FORSKNINGSETISKE KOMITEER

De nasjonale forskningsetiske komiteer
Prinsens gate 18
P.b. 522 Sentrum, 0105 Oslo
Tlf.: 23 31 83 00
Faks: 23 31 83 01
www.etikkom.no

Lisette Kootker
lisette.kootker@vu.nl

Our ref.: 2012/138 Date: 5 October, 2012

Response concerning "Arctic Cold-Case: Multi-Isotope Investigations of 17th and 18th Century Dutch Whalers from Ytre Norskøya, Svalbard"

Presentation
The applicant is Lisette Kootker, MSc, Institute for Geo and Bioarchaeology, Vrije Universiteit (VU) Amsterdam. Her research partner in the project is Prof. Dr. Gareth Davies, Department of Petrology, VU Amsterdam.

The project will be carried out at the Institute for Geo- and Bioarchaeology, in cooperation with the Petrology Department. It will start as soon as possible, with a first preliminary report published before the end of November 2012.

All sample preparations and analyses will be performed by the applicant, supervised by the research partner. In addition, 3 high school students will follow the project and write their own report on it.

The results will be published in international peer-reviewed journals. If they manage to complete a solid report in time, the three students will be encouraged to present their work at a meeting of the National Geographic Society in St. Petersburg in December 2012.

In the 1980s, 185 well-preserved skeletons of Dutch whalers from the 17th and 18th centuries were found at Ytre Norskøya; 50 of these were excavated. The aim of the project is to

- gain more insight into the diet and provenance of these individuals,
- contribute to a better understanding of the historical and cultural roots of the Dutch people,
- as well as provide an important complement to the existing physical anthropological dataset.

The method is as follows. 20 skeletons will be (or have been) chosen for multi-isotopic analysis (strontium, oxygen, carbon, and nitrogen) in order to investigate the geographical origins of the individuals and establish their palaeodiet.

Strontium and oxygen isotopes are used for provenancing the source of the major dietary input. The strontium isotope signature of geological materials is taken up in our food chain from eroding geological bedrock through soils, to vegetation and livestock. It can be related to soil surface composition and the age of the rock in different areas of Europe. Oxygen isotopes primarily vary with climate (temperature) and precipitation gradients throughout Europe, with subtle effects introduced by altitude and water source. They are incorporated into tooth enamel and bone tissue through ingestion of drinking water, absorbed water in food and through inhalation.

Carbon and nitrogen isotopes are used for dietary reconstruction. Carbon stable isotope ratios mainly reflect differences between plants using different pathways of carbon fixation and their consumers, or between foods originating from terrestrial and marine ecosystems. Nitrogen isotopes are used to gain information about the relative importance of plant and animal protein in the diet. Together, they reflect the dietary average of the main sources of protein consumption at the time of bone (re)mineralization, i.e., the last 10-30+ years of an individual's life.

The results will be compared with similar results from individuals from the "Hoogland" Church in Leiden, enabling a comparison between the whalers and Dutch citizens on land.

The plan is to utilize the following material: the skeletons from Ytre Norskøya were investigated by Dutch researchers in the 1980s with regard to a physical anthropological examination, and histological samples were taken for additional microscopical palaeopathological research. For the present study, 20 teeth (preferably the first molars) and 20 bone fragments (from the femur or humerus) from 20 individuals will be collected, preferably from individuals who have already been sampled for histological analyses. For strontium and oxygen isotope analyses respectively, 2-3 mg and 10 mg of enamel powder is needed. For carbon and nitrogen isotope analyses, 1 gram of bone (ca. 2x2 cm) is needed.

Sampling will be executed by or in cooperation with a staff member from the Svalbard Museum where the skeletons are being kept. If done by a staff member from the museum, a sample guideline will be provided. Samples will then be sent to the VU University by airmail for analysis. The sampled teeth will be returned to the museum within 8 weeks of receipt, while the bone samples will be used in their entirety.

All costs will be covered by VU Amsterdam.

Discussion of research ethical considerations
The relevant ethical considerations are described by the applicant as arising mainly from the archaeological excavation of human remains. Since the remains in question

have already been excavated, investigated and sometimes sampled, the project is thus not seen as giving rise to such ethical issues.

One major research ethical dimension, however, concerns destructive research on unique material. This relates both to respect for the human remains and to respect for future research. It is responsible to carry out such research only if the research can be expected to yield new insights of some importance.

In the present case, the need to carry out the research lacks such explicit justification. The reason is that the answers to the questions to be researched seem to be available by other, non-intrusive means, and to already have been addressed by existing research. Nor does the project description give the impression that the researcher has looked into this existing material.

(1) The project's specified research question, concerning the provenance and diet of the Dutch whalers, is answered in detail in existing historical material. Concerning provenance, e.g., historical records inform us of which towns the individuals came from and even their names (cf. Conway, *No Man's Land, A History of Spitsbergen from its Discovery in 1596 to the Beginning of the Scientific Exploration of the Country*, pp 38-232, London 1906; Hessel Gerritsz, *Historie du Pays nomme Spitsberghe* (1613); Zorgdrager, *Bloeyende Opkomst der Aloude en Hedendaagsche Groenlandsche Visschery*, Amsterdam 1720).

(2) Samples have already been taken from the population in question. The Dutch researcher George J.R. Maat (now Professor Emeritus at Leiden University) and others have been involved in taking such samples at least twice: ca 1980/1981 and 2004/2005. The likely relevance of these existing results is not mentioned, and would need to be addressed.

In order for this project to be ethically advisable, it would have to be argued convincingly that new and important insights can be gained from it (i.e., results not available from existing sources like the two listed above), before proceeding to perform destructive research on a relatively unique material. Such arguments are not broached in the material received by the committee. The committee therefore cannot recommend that this research be carried out.

Should such arguments be forthcoming, the following points should also be addressed with a view to an ethical evaluation.

(3) With the exception of the claims about diet and provenance, the aims of the research are at present not specified at all (contributing to a better understanding of "historical and cultural roots" and providing "new details

about the whalers" remain entirely general descriptions); such specifications, linking methodology and aims, should be articulated.

(4) Alongside a presentation of how the research would fit into existing research, there should also be a presentation of how the proposed project fits into Lisette Kootker's PhD project and of how senior researchers will partake in the critical phases of sampling and analysis.

Provided these four dimensions of the research are convincingly argued, the committee will be happy to evaluate the project anew.

On a final note, it is the committee's understanding that the three high school students mentioned in the description would only be included as observers and dialogue partners, while all sampling and analysis would be performed only by specialized researchers. Given this caveat, the inclusion of students in the project can be judged to be an asset to the project.

Anne Karin Hufthammer
Chair, National Committee for the evaluation of Research on Human Remains

Hallvard J. Fossheim
Director, NESH/ National Committee for the evaluation of Research on Human Remains