and research, have established that place-name patterns here are different to those in central Sweden.

It seems that, throughout Scandinavia, there were certain cultural models for the organisation of central areas in general, but in each area individual choices were made, and different elements assembled.

In this presentation, the main issues relating to the use of place names as a source for the Iron Age organisation of land are outlined, and the results of an investigation of the place-name evidence from the Odense and Aalborg areas are presented. A search for place names relating to themes such as power, religion, trade, legal functions, warfare and defence revealed no place-name patterns corresponding to the Swedish model. But concentrations of relevant place names were identified in areas that may have had intense activities, creating a density of place names derived from central functions. The place-name evidence also indicates differences between the Odense and Aalborg areas in the organisation of the sacral landscape.

Nationalmuseet



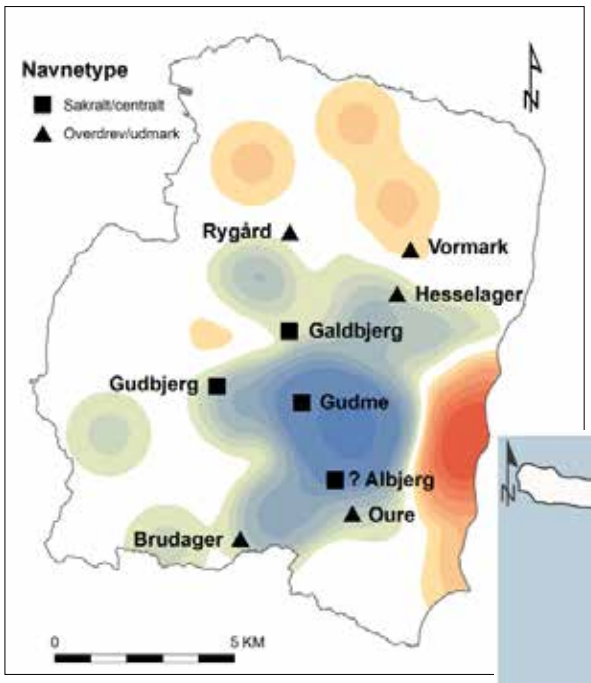
Place names as a source for Iron Age organization of land

Sofie Laurine Albris

National Museum of Denmark

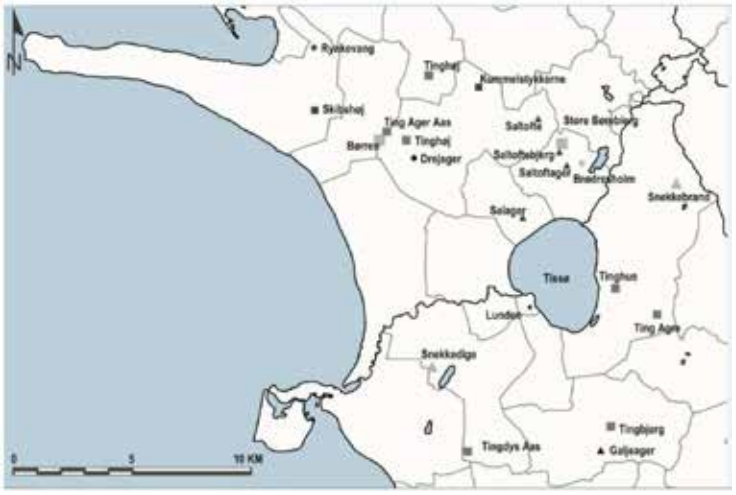
National Museum of Denmark

PhD 2017 about place names and archaeology around well known Danish central places

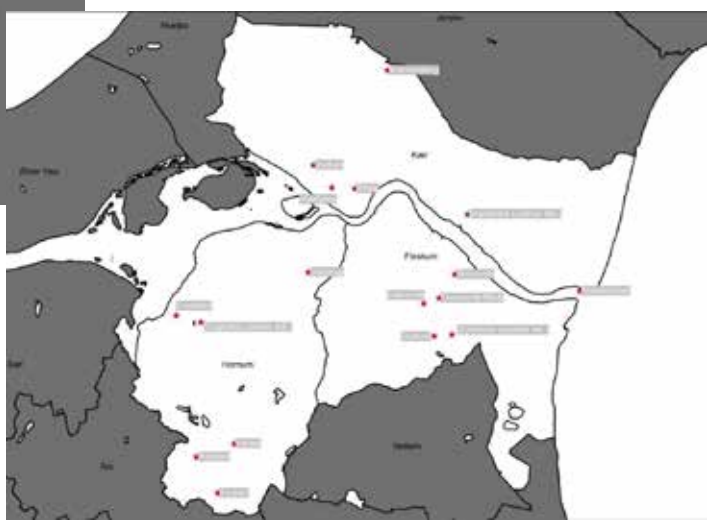


Use of place names: issues relating to chronology, dynamics, terminology and interpretations etc.

2



Focus on names relating to centrality
Investigation made with Lisbeth Christensen for the Central Place to Urban Space project



Odense area: Skam Herred, Lunde Herred, Bjerge Herred, Åsum Herred, Odense Herred

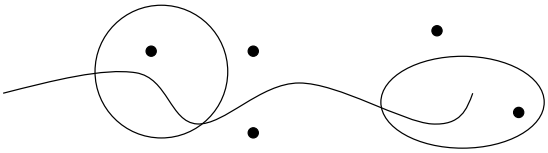
Aalborg area: Kær Herred, Fleskum Herred, Hornum Herred

3

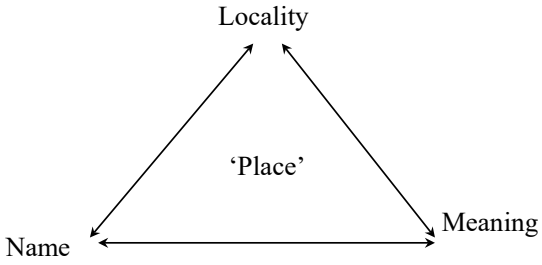
Place names are a source to past perceptions of landscape

- A place name represents a collective definition of a 'place'
- Naming is a means to define and communicate about 'places' within 'space'
- Names are *locally bound* sources of the perception of settlement and landscape
- Necessary part of ordering, classifying and moving in a landscape

- Naming is *one interpretation* of the locality, choosing from possibilities:
- The site: The concrete topographical conditions
  Practises connected with the place
- Other names: General practises of naming
  Other place names in the area

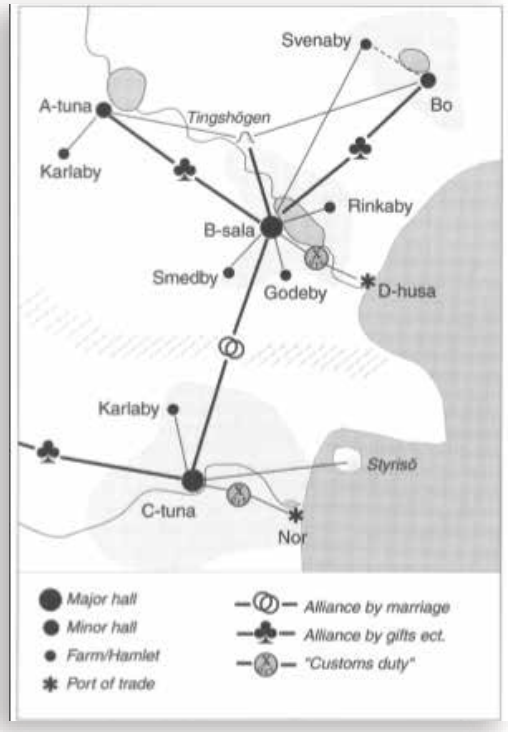


Point, lines and domains



Vikstrand 2001

"Central places" and "naming environments"



Lars Hellberg 1970'es:
content in place names reflect a repeated pattern of functions and social structures grouped around a central site.

The reocurring pattern is connected to the Svea-state (early Sweden)

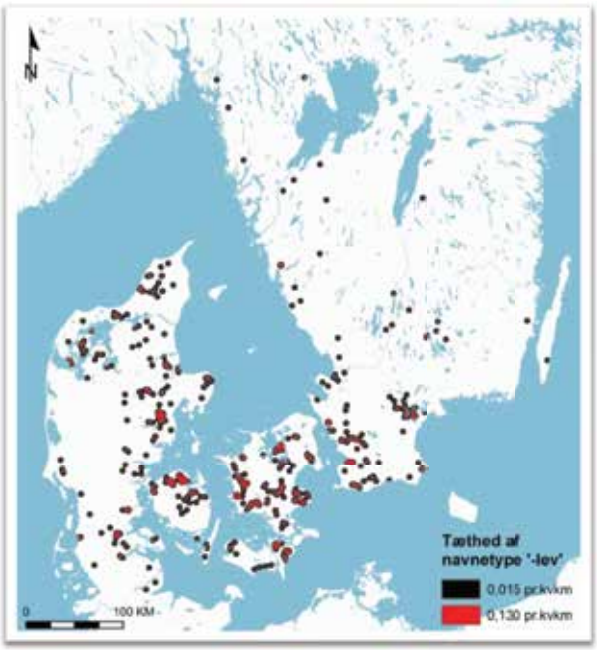
Stefan Brink 1999: Naming environments in central Sweden reflect a pan-Scandinavian model.

For south Scandinavia this is based mainly on archaeology
- Naming patterns of the Swedish model have not been identified (Christensen 2010, Albris 2017)

Place names and social organization in South Scandinavia

- Explanation of differences
  - Later restructuring
  - Strategies of interpretation
- We need to focus on the special qualities of South Scandinavian names

B. Jørgensen 2007



Terminology and methodology

Material: settlement names, field names and topographical names

Names recorded *before 1680* containing words connected to themes: *trade, crafts, warfare, administration, religion or elites* (Christensen 2010).

*Al, *As, Bo, *Boe, Bor, Borg, Bryte (bryde), Böte, Drag, Erik, Fred, Frigg, Frö (Frej), Fröja (Freja), Gillberg(a) (Gilbjerg), Gud, *Gudhi (gode), Gärde (gærde), *Göti, Harg (*hargh), Helig (hellig), Hov, Hus(a), Husaby (Hus(e)by), *Härn (Hærn), *Hærse, Hög (høj), *Ingvi/*Ingi, Jarl, Karl, Knarr (knar), Kogg (kogge), Konung (konge), *Liudhgudh(a) (*Luthguth), Lund, *Lytir, Naust (nøst), Njärd (Njord), Oden (Odin), Ring, *Rinker (*rink), Sal, Sked(e), Skepp (skib), Skeið, Smed, Snäcka (snekke), Stallar (staller), Stav, Sten, Styreman (styr(e)mand), *Styrir, Stämma (stævne), Svea, Sven (svend), *Thegn, Thor, Thul, Ting, Tuna (tun(e)), Ull, Ullargudhi, Vall (wall), Vi, Vise, *Vitul, *Vivil, Vård (warth), Åker (ager)

Supplerende danske søgeord Bavn, Blus, Brand, Bål, *Frøvi(r), Guthvi(r), *Harghvi(r), *Hylla, Hær, *Lath, Mål, Thorir, *tī, Tyr (*Tī), *Wæir

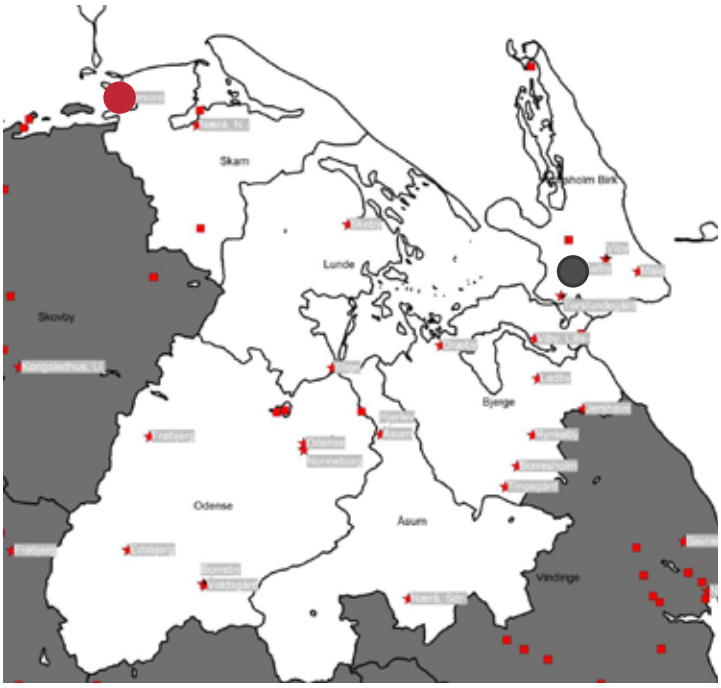
Power and elites

Odense area

Sal, 'magnate's farm, hall'
Salby (1488 Salby), Hindsholm

jarl, protonorse *erilaR, '*earl'
uncertain:
Edsbjerg, Brylle Sogn (1542 Jernsberg)
Jershave, Jerninge Sogn (1537 Jershafue)
Hjerlev (MB 1682 Hierlef) ved Åsum.

Certain
Jersore*,* hovedgård i Klinte Sogn (1353 (1607) Jersøre; 1391 Jærlsoræ)



Power and elites

Aalborg area

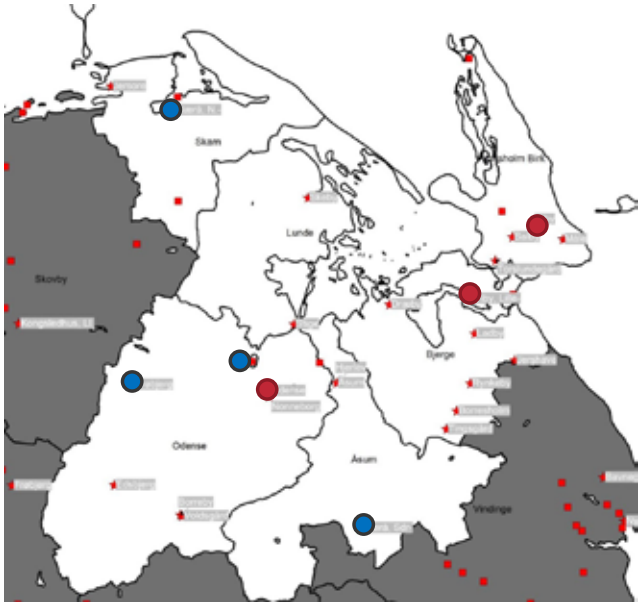
Kongerslev, south of Gudum

Related to the term *kongelev* in king Valdemar's cadastre from 1231?

Cult and religion
Odense area

Vi, ‘sanctuary’
Viby, Bjerge herred (c. 1300-1335 Viby),
Lille Viby Drigstrup sogn (1509 Wijby)
Odense (988 Othenesuuigensem).

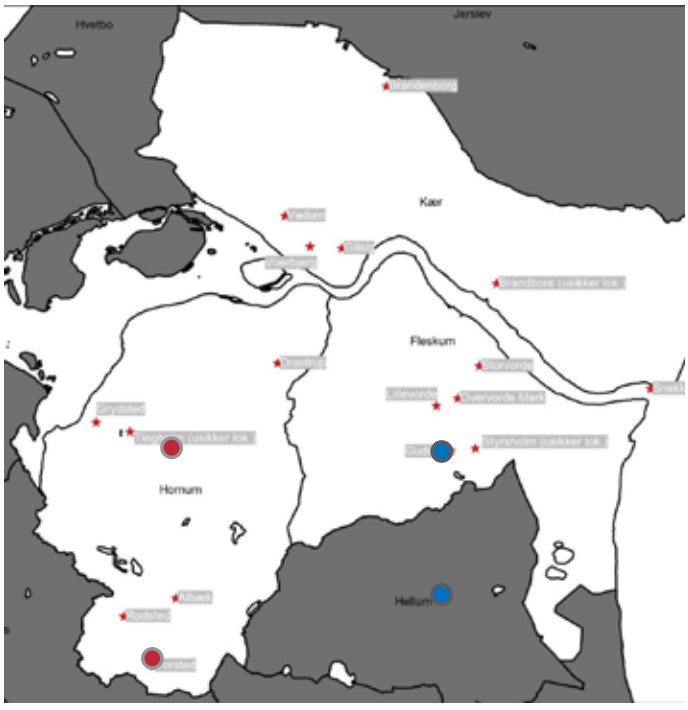
Theoforic names
Thorslund (1245 thorslundh (skov))
Frøbjerg (1664 Frøbierrig)
Nørre Nærå, Skam Hrd (12/3 1304 Niærthøu)
Sdr. Nærå, Åsum Hrd (1304 Niærthøu)



Cult and religion
Aalborg area

Gudum, Fleskum Herred: **guthhēm – compund* ‘home of the gods’
Hellum Herred (1231 Hellyumheret)
‘home of the sanctuary’

uncertain
Torsted (1451 (1554) Torstet), Årestrup s., Hornum Herred
Harrild, Vokslev Sogn, Hornum Herred ([1481-1513] (1690) Harrild)

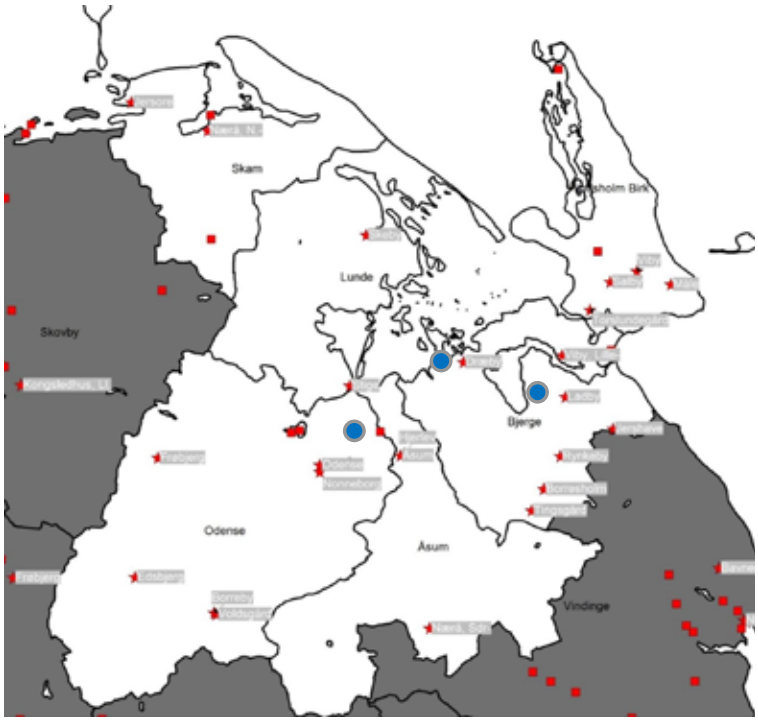


Trade and crafts
Odense area

Ladby (1383 Ladby)
Kølstrup sogn, Bjerge herred
- glda. **lath* 'loading place'

Dræby (1418 Dreyby) i
Munkebo sogn, Bjerge herred
- drag, 'place for dragging ships'

Skibmaden (1548 Skibmaden)



Trade and crafts
Aalborg area

Drastrup
SV-udkant af Ålborg, Frejlev
Sogn, Hornum Herred (1546
Drastrup Sig)
- subst. *drag*, dragging place' or
subst. *drav* 'swamp, bog'

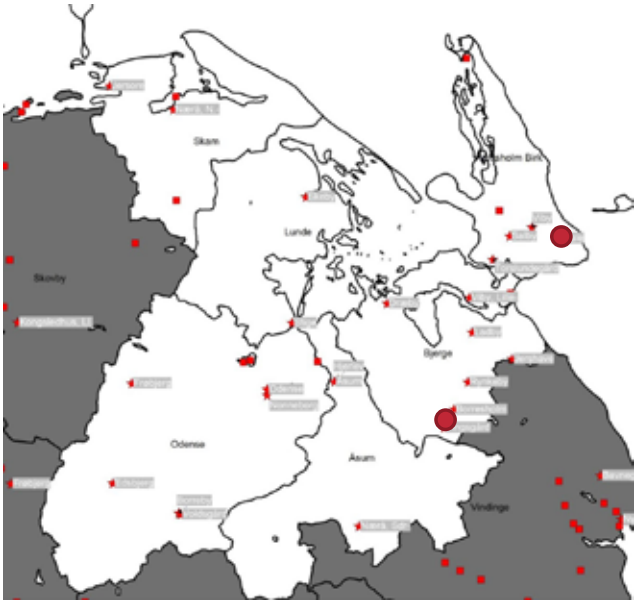
Justice/law

Odense area

Måle (1488 Molø), Hindsholm, Viby sogn, Bjerge herred. Opr. Mål-høgh
- *mål*, maybe meaning ‘thing site', *høj,* ‘mound’

In medieval times Hindsholm Herred had four parishes with their own thing site, 1588 in Dalby. Måle can indicate an earlier place for functions relating to law.

Tingsgård (1493 (1607) Tingsgaard) Birkende Sogn, Bjerge Herred
- A thing site for the western part of Bjerge Herred?



Justice/law

Aalborg area

Many (late) field names relating to medieval ”herredsting”

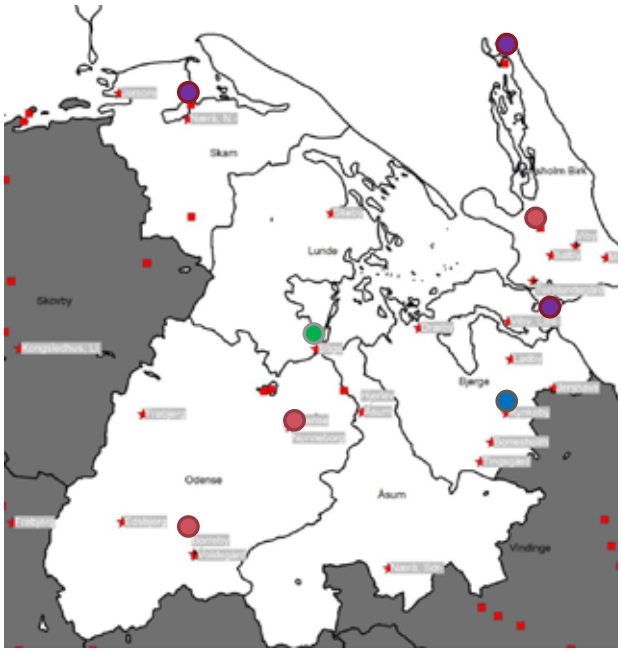
Grydsted, Vokslev Sogn, Hornum Herred, (1407 (1584) Grydsted)
subst. Old Danish. **grithæstath*, ‘sacrosanct place'

Defence, war and control

Odense area

Borg, 'hill, castle built for defense'
Borre (1623 Borre) Mesinge sogn, Bjerge Herred
Borreby (c. 1510 [1537 Boreby Len] Borybøgh) Bellinge sogn, Odense Herred.
Nonneborg, now *Nonnebakken*,
Originally simplex *Borg* (c. 1182 (1570) Burgh).

Snekke, 'ship'
Stensnekkehøjen (1623 Steensnechehøygenn) Stubberup Sogn, Bjerge herred
Snekkedrætsagre (1572 (1669) Snechedrets Agre) Nærå Strand, Nørre Nærå
- *snekke* 'ship' og *dræt* 'dragging place'
Snekkeled (MB 1682 Sneche Ledtz Agre)Drigstrup/ Ll. Viby ejerlav



Rynkeby, Bjerge Herred (1277-86 Rynkæby).
- Old Danish **rink,* 'man, warrior'.

Defence, war and control

Aalborg area

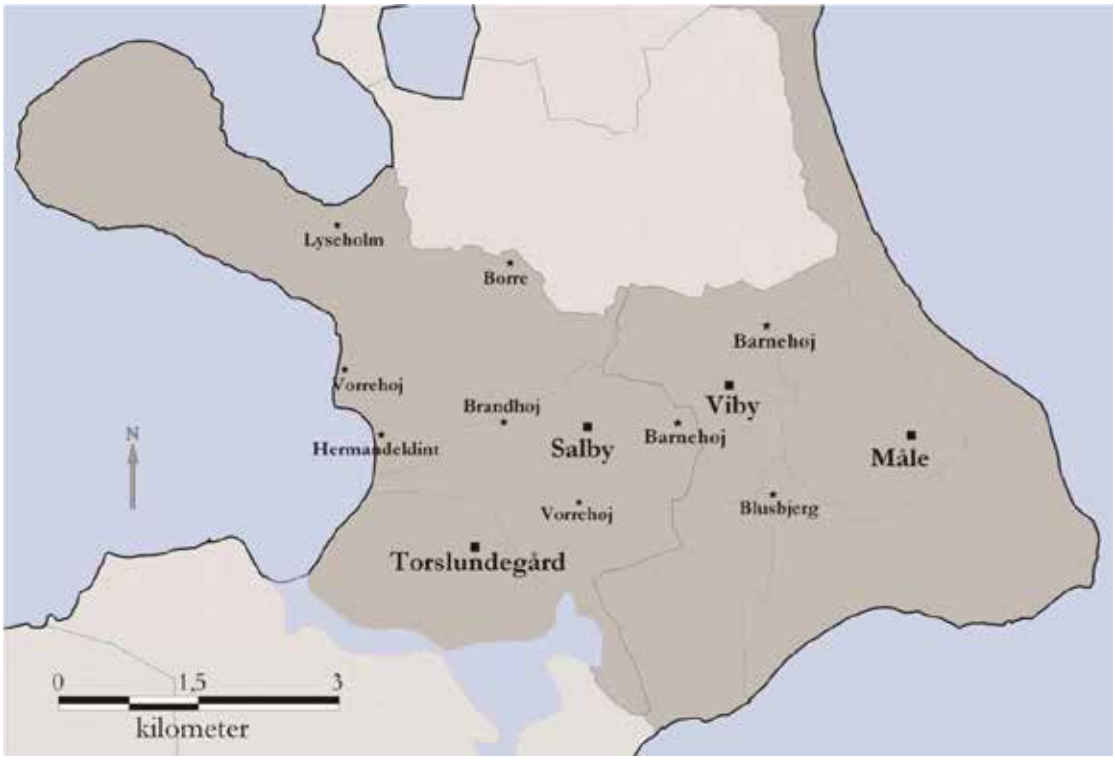
Lillevorde (1449 Lillæ Wordum)
Storvorde (1216 Worthegh)
- Old Danish. **warthhøgh*, 'guarding mound'

Voerbjerg ([1202-1241] Wordberg)
Lindholm Sogn, Kær Herred
- subst. glda. *warth* 'guard'

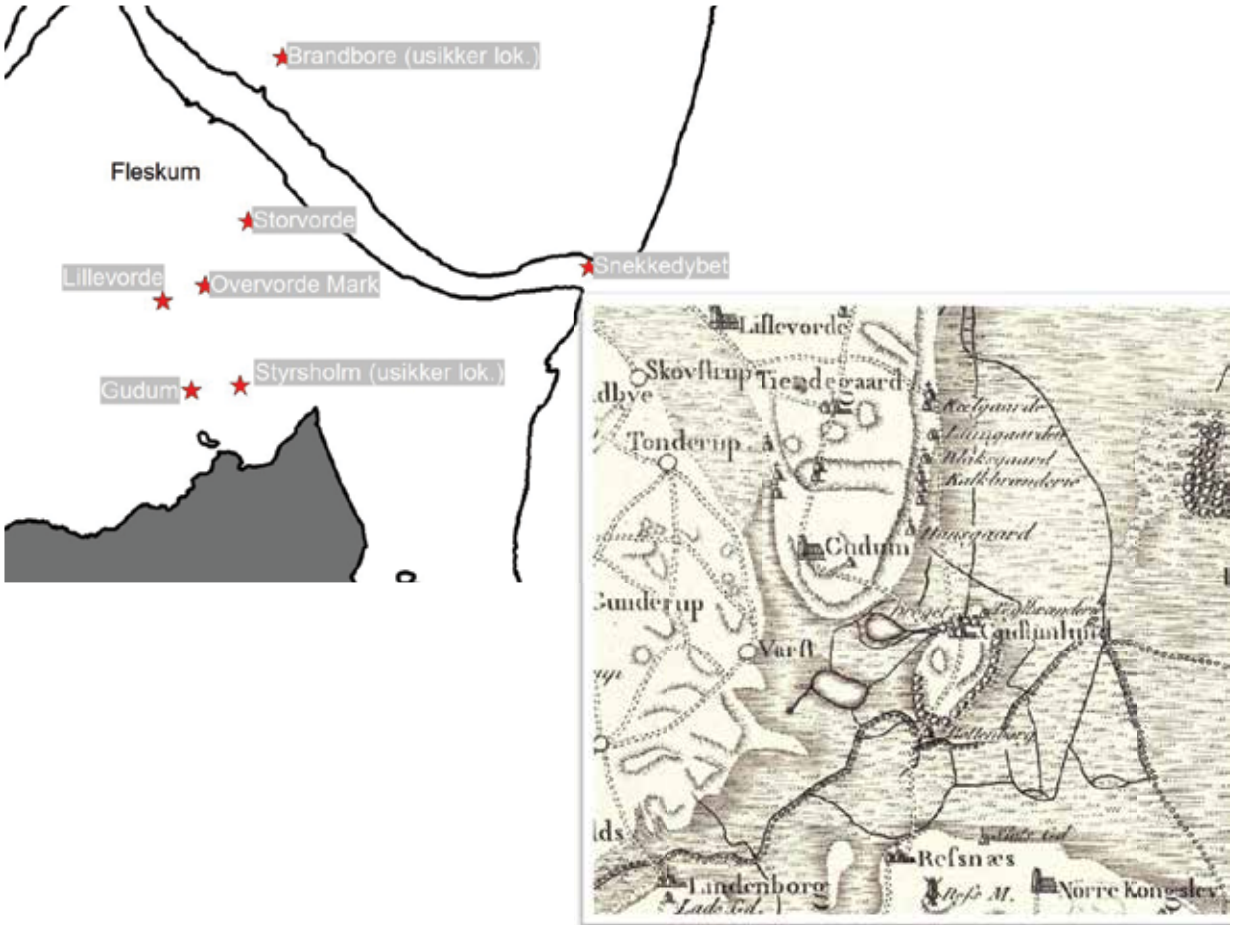
Brandborg (1589 Brandbore) i Vester Hassing Sogn, Kær Herred
Brandenborg (1593 Brandberg, 1610 Brenndborg) i Ajstrup Sogn, Kær Herred

Ålborg (1035-42 Alabu) j
- 'the fortification by the canals'

Snekkedybet (1515 Sneckedybett)



Group of names related to centrality, Hindsholm, Fyn. Christensen 2010.

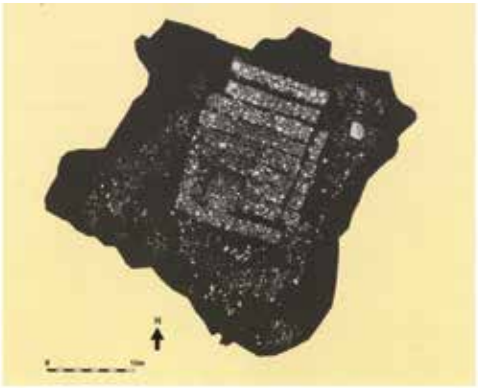


Religious centres and social organization

***Vi* – sacred place, sanctuary**

fx
- Odense
- Viborg

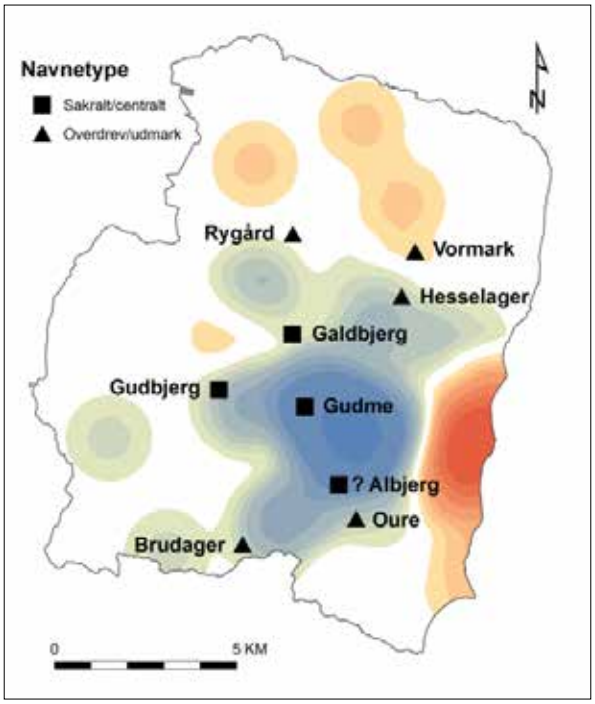
Northern Funen: many theoforic names
Limfjord area: ”wider” more undefined terms
sacred centres for larger areas?



Götavi, Närke, Svensson 2007

Kousgård Sørensen 1992

Sacral names in Gudme



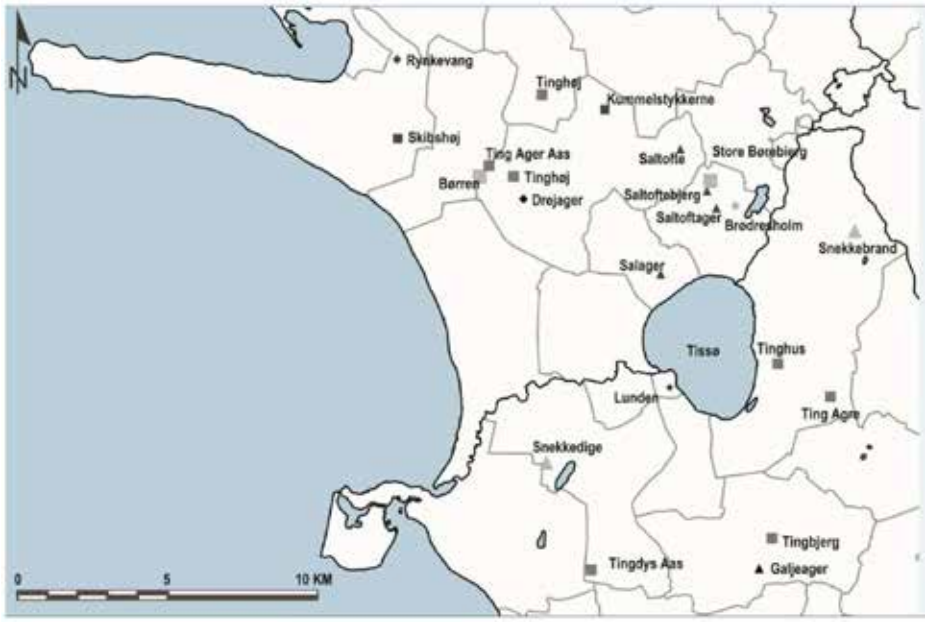
- **Gudme**, app. *gudhem*, home of the gods' (Kousgård Sørensen 1985, 11 in South Scandinavia).

- **Gudbjerg**, ‘hill of the gods’

- **Galdbjerg**,not ‘hill of sacrifice’, but ‘hill of debt/fee/tax’

- **Albjerg,** not ‘hill of the temple’, but ‘the hill with alnus trees’

Tissø, 'lake of Tyr/the god/gods' - traces of social organization



A sarcred centre in a large area? In the medieval period, the centre moved to Kalundborg, near the water like Lund and Roskilde near Uppåkra and Lejre

22

Thank you

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Sofie Laurine Albris – **Place names as a source for the Iron Age organisation of land**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
Sofie Laurine Albris is a participant in the project *From Central Space to Urban Place*, after having completed her PhD last year on archaeology and place names around some other well-known Danish central spaces. Working with place names involves the disciplines of chronology, dynamics, language history, interpretation etc. The main research area presented here was picked up from the works of Lisbeth Christensen. The focus is on place names within the Odense and Aalborg areas in Denmark.

Place names present us with many problems. They are, for example, difficult to date. Nevertheless, they represent a product of communication and provide us with a mental map of the landscape of the past, produced and changed over time. They give an insight into how people in the past talked about and interpreted their landscape, handing down to us information about communication and movement.

