

News from ADBOU

Unit of Anthropology, Department of Forensic Medicine, University of Southern Denmark

Business as usual? Not quite...

The last few months were exciting for ADBOU. We spent our time working with a interesting mix comprising new projects, excavation field work, business trips, teaching many talented students, but also taking care of the routine tasks in the collection.

Over the coming months there will be more in depth analysis of the data we collected over the summer, and our new flock of students will be introduced to basic osteological techniques.



The people working at ADBOU:

Jesper Boldsen, Professor, PhD, Dr.Med.Sci.

Svenja Weise, postdoc, PhD

Dorthe Dangvard Pedersen, postdoc, PhD

Peter Tarp, teaching assistant, PhD

Vicki Ryttoft Lillegård Kristensen, PhD student, MSc

Bodil Theilade, secretary

Hågerup – excavation of a medieval rural cemetery

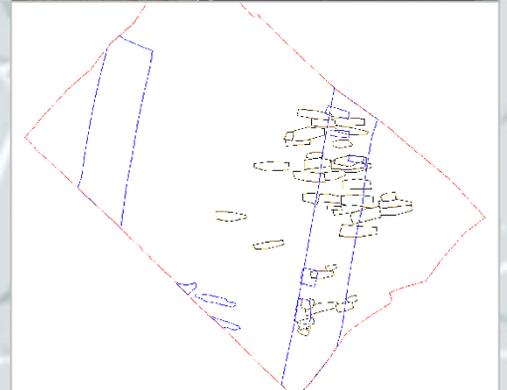
After a wonderful early summer excavation in collaboration with Øhavsmuseet Faaborg we now have better knowledge of what lies hidden underneath the topsoil.

The campaign was run by Vicki as daily leader in the field and Julia Gamble (University of Toronto) in the lab. The 15 students from Canada and the US that were enrolled at the summer school, together with teachers and helpers, managed to excavate 42 primary skeletons and a large number of loose found bones. In November Jesper finished the recording of the skeletons and started with the demographical and epidemiological analysis.

Both men and women, as well as children and infants were found. The preservation of the bones is varying, but generally they are in good condition. The skeletons were found right under the topsoil, buried in several layers on top of each other, which we rarely see in rural cemeteries from that time period. This suggests that the cemetery has been relatively intensely used. Therefore, our estimation of number of burials at the cemetery lies around 3000 graves.

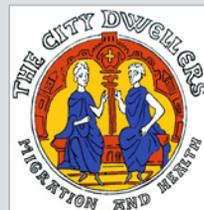
The arm positions of the skeletons are mainly A or B and several of the graves contained headstones, which indicates that the graves excavated are from around 1100-1300 AD.

The field school for 2018 has already been arranged and we are looking forward to many interesting applications from students from all over the world. For more information please have a look at topics under the header **Haagerup** on our homepage.



TheCityDwellers – Migration and Health in Medieval Viborg

The project in cooperation with Viborg Museum and CHART (Cultural Heritage and Archaeometric Research Team, SDU) is now up and running. It is organized in two different but tightly intertwined columns: the *Children Project* and the *Health in Medieval Viborg Project*.



The Children Project

A total of 45 medieval and early modern cemetery samples have been identified for the Children Project. So far 267 skeletons from 44 cemeteries have been analysed by Dorthe and sampled by Lilian Skytte (CHART) and from 43 sites the data is already available. The anthropological rationale behind the Children Project is that children between the ages 5 and 12 carry the local signal of human bio-available trace element concentrations in their bones, and allow mapping the local signature.



©J.L. Boldsen

The approximate location of 45 medieval and early modern cemetery sites used in the *Children Project*.

Anthropological data collection in progress. Dorthe (left) and Vicki working on the *Health in Medieval Viborg Project*.

Health in Medieval Viborg Project

So far approximately 500 skeletons of the 1,400 medieval skeletons available have been examined. The skeletons were excavated at more than 15 different sites from within the medieval town or from rural areas in the vicinity of Viborg. Data is collected using a very elaborate five page recording sheet. The scorings are focused on three different sets of observations: First, there are the new age estimation characters; these have been adopted from the on-going NIJ age estimation project. Second set are the scores of disability among the adults and children, and third scorings of dental development and long bone maturation in children. The anthropological data will be analyzed within the temporal and socioeconomic frame of the cemeteries provided by the archaeological sources and through the results of the chemical analyses that makes it possible to identify migrants and locals in medieval Viborg. The aim is to test hypotheses regarding among others the impact of social change on disease susceptibility and differential mortality.

2017 is a good harvest. New students aplenty!

This autumn ADBOU is popular with the students. Numbers increased for years, but we didn't expect 18 participants for our class 'Basics in Biological Anthropology'. We are happy with the growing interest in our field! The students come from a variety of backgrounds, like the usual archaeologists and biologists, but also from studies like Spanish, English, and even philosophy. While the high number of people required some changes in Peter's teaching mode, two months into the semester we are delighted that we are working with such a nice group of bright and enthusiastic students.



