## Pioneer the frontier. Red deer antler headdresses and the beginning of the Mesolithic in the Lowlands

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## Abstract

So-called antler headdresses, red deer skulls with antlers specifically modified by humans are a phenomenon typical of early Mesolithic sites in the northern European lowlands. In addition to clearly processed pieces with artificial perforations, antlers split lengthways and heavy processing of the surface, there are also pieces that have only one type of these modifications and others in which human processing is hardly verifiable. Although a comprehensive study of these so-called deer antler headdresses has so far not been carried out, the various artefacts are often discussed functionally depending on other findings from this group. We present here a synthetic study of corresponding objects from 10 sites and layers, among them finds from Star Carr, Friesack 4, and Bedburg-Königshoven.

Based on zooarchaeological assessment of the assemblages and possible headdresses, their technological description, and experimental work, we propose a polythetic headdress definition based on morphometric and technological features. Applying this definition allows for the identification of only a handful of artefacts from five sites that can well be distinguished from otherwise treated cranial deer bones (e.g. butchering waste (Wild 2014), so-called (bone or deer) ring-frontlets (David et al. 2016), or the a wide range of other antler frontlets (Elliott et al. 2018)).

As chronological data was lacking, we directly dated finds from Hohen Viecheln and Berlin-Biesdorf. Further direct and contextual dates for Bedburg-Königshoven and Star Carr allow for modelling the headdress chronology and identifies them as a short-termed earliest Mesolithic phenomenon that can be correlated with the spread of Mesolithic lifeways into lowland Northern Europe after the Preboreal Oscillation 1 (PBO1).

Ultimately the new data offers potential for re-investigating the functional interpretation of this group of artefacts and help to better understand existing models on human-red deer interactions during the Early Mesolithic.

Keywords: Preboreal, Technology, Rituals, northern Europe, Typology

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