Not all place names appear to reflect information that is relevant to our historical or archaeological interests. For example, Jelling, meaning "the yellow area", does not hold any information about the monuments or the significance of the place during the Viking Age.

The aim of this project is to locate place names relevant to the identification of central spaces in the Iron Age and the Early Middle Ages.

Place names may cover specific places/points in the landscape or larger areas, and we do not always know which of these they refer to. Names can also be attached to rivers, roads and paths and, in this way, "pass through" the landscape.

Presentation:
A dominant aspect of Scandinavian place-name research has been Lars Hellberg's theories from central Sweden on naming environments around central places. These environments or groups of place names are believed to reflect a pattern of functional and social structures grouped around central sites. However, the Swedish model of naming environments cannot be applied to place names in southern Scandinavia, even though central places have been identified archaeologically here too.

There are some clear differences in the place-name evidence from central Sweden compared to that in south Scandinavia. For example, the suffix *-tuna* is common is central Sweden, but not in southern Scandinavia, whereas the suffix *-lev* is common in southern Scandinavia but not in central Sweden. This urges us to focus on special qualities of south Scandinavian places names and be aware of differences within Scandinavia, and not to apply the central Swedish model to other areas.

The current project is based on a list of place-name elements developed by Lisbeth Christensen for her PhD research: The place names must be recorded before 1680 and contain elements connected to trade, craft, warfare, administration, religion or elites/power.

Various examples of such elements are found in the Odense and Aalborg areas. An important place name connected with power is that of the village of Salby on the Hindsholm peninsula (recorded in 1488), with *Sal-* meaning "magnate's farm or hall". Very few place names within the Aalborg area seem to be connected to power/elite. One of the most interesting results from the present investigation comes from the work on place names connected with cult and religion. Especially around Odense (the name itself refers to an Odin sanctuary), many place names are found that reflect the religious landscape, including theophoric names (containing the embedded name of a god) that are not found in the Aalborg area.

Trade and crafts are not often reflected in Iron Age place names, and this seems to be a later Medieval element, for example with the place name suffix *-køb*ing. However, there are some examples of 'portages' where boats were hauled over land. These are also mainly found within the Odense area.

Place names related to *-thing* are believed to re-

flect a justice organisation that, in some instances, may predate the structure of the shires. Within the Aalborg area, the name Grydsted could represent a "sacrosanct place".

Most common are the names related to defence, warfare and landscape control, often referring to signalling points in the landscape. A common name is *snekke-*, meaning ship. Such names are found in both research areas.

Conclusion:
One conclusion reached in this project is that some sacral names have interesting place names clustered around them, while others are isolated with no significant place names nearby, as in the case of Gudme on Funen. A real cluster of place names related to centrality is only found within the Salby area on the southern part of the Hindsholm peninsula, which may reflect a central space of a special character compared to other areas.

South of the Limfjord, in the Aalborg area, a cluster of place names related to signalling has been identified close to the Gudum place name, which Albris believes is the central sanctuary in that area. Albris points out that, in some cases, the later Medieval centres appear to have been founded on the sites of Iron Age central places (Odense and Viborg), while this might not be the case for Aalborg if Gudum was the central sanctuary in the pre-Medieval times. Maybe Tissø/Kalundborg is another example of a central space being moved from the Iron Age to Middle Ages.

Questions:
Mads Ravn (The Vejle Museums) asked why the place name "Viby" south of Aarhus was missing from one of the maps of sacral place names. Albris explained that, in this case, the prefix *vi-* does not mean a sanctuary even though it has sometimes been interpreted in that way in the literature.

At the end of the seminar, in his reflections, Mads Dengsø Jessen (The National Museum of Denmark) suggested that the meaning of Jelling (i.e. "the yellow area") could derive from the appearance of the landscape after the grass turf was removed from a large area to construct the big mounds. The yellowish subsoil would then have been visible over a large area around the mounds.

Further reading
Albris, S.L. 2017: *Stednavne og storgårde i Syd-skandinavien i 1. årtusind*. PhD-thesis. University of Copenhagen.

Christensen, L.E. 2010: *Stednavne som kilde til yngre jernalders centralpladser*. PhD-thesis. University of Copenhagen.

Christensen, L.E. 2014: Centralpladsrelevante stednavne og centrale pladser på Fyn - Nye fund og mulige strukturer. In: M.S. Danielsen, B. Eggert & J.G.G. Jakobsen (red.) *Navn og navnebærer. Rapport fra NORNAs 45. symposium i Skagen 1.–4. oktober 2014*. Uppsala 2016, pp. 7-33.

Christensen, L.E. 2017: Stednavne og arkæologi i Danmark. *KUML 2017*, pp. 155-76.

Christensen, L.E. 2018: Centralpladsindikatorer og centralpladsdistribution – om centralitet og vækst
i yngre jernalder og vikingetid. In: Volker Hilberg & Thorsten Lemm (eds.) *Viele Funde – große Bedeutung? Potenzial und Aussagewert von Metalldetektorfunden für die siedlungsarchäologische Forschung der Wikingerzeit.*
Bericht des 33. Tværfaglige Vikingesymposiums, 9. Mai 2014, Wikinger Museum Haithabu Schriften des Museums für Archäologie Schloss Gottorf - Ergänzungsreihe Band 12. Verlag Ludwig, Kiel. pp. 11-28.

Portable antiquities as a source relative to the organisation of an Iron Age landscape: Limitations and possibilities. Spatial and functional organisation and dynamics

Mogens Bo Henriksen
(Odense City Museums, Denmark)

Abstract:

A document from AD 988 states that Odense had a church and episcopal residence, and we can therefore assume that the settlement had an urban character with central functions. At about the same time, the ring fortress of Nonnebakken was constructed. The archaeological record from the present-day urban area does not indicate that the settlement had central or supra-regional functions prior to the 10th century and, in general, archaeological data relating to the preceding centuries are almost absent.

To investigate the town's development in a regional perspective and a landscape context, about 8000 objects of bronze, silver and gold were examined. These have been found by metal detector within an area of c. 450 km² around Odense over the last 10 years. About 2700 of these metal objects can be dated to AD 400-1100, and most of them were found in 26 concentrations, referred to here as "complexes".

In the analysis of the metal objects, there was a focus on types related to trade, imports, crafts, weaponry, administration, transport, cult and high social status. In addition, there was an emphasis on the chronological spread of the objects in the complexes. Similarly, the relations between the complexes and water, as well as to the landscape, historical villages and the infrastructure was investigated.

Most of the sites were occupied from the 6th or the early 7th century AD. Only a small and probably highly specialised site on the eastern side of Odense Fjord and a site close to the town of Odense were established in the 9th or 10th centuries. Apart from these two sites, all the complexes are directly linked to Medieval villages, which can therefore be assumed to have roots extending back to the Late Iron Age. The complexes also show close links with the major roads and traffic hubs of the 18th century, including passages over watercourses. On the other hand, none of them are located directly on the coast.

Debris from metal crafts was found in all the complexes, and tools for textile crafts have appeared at most sites. Trading activities are reflected at some sites, but to varying degrees. Insular (British Isles) and continental imports are also known from several of them, predominantly in the area east of Odense and thereby south of Kerteminde fjord. The largest concentration of unique objects is evident in the same landscape, reflecting high social status, as well as mounts from weaponry.

The complexes are distributed over large parts of the study area with a concentration east of Odense and on the southern part of the Hindsholm peninsula. The distance between the individual complexes is 1-4 km. However, the analyses have shown that the largest complexes, containing the most complex finds and the greatest numbers of indicators of international networks, power and cultic activities, are located east of Odense, i.e. in the landscape south of the place where the Ladby ship burial was constructed in the early 10th century. As Odense developed as an urban settlement in the 10th century, this took place in a landscape that already had several settlements with central functions and supra-regional networks.

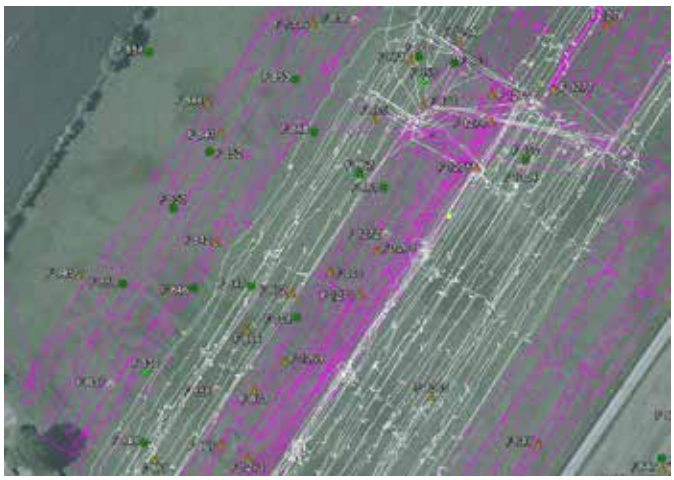
Portable antiquities as a source to organization of an Iron Age landscape. Limitations and possibilities. Spatial and functional organization and dynamics

Mogens Bo Henriksen
Curator, Odense Bys Museer

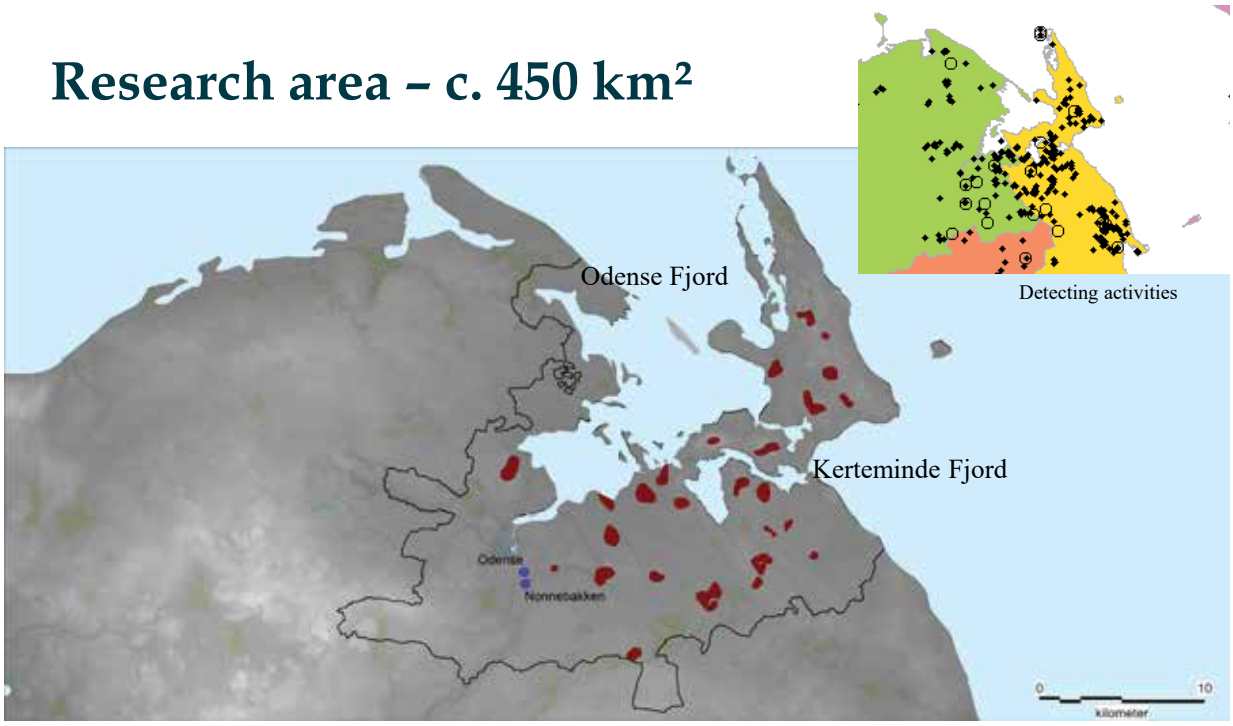
Data collected by detectorists

Total number of objects	Objects from AD400-1100
N = 7972	N = 2662 (2492 objects from 26 ”complexes”)

Report formula and tracking: Glen Abramsson



Research area – c. 450 km²

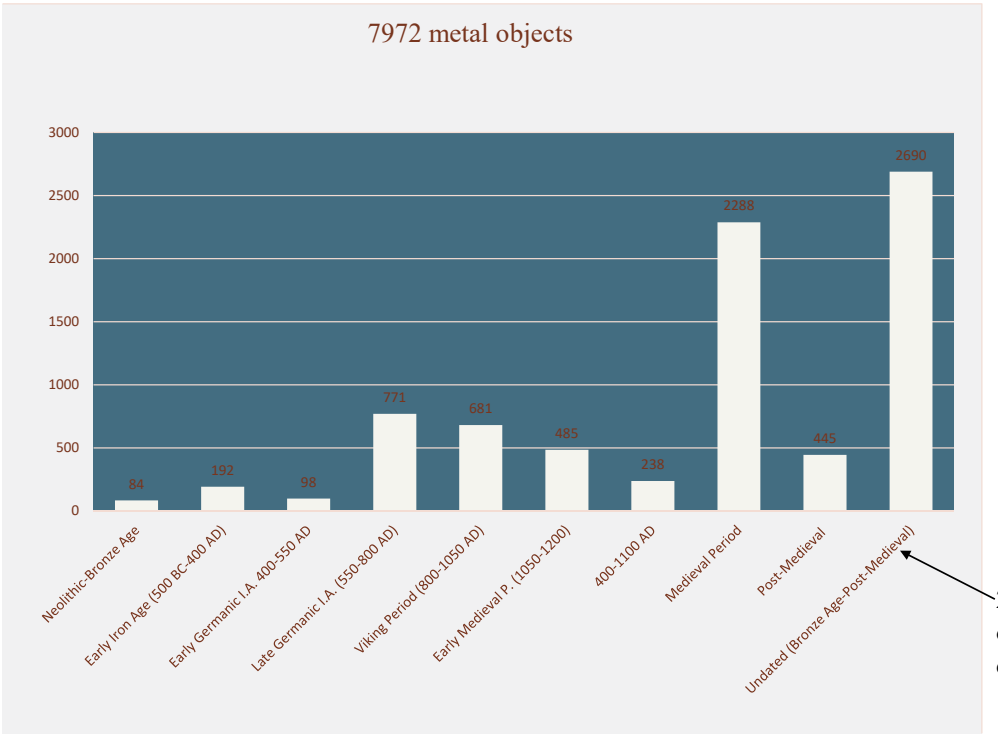


26 ”complexes” – defined area with more than 10 objects from AD 400-1100

Coast lines c. AD1780

Maps: ©Geodatastyrelsen. Torben Trier Christiansen and Claus Feveile..

Chronological challenges



25-50% of the metal objects can not be dated accurately

Research questions
– *objects and activities*

When: Chronological distribution.
What: Activities – focus on specialized functions:

Crafts

Cult (photo M. Beck)

High status

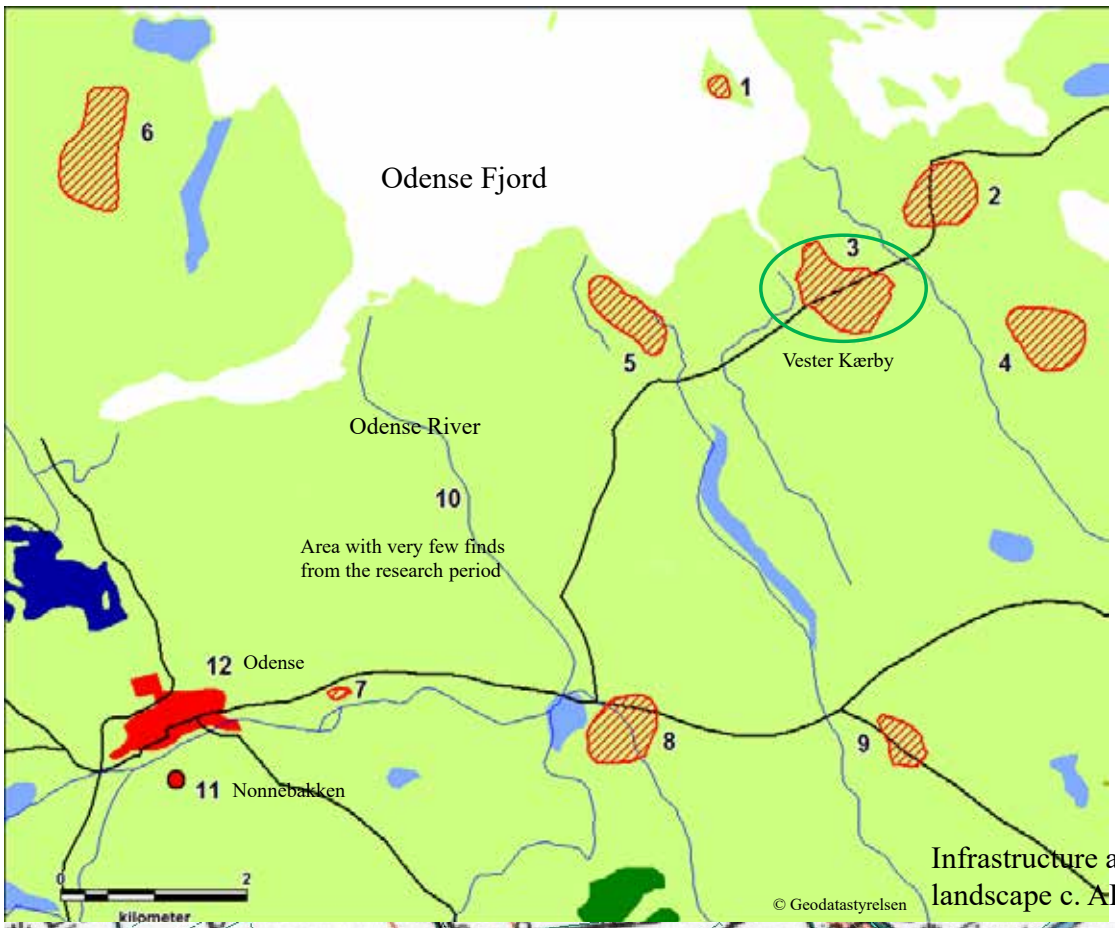
Import

Military

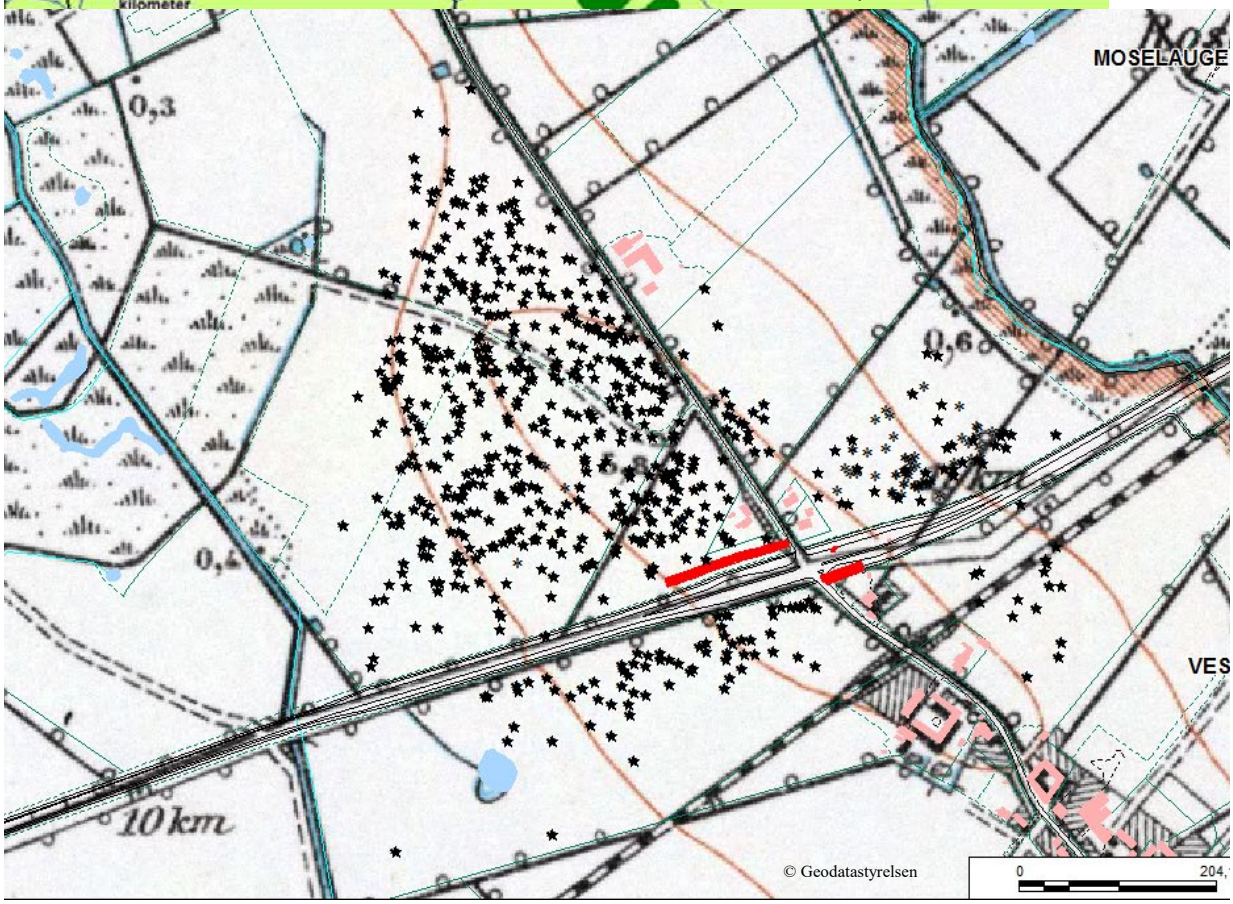
Trade

Research questions
- *structure*

Relation to landscape including sea/rivers.
Relation to infrastructure (roads/passages).
Relation between sites.



Infrastructure and landscape c. AD1780

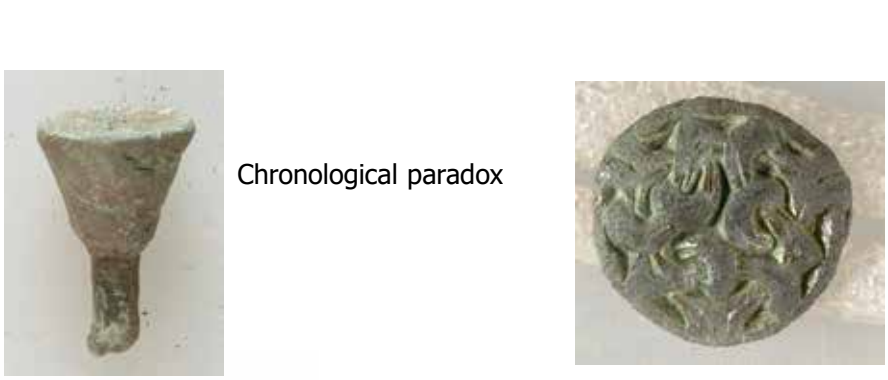


550-800 AD

800-1050

1050-11/1200

Crafts
– bronze casting and textile production



Chronological paradox

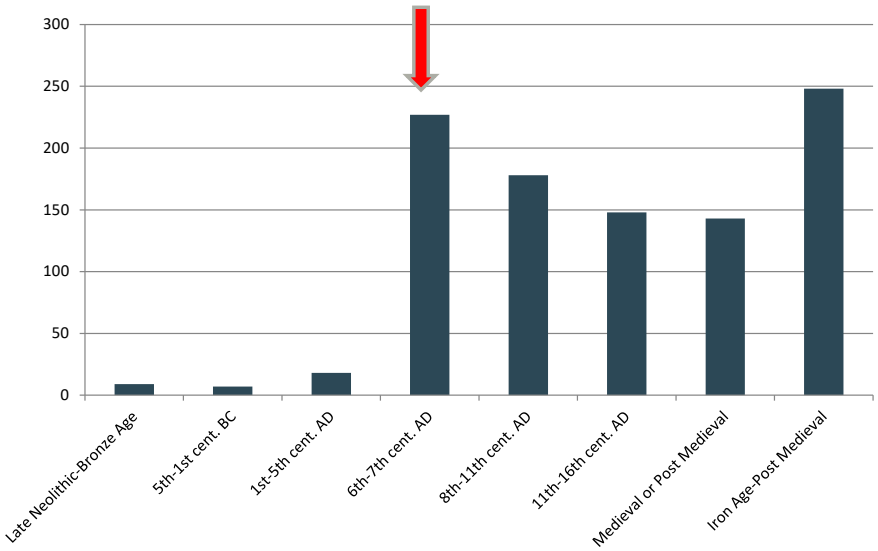
Coins

Mounting from sword-handle
6th-7th c

Mounting from rivet from spear head
6th-7th c

No weapons
- But mountings

Chronological profile of the metal finds from Vester Kærby (c. 1250 objects)



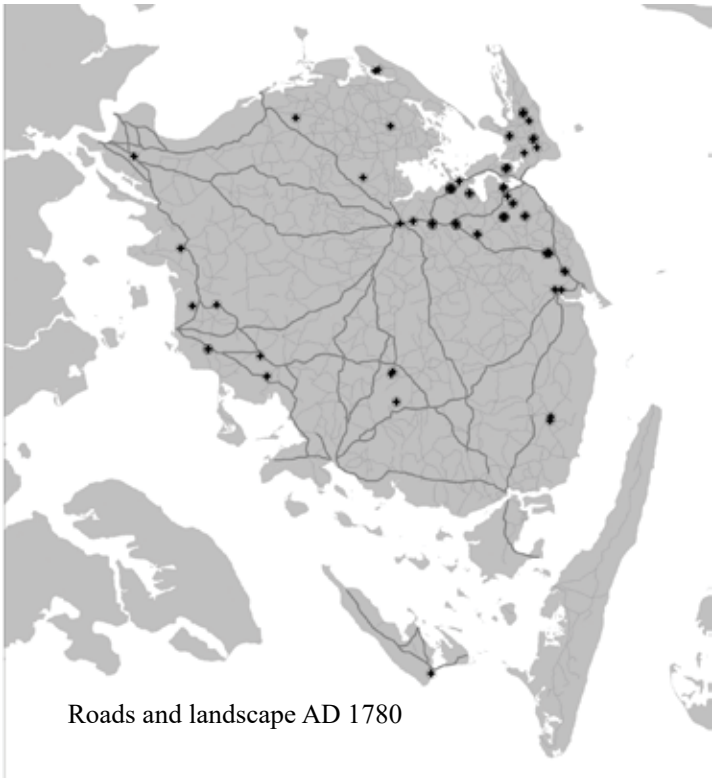
Common elements

- Except for one, all complexes represent multi period accumulations of objects.
- Except for two, all complexes start in the 6th century AD

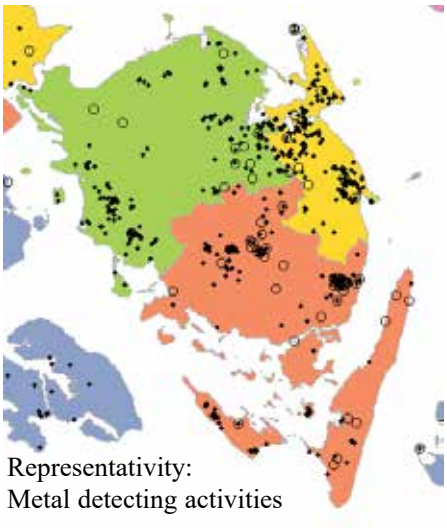
- The metal objects from most complexes represent several types of activities (multi functional).

- Metal casting, textile production and trade is represented at all sites.

Small enamelled broches (N=83)



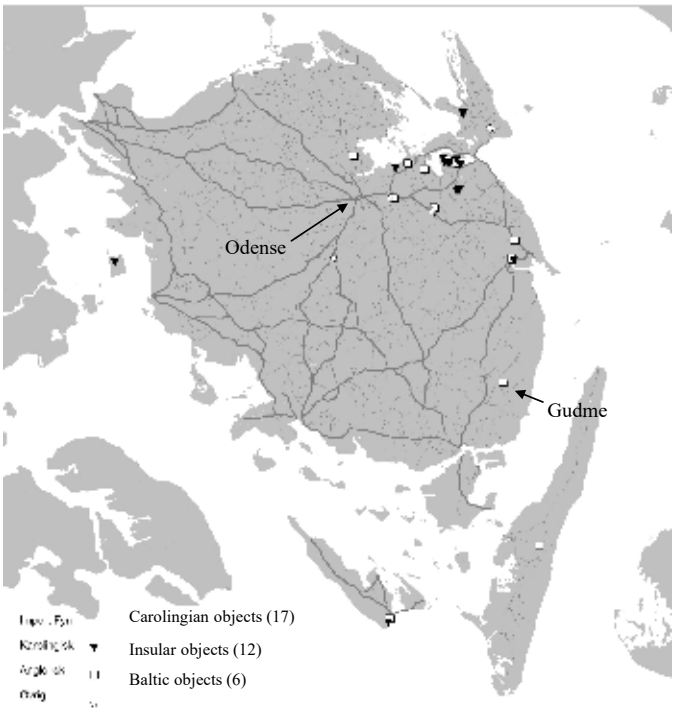
Roads and landscape AD 1780



Representativity:
Metal detecting activities

Maps: © Geodatastyrelsen. M. Beck and C. Feveile.

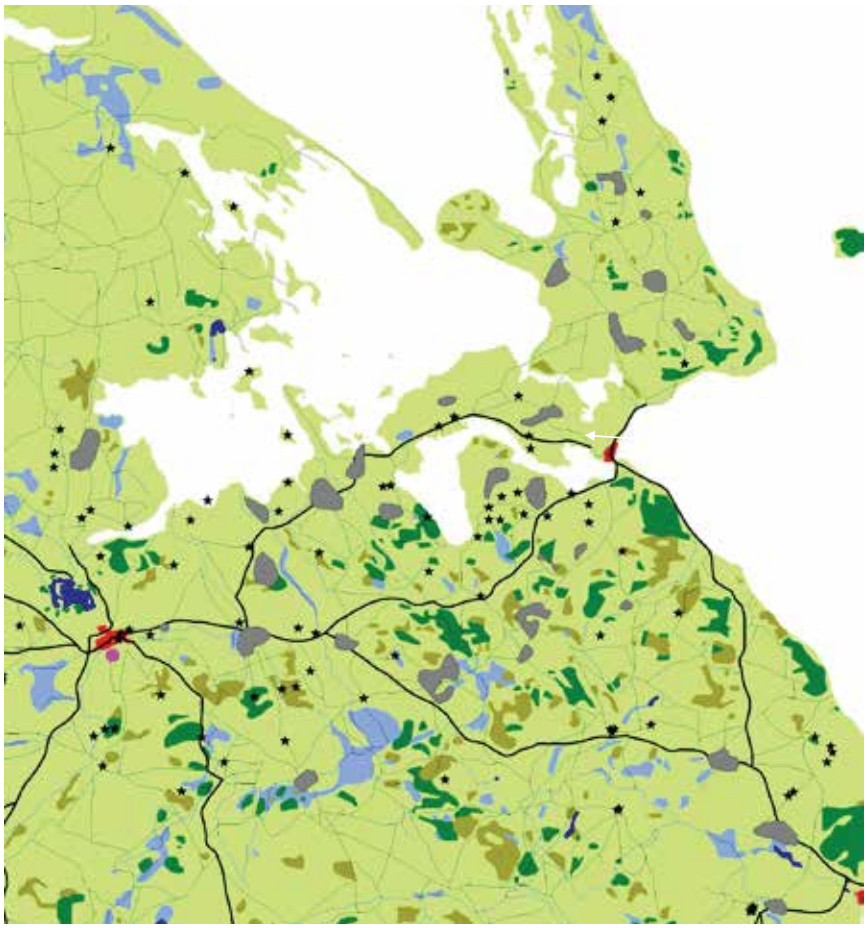
Carolingian and insular objects (N=35)



After Sørensen, A.C. 2001: *Ladby. A Danish ship-grave from the Viking Age*.

Vester Kærby and Lumby

Map: © Geodatastyrelsen. M. Beck



Complexes (grey) and single finds (stars).

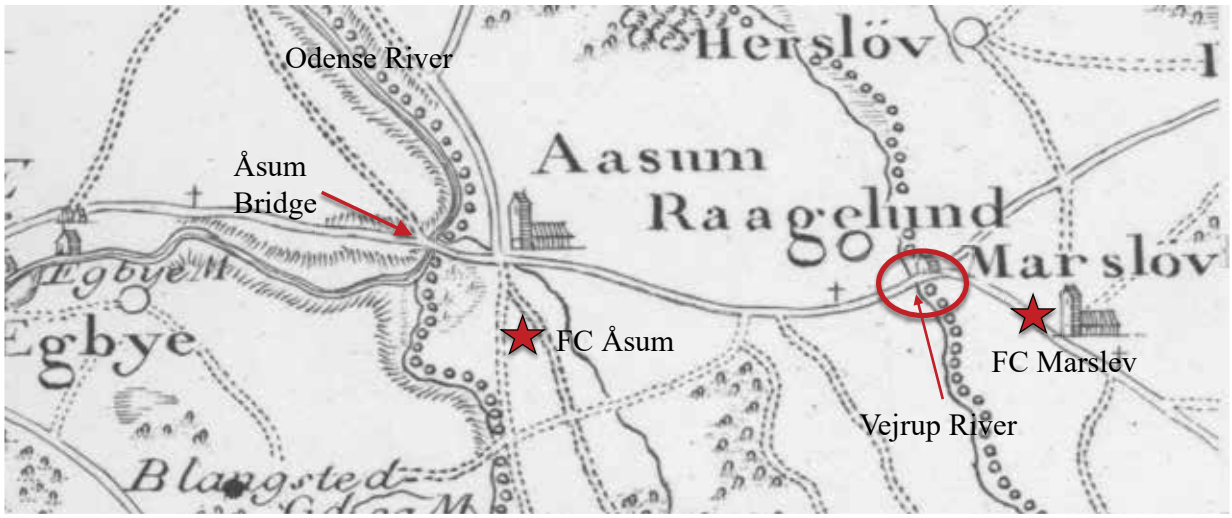
Infrastructure and landscape c. AD1780

Most complexes are related to existing villages.

Distance 1-3 km

Map: M. Beck © Geodatastyrelsen

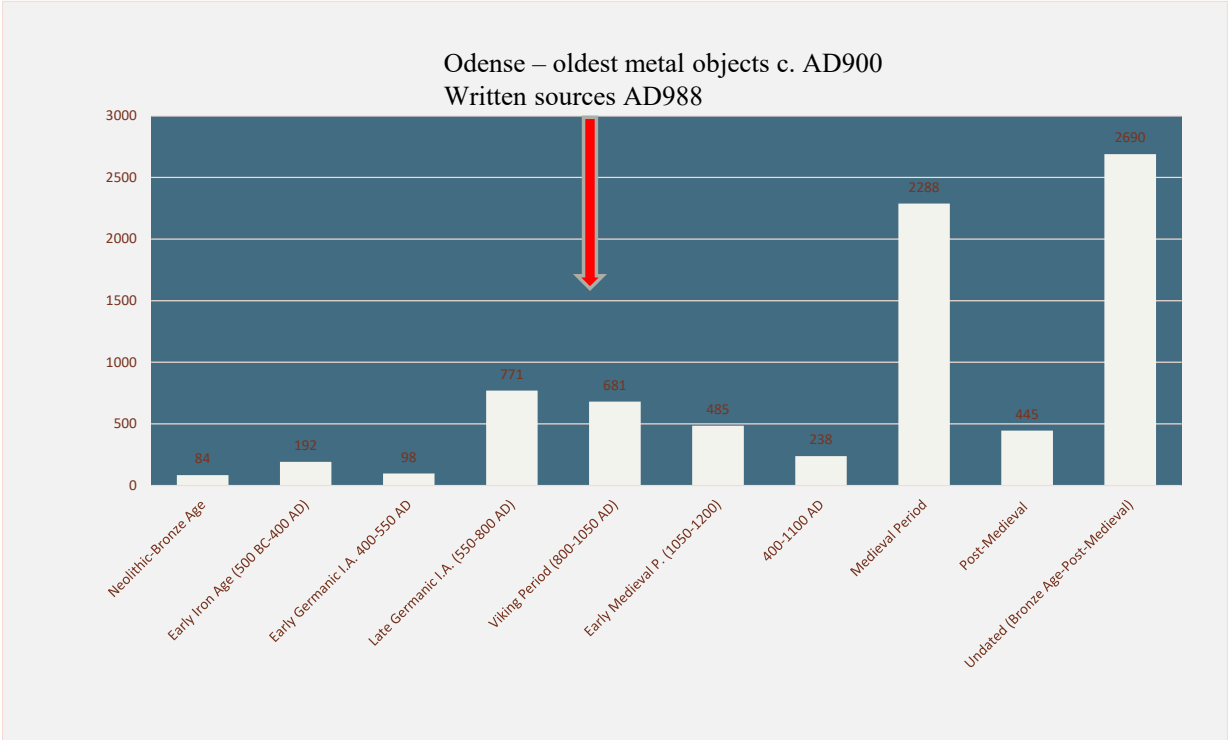
Along the road from Odense to the Great Belt



All roads lead to Åsum!

