
Forests, wild game and humans -paleoecological aspects of large herbivore foraging reflected in stable isotopes and dendrological indications of bark-stripping and its implications for Mesolithic hunting

Ola Magnell*^{†1}, Johannes Edvardsson, Anton Hansson², Björn Nilsson³, and Arne Sjöström³

¹Arkeologerna, National History Museums, /Lund University – Sweden

²Department of Geology, Lund University – Sweden

³Department of Archaeology and Ancient History, Lund University – Sweden

Abstract

The submerged seascapes with refuse layers containing animal bones and *in situ* standing rooted pine trees from the low-stand sea level of the Baltic Sea at Haväng in southeastern Sweden reveals paleoecological conditions for animals and humans in the Early Mesolithic coastal zone. Stable isotope signatures ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) of bones from large herbivores (aurochs, moose and red deer) have been analyzed in order to study foraging habitats over time from the open woodlands of the Late Preboreal (ca 8 600 BC) to climax forest of the Late Atlantic Chronozone (ca 5000 BC), but also between the coastal and inland zones. The result indicates changes of foraging habitats related to increasing forest cover/canopy effect ($\delta^{13}\text{C}$), but possibly a more open forests in the coastal zones. All three taxa of large herbivores seem to have responded differently to changes of forest environment reflected in their foraging ($\delta^{15}\text{N}$). Dendrological damages on submerged pine trees reflecting bark-stripping by large herbivores have resulted in new approach to study densities of Mesolithic wild game populations and indicates relatively high abundance of large herbivores in the coastal zone during the Early Mesolithic. The impact of the environmental changes on the populations of large herbivores and its implications for the hunting by the Mesolithic hunter-gatherers will also be discussed.

Keywords: Paleoenvironment, wild game, stable isotopes, bark stripping, zooarchaeology, South Scandinavia

*Speaker

[†]Corresponding author: ola.magnell@arkeologerna.com