



Analytical, Environmental and Geo-Chemistry

has the honor to invite you to the public defense of the PhD thesis of

Tessi Löffelmann

to obtain the degree of Doctor of Interdisciplinary Studies

Joint PhD with Durham University

Title of the PhD thesis:

There and back again - Mobility and burial rites in early medieval England c. AD 300-1000: An analysis of strontium isotopes in cremated human remains

Promotors:

Prof. dr. Christophe Snoeck (VUB)

Prof. dr. Philippe Claeys (VUB)

Prof. dr. Janet Montgomery (Durham University)

Prof. dr. Sarah Semple (Durham University)

The defense will take place on
Friday, March 3, 2023 at 16h in auditorium D.2.01.

The defense will be a hybrid event and can be followed via livestream.

<https://zoom.us/j/92196246402?pwd=cW9neElydmY5VnkxanpNM0E2aUt1UT09>

Meeting ID: 921 9624 6402

Passcode: aqZ8Gr

Members of the jury

Prof. dr. David Petts (Durham University, chair)

Prof. dr. Steven Goderis (VUB, secretary)

Dr. Richard Madgwick (Cardiff University)

Prof. dr. Duncan Sayer (University of Central Lancashire)

Curriculum vitae

I graduated with a MA Joint Honours degree in Archaeology and History from Glasgow University in 2013 and subsequently completed an MSc in Palaeopathology at Durham University with Distinction. After this, I worked in commercial archaeology for two years until 2016 when I started my co-tutelle PhD part-time. My research was funded by the Arts and Humanities Research Council UK (Northern Bridge) and the VUB and investigates mobility in early medieval Britain (c. AD 300-1000) with a focus on cremated human remains.

Abstract of the PhD research

Observable changes in funerary rites in early medieval Britain culminate in the re-appearance of cremation in the 5th and 6th centuries, and again briefly in the 9th century. These changes are traditionally linked to questions of mobility and encompass many thousands of individuals. Analyses making use of isotopic systems have been immensely successful in the exploration of inhumed, unburnt remains in the last few decades - touching on the diet, mobility, and the lifecycle of individuals, and recent work on cremated remains has shown that some of these isotope analyses are also reliable when conducted on calcined bone. Following on from this work, this thesis aims to test whether strontium isotope analysis on cremated remains can be used to extract new information from early medieval cemeteries to investigate such aspects as mobility, animal-human relationships, and social practice of the cremating communities. The project uses multi-skeletal sampling to explore the mobility history of cremated individuals buried at the 5th to 7th century mixed-rite cemeteries at Ingleby Barwick, Stockton-on-Tees, and Cleatham, North Lincolnshire, as well as at the 9th century Scandinavian barrow cemetery at Heath Wood, Ingleby, Derbyshire. Plants within 25km catchments around the sites were sampled to establish the variation of bioavailable $^{87}\text{Sr}/^{86}\text{Sr}$, ameliorating the sample density and therefore precision of existing Sr isoscapes.

The application of strontium isotope analysis uncovered what appears to be regional mobility amongst the cremating communities at Cleatham and Ingleby Barwick, and long-distance mobility from Scandinavia at Heath Wood. At Cleatham, the larger sample of individuals (54 humans and 4 animals) also allowed us to observe that women, born outside the 25km catchment, moved more frequently into the area than men. This was noted to pertain especially to the early phase of use of the cemetery and highlights that trends in mobility may change across time. Animal-human relationships were explored with reference to the strontium isotope results and agency/personhood theory at all three case-study sites. This work is the first of its kind with a focus on the early medieval period in Britain and its results show that the method has enormous potential to unlock aspects of mobility, animal-human relationships, and social practice of the cremating communities.