Map: © Geodatastyrelsen

Dating of the complexes and Odense



Concluding remarks

Most of the sites were established in the 6th century in relation to agrarian settlements

- Most of the sites are related to road systems and passages.
- Specialized sites from the 3rd-5th centuries are not!
- None of the sites seem to have a maritime orientation.

Concluding remarks

The complexes form an area of intensive craft and trade activities from the 6th century onwards.

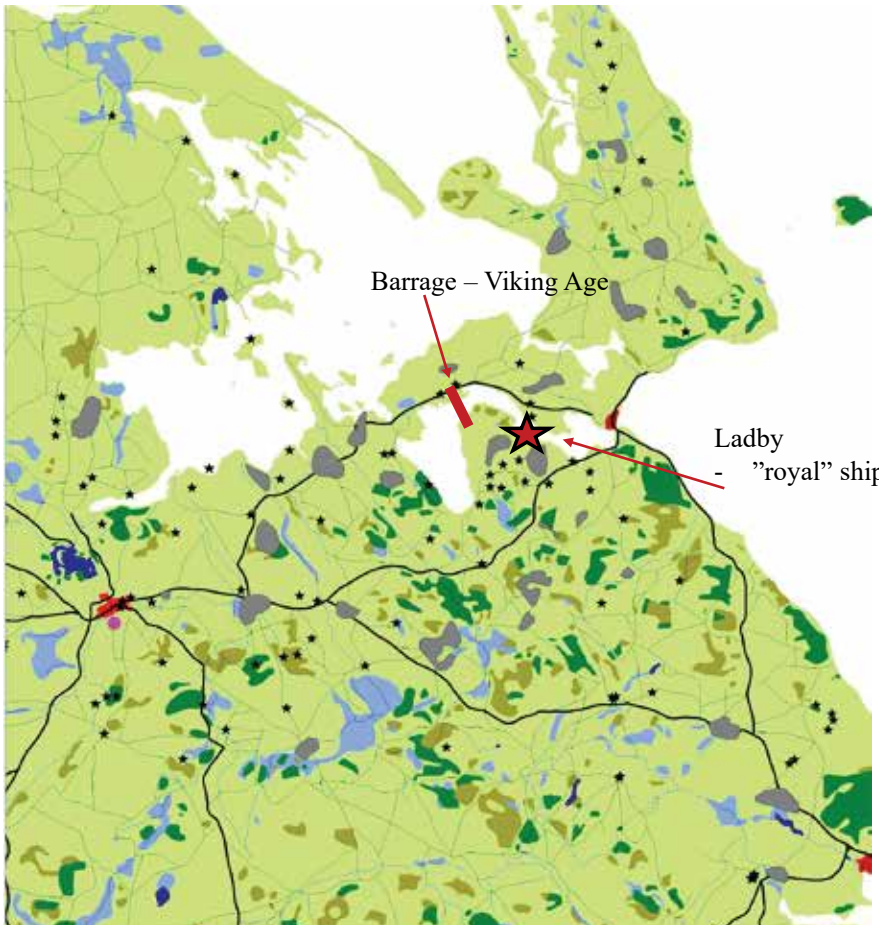
There is no (obvious) central PLACE – but several complexes with elements reflecting centrality.

This corresponds with Maria Panum Baastrup's definition of a "*Gateway Community*" in the northeastern part of Funen.

- And Lisbeth Christensen's designation of a concentration af place names with central elements in the same area.

Gateway Communities

After Baastrup, M.P. 2014: Continental and insular imports in Viking Age Denmark – on transcultural competences, actor networks and high-cultural differentiation. I: H.C. Gulløv (red.): *Northern Worlds – landscapes, interactions and dynamics. Research at the National Museum of Denmark*. Proceedings of the Northern Worlds Conference, Copenhagen 28-30 November 2012. Publications from the National Museum. Studies in Archaeology & History Vol. 22, s. 353-367. Copenhagen.



Map: © Geodatastyrelsen. M. Beck

Mogens Bo Henriksen – **Portable antiquities as a source in relation to the organisation of an Iron Age landscape: Limitations and possibilities. Spatial and functional organisation and dynamics**

Summary by: Jakob Bonde and Mikael Manøe Bjerregaard

Introduction:
The conclusions presented in this paper by Mogens Bo Henriksen (Odense City Museums) are partly a result of cooperation with Torben Trier Christiansen (The Historical Museum of Northern Jutland) and Malene Refshauge Beck (Museum of Eastern Funen). This team worked on the finds from metal-detecting activities during the Space to place project, funded by the Velux Foundation.

In this paper, Henriksen focuses on an area in northeast Funen, between Odense fjord and Kerteminde fjord, where close collaboration with a group of non-professional metal detectorists has resulted in the recording of about 8000 metal objects representing a period of about 5000 years. The detectorists have been systematically instructed in recording methods, and the data appear to have a high degree of standardisation.

The paper addresses questions about the objects and activities in two categories: The chronological distribution of the finds (when) and activities focused on specialised functions (what).

Presentation:
The research area between Odense and Kerteminde covers c. 450 km² and the 8000 metal objects recovered here can be divided into 26 complexes. A complex is defined as an area with more than ten objects dating from AD 400-1100. About one third of the objects can be dated to within this period.

However, the material presents significant chronological challenges and 25-50% of the objects cannot be dated precisely. Especially objects related to crafts (molten metal drops, weights etc.) are difficult to date accurately. Furthermore, the material is difficult to handle as the complexes typically cover hundreds or even thousands of years, and each complex extends over a large area.

It was therefore necessary to define groups of precisely-dated objects (so-called markers) to define special activities within each complex. The markers include objects associated with crafts, cult, high status, imports and the military. The spatial distribution of these objects was subsequently correlated with the complex's relationship to the landscape (including the sea/rivers) and the infrastructure (roads/passages), as well as the relationship between the sites, in order to understand the landscape structure at a given time.

Within the research area, the metal-rich sites are located very close to each other, except in the area to the north of Odense were only a few finds of metal objects from AD 400-1100 have been recorded. Furthermore, it is difficult to find anything near Viking Age Odense, as urban development over the last 200 years makes metal detecting impossible here. Nevertheless, it seems clear that there is a relationship between the location of the metal-rich complexes and the infrastructure, such as historical roads, waterways etc., in the area northeast of Odense.

Henriksen uses one of the largest metal-rich sites in the research area (Vester Kærby) as an example. Metal detecting has been carried out by non-professionals at this site for about ten years, searching not only for fibulas and various kinds of jewellery, but also for molten metal drops etc.

Vester Kærby, as well as other sites, contains many fibulas dating to the same period as the earliest traces of settlement below present-day Odense. However, such objects are almost absent in the cultural deposits of the oldest part of Odense. This may indicate a difference in the use of dress accessories in an urban and a rural context.

In general, the metal-rich sites in the research area are difficult to explain due to their multifunctionality. Furthermore, the sites often extend over several hectares and have an extended chronological range, covering about 5000 years from the Late Neolithic onwards.

Most of them, however, begin in first half of the Late Germanic Iron Age, corresponding to the later part of the 6th Century (AD 540/575). Most

sites also have objects from the preceding centuries, but in small numbers. Compared to the vast material from the Late Germanic Iron Age, there seems to be only a relatively small number of objects from the Viking period. But it remains to be investigated whether this reflects a decline in activities in the 9th century.

All the sites seem to have involved bronze casting and textile production on some scale. Unfortunately, these activities can only be dated in a few cases, which makes it difficult to determine the extent to which these crafts took place simultaneously.

Coins (Kufic as well as European) are present at most sites, but no specific concentrations can be traced. Many coins have been reworked or cut.

Because iron has not been collected, weapons are only represented by mounts. No distinct concentrations can be observed, but many of these finds can be dated to the Late Germanic Iron Age and were found in Vester Kærby and around Kerteminde Fjord.

In summary, all the complexes, with one exception, represent a multi-period accumulation of objects. All complexes (with two exceptions) began in the 6th century AD, and the metal objects recovered from most of them represent several types of activities. Furthermore, metal casting and textile production are represented at all the sites and trade at many of them.

Looking at two specific categories of finds (small enamelled broches, Carolingian and insular objects), which are assumed to be associated with an elite network, they all have specific concentrations in the research area north of Odense and are also associated with mapped historical road structures. Furthermore, there seems to be a connection between these complexes and extant villages with roots in the Late Iron Age. Many complexes appear to have evolved in conjunction with passages across rivers and streams and in relation to junctions. In particular, several large metal-rich sites have been recorded along the main road from Odense to Nyborg.

Conclusion:
Most of the sites were established in the 6th century in association with agrarian settlements, and most are associated with road systems and passages. None of the sites appears to have a maritime orientation. The metal-rich sites from this period seem to be isolated from the sites with specialised activities dating from the 3rd-5th centuries.

The complexes form an area of intensive craft and trade activities from the 6th century onwards. There is no (obvious) central place – but several complexes with elements reflecting centrality.

This means that the emergence of Odense took place in an area with highly specialised settlements located 1-3 km apart in a landscape with several central elements (e.g. the early 10th century Ladby ship burial). This area can be characterised as a central landscape or central space in the Late Iron Age, where a central place (Odense) emerged during the Viking Age.

Questions:
No questions.
Speaker's e-mail: mbhe@odense.dk.

Further reading:
Feveile, C. 2016: Understanding the Hinterland of the Ladby Ship Grave. I: V.E. Turner, O.A. Owen & D.J. Waugh (ed.): *Shetland and the Viking World. Papers from the Proceedings of the Seventeenth Viking Congress, Lerwick*, p. 229-35. Glasgow.

Henriksen, M.B. 2013: Odenses forgænger – eller: én af mange? L. Bisgaard, M. Bruus & P. Gammeltoft (red.). *Beretning fra toogtredivte tværfaglige vikingesymposium*, pp. 68-83. Højbjerg.

The dialogue between research and communication of large-scale Iron Age cultural landscapes

Lene Feveile
(Museum of Eastern Funen, Denmark)

Abstract:

As part of the project *From Central Space to Urban Place*, four major communication projects have been planned, two with a focus on "space" and two associated with "place". The overall theme is "How to integrate learning and understanding of the now invisible landscapes of the Iron Age" for the public, with a special eye on pupils in the 4th grade.

The projects are equally placed in relation to the overall research project and take up central locations and questions relating to it. The four communication projects work with different approaches in their way of presenting and explaining the knowledge we have of the cultural landscape of the Iron Age, both to the pupils and the general public. In some of the projects the pupils are involved in both the practical execution and recording of information, in others their roles are "less involving" and take more of an inspirational form.

The "space" projects are:

1. *The beacon project: The enemy is coming – light the beacons*.
   From Fyns Hoved to Odense/Ladby. How did the Vikings communicate over long distances? Through recreating fires (beacons) in the locations in the landscape that still bear the names *Bavn*, *barn* etc. (which refer to beacons), the pupils will acquire an understanding of signalling in an Iron Age landscape.

2 . *Ghost ships on Kertinge Nor*.
   A 1:1 installation of the Ladby ship employing lighting effects and water. An on-location visualisation of Viking sailing routes in an area where both today's place names and archaeological research show that the Vikings were active.

The "place" projects are:

3. *The king's castle project.*
   The Viking fortress of Nonnebakken. On-location illustrations and recreations of important archaeological sites in the early history of Odense as a town. None of the chosen Viking Age sites are especially visible in Odense today.
4. The early town.
   Featuring various art installations, routes can be followed through the town of Aalborg to learn about its earliest history.

As of November 2017, only the first project – the beacon project – has been undertaken.
The next project coming up will be the ghost ships project in September/October 2018

This lecture will present the beacon project: *The enemy is coming – light the beacons* as a case study.

From Central Space to Urban Place

– From the Iron age centrale areas to the medieaval towns

1. Formidling og læring kobles direkte til de arkæologiske landskaber, lokaliteter og effekter og skal kunne anvendes i det åbne land såvel som i byen. Det teoretiske perspektiv på forskningsdelen, begrebet space & place, sættes således i direkte forbindelse til formidlingsdelen. Flere af formidlingsdelene vil endvidere kunne anvendes som afprøvning af dele i projektets forskningselementer.

2. Projektet vil behandle udfordringen i at formidle arkæologiske landskaber og lokaliteter on location i fuld skala efter overstået udgravning, dvs. på et tidspunkt, hvor der ikke længere er synlige spor af de arkæologiske levn på stedet. Udfordringen løses via afprøvning af events og mere blivende tiltag.

3. Formidling og læring skal foregå i et brugerinddragende perspektiv, der via anknytning til kunst giver en i dansk sammenhæng relativt ny måde at illustrere arkæologien på. Kunsten rummer i forhold til andre formidlingsgreb større mulighed for at sætte fantasien i spil og skabe fælles oplevelser.

4. Formidlingen skal have en tilknyttet undervisningsdimension målrettet skolernes mellemtrin under temaet kunst og arkæologi. Undervisningen vil behandle kunst som udtryksform og kommunikator i forhistorien, ligesom den vil inddrage eleverne i selve arbejdet med at lave kunstværkerne.

1. - Direct link to the archaeological landscapes, locations and artefacts – both in the open landscape and the towns. That way ”Space and place” are connected directly to the mediation.

2. - On location in full scale - after excavations has taken part and there are no longer any visible signs of archaeology on the spot.

3. - Participations of the public.
   - Using art as an illustration of archaeology

4. - Education and mediation primarily targeted at the 4th graders via the themes art and archaelogy.

Education and mediation projects

- Communication (*space*) – ”The Beacon project”
- Navigation (*space*) – ”The fleet on the water”
- The royal castle(*place*) – Nonnebakken
- The early town (*place*) – Historical art route through Aalborg

“The enemy is coming - Light the beacons”

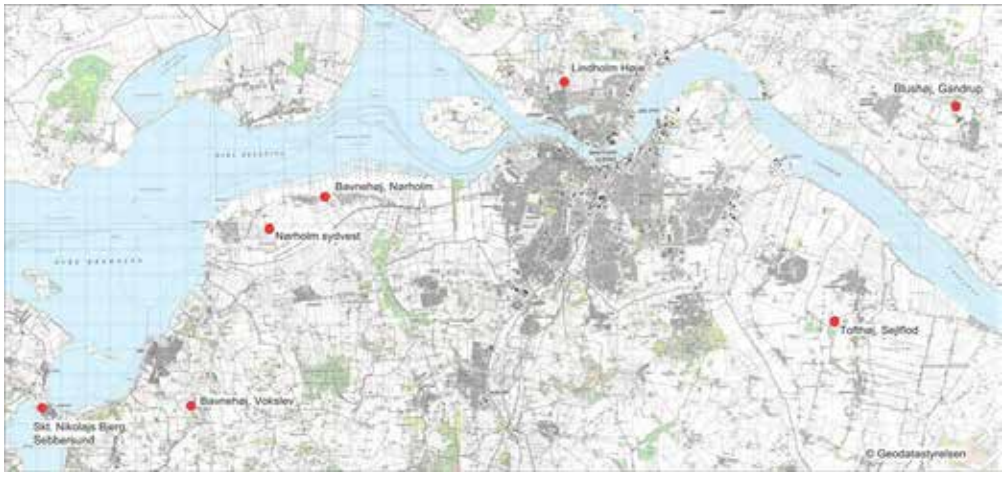
- Areas: Odense Fjord/Kertinge Nor og Limfjordens eastern part.

- Participants:

Østfyns Museer, Odense Bys Museer og Ålborg historiske Museum

The local shools, landowners and other local groups

When: 8. november 2017, kl. 17



“The enemy is coming - Light the beacons”.

The aim and idea

To make visible how the vikings could communicate over long distances by actually doing it yourself

To give both children and adults an archaelogical /historical knowledge about places in their local surroundings

To let local school classes and other groups build, light and registrate the hole proces

To create a log book that can be used by others who wants to make something like it

To open up peoples eyes to the invisible archaeological history that hides in the landscape of today

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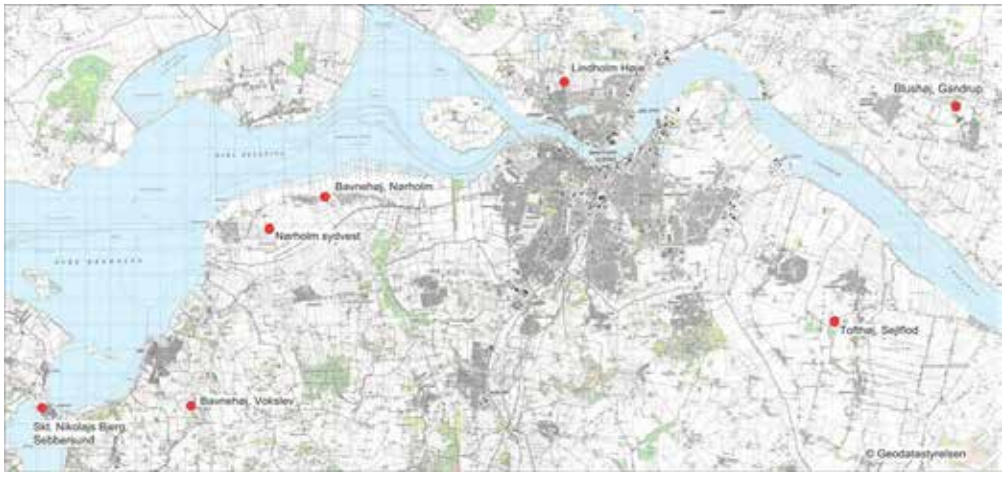

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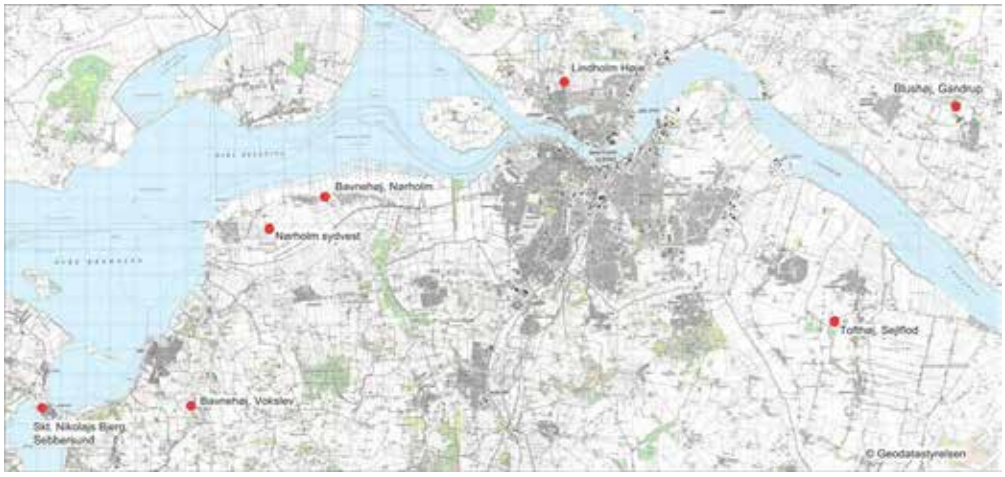

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To open up peoples eyes to the invisible archaeological history that hides in the landscape of today

Preparations

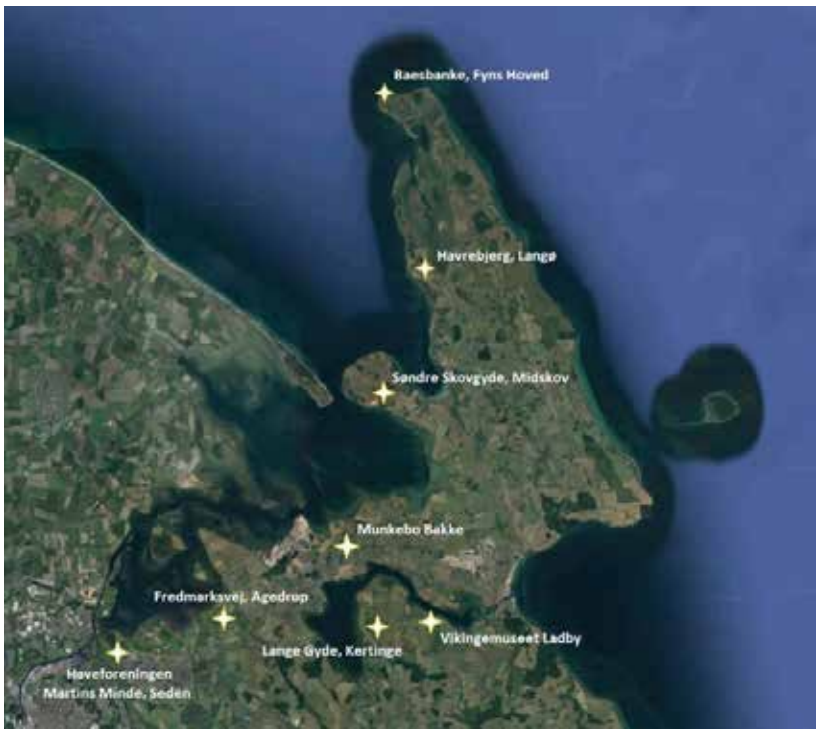
Selected places
Place names like som Baesbanke, blusholme, brandhøj etc.

The use of view analysis

Physically checking out of the spot

Modern disturbances
Trees and bushes in the sight line
Crops on the fields – land owners
Accessability on the day
Protected mounds (Nordjylland)
Light pollution
Safty

Dialog with paticipating groups/shool classes

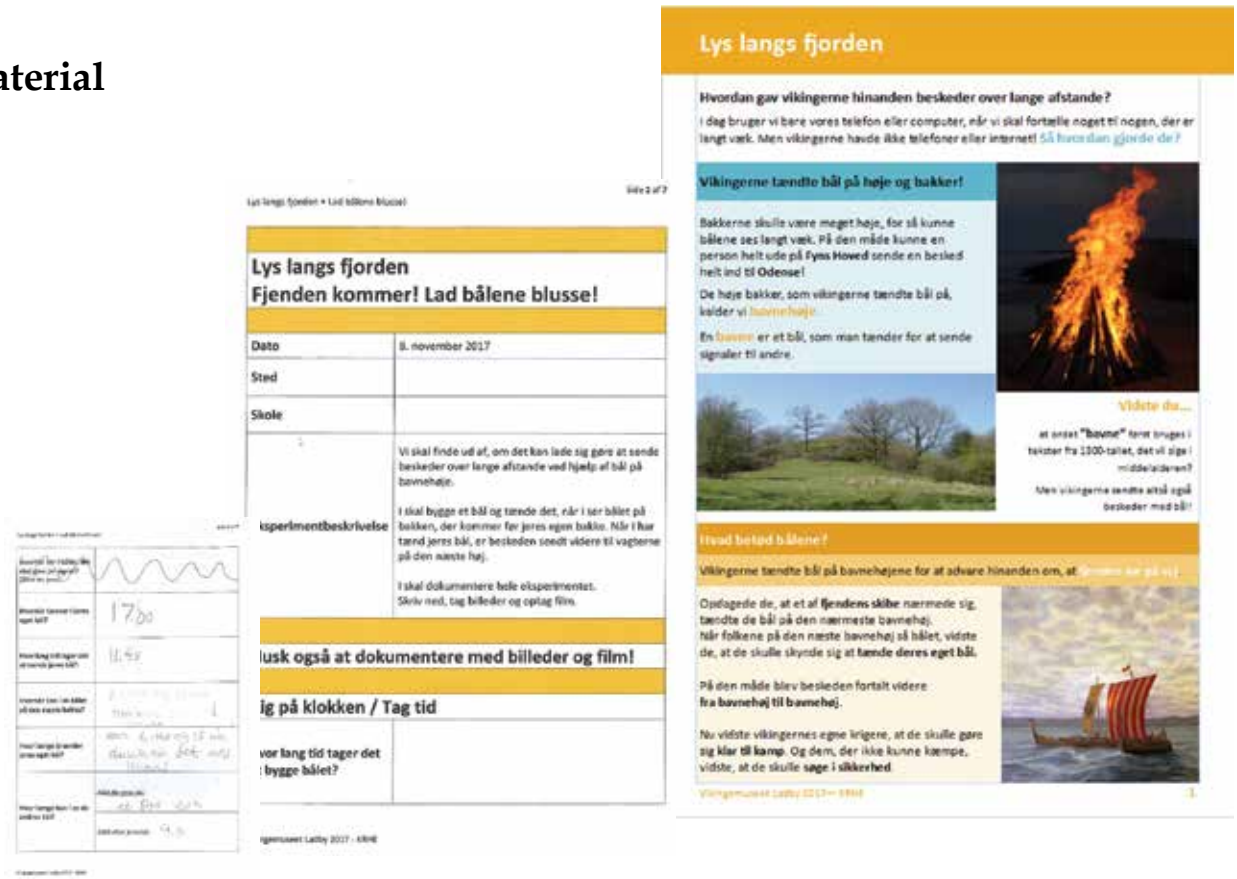


Education material

Pre - material

Documenting material

Foto and Film



“The enemy is coming - Light the beacons”

8. november 2018

The weather

Building to becon

The registration

“The enemy is coming - Light the beacons”.

8. november 2018

Press

Audience

“The enemy is coming - Light the beacons”.

Reporting back

”It went so fast to send a message”

”Part of something bigger”

The museums were thrilled

The participants were thrilled

”We really are back in the old days”

Invisible history certainly became visible

Lene Feveile – **The dialogue between research and communication of large-scale Iron Age cultural landscapes**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
In this presentation Lene Feveile talks about communication projects that form part of the *Central Space to Urban Place* project. The main focus is on the project *The enemy is coming – light the beacons* which took place in November 2017.

Museums have always informed the public about the results of their research. However, in this project, the main focus is on involving the public in the ongoing research process by integrating part of the public communication into the overall research project. Most archaeological research does not leave any visible traces in the landscape. Various means of communication must therefore be employed in order to bring past landscape alive to the public.

Presentation:
Four large communication projects are planned as part of the overall research project, two of which are connected to the "space" element and two to the "place" element. The overall focus is on how to integrate learning and understanding of the now invisible landscapes of the past (Iron Age and Early Medieval times) for the public (with special emphasis on 4th grade pupils).

The archaeological and historical results of the overall project will in time be published in scientific articles, but the aim of the communication projects outlined here is to make the results accessible to, and involve, a wider range of people during the research period. The goal is to create a direct link to the archaeological landscapes, both in open country and in towns, on location, with full scale reconstructions involving the public and employing measures such as art to illustrate archaeology. In some of the projects, the public will be directly involved in the hands-on process managed by the museum, in others, they are involved on a more inspirational level.

The four projects are:
1. *The enemy is coming – light the beacons* (Signalling) (Space). See below.
2. *The ghost ships on Kertinge Nor* (Navigation) (Space). Full-size art installation of a Viking ship employing lighting effects and water. (8th September to 20th October 2018)
3. *The king's castle* (Nonnebakken) (Place). On-site illustration and reconstruction of the Viking fortress. (2019)
4. *The early town* (Aalborg) (Place). Two routes through central Aalborg with art installations telling the early history of the town. (2019)

The rest of Feveile's presentation concentrates on details of the planning and execution of the project The enemy is coming – light the beacons, which took place simultaneously in eastern Funen and in the Aalborg area. In the Funen area, the project focused on signaling from Fynshoved to Odense via beacons at eight different locations. In the wake of this project, a manual was produced to assist people wishing to create similar projects in the future.

The beacon locations originally planned for use in this project were pinpointed by means of place-name research. In the preparation process, however, it became clear that most of these were not accessible for various reasons, so alternative locations were found. Because of time constraints, it was not possible to undertake a view-spread analysis between the different points, but it is advisable to do this in future projects in order to locate the most suitable locations within the landscape. The landowners turned out to be very enthusiastic, as did the locals and the press.

The aim was not just to create an event or a happening but to undertake a joint scientific and communication project. Furthermore, the museum staff were not instructors, merely observers in the final stage of the project (they were not present at every beacon site) in order to urge the participants to claim ownership of the project.

An interesting result from an archaeological point of view is that the beacon at Fynshoved was visible from Odense.

Conclusion:
The experiences drawn from arranging this project, as well as the practical work involved in its execution, will be summarised in a report and a manual for those who wish to undertake similar projects in the future. It will be published on the website www.spacetoplace.dk

Questions:
No questions.

Part 2:

Social organization and manipulation of landscapes in the period Late Iron Age to Early Middle Age. Background, methods, results and unused potentials in large projects of landscape archaeology

The Gamla Uppsala project: Reflections on landscape transformations

John Ljungkvist
(University of Uppsala, Sweden)

Abstract:

Gamla Uppsala has attracted the interest of historians, runologists and archaeologists since the 17th century, resulting in a veritable mountain of data. Up until the 1990s, however, most attention was focused on the large burial monuments, the church and, of course, the impressive literary evidence. The latter extends from the Icelandic sagas to the southern Scandinavian rune stones, the Adam of Bremen manuscript and, to some degree, even to Saxo Grammaticus and Beowulf.

When Scandinavian settlement archaeology emerged in the 1980s, Gamla Uppsala also formed part of the developments, even if these were slow. More and more settlement areas were discovered and investigated in parallel with research projects in the central parts of the area that is still well protected from the strong urbanisation processes that affect other parts of Gamla Uppsala.

In 2009, the project *Gamla Uppsala – the emergence of a mythical centre* was launched. This lives on in the form of the recently launched project *Viking Dynasties*. The latter is funded by Krogagerfonden and is being undertaken in cooperation with Tom Christensen and the National Museum of Denmark. This research project is a multi-faceted enterprise that involves several scholars and archaeologists with different specialities. Its primary goal is to fill in as many as possible of the large knowledge gaps that have existed for various periods in the very long history of the site. The project has also served as a test bed for various methods and a training platform for students and researchers.

An overarching ambition is to create a general overview of the long history of the place which had central functions from at least the 6th to the 16th century AD. Due to the very large contract archaeology project *Ostkustbanan* (OKB), which has generated a cross-section through the village area, most field efforts in the research project have been focused upon the central parts of the locality. We have undertaken several small investigations to determine the character of previously blank areas, but larger excavations have also been conducted in areas north of the church.

Much of the data are clustered around the 6th and 7th centuries, when the place underwent a vigorous process of monumentalisation, which ranged from mound building to the creation of a manor with a palace-like character and post-row monuments extending out into the surrounding landscape. But beneath these thick deposits we have also found increasing evidence of a highly interesting Migration period phase. Another major breakthrough, partly unintentional, was the discovery of the first major Medieval settlement remains, in the form of a 14th century king's manor and a 13th century archbishop's manor. Last, but not the least, the palaeoecological and osteological data have become increasingly important for studies of long-term landscape changes and current questions relating to the management of the ancient monument landscape at Gamla Uppsala.

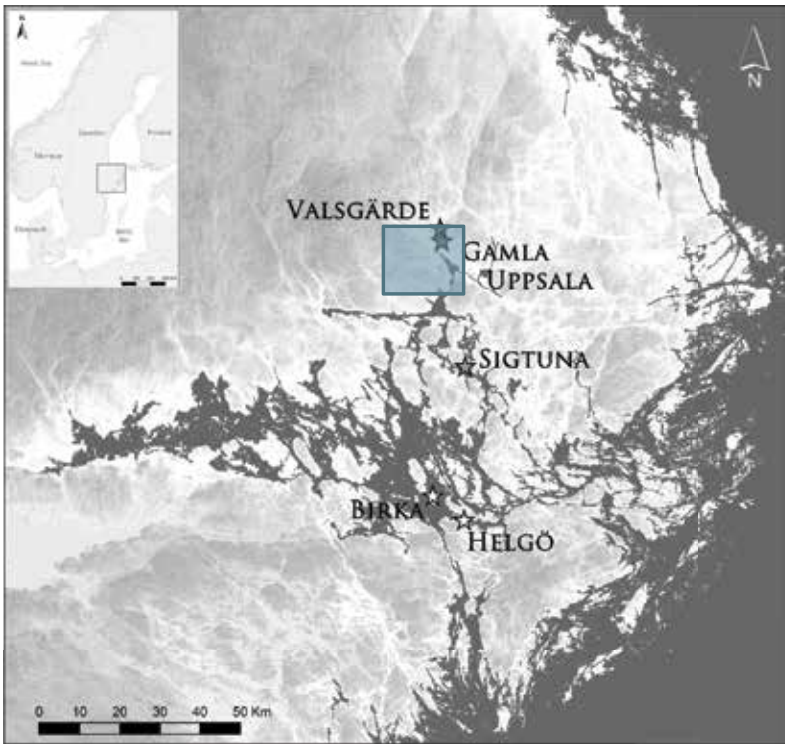
The Gamla Uppsala project

Reflections on landscape transformations

VR-graphics: Daniel Westergren, Disir productions

John Ljungkvist Uppsala Universitet, May 24 2018. From central to urban place. Results from Viking phenomenon and Viking Dynasties (and GUAM) projects. Financed by Krogagerfonden and Scientific Council (VR) Sweden (and previously Berit Wallenberg foundation).

The Mälar region/Middle Sweden



Viking Age water levels, 5 meters above present level

Picture: Daniel Löwenborg

Uppsala - the big stage for history and myths

Examples of myths:

Frey, ancestor of later rulers, founds a hov in Uppsala.

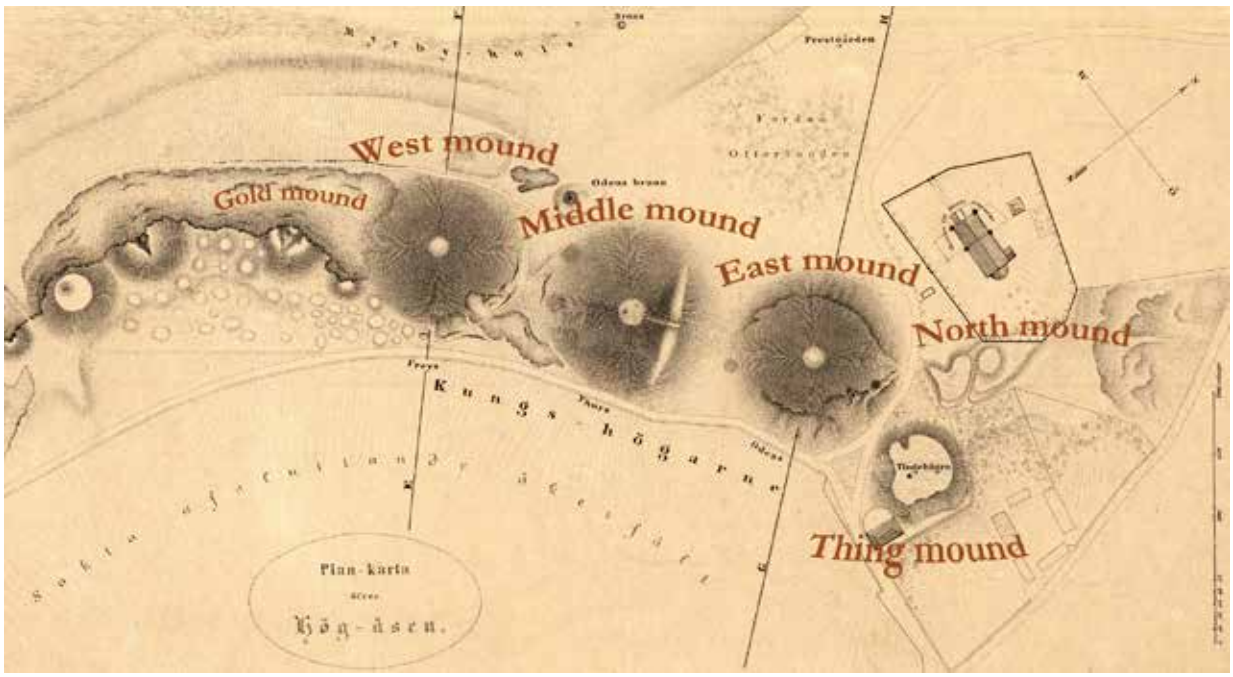
The Ynglingar dynasty, some buried in Uppsala, according to myth.