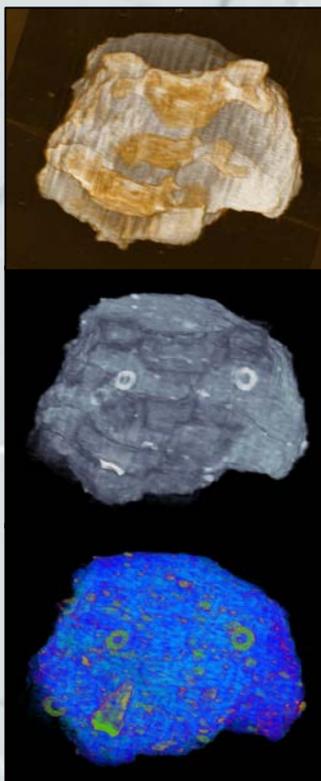
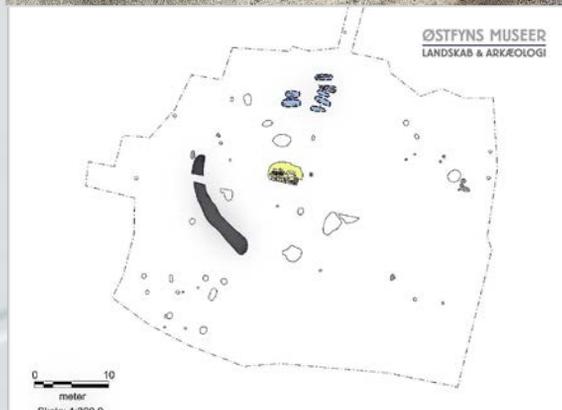
Bronze Age excavation at Kalvehavegård

During a rescue excavation last year Malene Refshauge Beck from Østfyns Museer excavated four burials at the center (two cremations) and base (two inhumations) of a burial mound close to Kerteminde Fjord. The two skeletons have subsequently been dated to Danish Bronze Age period II (ca. BC 1500 - 1300). In September 2017, when the mound could be fully excavated with funding from Slots- og Kulturstyrelsen, Svenja joined the team. She excavated the remaining six graves and will execute the planned osteological analysis and scanning of all burials, including the cremations.

All individuals were buried with their heads in the west, and probably tightly wrapped in some cloth, hide, or seaweed. The graves were shallow, with stones marking the outline of most burials. They contained no metal and few grave goods of organic material; only one person was buried with a necklace made of shell beads. A total number of 12 individuals has been found, comprising of eight inhumations, two cremations, and a few loose found bones. The skeletons are for the most part well preserved and represent all age groups - adults, children, and even a newborn.

Proposed future scientific analyses by other institutions (e.g. methods examining aDNA, isotopes, mycobacteria, or mycolic acids) will be arranged in agreement and with the permission of Østfyns Museer.

The find of inhumation graves from that time period is unusual, and by analysing the skeletons thoroughly we hope to get valuable insights into the life of the inhabitants of Bronze Age Denmark.



First CT scans of archaeological material

A surprise find at Kalvehavegård gave us the welcome chance to try the scanner on (partly organic) archaeological material. Most of the remains of the necklace made of shell beads were picked up by a conservator on site, but not all pieces could be rescued in the field. A block held together by sand and clay was first scanned and later excavated by Svenja.

The scan revealed three vertebrae, a tooth, and four complete beads as well as several shell fragments. Different ways of enhancing the contrast or histogram (called *windowing*) of the 3D model highlight particular structures: either the bone or the denser material like the beads and the tooth can be seen in more detail. Meticulous excavation in the lab showed that all beads had been detected.

This clearly shows the potential of using the scanner for a variety of tasks apart from its main purpose – scanning bones. From now on we offer CT scanning as additional service to museums.



The “New Transition Analysis”

Our forensic anthropology project funded by the National Institute of Justice (USA), and carried out in collaboration with Penn State University and Mercyhurst University, transitions itself - into the stage of analysis.

In August Jesper and Svenja went to Pretoria, South Africa, where they (together with the American colleagues) collected data from skeletons for a last time during this project. From now on they will be busy at home with statistics: modeling and analyzing the transitions, and choosing the most meaningful indicators.

The final work will take place at Mercyhurst University, where the programing for the new version of the software will be done by Prof. Ousley. The end product will be a computer program accompanied by an illustrated scoring manual. It will be made publicly available through FORDISC, a program used extensively in medicolegal investigations involving skeletal remains. Apart from its use in modern forensics it will hugely contribute to the analyses of archeological material, since it allows to estimate age from badly preserved skeletons, and is able to identify the older individuals in historical populations, both a necessity for meaningful work in paleoepidemiology and -demography.

The more, the merrier – ADBOU welcomes a new student aid

We warmly welcome Mette Alexandersen. Since August she is employed in TheCityDwellers project, where she mainly washes bones from the Nytorv in Viborg, but also helps with osteological reports. Mette finished her BA in history with a minor in biological anthropology at SDU in summer 2017. Now she is studying for her MA (kandidatuddannelse) in history. We are very happy to have her back with us!



**21ST CONGRESS
OF THE EUROPEAN
ANTHROPOLOGICAL ASSOCIATION**

Population ageing - causes and consequences • Population history • aDNA
Forensic Anthropology • Child growth and development • Disease in the past
Paleoanthropology • Bio-Archaeology • Other

Last but not least: The coming 21st Congress of the European Anthropological Association

We are very excited to hold the biannual meeting of the EAA in Odense! Thanks to Bodil, our homepage for the conference is now up and running at this address:

www.eaa2018.com

Registration is open with online webpay at ‘early bird-prices’. We have outlined the rules for abstract submission, which will be open from 1st December 2017, and we are looking forward to receiving input for the scientific program and suggestions for symposia. The next step will be advertisement and direct contact to EAA-members. Shortly we will also be on Facebook, and use that platform for additional communication.