Investigating sociocultural patterns of the Mesolithic hunter-gatherers of Téviec and Hoëdic, Brittany, France: an archeogenomic approach

Luciana G. Simoes*†[1], Rita Peyroteo Stjerna*[1,2], Darshan Chetty*[1], Amélie Vialet*[3], Grégor Marchand[4], Torsten Günther[1], and Mattias Jakobsson‡[1]

[1]Human Evolution, Dep. Organismal Biology, Uppsala Universitet – Norbyvägen 18C, 752 36 Uppsala, Sweden

[2]Centro de Arqueologia da Universidade de Lisboa, Portugal (UNIARQ) – Portugal

[3]Muséum national d'Histoire naturelle, UMR 7194 (UPVD) – Museum National d'Histoire Naturelle : UMR7194 – France

[4]Centre de Recherche en Archéologie, Archéosciences, Histoire, UMR6566 (CReAAH) – Universite de Rennes 1 : UMR6566 – Université de Rennes 1 -35042 Rennes Cedex, France

Abstract

The Mesolithic sites of Téviec and Hoëdic in southern Brittany, France are known for the unusually well-preserved human burials, along with the Mesolithic coastal cemeteries of southern Scandinavia and Portugal. They are crucial for investigating sociocultural and demographic processes in the Late Mesolithic of Atlantic Europe and critical in any discussion about the expansion of the Neolithic in Brittany.
We conducted a palaeogenomic study of nine human burials in Téviec and Hoëdic. All individuals yielded authentic ancient DNA, which reflects the good preservation of the human remains at these sites. We present the results of ancient DNA analysis along with new and direct radiocarbon dates and stable isotopes of carbon and nitrogen.

We use this new dataset to revisit the 2001 paper "Dating Women and Becoming Farmers" by Schulting and Richards[1]. In this pioneer study, the authors presented an inter- and intra-site analysis of the stable isotopic evidence and showed that while the individuals buried in Hoëdic obtained 70 to 80% of their protein from marine sources, the people in Téviec consumed equal amounts of terrestrial and marine foods. Although the neighbouring sites were contemporaneous, they had different diets and potentially different subsistence strategies. To investigate if these results are reflected onto the patterns of genetic relatedness, we compare intra- and inter-site genetic similarity, by describing fine-scale population structure. We also analyse kin relationships of the buried individuals at Téviec and Hoëdic.

Furthermore, Schulting and Richards found that at both sites the diet of young females was more reliant on terrestrial protein, shifting towards the group's marine-terrestrial values at older ages. The authors suggested that the differences observed in the stable isotopes may result from an exogamous, patrilocal marriage pattern, with women marrying in from

*Speaker

†Corresponding author: luciana.simoes@ebc.uu.se

‡Corresponding author: mattias.jakobsson@ebc.uu.se

other locations, including some more inland communities. Due to the chronological overlap between these hunter-gatherer burials and pioneer farmer sites in the region, it was also suggested that some of these women could originate from Neolithic groups. We test this hypothesis by addressing potential differences in ancestry of biologically identified males and females at both sites, by comparison with previously published datasets, to investigate potential patrilocal marriage systems and Mesolithic-Neolithic contacts.

This paper follows on the footsteps of pioneer studies at Téviec and Hoëdic and aims to provide new elements about sociocultural behaviour patterns of the last hunter-gatherer societies in western France.

Rick Schulting and Michael Richards, 'Dating Women and Becoming Farmers: New Paleodietary and AMS Dating Evidence from Breton Mesolithic Cemeteries of Téviec and Hoëdic', *Journal of Anthropological Archaeology* 20 (2001): 314–44.

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