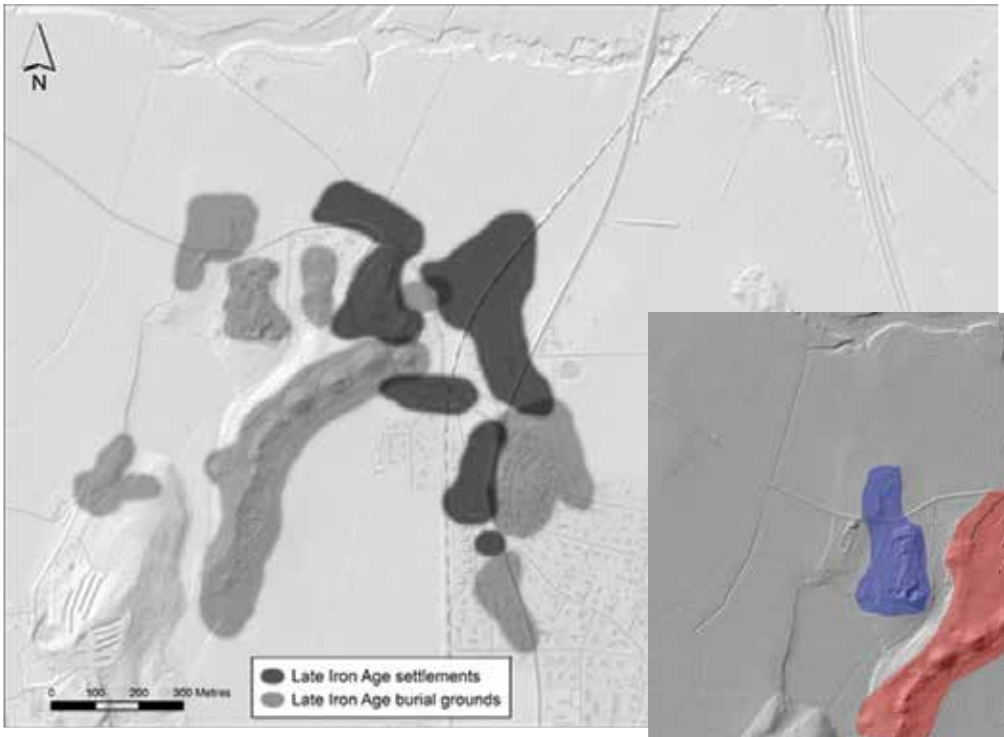
A stage for mythical and true dramas/events such as:

- The story of Rolf Krake and Sveagris.
- The Injald Illråde killing of the small kings in a great hall
- Battle by the Fyrisvellir/Uppsala in the 980s.
- A battle in Ragnar Lodbrok saga.

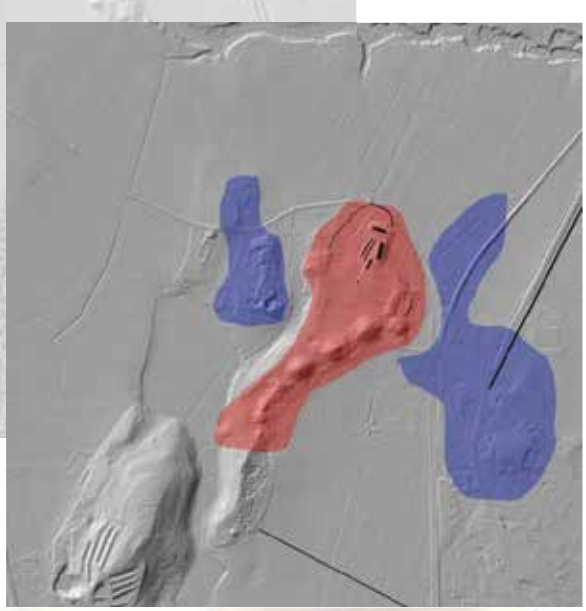
An island of visible monuments

The great mounds and the remains of a cathedral

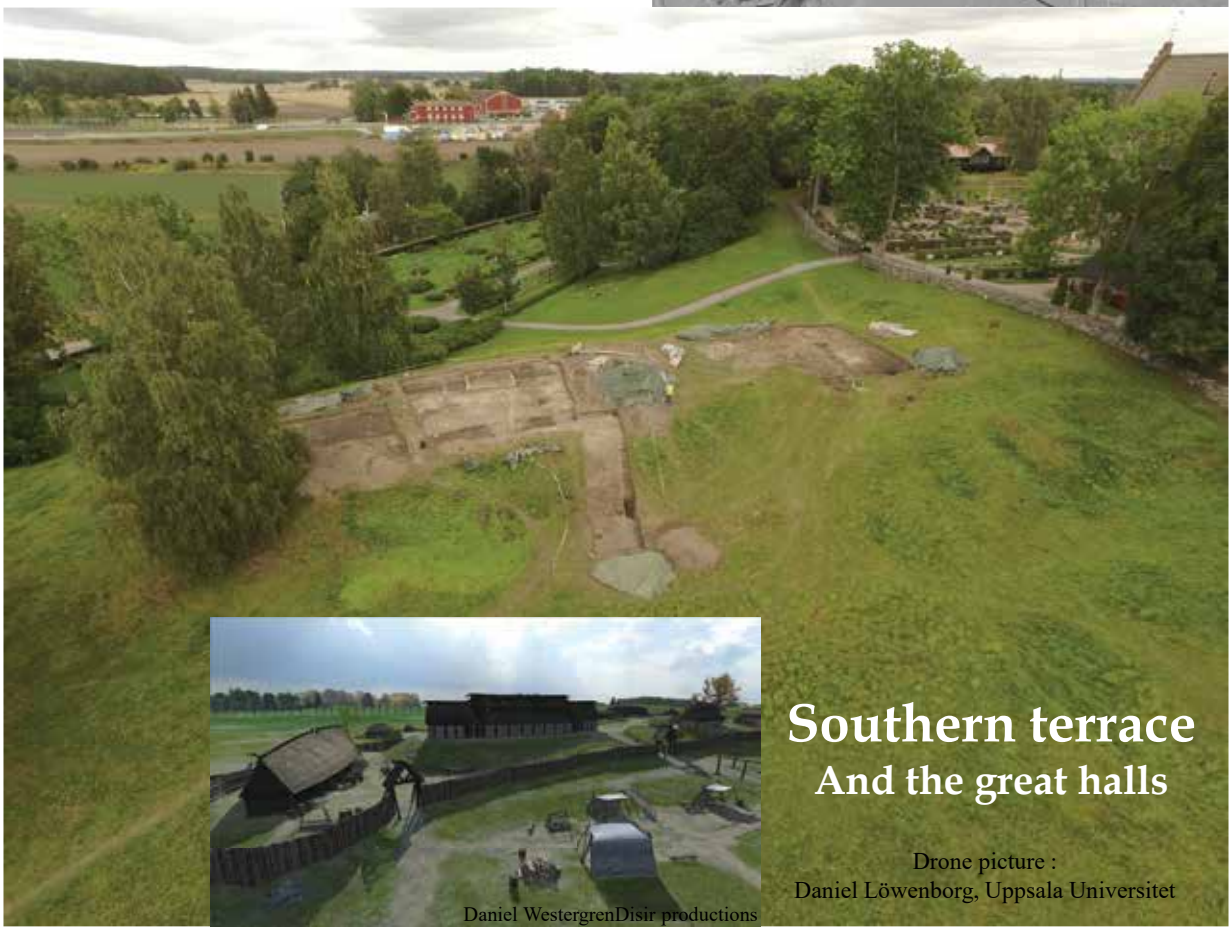




Palace and Village 550-1200 AD



7th century situation



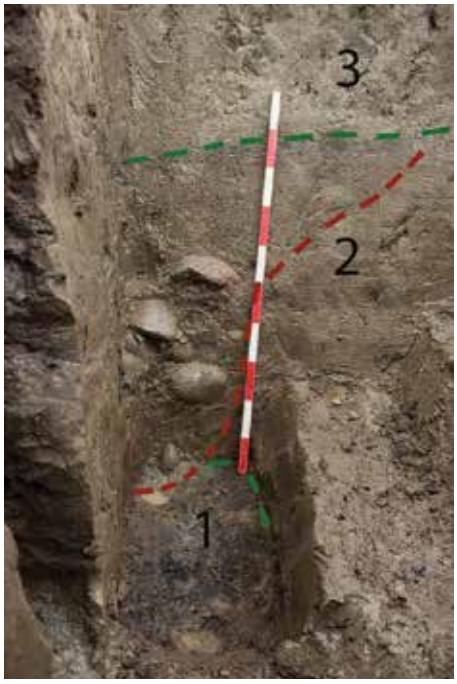
Daniel WestergrenDisir productions

Southern terrace
And the great halls

Drone picture :
Daniel Löwenborg, Uppsala Universitet

THREE HALLS AND GLIMPSES OF THE FIRST LANDSCAPE TRANSFORMATION

1. HALL/HOUSE 1 – ENCLOSED FIRE PLOT . 5TH/6TH CENTURY (WILL BE REVISED)
2. HALL/HOUSE 2 – POST HOLE IN .90 M THICK TERRACE LAYER. 6TH/7TH C
3. HALL/HOUSE 3 – TERRACE LAYER FOR THE EXCAVATED GREAT HALL. 7TH-9TH C.



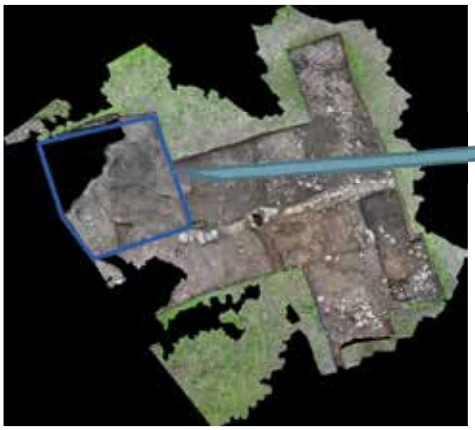
Iron dekorations

Different types in clear concentrations

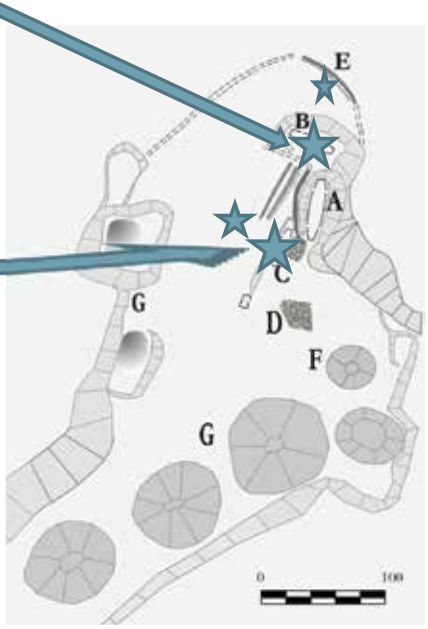
1

TWO CERTAIN WORKSHOPS
AND TRACES OF OTHERS

Workshop 1, Northern terrace
Beneath 14th c manor.



Workshop 2, Western terrace
Beneath 13th century archbishops manor



Current known workshop activity in Gamla Uppsala

manor area during 6th-8th c.

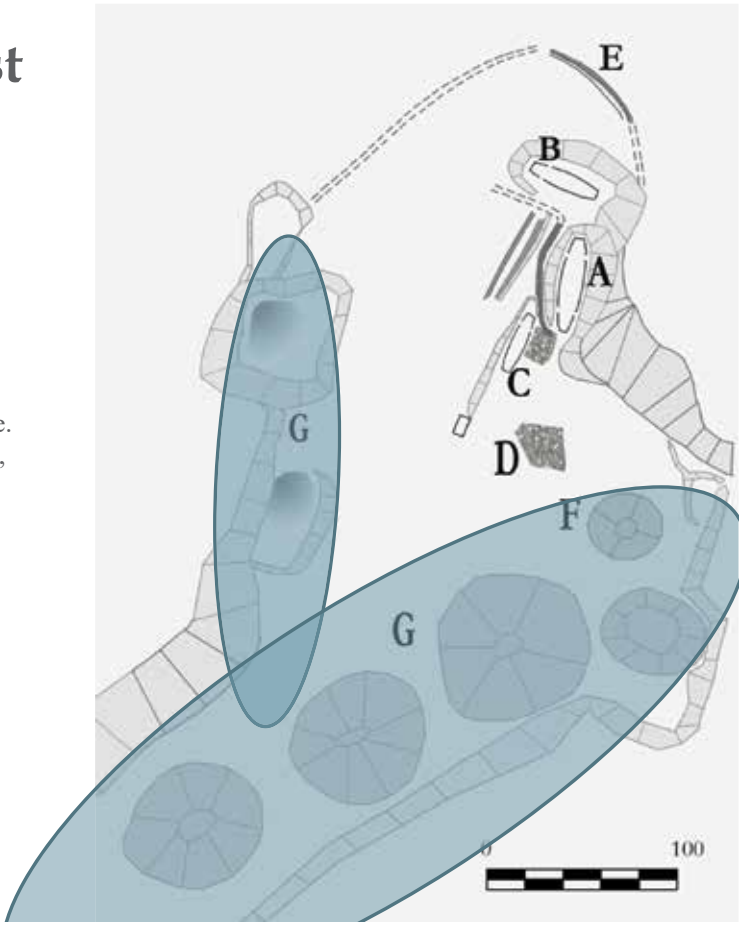
Craft/ Area	Northern terrace 7th c., Workshop 1	Western terrace 6th-7th c. Workshop 2	Area N of workshop 1, 8th c.	Area W of workshop 2, 6th c.
Garnet	1	2		
Casting	?	1	3	3
Bead making	3	3	2	-
Antler	3	-	-	3
Amber	-	2	3	-
Smithing	1	1	3	3
Gold jewellery	-	3	-	-

1= Large material (in relation to excavated layers), 2= Strong evidence, 3= Indications

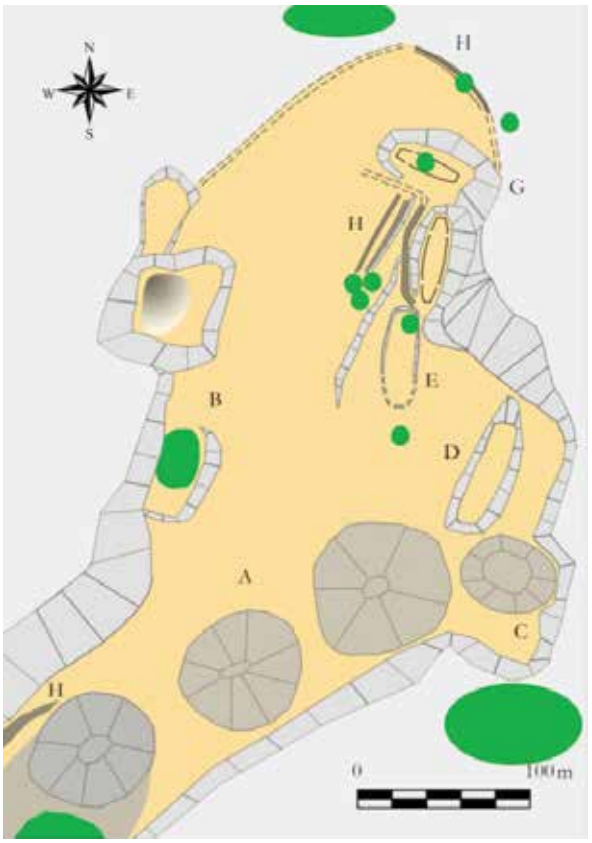
Results of the first landscape transformation

Situation c 650 AD based on current knowledge.

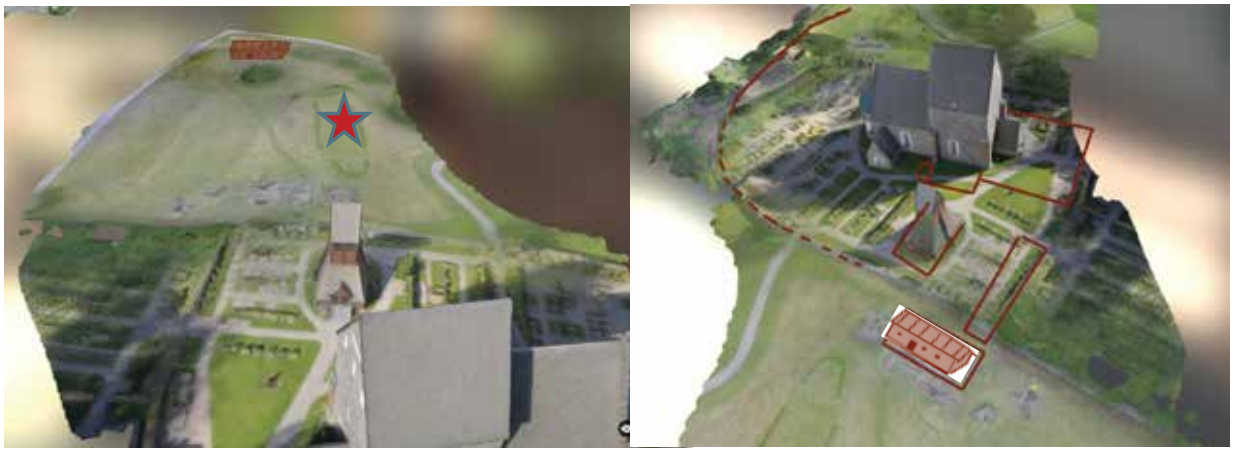
A. Great hall on Southern terrace.
B. Workshop 1, major building on terrace.
C. Workshop 2, thick layers, high terrace, probable building.
D. Stone pavements and probable roads. Uncertain extension.
E. Stone foundation for roads/ walls/enclosures. Uncertain extension.
F. North mound found 2015.
G. Burial grounds.



The Viking age center



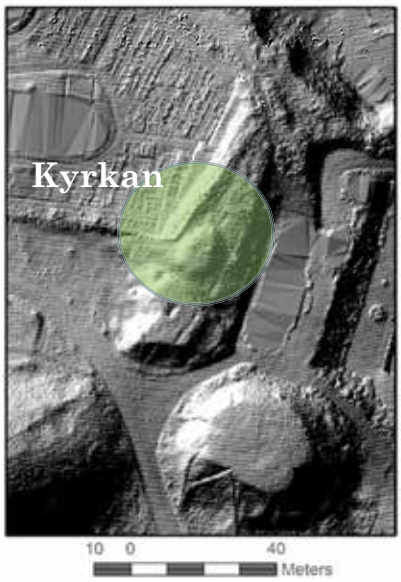
A second large landscape transformation



The bailiffs residence during the 14th century on the Northern terrace.

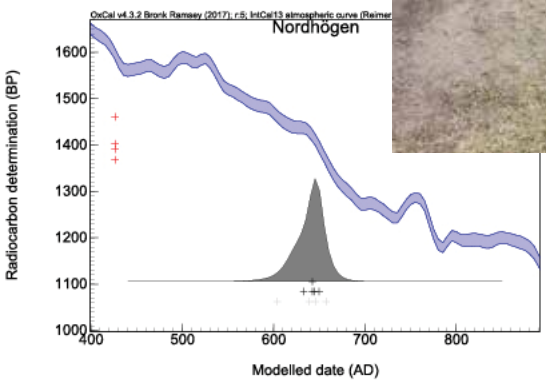
1100/1200th century cathedral and archbishops manor.

Hidden monuments: The North mound, levelled in

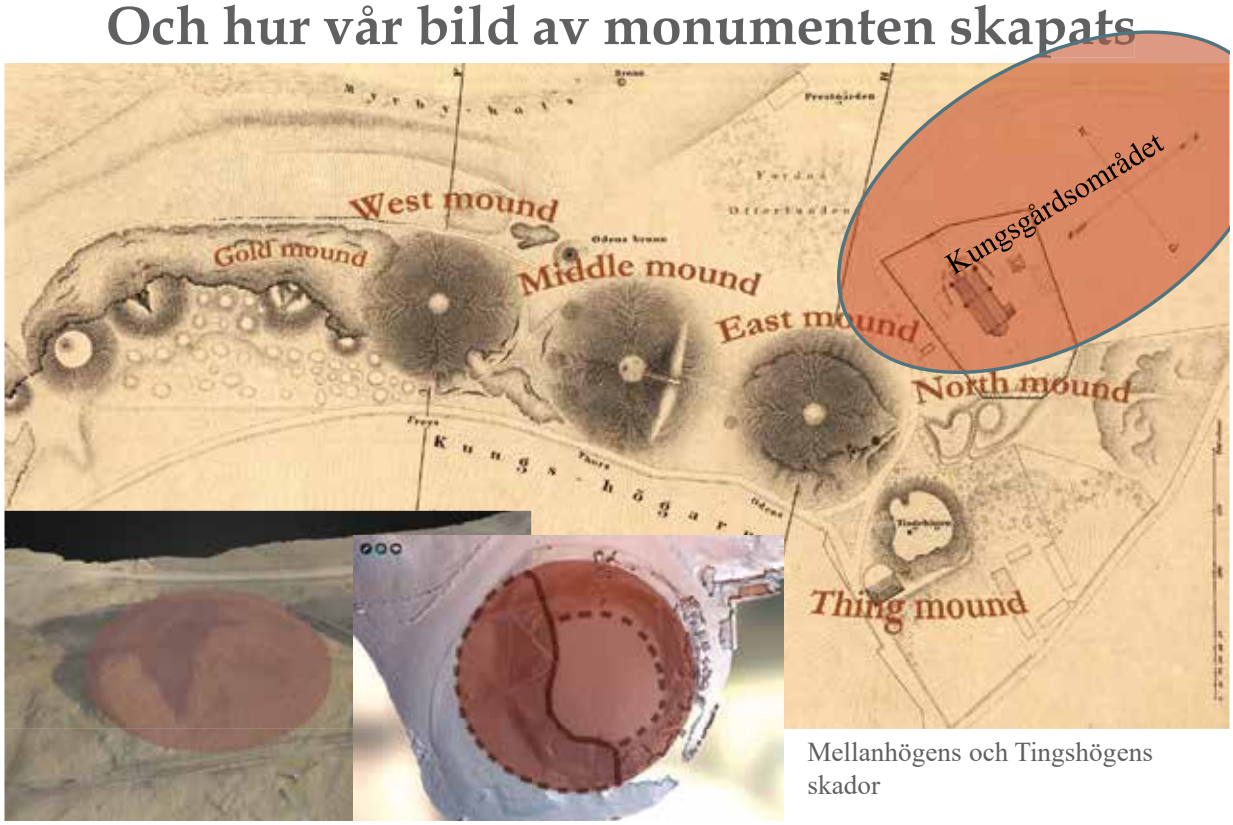


At least 33 m in diameter
Central cairn 2 m high and 31 m wide

Date: ca 650
(4 14C-samples)



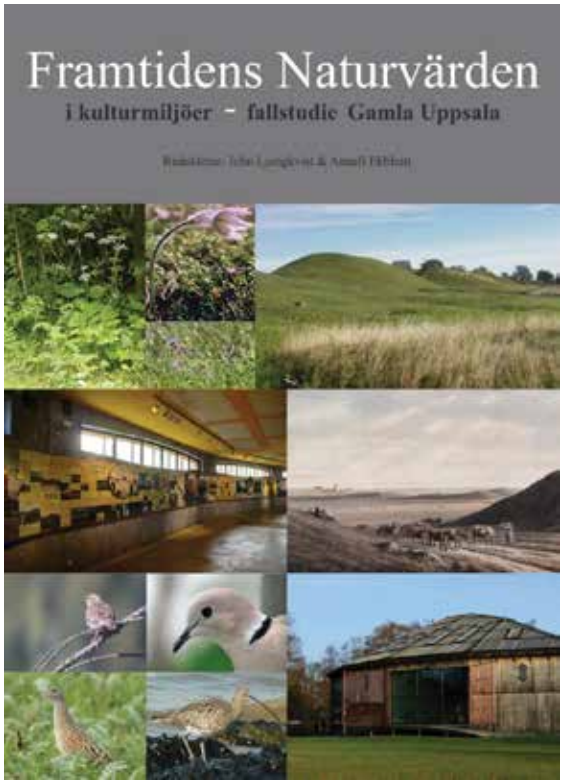
Ett fragmenterat gravlandskap
Och hur vår bild av monumenten skapats



Mellanhögens och Tingshögens skador

Digitally published study, financed by the National History Board (FoU)

- Landscape issues
- Historical ecology
- How to present the landscape around the monuments



Contact info: john.ljungkvist@arkeologi.uu.se

Thank you!

VR-graphics Daniel Westergren, Disir productions

John Ljungkvist – **The Gamla Uppsala-project: Reflections on landscape transformations**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
The project *Gamla Uppsala – the emergence of a mythical centre*, has been in progress since 2009, with varying intensity dependent on the level of external funding. Current research at the site is primarily being undertaken within the frame of the *Viking Dynasties* project, funded by Krogagerfonden, in collaboration with the National Museum of Denmark. But the site is also of central importance to the *Viking Phenomenon* project, financed for ten years by the Scientific Council, Sweden.

The focus in the present paper is on how people transformed Gamla Uppsala over time.

Presentation:
Gamla Uppsala is situated north of Birka, Helgö and Sigtuna and has through time been remembered as a mythical place, mentioned frequently in both Early Medieval literature and on rune stones. Several of the great stories from the Norse sagas are associated with Gamla Uppsala (e.g. events in the Ragnar Lodbrok and Rolf Krake sagas) and at least two are directly connected to the place (particularly the battle of Fyrisvellir/Uppsala in the 980s).

Historical maps show the large mounds and the church, which have traditionally been the natural focus of research attention. In recent years, however there has been an increasing awareness of activities in the surrounding landscape.

The settlements from the Early Iron Age are pri-

marily situated some distance away from the later central location, but from about AD 600 there seems to have been settlement continuity that, by and large, can followed into the 19th century.

The Uppsala mounds are situated on a glacial ridge in the landscape and were constructed around AD 550-650. The extraction of sand, clay and turf for building the mounds has altered the landscape topography considerably. On the northwestern part of the ridge, three large halls in three phases were built on artificial terraces that were enlarged for every new building. The earliest of these halls was built in the 5th/6th century and shows evidence of having been burnt down before construction of the next hall phase (6th/7th century), which was constructed on an additional 90 cm of terrace layer. If the dating of phase 1 to AD 500 is correct, this means that the first hall pre-dates the mounds and should be seen as the initial transformation of the landscape.

A very well-preserved hall from phase 3 (7th/9th century) has been excavated. The dimensions of this building were 50x4-12 m with a floor area of around 250 m^2, five to six rooms and four doors opening into two entrance rooms. All the postholes for the roof-bearing posts were found to contain iron depositions, which in many cases comprised stylistic spear heads and various types of iron decorations, presumably from door ornaments.

Specialist workshops have been recorded on two terraces near the large halls, despite the fact that such buildings are normally situated on lower ground. Only a fraction of these workplaces has been excavated.

The terraces (including the halls and workshops) are most likely the result of the first landscape transformation of the area, manifesting the buildings on a carefully planned location.

Although many finds from the area can be dated to the Viking Age, there are no definite buildings from this period. Ljungkvist stresses that it may not have been necessary to have monumental structures (apart from the church) to maintain the central-place function during the Viking Age.

In the 11th and 12th centuries, the cathedral and the archbishop's manor were constructed and later, in the 14th century, a royal manor was built. In the process, several of the great monuments were destroyed. Trial excavations have revealed that a large mound was levelled in the 12th century. This probably had an original size corresponding to that of the "Thing mound" (AD 600). It seems likely that several of the large mounds were flattened during this period, perhaps to be used for assemblies of some kind, leaving a fragmented monumental landscape.

Looking at the surroundings, Gamla Uppsala is situated in a kind of central landscape. Within a 10 km radius of Uppsala, there is a concentration of records of large burial mounds (more than 15 m in diameter) containing very rich burials. Most of them can be dated to the 6th and 7th centuries, i.e. contemporaneous with the large mounds in the central Gamla Uppsala location. This indicates the presence of a large-scale central landscape in the area during the 6th-7th centuries: A situation in many ways parallel to that around Odense, presented earlier at this seminar by Mogens Bo Henriksen.

Conclusion:
The Gamla Uppsala locality is the result of a deliberate and planned transformation of the landscape which over time created the monumentality we see today. Gamla Uppsala is to be seen as the central place in a central landscape in the 6th and 7th centuries, containing an unusually large number of rich cremation burials in large mounds within a 10 km radius of its centre.

Questions:
Sofie Lurine Albris (The National Museum of Denmark): What kind of workshop activity took place in the workshops on the terraces?

Ljungkvist: More or less all kinds of craft activities are documented in the workshops (garnets, bead production, iron production etc.)

Mads Ravn (The Vejle Museums): In one of the slides, a row of posts (a fence) was shown. Can these be dated and has their function been established?

Ljungkvist: They are contemporaneous with the

large mounds (early 7th century) and were abandoned in the 8th century. The north-south-oriented row is situated by a road, which can be dated back to the early 6th century.

Further reading:

Ljungkvist, J. & Ekblom, A. (ed.) 2018: *Framtidens naturvärden i kulturmiljöer*. Uppsala.

Ljungkvist & Frölund, P. 2015: Gamla Uppsala - the emergence of a centre and a magnate complex. *Journal of Archaeology and Ancient History* (JAAH No 16).

Ljungkvist, J, Frölund, P; Göthberg, H; Löwenborg, D. 2011: Gamla Uppsala – the development of a central place in Middle Sweden. Archaeologisches. *Korrespondenzblatt RGZM 2011/4*. pp. 571-85.

Ljungkvist, J., Sarén Lundahl, J. & Frölund, P. 2017: Two workshops with garnet crafts in Gamla Uppsala. Gemstones in the first millennium AD. In: Hilgner, A., Greiff, S. & Quast, D. (eds). *RGZM – TAGUNGEN Band 30*. pp. 91-102.

Assemblies and kings – the inauguration sites of Norway: The case of Øyrathing

Frode Iversen
(Museum of Cultural History, University of Oslo, Norway)

Abstract:

This paper will discuss the *thing* organisation in the Frostathing law area in Norway during the second half of the 1st millennium AD. This is explored through detailed investigation of the courtyard sites (*ringtun*) at Værem, Skei, Heggstad and Hustad (c. 600-1050), seen in relation to the main inauguration site of the Norwegian kingdom, the Øyrathing, established in the early 11th century, and the Frostathing – the major law thing of Trøndelag.

All the courtyard sites are surrounded by several large burial mounds, and some exhibit traces of feasting. It is concluded that they were places where local politics were acted out, together with cultic and military activities, as politics, religion and law were closely interwoven, and ancestral worship was important too. It is possible that the inauguration of kings took place at the courtyard sites before the Øyrathing was established. Their location on the outskirts of the shires (directed towards the Frostathing) may indicate that meetings were held in advance of the Frostathing. When established, the Øyrathing was held one week before the Frostathing, and it is suggested that it took over some of the functions earlier acted out at the courtyard sites. The last Earl of Lade was exiled from Trøndelag and Norway in c. 1015, and the town of Nidaros was becoming increasingly important. The Øyrathing was established shortly afterwards. It became the main inauguration site for the Norwegian kings and also the assembly site for the men of Trøndelag from the eight core shires. During this period, the king may have taken control of centres associated with the earldom and elites of Trøndelag. The courtyard sites fell into disuse during this turbulent period. It is proposed that the legal system operated by the regional elite was transformed into a royal Christian system supporting greater policies and the emerging monarchy.

UiO : Museum of Cultural History
University of Oslo

Assemblies and Kings – the inauguration sites of Norway. The case of Øyrathing

Frode Iversen, professor of archaeology, Oslo

From Central Space to Urban Place
Social organization of land
Odense City Museums, Thursday May 24'
13.30-14.00

Historia Norwegie (1150-75)

Three main areas:

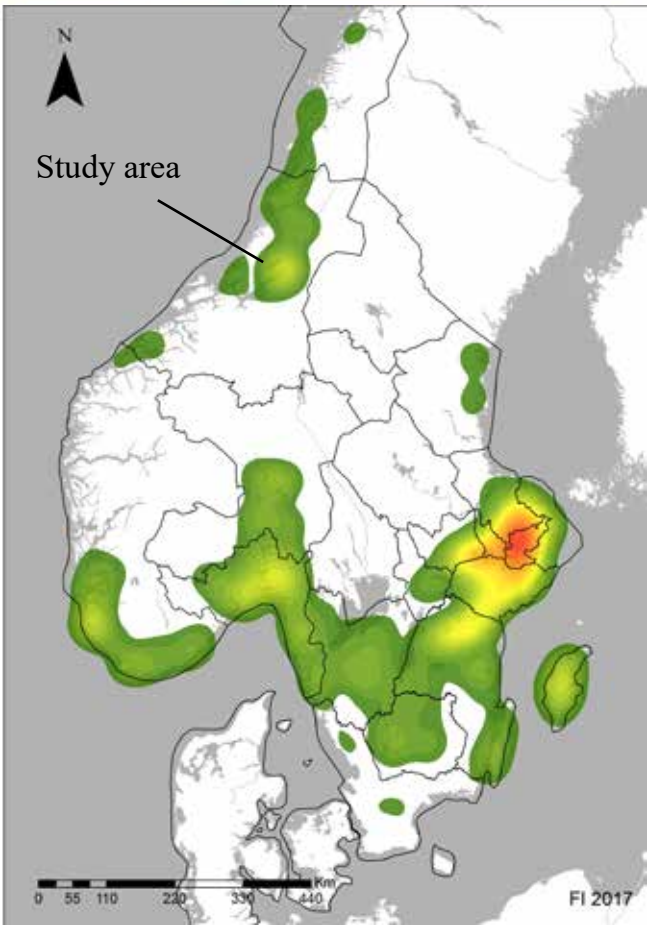
- The Coastal land - Kystlandet - *Zona itaque maritima*
- The Mountain land - Midt- eller Fjellandet - *Mediterranea zona/De montains Norwegie*
- The Sami land - Finnenes land - *De Finnis*

The Frostathing-law area (= Trøndelag)

Cemeteries Scandinavia (Norway and Sweden)

Kernel density analyses

N = c. 27 000 (mainly from the Iron Age)



In this paper I will discuss:

The thing organisation in the Frostathing law area in Norway during the second half of the first millennium.

