



Logo for *TheCityDwellers*

Background

The background for this series of newsletter is that FKK (the research council for culture and communication) has granted 4482000 DKK to the project: TheCityDwellers – Migration and Health in Medieval Viborg. This occasional newsletter will be circulated to our partners in Denmark and abroad and to our collaborators on this and other projects, and it will be published on <http://adbou.dk/> and on Facebook (<https://www.facebook.com/search/top/?q=ADBOU>). Newsletters will appear when there is news to communicate; and this first issue will primarily give information about the structure of the project group and our plans.

Project group

TheCityDwellers project is housed at the Unit of Anthropology (ADBOU), Department of Forensic Medicine, University of Southern Denmark, and at Cultural Heritage and Archaeometric Research Team (CHART), Department of Physics, Chemistry and Pharmacy, University of Southern Denmark.

Principal investigator:	Professor Jesper Boldsen, ADBOU
Co-principal investigator:	Associate professor Kaare Lund Rasmussen, CHART
Collaborators:	Curator Jesper Hjermand, Viborg Museum Curator Lars Agersnap Larsen, Viborg Museum
Partners:	Professor George Milner, Penn State University Professor Robert Hoppa, University of Manitoba
Other:	Postdoc Dorthe Pedersen, ADBOU Academic technician Lilian Skytte, CHART PhD student Vicki Kristensen, ADBOU Laboratory technician Pia Klingenberg Hausmann, CHART Secretary Bodil Theilade, ADBOU

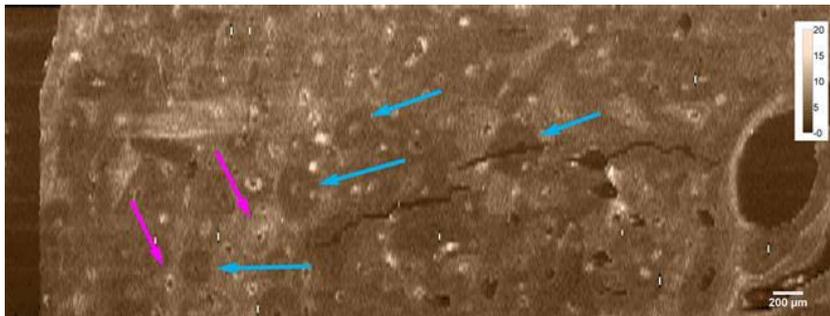
Project summary

Using excavated skeletons, this project explores the consequences of environmental, social and economic change on human migration, mortality and morbidity in a tightly defined historical context. Medieval Viborg offers a unique opportunity to identify how economic, social and cultural change influenced the life, disease and mobility of people at the dawn of the modern era. A novel approach in determining where people have been at different times in their past will be developed and applied to the Viborg skeletons. This will, in combination with a tight control over the dating of individual burials, permit osteological observations to be connected to specific historical tendencies in population migration. The skeletons are stored in the ADBOU skeletal collection in University of Southern Denmark. This means that the Viborg

skeletons already are part of a BIO-BANK. This aspect of the collection will be developed further facilitating the testing of hypotheses using individual life history data regarding the impact of environmental and social change on disease susceptibility and differential mortality. The BIO-BANK is a repository for systematically collected skeletons. Data from this collection is available for researchers worldwide that will be supplemented over time by additional complementary projects. These materials are preserved for yet unforeseen future research. The proposed research will provide a fundamentally new approach to the demographic and epidemiological processes that created our modern world. In addition, it will create a new basis for understanding the interaction between people, both as individuals and at a population level.

Research plans

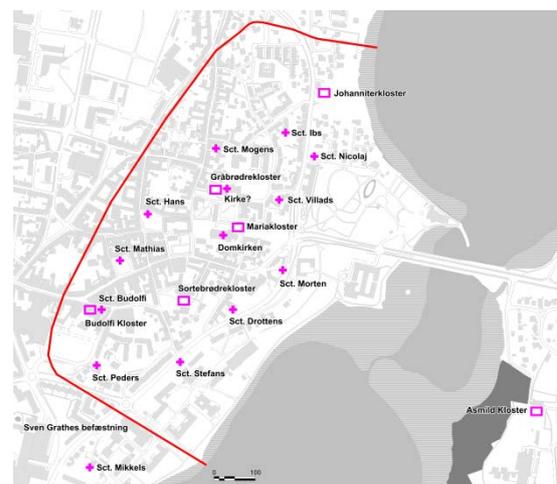
There are two main research goals in TheCityDwellers project. The first and most methodological consists in the creation of a map of (western) Denmark describing the local and regional variation of bio-available trace elements. This will be done by analyzing bone samples and cross sections of long bones of children aged between 5 and 12 years from all excavated cemetery sites. Multiple trace elements will be used to



Barium concentration in a histological cut of a mid-shaft femur. The blue arrows point at osteons with a low Ba content and the red arrows at osteons with high Ba content. This individual had during life been under two different Ba-concentration regimes; i.e. she lived in different places.

generate a multidimensional provenance determination matrix, which will be immensely more informative than one-dimensional methods like strontium isotopes analysis. This work will form the background for the second research goal.

The second goal is to determine the health and mortality consequences of migration during life. The material for these analyses will primarily be skeletons from the many excavated cemetery sites in Viborg. Using mappings of trace element concentrations on a histological level to determine the mobility patterns of individuals, it will be possible to define both historical cohort and case-control studies, which can provide information about the association between disease and early death in Medieval Viborg.



Map of contemporary Viborg showing the medieval ecclesiastical institutions

The two goals go hand in hand; one of them would not be justifiable without the other. The results of the stipulated analyses will benefit greatly by including all the historical and archaeological information that Viborg Museum can provide. In future newsletters the more actual research plans and the timelines of research will be outlined.

Timeline

The project will start during the autumn of 2016 and the first employments will take place either October 1st, 2016 or January 1st, 2017.

The selection of samples for the trace element mapping program will be initiated during the autumn of 2016 and the main chemical analyses of them will take place during 2017.

The osteological analysis of the Viborg skeletons will start in January 2017 and last until the autumn of 2019.

Partners will visit and participate in the research in the spring of 2017 and during the summer breaks.

Contact

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