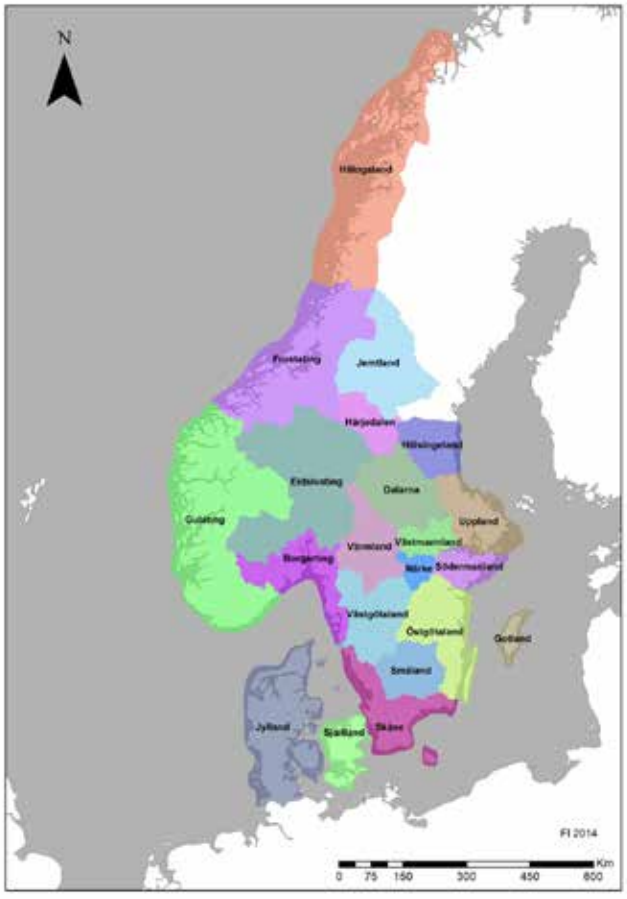
This is explored through detailed investigation of the court-yard sites («ringtun») at **Værem**, Skei, **Heggstad** and Hustad (c. 600–1050),

Set in relation to the main inauguration site of the Norway kingdom, the Øyrathing established early 11th century and Frostathing – the major law-thing of Trøndelag.

- By the 12-13th century there were c. 20 law provinces in Scandinavia.
- Regional law provinces – an intermediate stage between "tribal" and "state" organisation?

What happened to the "rural" regional inauguration sites during the Viking Age when towns were established?

… and during the formation of the kingdom?



AD 1150: c. 10 towns in Norway

«Decapolis»

One of the less urbanized kingdoms in Europe

Less than 5 % of the population lived in towns

Most of the towns were royal towns

By the end of the middle ages:

16 towns in Norway

100 in Denmark

50-60 in Sweden

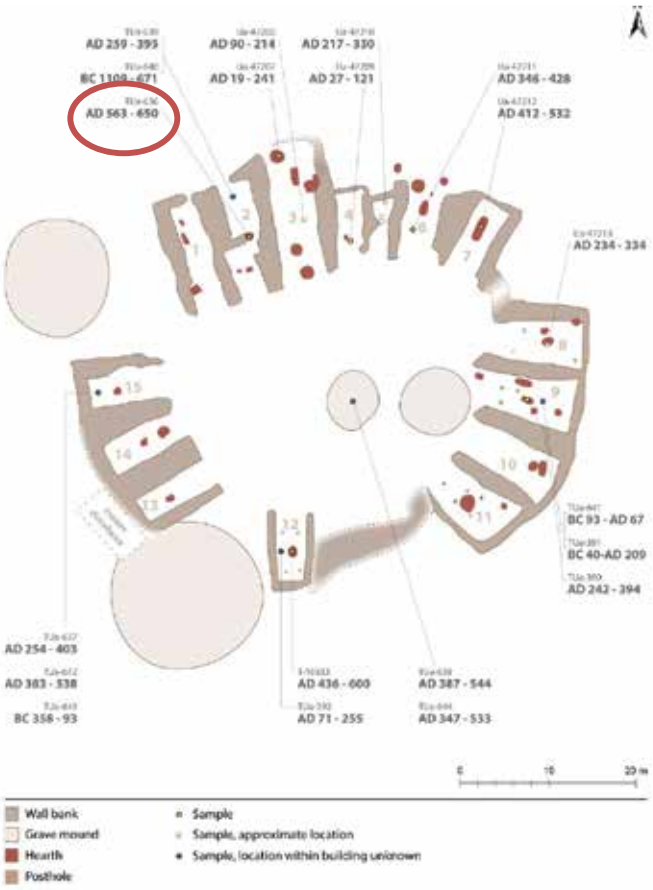
The court yard sites of Western Norway

Central to the discussion of the early phase, 3rd – 10th centuries, are the so called **courtyard sites**, providing a key material to these development in a Northern European context.

Thing-sites and potential inauguration sites on "county-level" in pre-urban periods

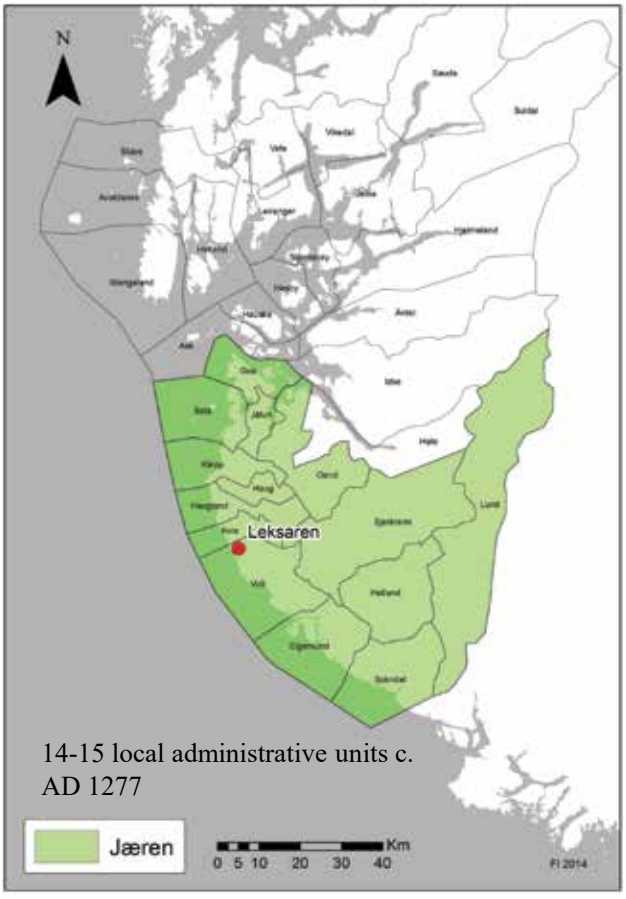
UiO : Kulturhistorisk museum

'Leksaren' Reistad, Varhaug, 1939. Rogaland. Foto: Haarens flydpen 1939

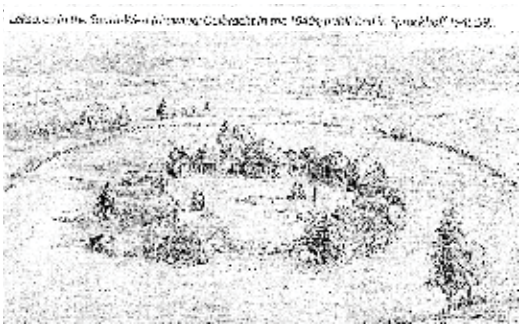


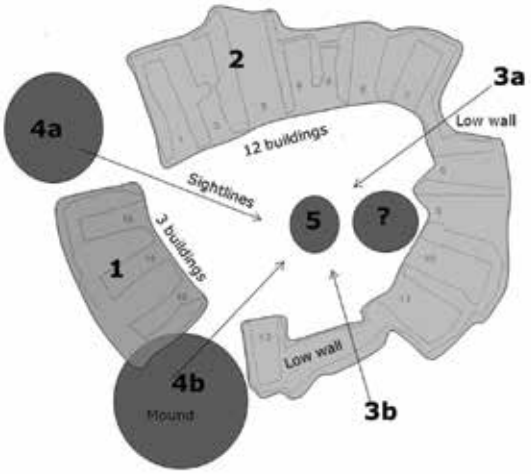
The Leksaren site, Rogaland.
Excavated by Jan Petersen
1939/40

c. AD 50-650



14-15 local administrative units c.
AD 1277

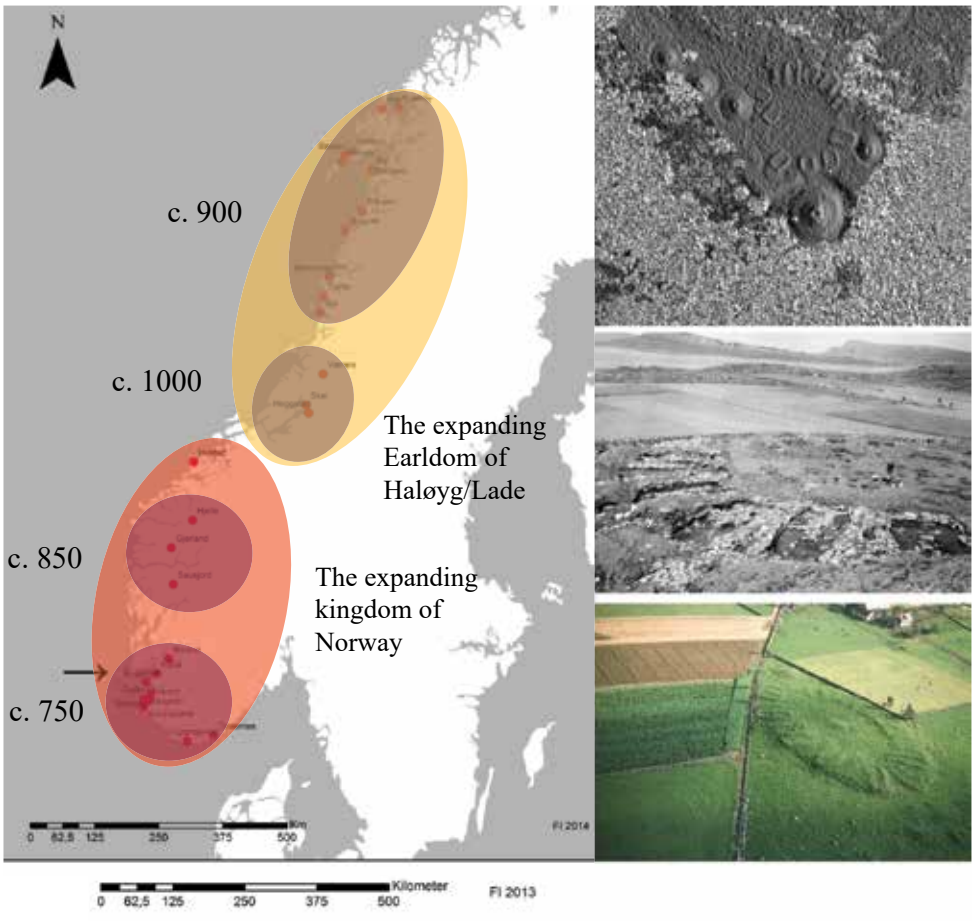




Court yard sites

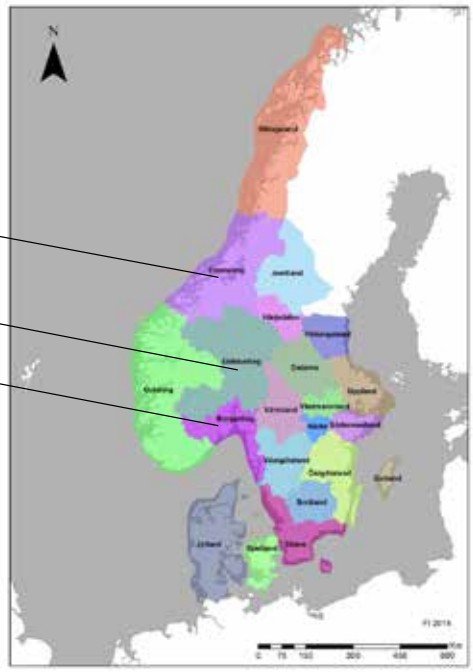
Previously, the sites have been discussed in context of chiefdoms and military functions, and also as thing-sites

Combined military, cultic and legal sites? They cease AD 750-1000 when the King took control over the military aspects of the legal system and larger political entities were established.



c. AD 1000-1300 «Parallel things» develops - urban inauguration sites and rural lawthings

- Øyrathing / Frostathing
- Åkerthing / Eidsivathing
- Haugathing / Borgarthing



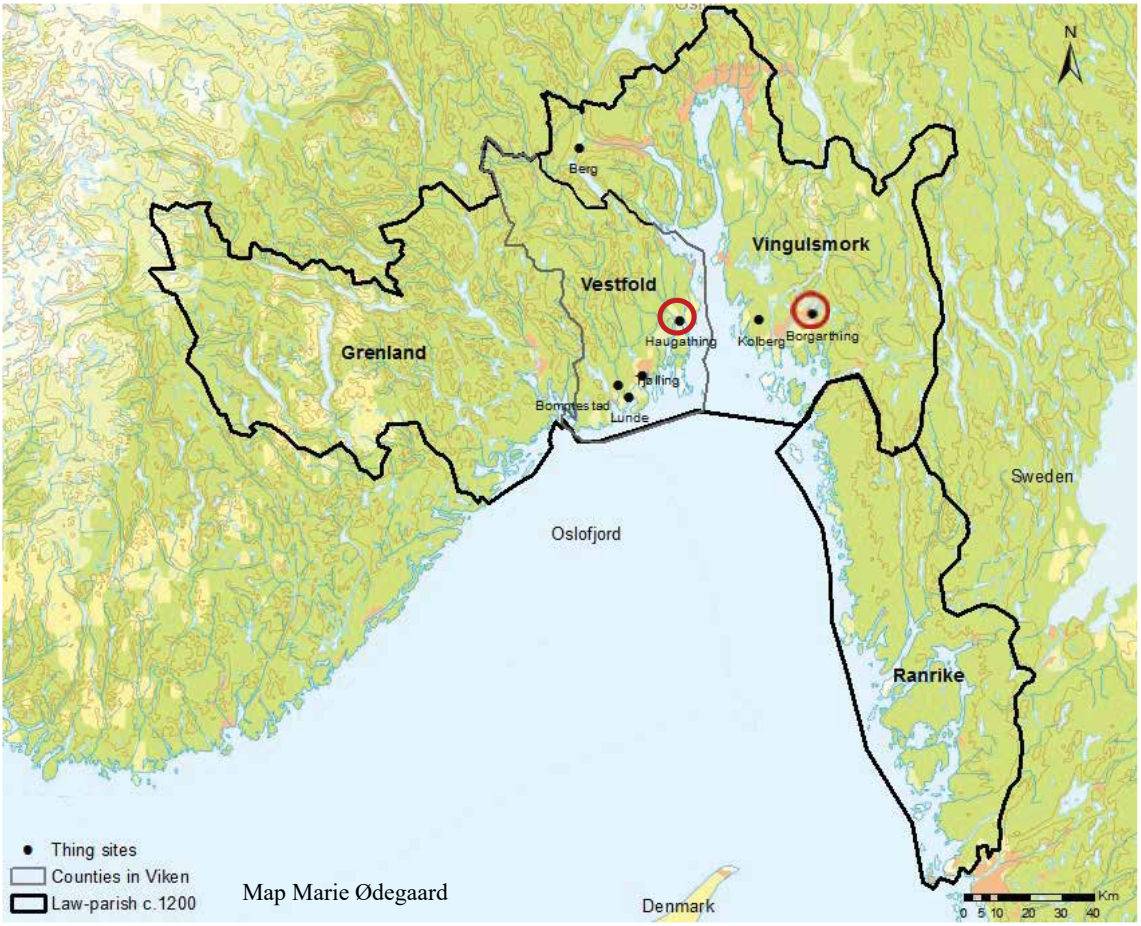
Sweden: Mora sten / Uppsala
Denmark: Isøre (Viborg/ Ringsted / Lund)

Archaeological status, inauguration sites in Norway (from AD 1161 to 1319)

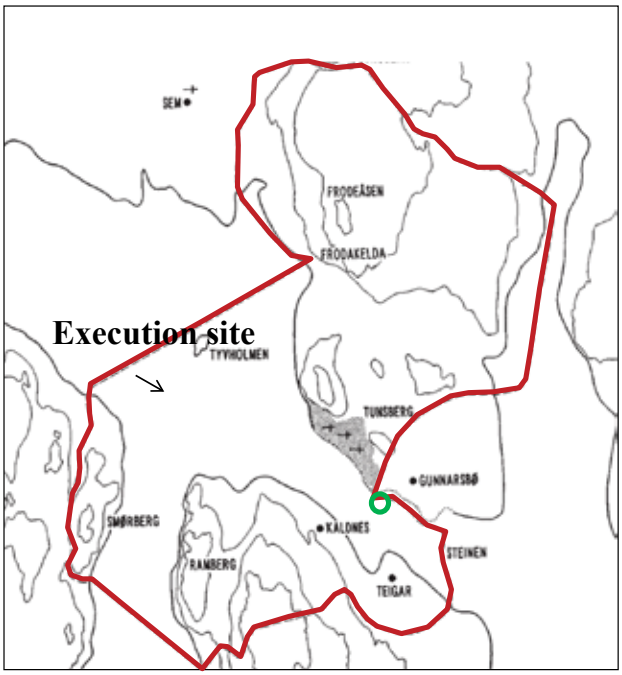
Site	Archaeological status	Landscape-analyse	Town
Øyrating	Removed?	Possible	Nidaros
Borgarting	Gone by mudslide	Not possible	Sarpsborg
Haugating	Some remains	Possible	Tønsberg
Bergen	Not identified	Possible	Bergen
Åker	Potential/not identified	Possible	Hamar

- 17 inaugurations at Øyrating (Nidaros) (and at least 5 in the period AD 1029-1161)
- 5 at Haugating (Tønsberg) (1185, 1193, 1204, 1205, 1217)
- 5 at Borgarting (Sarpsborg) (1196, 1204, 1205, 1207, 1217)
- 3 in Bergen (Kristkirkegården) (1161, 1217, 1240)
- 3 at Opplanda and Romerike (1162, 1166, 1226) (Åker?)

Haugathing, Tønsberg – the best preserved inauguration site in Norway (first known inauguration 1130, Harald Gille)



Map Marie Ødegaard



Town-boundary Tønsberg 1276, Brendalsmo 1994

Small trench-excavation 2011:

Eastern mound was dated to 9th/10th century

According to earlier excavations also the western mound is dated to this period

Report Julie Askjem and F. Iversen 2015

See also Gansum 2013

Lab. Ref.	Materiale	14-C BP	Kalibrert 2 sigma
Beta 361405	Brent bein, mellomstort dyr (F502)	1130 ± 30	AD 770-970
Beta 361406	Brent bein, mellomstort dyr (F505)	1220 ± 30	AD 730-940
Beta 361407	Brent bein, mellomstort dyr (F521)	1080 ± 30	AD 830-990
Beta 361408	Brent bein, menneske (F100004)	1110 ± 30	AD 780-970
Beta 362247	Trekull (P509)	1120 ± 30	AD 880-990
Beta 362248	Trekull (P518)	1290 ± 30	AD 660-770

C14 datings, Haugathing, Eastern Mound

Trøndelag – the case study area

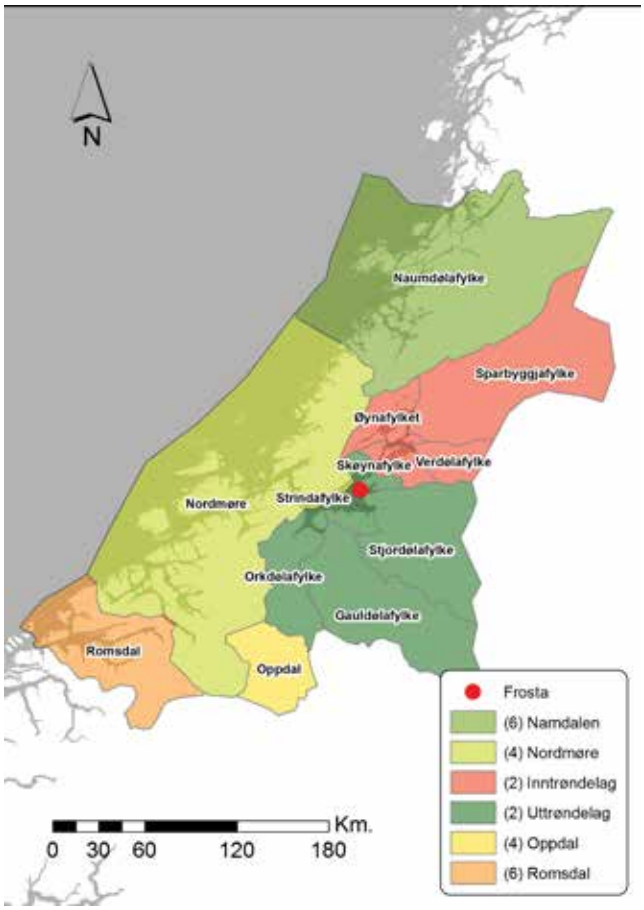
Innherred

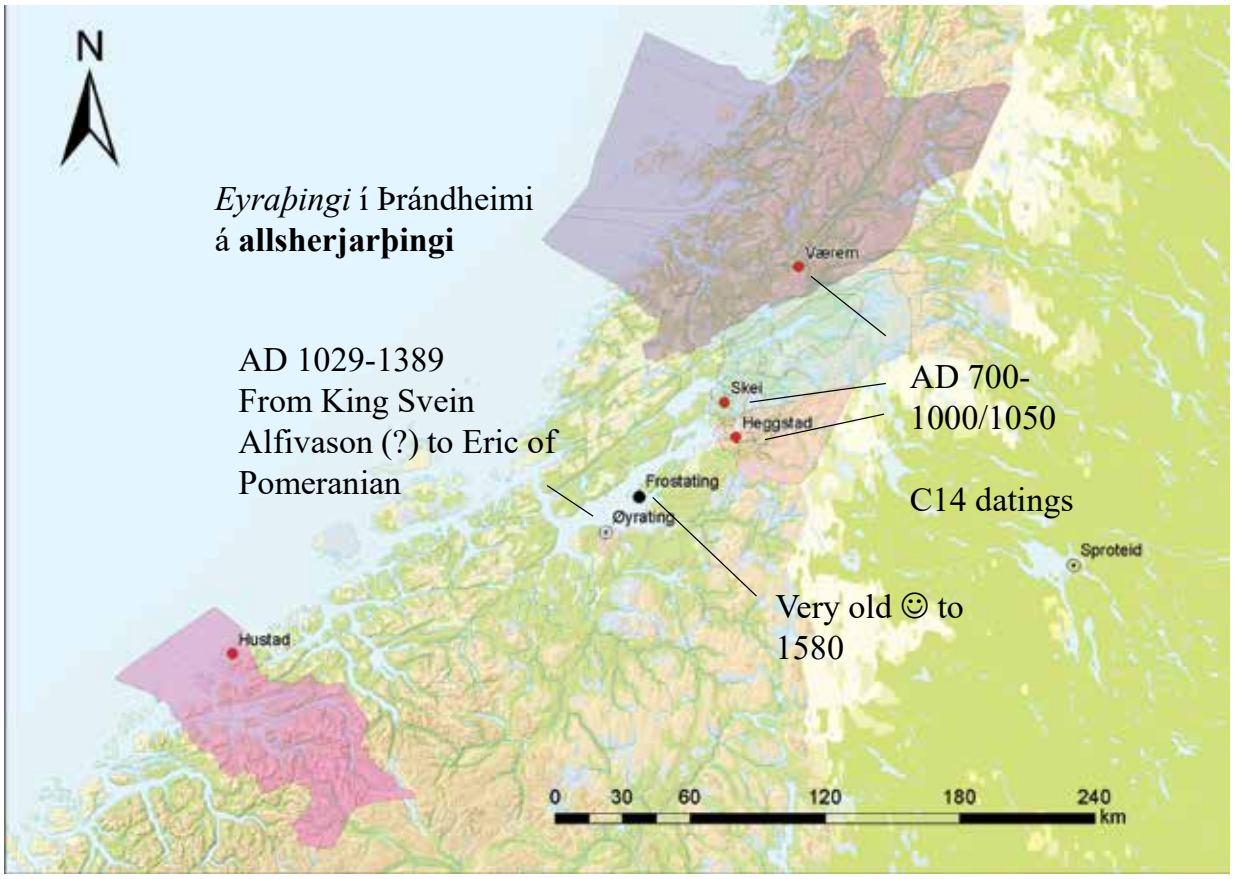
The Frostathing-law area

11-12 counties c. 1150

þrōwendum, Þrōwend
"Trønder" mentioned in Widsith (AD 950 / 700 / 570, see Kemp Malone 1962)

This may indicate the presence of a regional identity/law area in 6th century



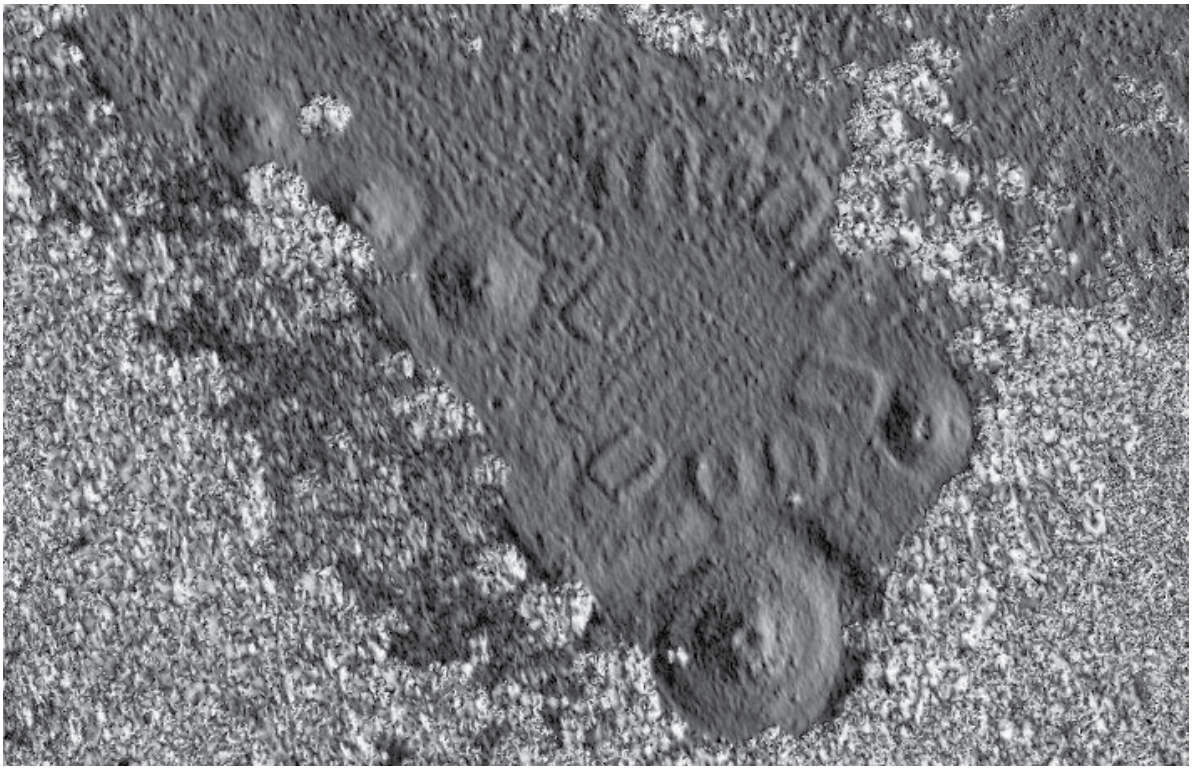


First phase

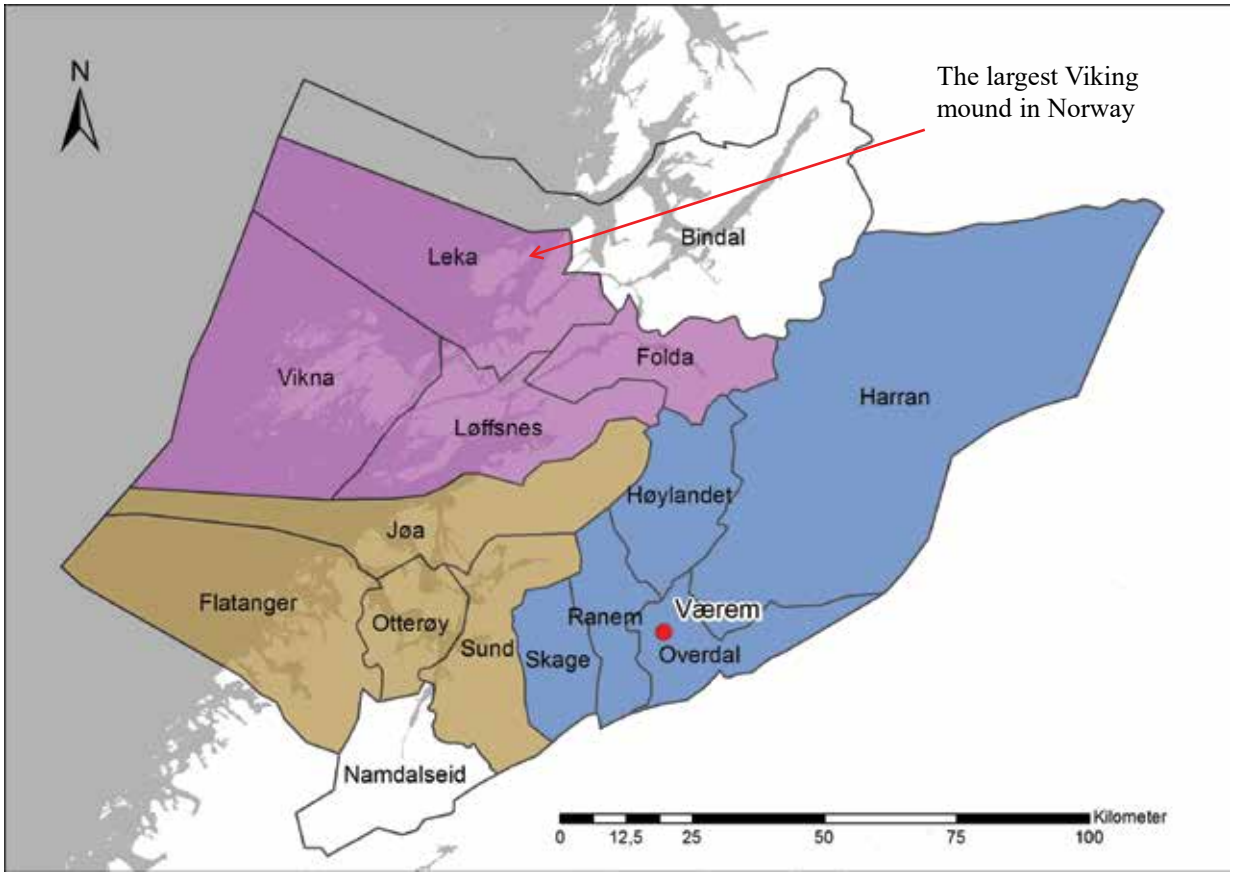
- Courtyard sites in Frostathing law-area (Trøndelag)

- 4 known sites
- AD 700-1000

County-things and inauguration sites?



Værem; Grong Namdalen, nord for Trondheim. LiDAR data, 5 pts pr m2: Lars Forseth, Nord-Trøndelag fylkeskommune



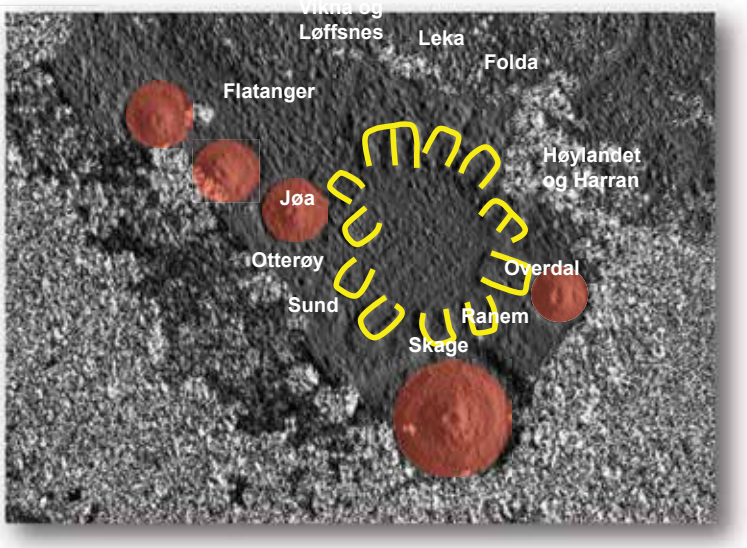
Herlaugshaugen, Leka (65 diameter and 12 meter high)

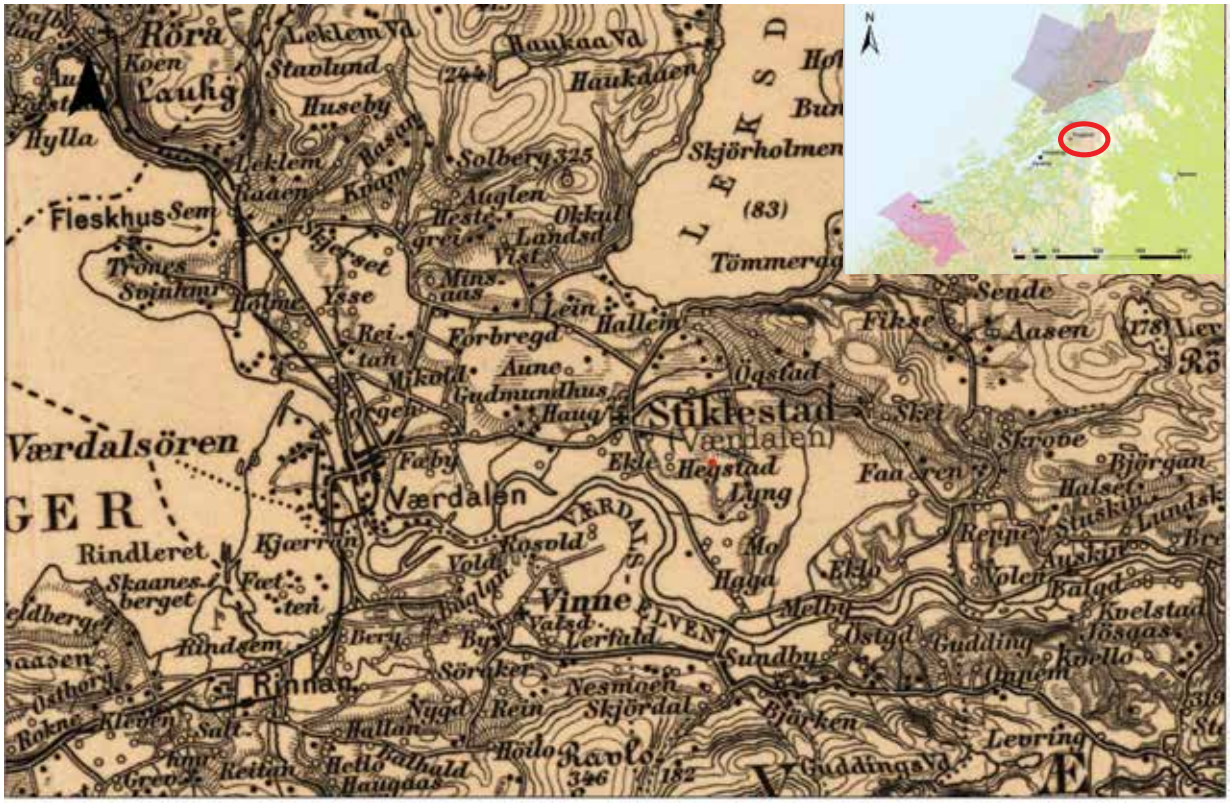
The Værem site

AD 700-?

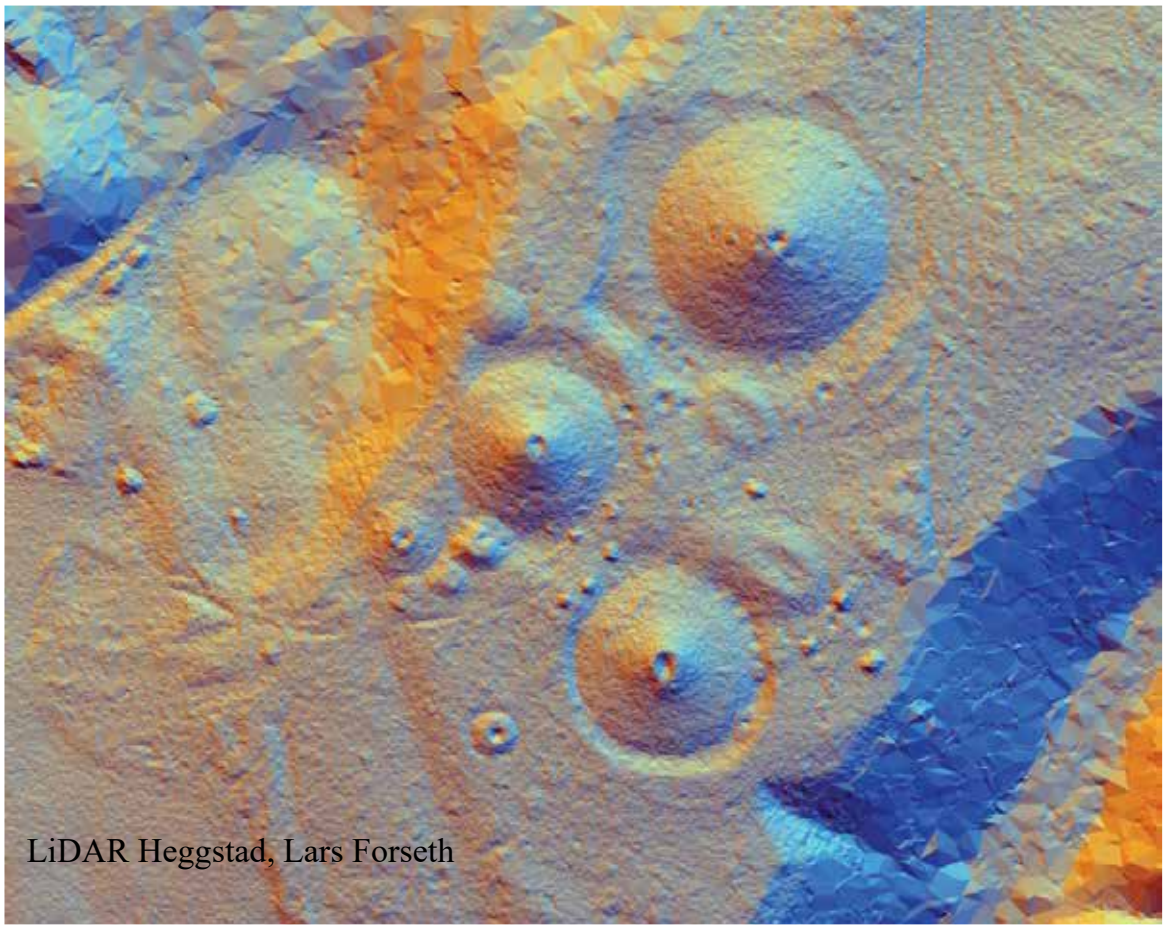
13 thingddistricts
13 booths

Largest mound: ca. 35 diameter, 4 meter high





The Heggstad site in Verdal county



LiDAR Heggstad, Lars Forseth

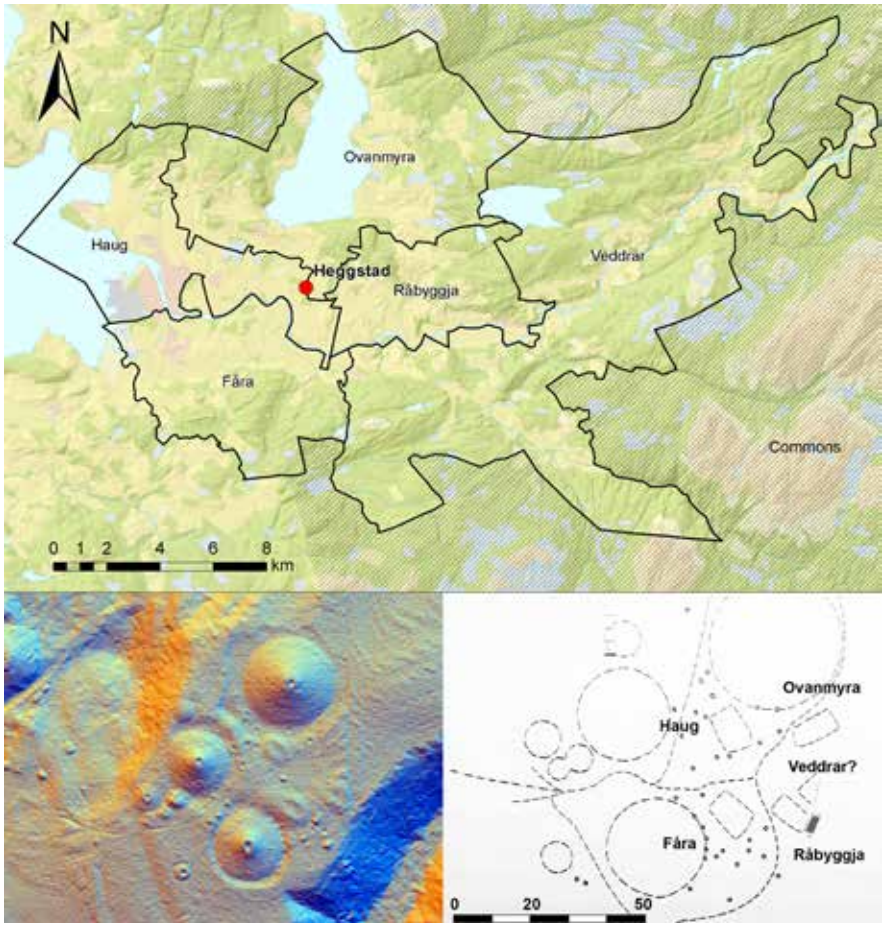
The Heggstad site.
Verdal county

AD 700-1000

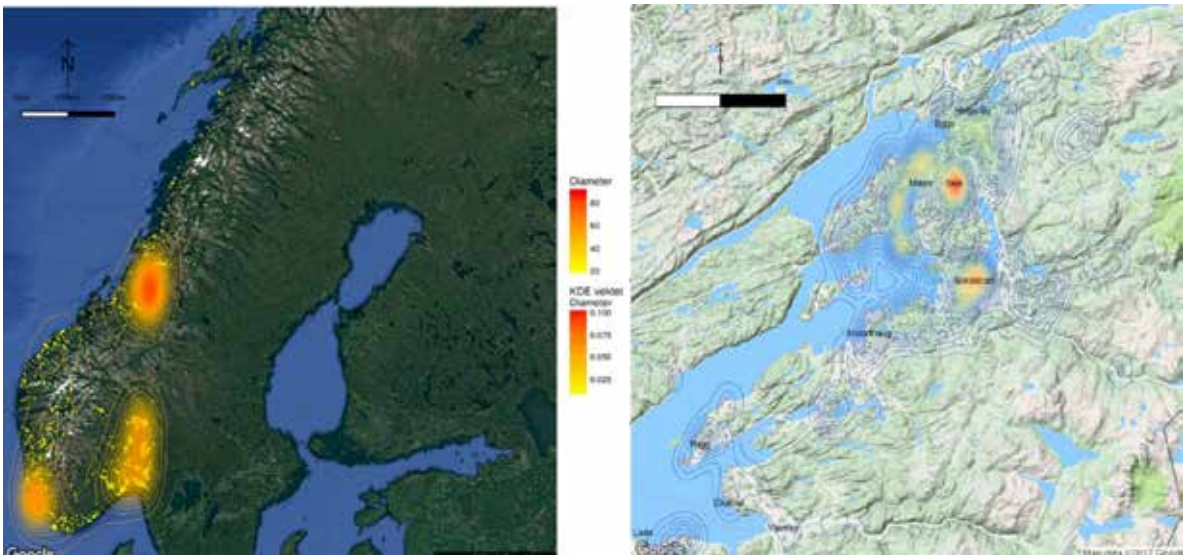
5 thingdistricts
5 booths

Inauguration site for Verdal county?

Largest mound : 45 diameter / 6 meter high



Great mounds Norway



Over 20 diameter. N = 2200
Kernel density estimation (KDE)

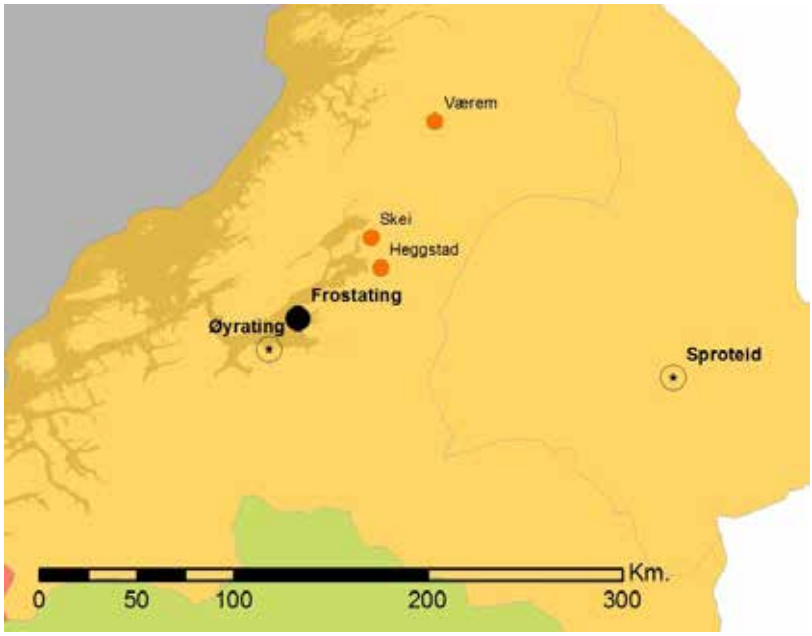
Forseth, L. og Foosnæs K. 2017. Maktens monumentalitet. Frostatingets lokalisering sett i lys av storhaugene i Trøndelag. Gunneria 81: 41-70.

The second phase

- Øyrathing

Early inaugurations at Øyrathing, mentioned by Snorre

- (1) Magnus Olavsson 1035 (the whole kingdom) (Magnus den godes saga 3),
- (2) Håkon Toresfostre 1093 (the half kingdom) (Magnus Berrføttssaga 1),
- (3) Øystein Haraldsson 1142 (a third of the kingdom) (Haraldsønnenes saga 13),
- (4) Magnus Erlinggson 1162/63 (the whole kingdom) (Magnus Erlingssonssaga 8)
- (5) Sigurd Sigurdsson Markusforste 1163 (ibid: 17).



Øyrathing, c. 1260 had two main functions; to make new law and to elect kings. The last inauguration: Eric of Pomerania 8th September 1389

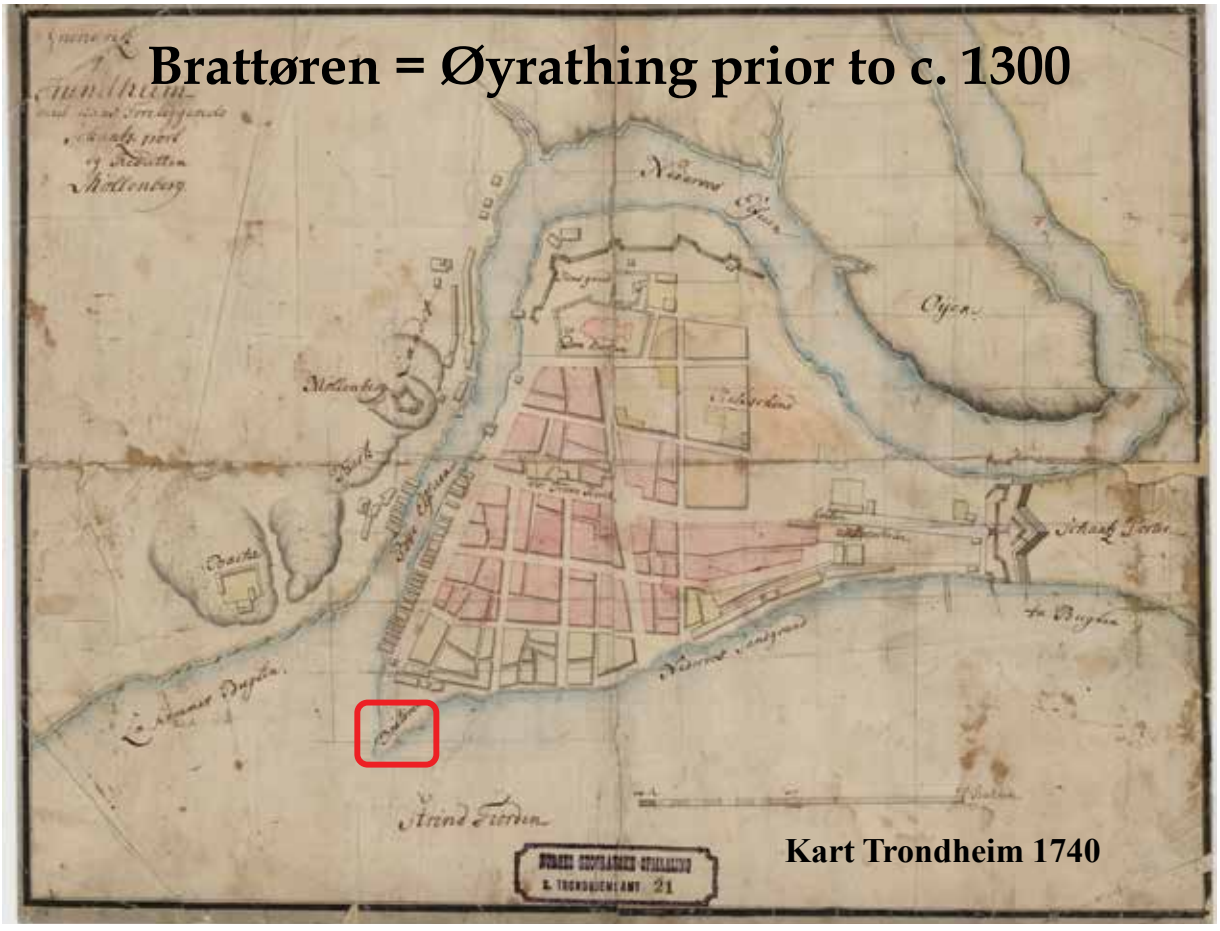
Meeting time: 10th June
All the "farmers" (household-leaders) from the eight core counties in Trøndelag were obliged to meet (= c. 3000-4000 men)

Frostathing delegate-based, 485 men met from 11 counties (c. 10 % of all household-leaders)

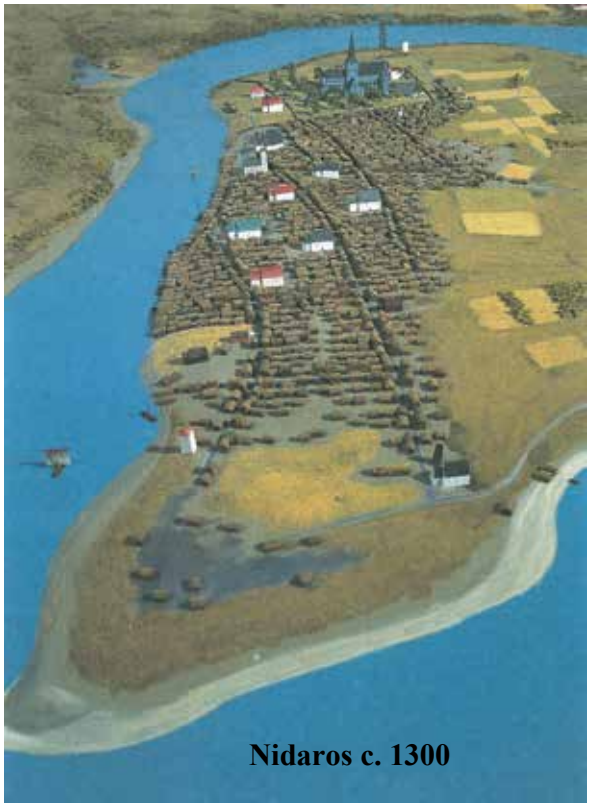
Meeting time: 16th June St. Botolfs-eve

- Øyrathing – established early 1100th century (Jørn Sandnes)
- Court yard sites abolished early 1100th century
- The origin of Frostathing is unknown

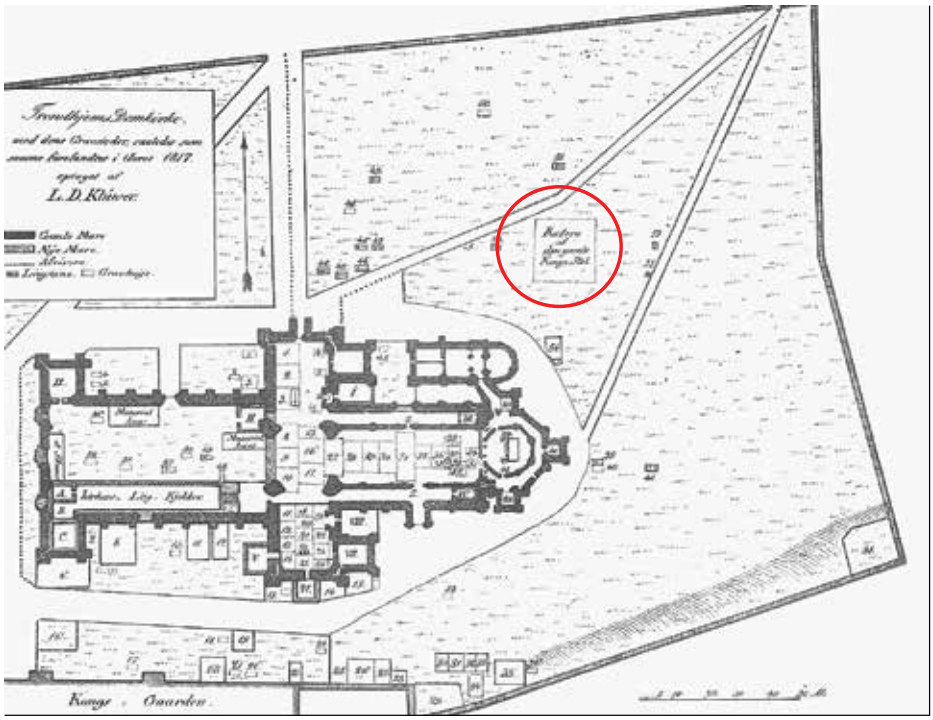
Øyrathing, Trondheim



According to the Hirdskrå (The Hird-law) c. 1270, the ceremony started in Nidaros cathedral. The mass *De spiritu sancto* was read for the heir apparent followed by several collectors (songs). After the mass, the heir apparent prayed for the mercy of God, and the intercession of St. Mary and St. Olaf. Next, the pretender would fall on his knees to receive the bishop's blessing. The Cross and other sacred relics were now carried in procession from the church to Øyrathing.


Nidaros c. 1300

At Øyrathing there was a high seat with several seat-rows. At the highest and best seat in the middle no one should sit. The king to be was placed on the step below, and the chieftains and various dignitaries in other high places. When the thing was ready, the most distinguished man, whether he was a cleric or a layman, gave the king-name (king-dignity) to the pretender. The bishops, barons, hird-leaders and lawmen lifted the new king into the highest seat, while the clerics sang *Te Deum* and the laymen sang the *Kyrie Eleison*. The king swore to keep the Christian law that St. Olaf acknowledged, and later laws, for all subjects born and unborn.



Klüwer 1817 (1823)

In the 14th century, the Øyrathing was moved from Brattøra closer to the Nidaros cathedral

Conclusion

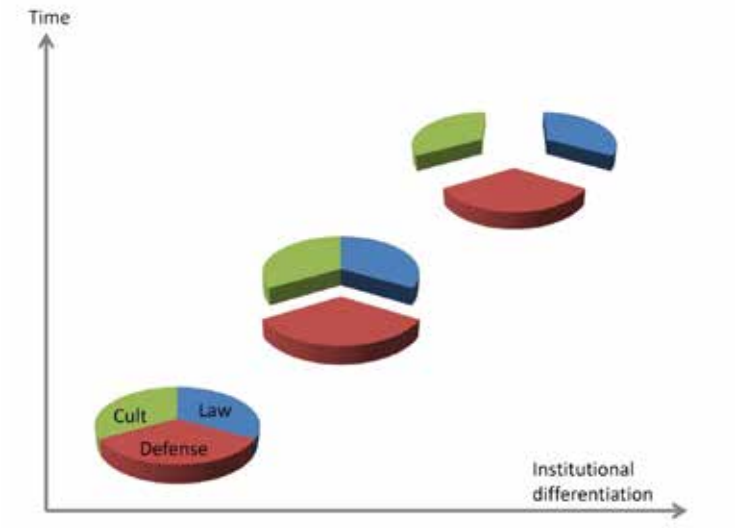
The counties were independent military units which could form alliances. It is likely that the inauguration of kings on "county-level" took place at the court-yard sites. Their location on the outskirts of the shires (directed towards the Frostathing) may indicate that meetings were held in advance of the Frostathing.

When established, the Øyrathing was held one week before the Frostathing, and it is suggested that it took over some of the functions earlier acted out at the court-yard sites.

The last Earl of Lade was exiled from Trøndelag and Norway in c. 1015 and the town of Nidaros was becoming increasingly important. The Øyrathing was established shortly after. It became the main inauguration site for the Norwegian kings and also the assembly site for the men from the eight core counties of Trøndelag.

During this period, the king may have taken control over centres associated with the earldom and elites of Trøndelag. The court-yard sites fell into disuse in this turbulent period. It is proposed that the legal system driven by the regional elite was transformed into a royal, Christian, system supporting larger policies and the emerging kingship.

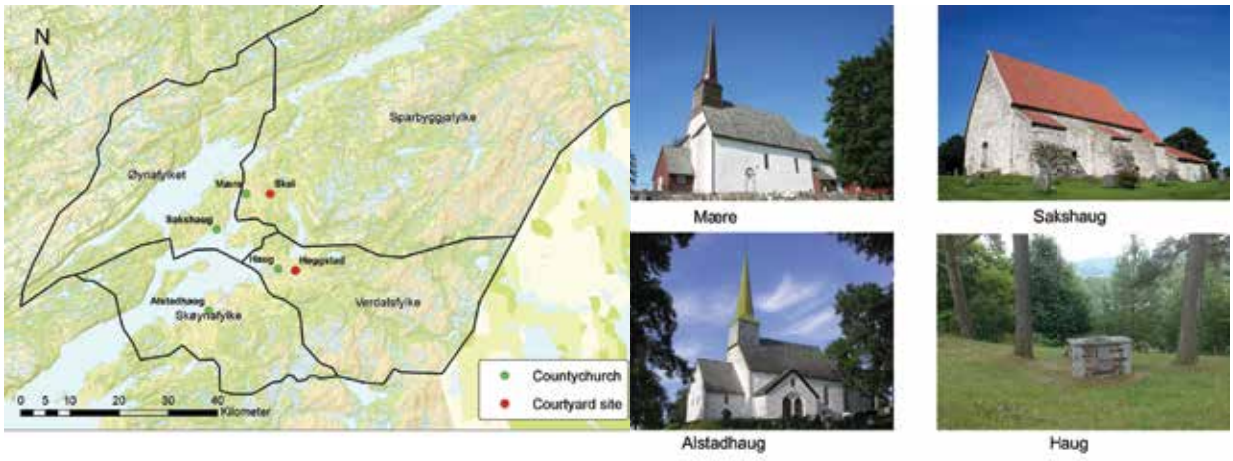
Proposed model of the development of the thing AD 400-1200. The three main functions (cultic, military and legal) become separated



AD 1000-1500 (Middle ages)

AD 600-1000 (Merovingian and Viking Age)

AD 100-600 (Roman and Migration period)



A division in a higher and a lower court?

- Øyrathing – making law, electing kings
- New county things moved closer to new royal founded main churches?

Frode Iversen – **Assemblies and kings – the inauguration sites of Norway: The case of Øyrathing**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
Frode Iversen was the leader of an international EU-funded project on assembly sites in northern Europe, and in this paper he presents some of the results from the Norwegian part of the project.

Inauguration sites are defined as sites where kings were sworn in. In the 11th and 12th centuries, Norway was divided into three main areas: the coastal land, the mountain land (each consisting of four provinces/law areas) and the Sami land (with no superregional structure). The main focus of this paper is the Frostathing area in Norway, which is part of the coastal land.

Iversen discusses the thing organisation within the Frostathing law area in Norway during the second half of the 1st millennium and up into the 12th century. This was explored through a detailed investigation of the so-called courtyard sites (*ringtun* in Norwegian) (c. AD 600-1050). The focus was on the *Værem* and the *Heggstad* courtyard sites (c. AD 600-1050), seen in relation to the main inauguration site of the Norwegian kingdom, the Øyrathing, established in the early 11th century, and the Frostathing, the major law thing of Trøndelag.

Presentation:
Iversen suggests that the c. 20 law provinces in Scandinavia in the 12th and 13th centuries may represent an intermediate stage between a Viking "tribal" and a state organisation. Iversen wanted to investigate what happened to the rural inauguration sites when towns (mainly royal) were established and superregional kingdoms were formed.
The courtyard sites in western Norway (dating from the 3rd century up to, in some cases, the early 11th century) are essential to an understanding of the organisation of the legal system in the Iron Age. There are about 30 of them in the western part of the country, and they are quite unique to Norway. They functioned as thing sites in the upper stratum of the pre-urban society and may also have been inauguration sites. They consist typically of wooden houses arranged in a more-or-less circular formation with a mound in the middle. Iversen argues that the different houses at a courtyard site belonged to a local administrative unit (ship district – *skeppslag* – with

its own thing site) of the law area, and that each unit maintained their own house at the courtyard site. The example given here is the Leksaren site in Jæren in the Rogaland region, where the courtyard site was placed centrally in the administrative region as known from c. 1277. These sites are thought to be a result of cooperation between local communities, not founded by a superregional king.

It is now believed that the courtyard sites combined military, cultic and legal functions, and that they ceased to function during the period AD 750-1000, when the king took control over the military and larger political entities were established. As such, the abandoning of the courtyard sites may represent the expanding Norwegian kingdom in the southern part of Norway, and the earldom in the north in alliances with the Danish kings. The kingdom and the earldom merged into one after 1030.

The courtyard sites were replaced by urban inauguration sites (where several known inaugurations took place) and rural law things in c. 1000-1300. The best preserved of the urban sites is the Haugething (from around AD 900) in the town of Tønsberg, which is an example of how these sites were often situated on the borders of urban communities.

The Frostathing area (Trøndelag) was used as a case study in this research. There is possible evidence of a 6th century regional identity/law area there. The courtyard sites in this area were located on the outskirts of their shires, i.e. not centrally, but directed towards the Frostathing. Four courtyard sites are known which were later replaced by the Øyrathing (the whole army thing) and the Frostathing.

The courtyard site of Værem had 13 buildings in accordance with the 13 units of the county (*fylke*). On the border of this region stands the largest Viking mound in Norway (Herlaugshaugen). Around the courtyard sites are burial mounds.

Another example is the Heggstad site in Verdal county, which is located on the borders of three of the five thing districts, and, accordingly, also has five buildings in addition to burial mounds. In general, the great mounds in Norway are located close to courtyard sites.

The next phase in the Frostathing area is represented by the Øyrathing in Nidaros (inauguration site and making of new laws), which was established when the courtyard sites fell out of use. Again, the location was on the outskirts of a town by the river which separated the rural law area from the town law area. Only later was the site moved closer to the Nidaros cathedral.

Conclusion:
The transition from courtyard sites to inauguration sites is a manifestation and a result of a new royal Christian system supporting larger policies and the emerging monarchy. In the early phase, AD 100-600, matters relating to law, cult and defence are believed to have been assembled into one institution (the courtyard sites). During the Viking period, the defence element was referred to superregional kings with the formation of ship districts. Finally, in the Middle Ages (1000-1500), the cult and law element were also separated further in the legal system. Perhaps also splitting into a higher and a lower court, with Øyrathing being the higher court where laws were made.

Questions:
Mads Dengsø Jenssen (The National Museum of Denmark) asked about the location of the later sites.

Answer: Some of the inauguration sites are located close to large earlier mounds, while the lower thing sites are often located near main churches instead of mounds.

Further reading:
Iversen, F. 2015: Community and Society: The Thing at the Edge of Europe. *Journal of the North Atlantic 8*, pp. 1-17.

Iversen, F. 2017: Courtyard sites and their cultic context, In. Bis-Worch, C. & Theune, C. (eds.) *Religion, cults & rituals in the medieval rural environment*. Sidestone Press. pp. 25-37.

Iversen, F. 2017: Emerging Kingship in the 8th Century? New Datings of three Courtyard Sites in Rogaland, In. Skre, D. (ed.), *Avaldsnes - A Sea-Kings' Manor in First-Millennium Western Scandinavia*. Walter de Gruyter, pp. 721-46.

These and other articles by the author can be downloaded from his webpage:
http://www.khm.uio.no/english/about/organisation/archaeology-department/staff/frodeiv/

Non-urban vs urban. Social complexity in Anglo-Saxon England

Andrew Reynolds
(Institute of Archaeology, University College London, England)

Abstract:

The weaving together of the complex social and administrative fabric of Anglo-Saxon England occurred largely without urban environments. Based on patterns of naming, this paper examines relationships between local administrative districts (hundreds) and central places, arguing for the long-term persistence of pre-urban modes of social organisation in Anglo-Saxon England. A particular focus is on the 112 locations that by 1086 are recorded as boroughs in the Domesday Survey and the 150 royal manors listed from written evidence by Peter Sawyer. Following a concise review of the nature of urban development in Anglo-Saxon England, a hitherto neglected body of material is brought to bear on long-standing notions of urbanism which emphasise the progressive nucleation of social and administrative functions as a linear measure of social complexity. Consideration of the relationships between hundred names, royal manors and the development of towns is almost absent from the literature and a new perspective is offered here which emphasises the limited extent of urban development in England prior to the 12th century and the robust nature of non-urban social complexity as a social system. In conclusion, the applicability of measures of social and administrative complexity drawn from "primary" complex societies is questioned and a plea is made for approaching social and administrative organisation in European post-Roman societies on their own terms rather than by comparison with ancient and classical ones.

ASSEMBLY SITES: PLACES, TEXTS AND NAMES –
notions of monumentality and power

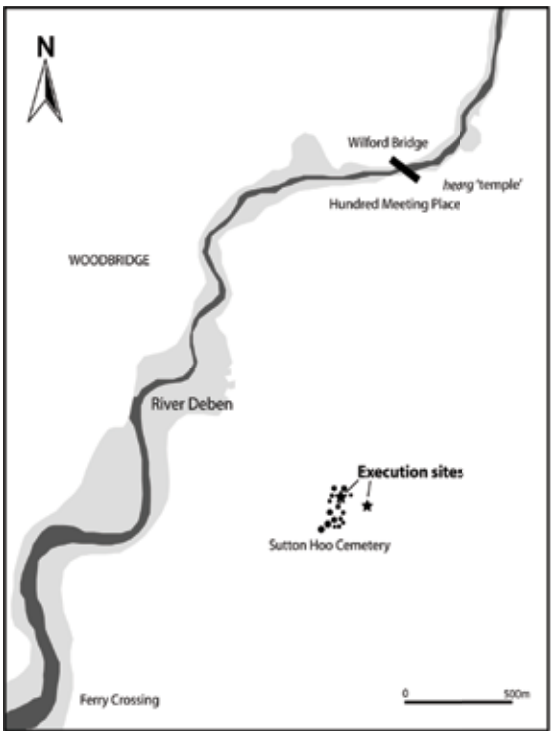
Egbert's Stone and Iley Oak 878

SWANBOROUGH TUMP (6") is *Swanabeorh* 987 (15th) LibHyda. 'Barrow of the peasants,' *v.* swan, beorh. The Hundred meeting-place, *v. supra* 317. For *Tump*, *v. infra* 476.

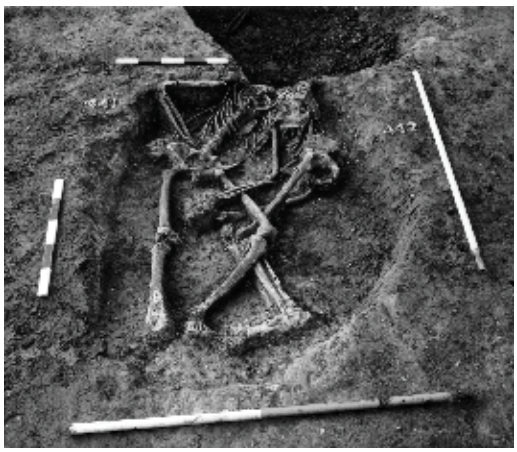
I, King Alfred, by the grace of God[1] and on consultation with Archbishop Æthelred[2] and with the witness of all the councillors of the West Saxons, have been inquiring about the needs of my soul and about my inheritance which God and my elders gave to me, and about the inheritance which my father King Æthelwulf bequeathed to us three brothers, Æthelbald, Æthelred and myself, stipulating that whichever of us should live longest was to succeed to everything.[3] But it happened that Æthelbald died; and Æthelred and I, with the witness of all the councillors of the West Saxons, entrusted our share to our kinsman King Æthelberht, on condition that he would restore it to us as much under our control as it was when we entrusted it to him; and then he did so, both that inheritance and what he had obtained from the use of our joint property, as well as that which he had himself acquired.[4]

Then it so happened that Æthelred succeeded to the kingdom,[5] and I asked him in the presence of all our councillors that we might divide the inheritance and he should give me my share. He then told me that he could not divide it at all easily, for he had attempted to do so many times before; and he said that after his lifetime he would give to no person sooner than to me whatever he held as our joint property and whatever he acquired.[6] And I was then readily a supporter of that.[7] But it came about that we were all oppressed by the heathen army.[8] Then we spoke about our children, that they would need some property, happen what might to the two of us in those troubles. Then, when we were at an assembly at *Swinbeorg*,[9] we agreed in the witness of the councillors of the West Saxons that whichever of us should live longer should give to the other's children the lands which we ourselves had obtained, and the lands which King Æthelwulf gave to us during Æthelbald's lifetime, except those which he bequeathed to us three brothers. And each of us gave to the other his pledge, that whichever of us lived longer should succeed both to the lands and to the treasures and to all the other's possessions except that part which each of us had bequeathed to his children.[10]

Sutton Hoo: an early supra-local landscape of power



And now Rendlesham…



Cult sites

Late Anglo-Saxon Wiltshire

Churches

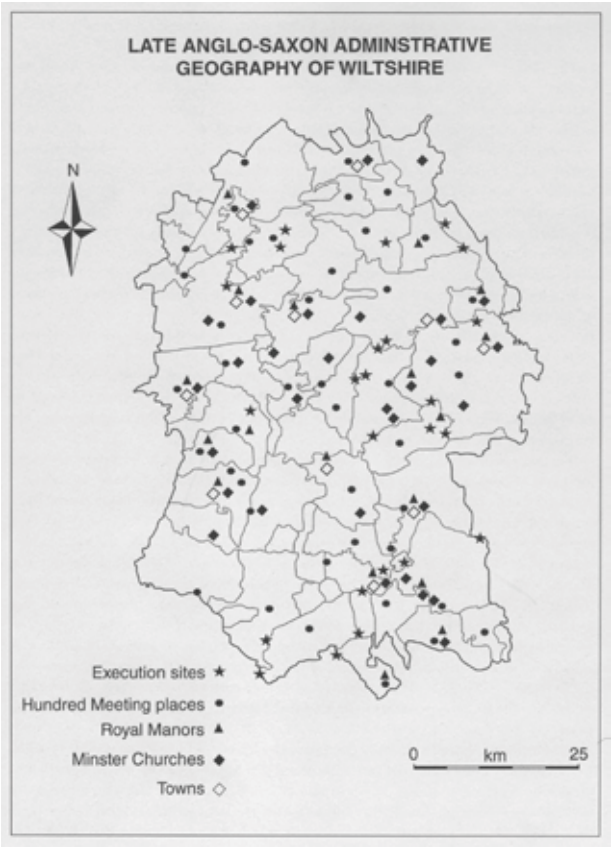
Royal manors

Towns

Villages

Territorial

Assembly



‘Wessex survived the onslaught because of Alfred’s military and political genius’ (Abels 1998): discuss…

ARGUABLY, A LANDSCAPE OF DISPERSED FUNCTIONS IS:

1. MUCH MORE RESISTANT TO EXTERNAL THREAT
2. LESS EXCLUSIVE/MORE INCLUSIVE IN SOCIAL TERMS
3. MORE ADAPTABLE TO CHANGE
4. DEEPLY EMBEDDED IN LANDSCAPE AND HUMAN EXPERIENCE
5. ARCHAIC BUT NOT ‘UNCIVILISED’

Andrew Reynolds – **Non-urban vs urban social complexity in Anglo-Saxon England**

Summary by: Jakob Bonde and Mikael Manøe Bjerregaard

Introduction:
In this paper, Reynolds presents 10-15 years of research. Reynolds has a special interest in reconstructing routes of travel and communication, assembly sites and the arrangement of jurisdiction, with a key interest in the spatial organisation of power in Early Medieval landscapes. The present focus is on the development of central spaces into urban places and how this process takes place in a British context.

Normally, we see this development as linear, but this is probably not the case in the British social structure when it applies to the emergence of urban societies.

Presentation:
As an example, Reynolds uses Neolithic mega sites/super sites (cities) in the Ukraine, which show an extraordinary type of settlement. Here we have large "urban" structures almost from the beginning of the Neolithic period – structures that in a Medieval perspective would constitute a kind of end of the line complexity, while it, in fact, shows none of the elements of the social hierarchy we normally associate with urban societies in the Late Iron Age and Medieval periods. In these Neolithic super sites, the complexity and specialisation are instead found in the landscape – not in the towns.

This raises the question of whether it is useful to see an urban complex as a valuable indicator of complex social structure/roles of power?

In Britain, it has been common to compare the Early Medieval period with previous periods, when Britain was occupied by the Romans. This focus has had an extensive influence on how the monumentality of power has been conceptualised.

For 40 years, British archaeologists have tried to create a straightforward unilinear model for the emergence of towns in Anglo-Saxon England. In the common settlement structure (emporia/wics), which was established in the 7th century and on the decline in the 9th century, when the Vikings came, elite structures are largely invisible at these places, apart from a few furnished 7th century burials.

The traditional idea was that when the Vikings came, the king built fortified settlements, but there was very little occupation of these sites until the 10th century and the previous interpretation of them as "urban" societies can no longer be sustained. This leaves us with an extended period when we once believed there were many towns, but this new perspective shows that this was in fact not the case.

There were only a few real towns in England in the 9th century, and they did not really emerge, as such, until the late 10th century. During this period, England was divided into several counties, which were further divided into hundreds, a small proportion of which possessed boroughs, and these have traditionally been interpreted as towns. The boroughs had, however, a statutory meaning and should not be seen as real towns or urban societies.

But if the social structure/elite/power was not organised around towns, how were power/elite structures manifested in the landscape?
Reynolds proposes a structure with a more archaic social organisation, with the spatial organisation of power as a crucial part of the social structure and monumentality, whereby the landscape was organised into constellations of places with specific functions (assembly sites). In this model, small places in the landscape are an essential element. As an example, Reynolds highlights the "Barrow of the pigs", which is an apparently insignificant place in the landscape, with no clear association with elite structures.

Nevertheless, this place set the scene for King Alfred's assembly, where he made some very important decisions relating to the country.

Furthermore, there is archaeological evidence that Bronze Age mounds have been reused as cemeteries in the 6th and 7th centuries AD.

Reynolds also uses later places of execution at the cemetery at Sutton Hoo as an example of how power structures can be placed at already important places, thereby creating a power landscape over time.

These examples also show how power was not always manifested centrally in a territorial unit but could also be placed along borders (e.g. place of execution, Danevirke etc.), thereby manifesting power to neighbours.

Conclusion:
In conclusion, Reynold points out that the urban process was not necessarily synonymous with the social organisation. In Anglo-Saxon England it is very important to look at central landscapes and not central places.

This system can be regarded as being very inclusive, where each participant in the social organisation had to go to different places to participate in this organisation. It created a robust system, which in many ways was archaic, but not uncivilised.

Reynolds points out that a landscape of dispersed functions is much more resistant to an external threat, less exclusive/more inclusive in social terms, more adaptable to change and deeply embedded in landscape and human experience.

Questions:
Mads Dengsø Jessen (The National Museum of Denmark): Did the common people use the system, or only the leaders?

Reynolds: Probably all free men assembled.

Mads Runge (Odense City Museums): "Barrow of the peasants", how was this determined?

Reynolds: It is documented by a 10th century written source, which pinpoints the place.

Further reading:
Carroll, J., Reynolds, A. and Yorke, B. (eds) in press: *Power and Place in Europe in the Early Middle Ages,* Proceedings of the British Academy, London, British Academy.

Reynolds, A. 2013 'Judicial culture and social complexity: a general model from Anglo-Saxon England', in A. Reynolds and K. P. Smith (eds), *The Archaeology of Legal Culture. World Archaeology 45.5*, pp. 699-713.

Reynolds, A. and Brookes, S., 2013 'Anglo-Saxon civil defence in the Viking Age: a case-study of the Avebury region'. In. Reynolds, A. and Webster, L. (eds) *Early Medieval Art and Archaeology in the Northern World,* The Northern World series. Leiden, Boston: Brill. pp. 561-606.

Reynolds, A. 2018: 'Lineage, genealogy and landscape: a high-resolution archaeological model for the emergence of supra-local society from early medieval England'. In Semple, S. (ed.) *Temporary Places, Gatherings and Assemblies. World Archaeology 50.1*
https://www.ucl.ac.uk/early-medieval-atlas

Uppåkra, Lund and the landscape

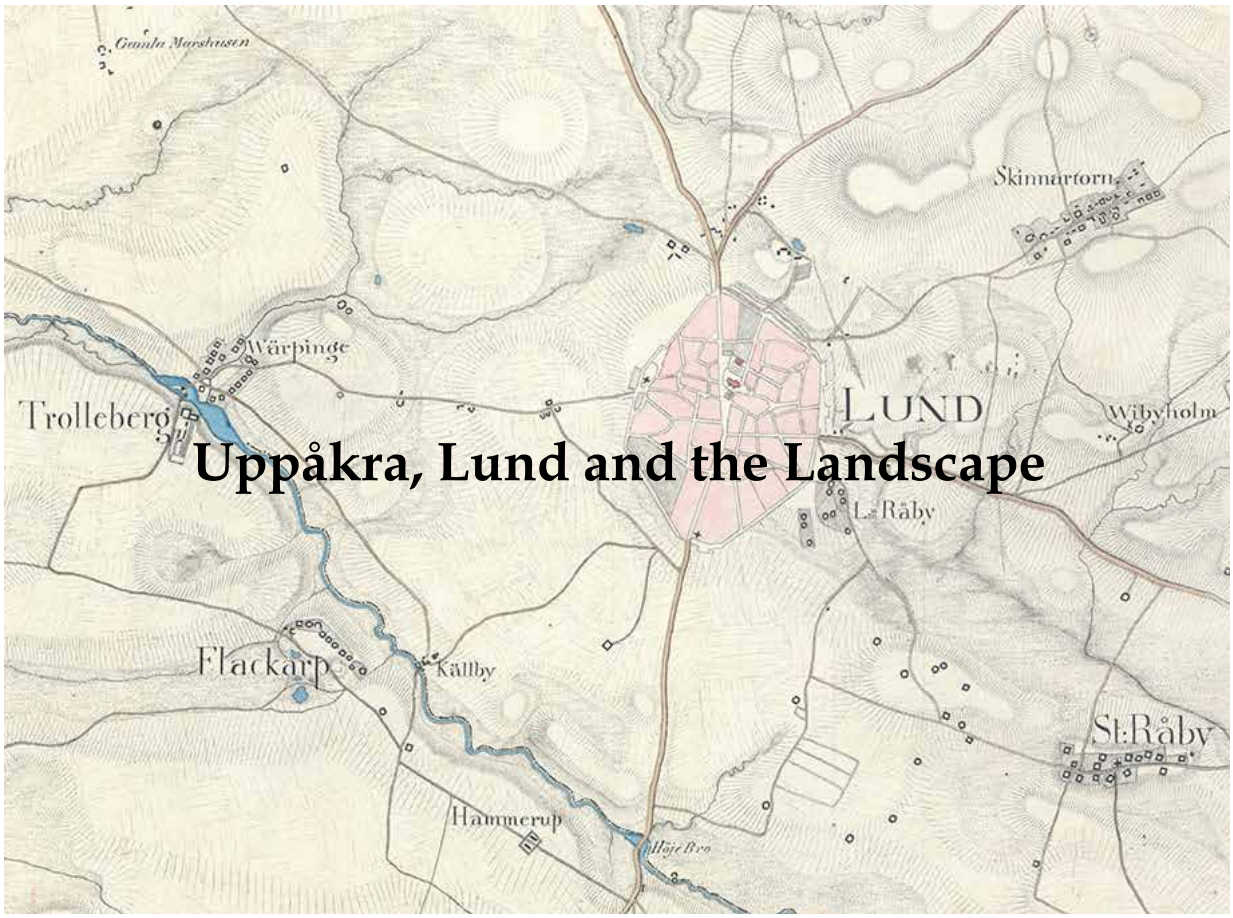
Mats Anglert
(Archaeology in Lund and Scania, Sweden)

Abstract:

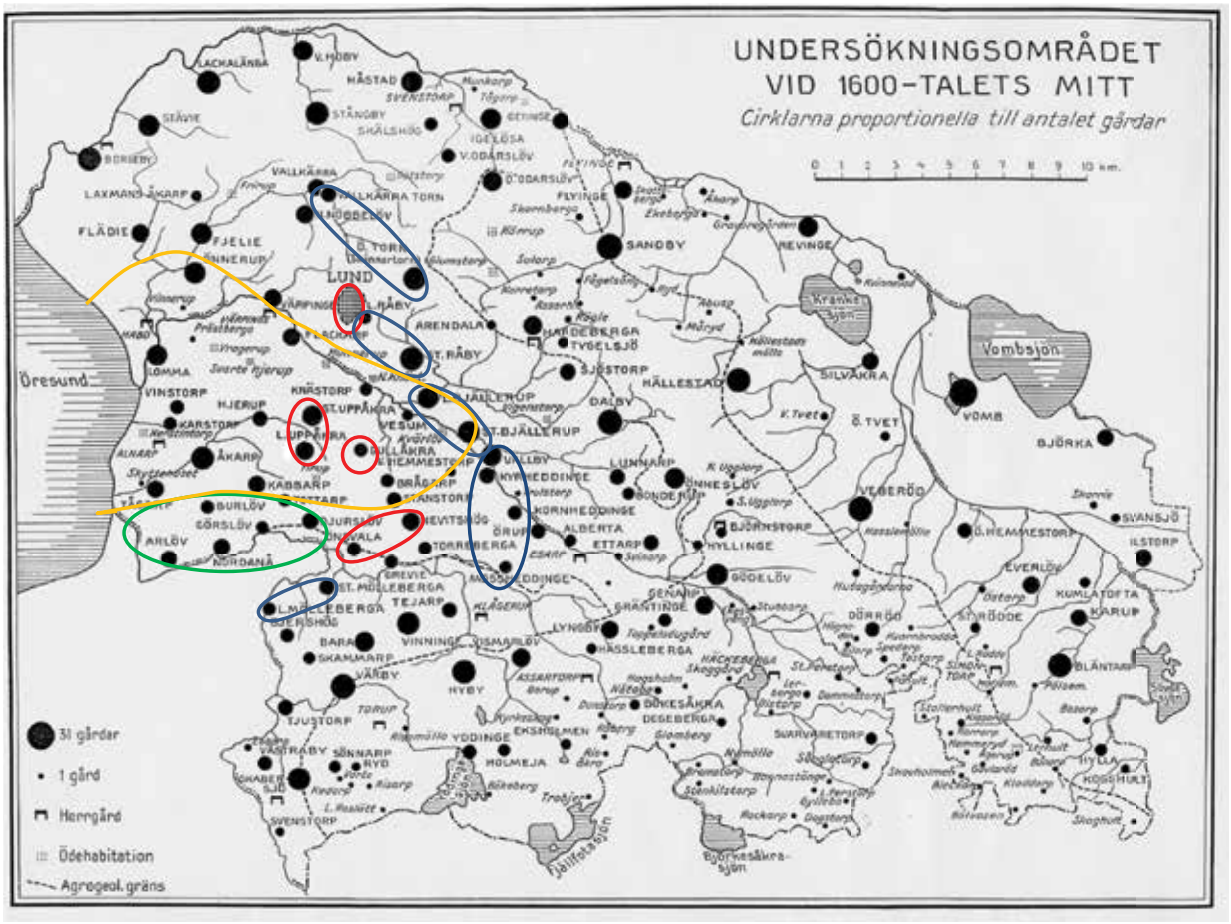
Both Uppåkra and Lund have been interpreted as dominant and stable places, characterised individually, and collectively, by long continuity. A major focus has been directed at the two places and their central functions. For an understanding of the development of places like Uppåkra, and also Lund, the context of the surrounding landscape is of great importance. Many settlements in the area have been excavated and the place names provide clues to the organisation of the landscape. The study period is the Late Iron Age and the Early Middle Ages (c. AD 500-1200). The point of departure for this paper is that society is characterised by a continuous change, i.e. it is a process.

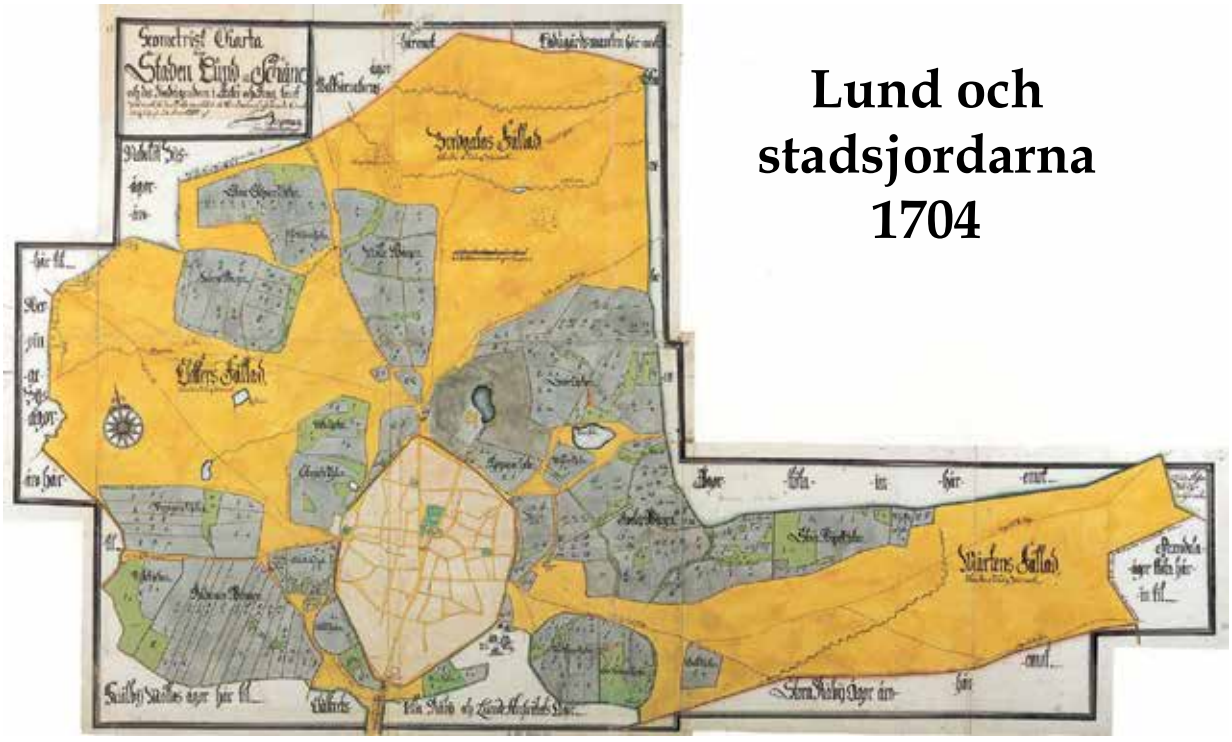
Seen from the perspective of power in the landscape, the contextual situation has often been complex since it was related to personal status and networks, as well as everyday practices. Rather than being homogeneous, society was pluralistic and consisted of several temporary collective associations or communities held together by personal ties and a common ideal. In the 12th and 13th centuries, this changed when regular transfers of taxes and fees were introduced. These required regulated structures such as a division of cultivated land and a developed administration. It was first in the Middle Ages that a more stable and uniform society developed, recumbent on institutions, laws, parishes, regularised settlements (villages) etc.

To understand the organisation of society it is necessary to address the settlement structure, place names, assembly sites etc. Structures known from the Middle Ages cannot automatically be projected backwards in time. A changeable landscape generated a varied settlement organisation in both space and time, and each landscape developed in its own rhythm. From the 6th century onwards, the landscape around Uppåkra and Lund has changed in many ways. Uppåkra stands out as a central place during Roman times and the Migration period. It is more difficult to characterise the place in the Late Iron Age, based on the archaeological record. The same could be said about the earliest Lund, but for a time they appear to have shared the same landscape.



Uppåkra, Lund and the Landscape

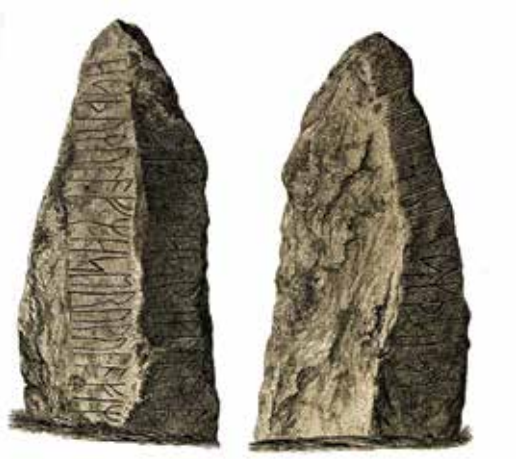




Lund och stadsjordarna 1704

Warrior Aristocracy

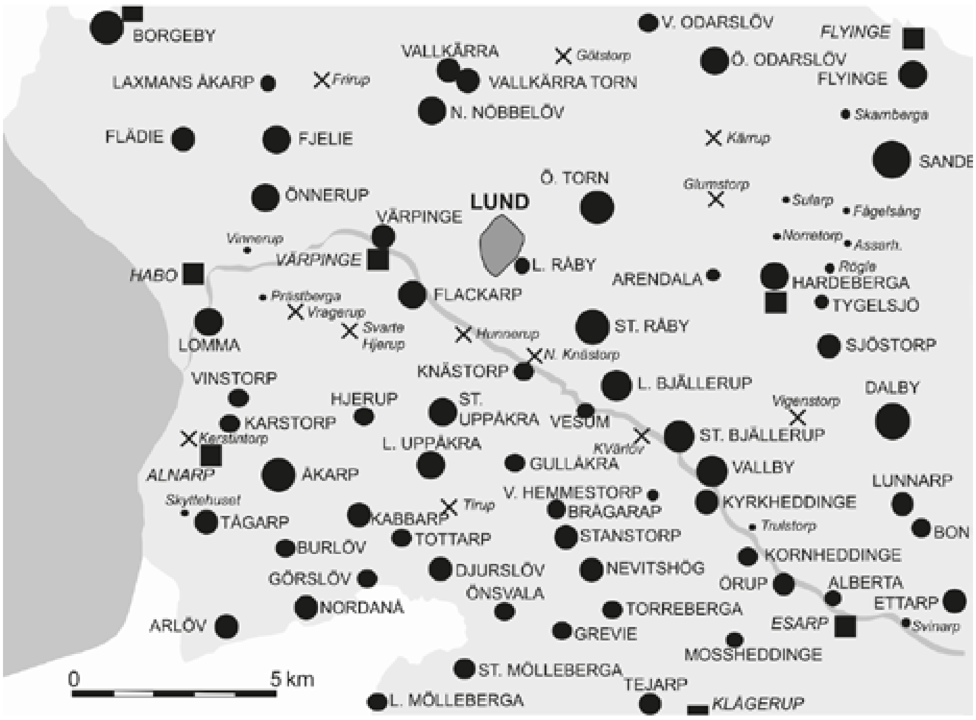
Ulvahögen – the Wolf mound



HaÞuwulfR, *HariwulfR* och *HaeruwulfR* - ’battle, war’, ’war-host’ och ’sword’

Warrior Aristocracy

Odin and *Ulfheðnar*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Frirup
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N. NÖBBELÖV
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Skamberga
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VÄRPINGE
LUND
Ö. TORN
Glumstorp
Sularp
Fågelsång
Vinnerup
VÄRPINGE
Norretorp
Assarh.
HABO
L. RÅBY
ARENDALA
Rögle
HARDEBERGA
Prästberga
Vragerup
FLACKARP
TYGELSJÖ
Svarte Hjerup
Hunnerup
ST. RÅBY
SJÖSTORP
LOMMA
N. Knästorp
VINSTORP
KNÄSTORP
L. BJÄLLERUP
DALBY
HJERUP
ST. UPPÅKRA
Vigenstorp
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VESUM
ST. BJÄLLERUP
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Kvärlöv
ALNARP
GULLÅKRA
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LUNNARP
V. HEMMESTORP
Skyttehuset
Tirup
TÅGARP
KABBARP
BRÅGARAP
KYRKHEDDINGE
Trulstorp
BON
BURLÖV
TOTTARP
STANSTORP
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DJURSLÖV
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Annelöv
Norrvidinge
Dagstorp
Särslöv
Södervidinge
Alstorp
Lundåkrabukten
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Kävlinge
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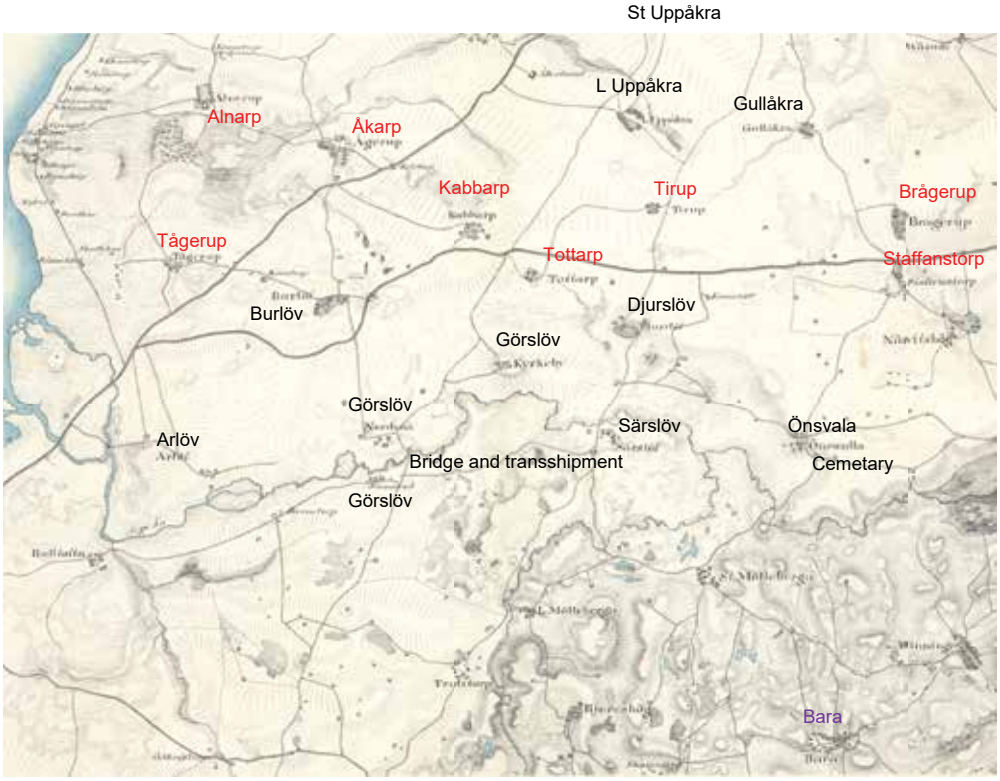


Thank you!

Mats.Anglert@arkeologerna.com

Mats Anglert – **Uppåkra, Lund and the landscape**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
In this paper, Anglert questions the dominant perception of Lund and Uppåkra as stable settlements, functioning as central places with long continuity, and with Lund taking over as Uppåkra fell into decline. Instead of projecting the Medieval situation back into prehistoric times, Anglert argues that the Iron Age organisation of the landscape and society was more complex. By using archaeological results from the last three decades and conclusions from place-name research, we can gain an insight into this organisation. The presentation focuses on Uppåkra, but Lund is also taken into consideration.

Presentation:
Uppåkra and Lund in Scania, Sweden, are located only 5 km apart on the same road which runs northwards from the Baltic coast in the south. The settlement at Uppåkra extends back to the 1st century AD. The history of Uppåkra was in many ways unknown prior to the excavations of the 1990s, with no known monuments except for two mounds. Neither is it mentioned in any Early Medieval written sources, so it is not known how the place was perceived at that time. The idea of long continuity can be discussed in the light of some archaeological excavations in the central part of the space (cult area) with the discovery of tall timber buildings (halls and a ceremonial house), weapon sacrifices etc., which appear to manifest a central space/cult. At the beginning of the Germanic (Vendel) period, however, a major change took place, with the place losing its significance around AD 700. At that time, the weapon sacrifices and rebuilding of the ceremonial house came to an end. The cultural layers from this period have been damaged by ploughing, but numerous metal-detector finds from this time relate to trade and crafts: workshops, coins, weights and scales are all known. In comparison, no workshops have so far been found in the earliest Lund. The earliest monument in Lund is a late 10th century cemetery. This suggest that Uppåkra and Lund were very different settlements during the overlapping period. It is uncertain how far back in time the early cemetery in Lund extends, but it seems too large to be accounted for solely by the small settlement constituting the earliest town. It may also have functioned as a cemetery for the surrounding area as well as for the later period at Uppåkra.

In Anglert's view of landscape, he defines two terms relating to how the context of the landscape was influenced by human actions:

- Reproduction: stabilising and conforming existing traditions, leading to a slow process of change.

- Transformation: related to economic, social and political strategies, leading to more dramatic changes, manifested in reorganisation of the landscape.

Through place-names studies, we can reveal some of the landscape organisation. For instance, there is evidence of two to four neighbouring localities in the area sharing the same place name (e.g. Stora Råby and Lilla Råby), which reflect an originally larger domain (marked in blue on slide 2). According to the suffix -by in these place names, most places of this kind extend back to the Iron Age. Around 50 such settlements are found in eastern Denmark/Scania. At a later point, -torp-named villages filled out the gaps between these earlier villages (marked in yellow on slide 2). This is significant for the area around Uppåkra, probably reflecting that this area was something special. According to the earliest map of Lund, the town did not have any farmland to the south (towards Uppåkra). Perhaps the village of Råby (the name referring to an earlier border) close to the town boundary provides an explanation for this layout of the town's farmland. Lund and Uppåkra were located in two different "hundreds" (legal districts).

Another aspect of research into the organisation of the area relates to traces of a warrior aristocracy. In old Norse sources there are examples of warriors with animal-like behaviour, and especially with wolf

connotations. Three 7th century rune stones carry the names of three individuals with the suffix -wolf and prefixes related to war or battle. Many sources now point towards a dramatic change in society around AD 600 and, similarly, many burial mounds bear wolf-related names. These are often situated in strategic places, such as on shorelines and along rivers. The large runestone at Lund from c. AD 1000 also presents an image influenced by heroic poetry expressing ideals adhered to by the aristocracy of the time. On one side of the stone there is a mask flanked by two wolves with a sword and shield. One interpretation of the scene sees Odin standing in the middle, between the wolves, representing some kind of brotherhood in war (Ulfheðnar). Iconographically, the two wolves standing opposite each other represent the protecting and the judging authorities, which also can be related to a Christian context, for example in the cathedral in Lund. The runestone could have been a part of a porticus

Yet another point of interest in Anglert's research is the use of the outfields. Here the Löddeköpinge and Trelleborg areas served as examples. The oldest place names (Iron Age) are located away from the coast (marked in red on slides 7 and 8). A group of settlements closer to the coast (marked in blue) stems from the Viking Age (700-900/1000) (some of these do not have surviving place names). At that time, the inhabitants started using the outfield for grazing, trading, crafts etc. Later, in the Early Middle Ages, the farmland extended into the coastal area, represented by the -torp names found on previously uninhabited land. In the Trelleborg area, several outfield place names with the suffix -köpinge are connected with the trading place located at the later coastal town of Trelleborg.

Conclusion:
Uppåkra appears to have lost some of its importance in the Late Iron Age, with power in the area transferring to the area to the south. The place names here with the suffix -löv could have formed a unit, with a bridge/entrepot where the road and waterway intersect, perhaps relocating the crafts and trade from Uppåkra to this area. Furthermore, the grazing areas just south of Uppåkra became inhabited by -torp settlements in the Early Medieval period.
The conclusion drawn from these studies is that we cannot project Medieval landscape organisation back into the Iron Age. Instead, we must expect and investigate a more flexible settlement situation in the Iron Age.

Questions:
Mads Dengsø Jessen (The National Museum of Denmark) asked whether the -torp names taking over after Uppåkra loses its importance represented an increase in population or a change in function, as at Löddeköpinge.

Anglert: Not sure if it represents an increase in population. There is probably a connection to earlier settlements/farms, which used these areas collectively for more extensive purposes.

Further reading:
Anglert, M. 2003: Uppåkra bland högar, ortnamn och kyrkor. In. Anglert, M & Thomasson, J. (eds.). *Landskapsarkeologi och tidig medeltid. Uppåkrastudier 8.* Stockholm.

Anglert, M. 2006: Landskapets urbanitet. In. Larsson, S. (ed.) *Nya stadsarkeologiska horisonter.* Stockholm.

Anglert, M. 2006: Vidinge, torpnamn och kristen gårdskult. In. Larsson, S. (ed.) *Centraliteter: människor, strategier och landskap.* Stockholm.

Anglert, M. (in print). Uppåkra, Lund och landskapet. Uppåkrastudier 13.

The Truso project: From local landing place to Viking Age emporium

Mateusz Bogucki
(Polish Academy of Sciences, Warsaw, Poland)

Abstract:

Since the dawn of history, the mouth of the Vistula has been a region that has attracted people who have then settled here and conducted intensive economic activities while maintaining close contacts with other, often distant regions. There were important amber workshops in the Neolithic, and at the beginning of the 1st millennium AD Gothic tribes, including the Gepids, settled here, while at its conclusion the Danes established the emporium of Truso. Finally, in the Late Middle Ages, Hanseatic merchants, the Knights of the Teutonic Order and the Polish kings fought for influence. The attractiveness of the lands lying on both sides of the wide Vistula delta was due to many reasons, including a convenient communication route, but its richness in natural resources was one of the most important.

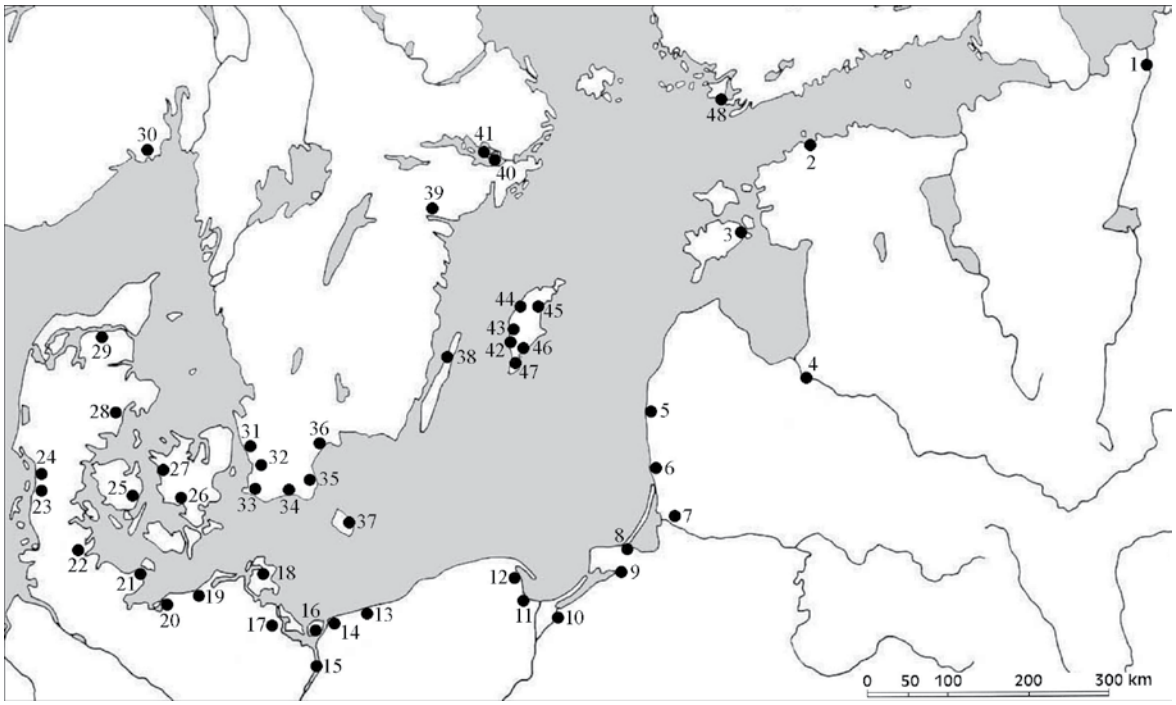
In the 6th-7th centuries, a population near Elblag maintained close contacts with Scandinavia, especially Denmark, and also with Friesland, the Elbe region, Thuringia and the Merovingian cultural sphere. The appearance of many items of both a luxury and a more everyday nature, originating from such distant regions, prompts the question of whether these objects were imports, "travel souvenirs", the effects of trade or perhaps caught up in the region along with their original owners? Considering the nature and history of this "turbulent epoch", we can expect any of the above options to be true. The picture emerging from the excavations corresponds well with the known text of Cassiodorus/Jordanes about the Vidivarii, who comprised *ex diversis nationibus*.

The cultural ties of the Elblag group with other parts of Europe leads us to the conclusion that the historic emporium of Truso, a place inhabited by people with broad, interregional contacts, is older than previously thought. A settlement existed in Janów Pomorski at least since the late 6th century and acted as a "window to the world" for the local community. The frequency of these contacts, and their character, was not of course as significant as in the 9th and 10th centuries. The conclusions presented above do not contradict a reasonable idea that a large group of Scandinavians arrived in Janów Pomorski at the end of the 8th century, and that here they established a major and important emporium. However, we can state with some certainty that the Vikings arrived in a place that was well known to them. The Migration period settlement constituted the basis for a typical Viking emporium (Truso), founded by the Danes at the end of the 8th century.

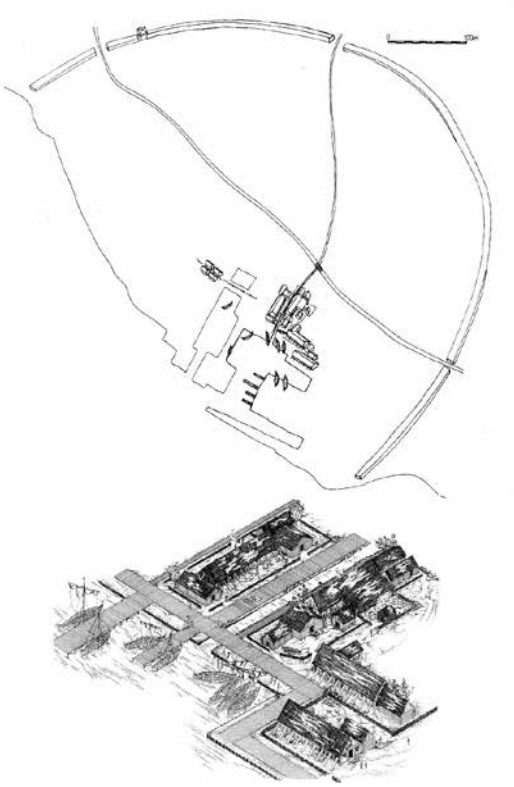
The Truso-project

Mateusz Bogucki

From local (?) landing place to Viking-Age emporium



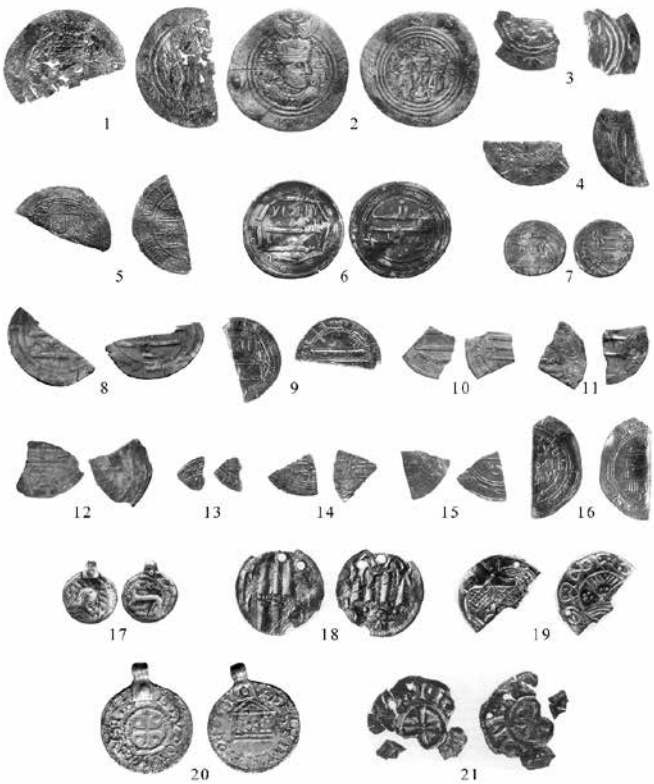
The most important „emporia" in the Viking-Age



Truso – a 8th/9th-midd 10th c. Viking-Age emporium

Truso – a 8th/9th-midd 10th c. Viking-Age emporium

Truso – a 8th/9th-midd 10th c. Viking-Age emporium



Truso – a 8th/9th-midd 10th c. Viking-Age emporium

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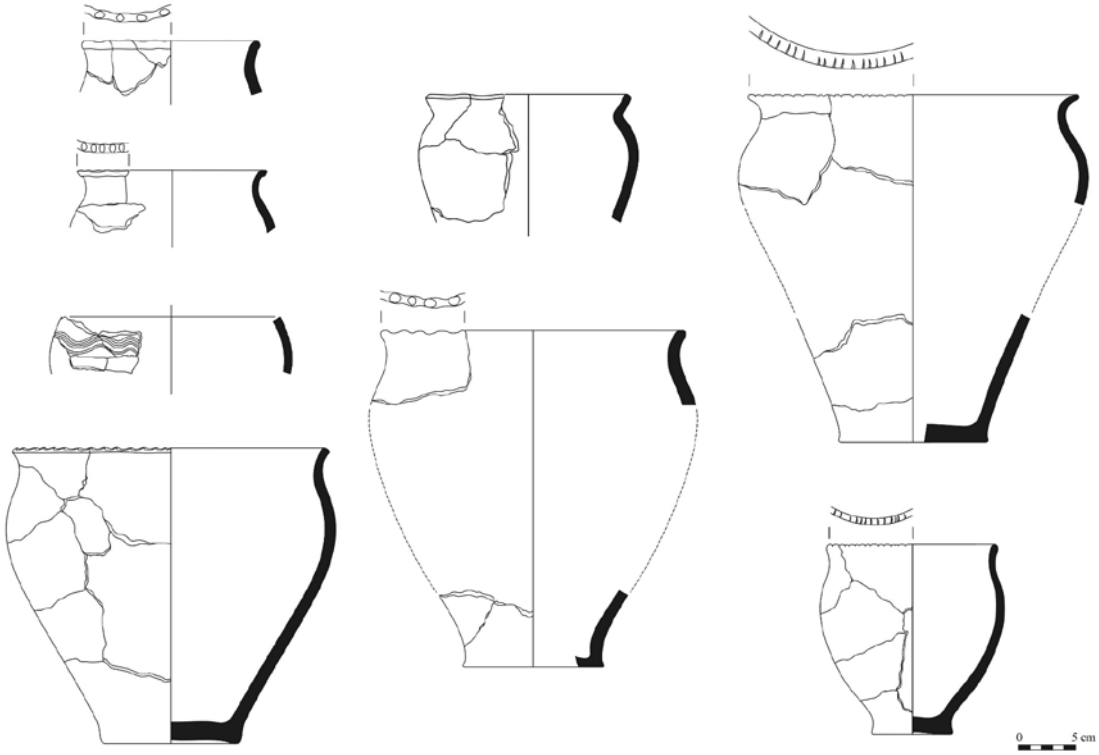

Truso – a 8th/9th-midd 10th c. Viking-Age emporium

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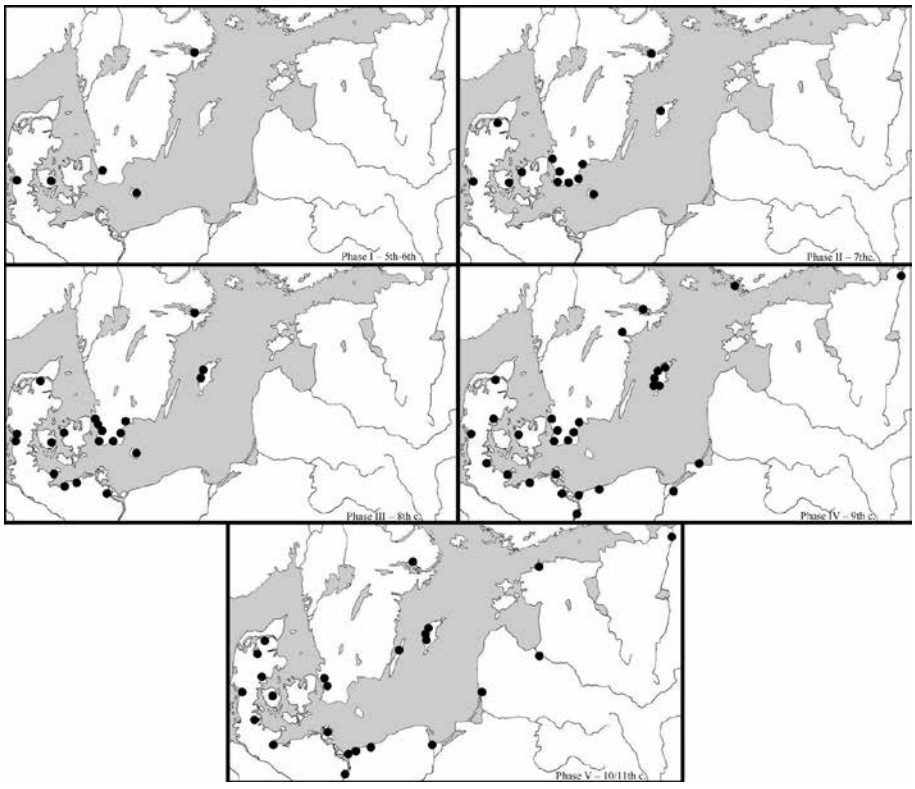
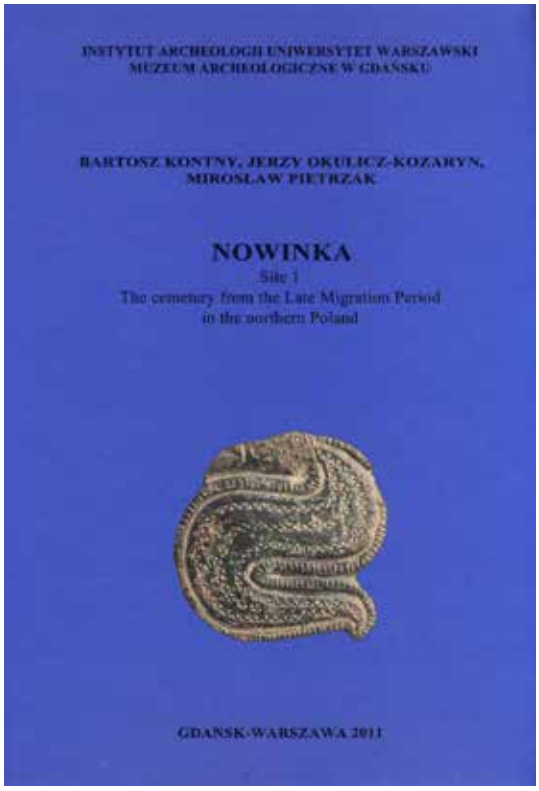


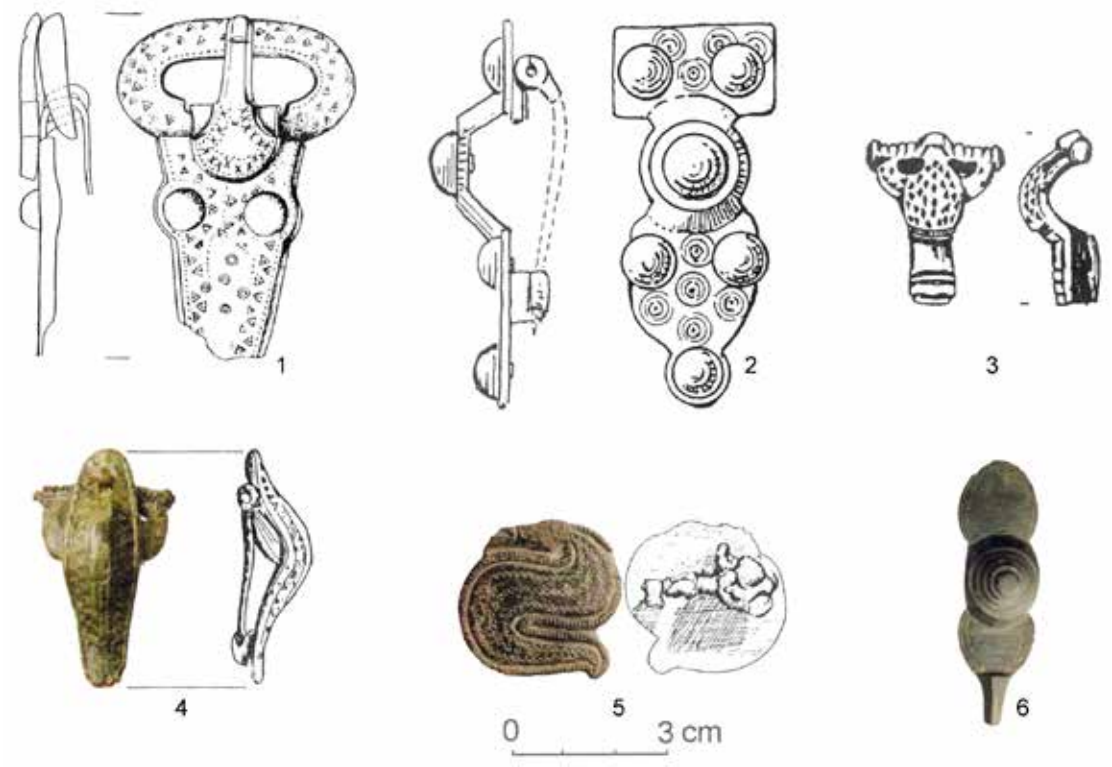
Evolution of the emporia network

Pre-Viking-Age Central Places

Archaeological identification of the „Elbląg Group"

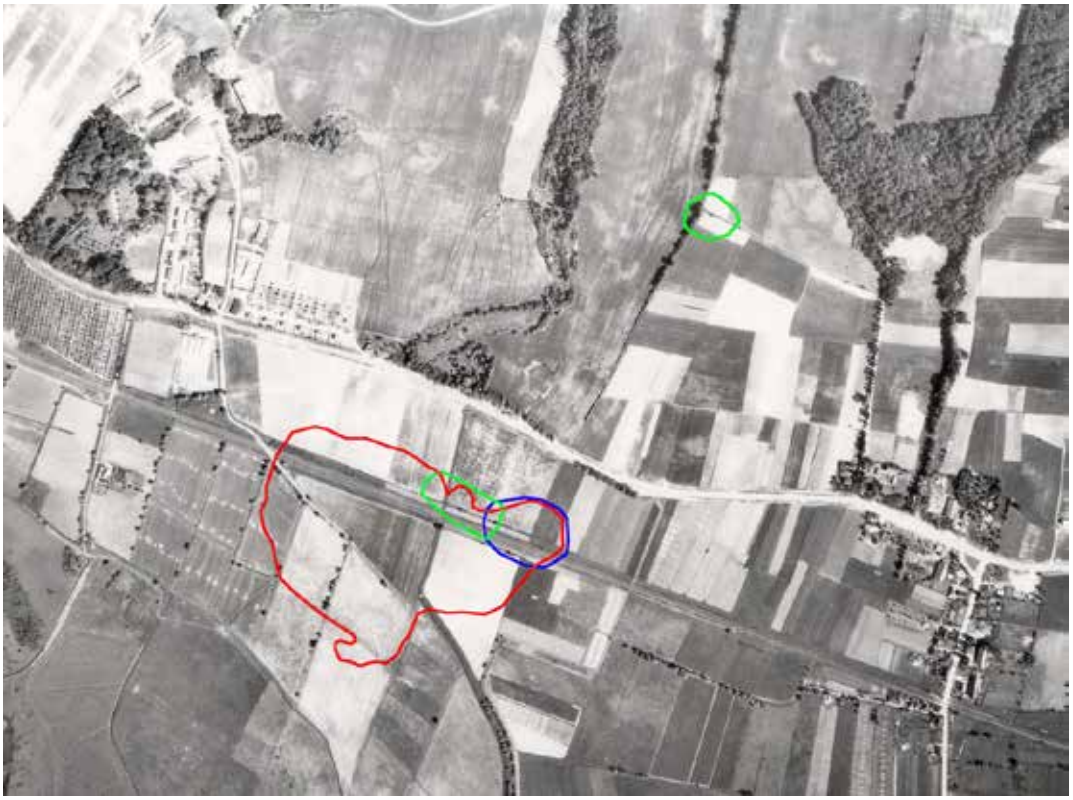


Nowinka – Best known cemetery of the „Elbląg Group"



Archaeological identification of the „Elbląg Group"

Archaeological identification of the „Elbląg Group"



Janów Pomorski – Komorowo Żuławskie

Komorowo Żuławskie

Komorowo Żuławskie

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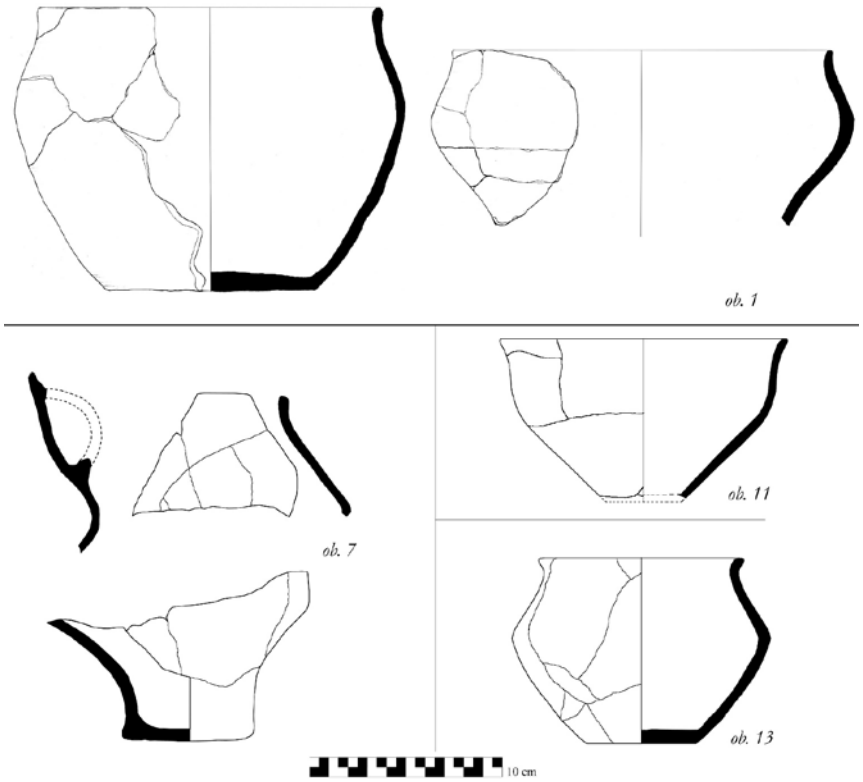
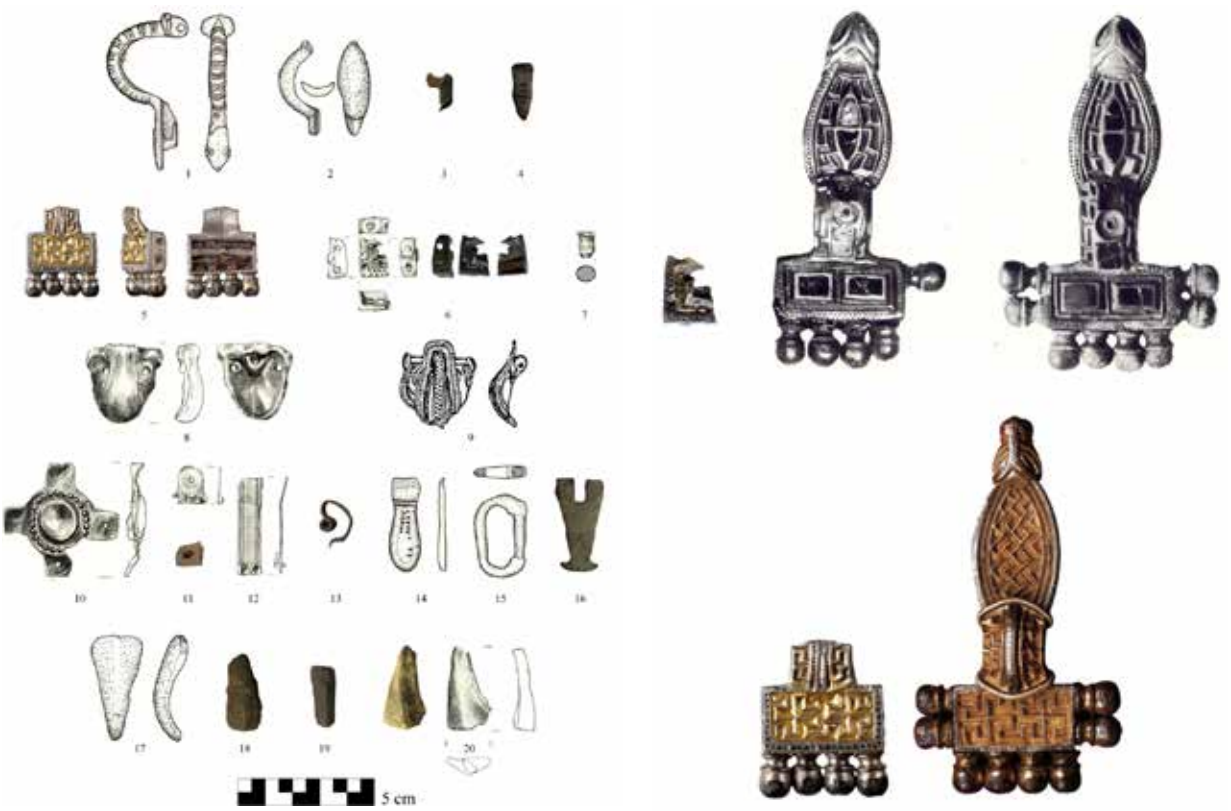


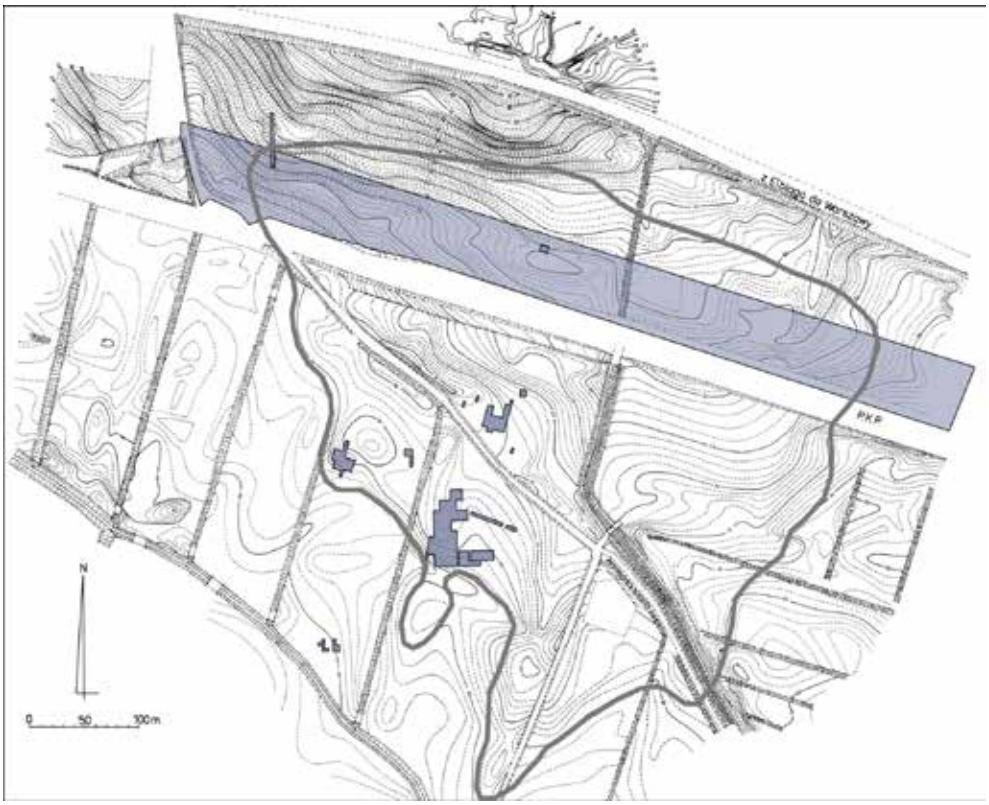
Komorowo Żuławskie



Komorowo Żuławskie
Imports (Schretzheim, gr 372; Klepsau, gr 7)

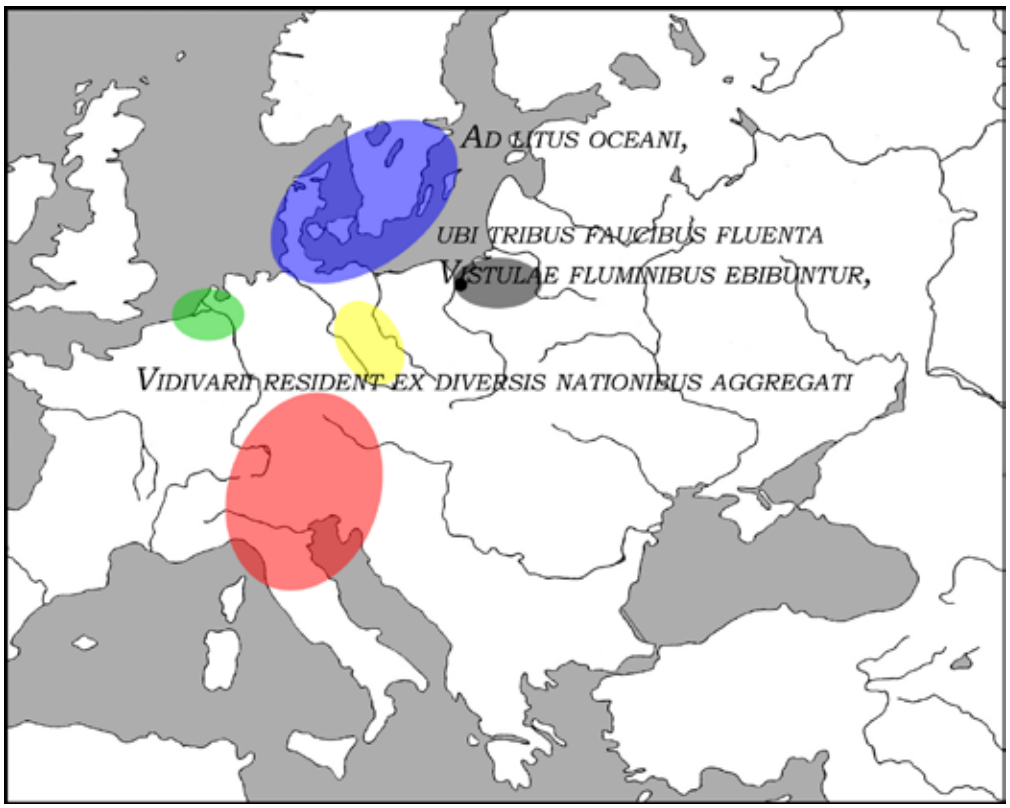
Langobard style – brooches from Ravenna

Komorowo Żuławskie



Janów Pomorski - Truso

Janów Pomorski – Migration Period finds



Vidivarii ex diversis nationibus

- A certain part of the Wielbark Culture population remained in the area of the Vistula estuary and assimilated with the incoming Baltic people

- The population of the "Elbląg Group" had close contacts with distant areas of Western, Northern, Southern and Eastern Europe

- The beginning of the "post-Roman/Late Iron Age" penetration of the Vistula estuary by Scandinavians can be dated from the 2nd half of the 6th century

- In Janów Pomorski, at least from the 6th century, there was a settlement that served as a "window to the world" for the local societies. It did not have the character of a trade and craft center yet, but was the foundation for a later, typical Viking-Age emporium (Truso), founded by the Danes at the end of the eighth century

Conclusions

Thank You for Your attention

Mats Anglert – **Uppåkra, Lund and the landscape**

Summary by: Mikael Manøe Bjerregaard and Jakob Bonde

Introduction:
This paper focusses more on chronological factors than the previous ones, and less on the use of the landscape. Nevertheless, a short introduction to the Truso landscape in the Vistula region is presented. The Vistula delta is about 70 km wide. On its eastern side, there is only access to about 300-400 m of land before the landscape rises and becomes relatively inaccessible, creating a very central obligatory passage to inland areas. These topographical elements of the landscape have attracted people from many different places over time, because of the favourable position with regard to trade routes, and because everyone who wished to travel further inland had to pass the place where Truso is located.

In the Neolithic, the area hosted huge amber workshops, and settlements were also established in the area during the Bronze Age and Early Iron Age. In the 1st century AD, Germanic tribes arrived and in the 9th century Scandinavians established an emporium (Truso).

Presentation:
In the Viking Age, the settlement of Truso covered about 20 ha. Since the 1980s, about 5 ha of this has been excavated. However, these excavations were mostly conducted as small-scale investigations in the harbour area and large-scale rescue excavations on the periphery, which explains our lack of knowledge of the settlement structure.

As a result of these investigations, Truso was defined as a settlement with a surrounding semi-circular rampart; an interpretation with which Bogucki does not agree. He interprets the rampart as a later phenomenon (mid to late 10th century).

Nevertheless, the excavations revealed a very rich and diverse finds assemblage comprising more than 100,000 objects. Unfortunately, the locality was very badly damaged by agricultural work in the 19th century and only 5-20 cm of compacted cultural deposits are now preserved. These circumstances make the locality difficult to understand and they complicate the dating of individual phases.

Many of the objects recovered from the site are made in the Scandinavian style. Some were produced by skilled Scandinavians and others are local imitations made by less-qualified craftsmen. Furthermore, some objects can be directly linked to the Scandinavian culture, while imported objects from the Carolingian empire and the Orient are also present.

Workshops are present in a huge number, for gold-, iron- and amber-working, with the latter being the most important.

Coins are also represented by about 1000 single finds. Most of these are early Arab dirhams, but some Carolingian, Anglo-Saxon and Danish coins appear too. A large numbers of weights and scales show the importance of trade.

The local component is almost exclusively evident in the pottery, with a slight influence from the Slavic region.

The evolution of the network of emporia is well studied, and the development shows that the pattern probably came from the west, and that its origins can be dated to the Migration period. Later, the influence of Carolingian and Frisian trade, along with trade contacts to Russia and the Arab area, consolidated the emporia and resulted in the Baltic area acquiring an important role in contacts between east and west.

But what happened prior to the emergence of Truso? Before the Viking Age, the land was inhabited by Baltic people characterised by very specific metal objects and pottery vessels (flasks). However, the finds also demonstrate long-distance relations with Scandinavia and Gotland, as well as with the Carolingians and Franks.

The dead were cremated and buried in a pit together with a non-cremated horse: A burial ground with several horse burials, and a few pits containing pottery vessels has been excavated north of Truso. This site has been badly damaged by mo-

dern agricultural work, but fibulas, some imported metal objects and a few swords were found in the plough soil and these can be dated to the Migration period (7th century AD).

Recent excavations in Truso, prior to the construction of a motorway, also revealed several objects from the Migration period – objects that are not found in ordinary settlement contexts.

Conclusion:
It is clear that the Truso emporium emerged in an area with already well-established settlements and that, at least from the end of the 6th century, there was a settlement within the area that can be described as a window to the world for the local communities. Even though this was not on the scale of the later trade and craft centre, it can be defined as the basis for the Viking Age emporium (Truso) founded by Scandinavians at the end of the 8th century.

Questions:
No questions.

Further reading:
Bogucki, M. 2013: Before the Vikings. Foreigners in the lower Vistula region during the Migration Period and the origins of Truso. In. Moździoch, S., Stanisławski, B., Wiszewski, P. (eds), *Scandinavian Culture in Medieval Poland, Interdisciplinary Medieval Studies II, Wrocław,* pp. 81–112.

Bogucki, M. & Jagodzinski, M.F. (eds) 2013-2017: *Studia nad Truso/Truso Studies, vol. I-III*, Elbląg.

Brather S. & Jagodziński M.F. 2012: Der wikingerzeitliche Seehandelsplatz von Janów (Truso). Geomagnetische, archäopedologische und archäologische Untersuchungen 2004–2008, *Zeitschrift für Archäologie des Mittelalters, Beiheft 24*, Bonn.

Jagodzinski, M.F. 2010: Truso. Miedzy Weonodlandem a Witlandem. Between Weonodland and Witland, Elbląg.

Summary of the day

Mads D. Jessen
National Museum

Kinds of spaces and places

- Space ➔ Place ➔ Non-place
- Place to whom: Places with ‘prefix’: Special character. Limited accessibility
- Early urban localities as social outliers
- Medieval towns as places of fusion

Mads Dengsø Jessen – **Reflection on the day: The landscape archaeology of South Scandinavia in the present and the future**

Summary by: Mikael Manøe Bjerregaard & Jakob Bonde

Dengsø Jessen summarised some general themes that were raised in the seminar. The first group of papers were focused on methodological questions. Many new non-archaeological approaches to decoding the historic landscape were presented. The quality of a multi-disciplinary approach was emphasised. By combining various methods and datasets, we can obtain detailed information about historical landscapes. However, as pointed out by several of the speakers, we must always be aware of the pros and cons of the individual methods. Already when planning the economic aspects of archaeological research/excavations, it is important to take these, sometimes very expensive, research methods into consideration. Additionally, the importance was stressed of an objective approach to the archaeological record and not to be too driven by predefined expectations of what to find. We should dare to question classical models of understanding specific sites or the development of towns as a linear evolution from a loosely organised rural society to a more organised and developed urban society.

Dengsø Jessen pointed out the importance of standardising data in order to be able to use different datasets, this included having a fixed terminology. For example, metal-detector surveys often result in a huge quantity of finds and data. Can we use specific artefacts/finds as markers to define specific functions in the Iron Age landscape? What exactly are these markers, and can we also use them to decipher other metal-detector sites? If so, even poor-quality iron finds may be significant for the interpretation of sites.

Some themes and locations were touched upon by several speakers during the seminar. These may not be completely new to archaeological research, but they are relevant to further research and investigation. Several of the speakers talked about the southern part of the Hindsholm peninsula and the areas around Kertinge Nor. There seems to be a significant body of finds and place names here, which Dengsø Jessen suggests may indicate that Hindsholm was once an aristocratic seat. The Gudme area too was briefly touched upon more than once. This very large site, which appears to have eradicated other possible centres of power in the vicinity, can perhaps be interpreted as an early emporium that fell out of use because it was too early and too efficient, seemingly leading to a kind of settlement vacuum round it: A situation eventually leading to a diminishing importance of the place. Finally, the dramatic transition in the settlement system in the mid-6th century was highlighted from several different perspectives, such as finds, place names, rune stones etc. Similar changes have been identified in recent years at Toftum Næs, Lejre and Tissø in Denmark, and south Scandinavian archaeology could, in this regard, find inspiration in British and north Scandinavian research into this period. For later periods, some papers gave examples of how landscapes were changed as a political tool.

Turning away from the hardcore research aspect of archaeology, Dengsø Jessen drew attention to communication with the public about research results and scientific investigations. Since many of the speakers and members of the audience at the seminar work at museums, communication with the public is of interest to most of them. Dengsø Jessen pointed out that, in the recent decades, the educational part of the museum work (in Danish dannelse) appears to have been given less attention. However, we should remember and embrace that museums are institutions where dannelse – general education – is created.
Dengsø Jessen drew attention to the reversed chronology of Gamla Uppsala, with its great halls found to have been built prior to the mounds. The same chronology can be seen at Tissø and Lejre, but not at Jelling, Denmark.

The courtyard sites of Norway are a representation

of the connected "hundreds", as microcosmoses mirroring the surrounding landscape: examples of place overlapping space.

Reflections:
The development from space to place is difficult to pinpoint exactly, and the papers presented at this seminar have shown that we need to adopt a more particularised viewpoint and standardised methods when debating this subject.
The Mossø area, with its important depositional finds, has recently been shown to have become almost completely forested within a short time – a significant place turns into a non-place. This underlines the fluctuant status of places, the importance of which can change rapidly.
There is no such thing as just a space or a place. They have prefixes which highlight a particular character of that place for the people using it.
The seminar also drew attention to very early urban localities as social outliers/abnormalities being very few in number and of a rather limited time span.
The aforementioned mid-6th century reorganisation of the landscape across southern Scandinavia, was followed by development of the early emporia, while no changes were seen at the same time in the rural society. This may reflect that early urban settlements were social outliers in a sort of parallel system to the existing rural society. Medieval towns can be seen as places of fusion between these two parallel systems, as mercantile emporia and rural cultic sites combined into a single space.

Further reading:
Jessen, M.D. & Terkildsen, K.F. 2016: Towering above – an interpretation of the Late Iron Age architecture at Toftum Næs, Denmark. *Danish Journal of Archaeology, 5:1-2,* pp. 52-71, DOI: 10.1080/21662282.2016.1248592
Jessen, M.D., Holst, M.K., Lindblom, C., Bonde, N. & Pedersen, A. 2014: A Palisade Fit for a King: Ideal Architecture in King Harald Bluetooth's Jelling. *Norwegian Archaeological Review, 47:1.* pp. 42-64, DOI: 10.1080/00293652.2014.921239