Pioneers in a changing world – investigating the elusive settlement and mobility patterns of north European hunter-gather groups from the end of the last Ice Age

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Abstract
Late Pleistocene hunter-gatherer groups had to cope with extensive climatic changes. When glaciers melted and water levels rose, large areas were flooded. Familiar landscapes disappeared whereas other areas were slowly made available for colonization. Human groups exploiting these pristine territories were few and their settlements scant. Tracking the movements of these elusive pioneers requires the collaborative effort of several scientific disciplines.

Keywords
archaeological prospection; Late Paleolithic; mobility; settlement patterns; taphonomy

Introduction

The focal point of this paper is the well-known statement that you cannot eat your cake and have it or translated into archaeological terms you cannot excavate your site and keep it. Field archaeology is highly destructive to prehistoric sites in a way that is inverse proportional to the degree of preservation: if very little is preserved – an excavation will destroy the rest. Thus, the conscientious archaeologist sometimes faces a dilemma encompassing an immediate need to excavate for rescue purposes, a desire to investigate carefully and meticulously for research purposes, and a request to protect and preserve prehistoric sites in situ for future generations. But are these really true alternatives in current prehistoric hunter-gatherer archaeology, and can field archaeology be non-destructive or even protective? This paper emphasizes that in contemporary archaeological research design it is mandatory to incorporate rescue archaeological considerations – especially with respect to sites characterized by a low general visibility.

Material

The paper will proceed from and address these issues with specific reference to north European Late Upper Paleolithic and Early Mesolithic archaeology. In an ongoing research project "Pioneers of the North" (funded by the German Research Foundation as part of the Collaborative Research Centre CRC1266 "Scales of Transformation") we investigate the timing and nature of hunter-gatherer colonization in relation to the environmental preconditions in Northern Europe during the period c. 15,000-9,500 BCE. Our geographic area of study includes the terrestrial part of the north European plain including southern Scandinavia, as well as the past landscapes that are now flooded by the North Atlantic and the Baltic Sea. Select examples highlighting the taphonomic difficulties pertaining to the preservation and accordingly localization of archaeological remains from these pioneers will serve as basis for the discussion.

Discussion

There are a few important premises guiding the discussion. Evidently, prehistoric hunter-gatherer groups surviving the arctic or subarctic conditions of the late Weichselian Ice Age must have been strongly dependent on the natural environment. Considering the environmental conditions and the marked seasonal variation in climate, flora, and fauna – we also must assume that mobility and settlement strategies may have been quite complex at the time (Eriksen 2002; Hamer et al. 2019). Thus, a broad geographic approach is crucial to our understanding of these aspects. If the geographical area of investigation is too limited, we will miss the overall context within which to interpret the patterning, and we may even miss vital aspects of the patterns themselves.

By reference to ethnographical observations pertaining to subrecent hunter-gatherer societies, the prehistoric hunter-gatherers in question are habitually described as being highly mobile, demographically fluctuating and exhibiting a more or less explicit seasonal behavior. Unfortunately, such a lifestyle frequently results in very few traces left behind, and hence a very low visibility of past settlement and mobility patterns. Well defined structural remains (fireplaces, tent rings, stone settings, etc.) are rare and inconspicuous by comparison to those left by later and more sedentary societies. Moreover, late Weichselian conditions for preservation are often problematic due to a variety of periglacial landscape factors (e.g., solifluction, aeolian erosion, lack of soil formation, etc.). Thus, Late Paleolithic living floors or cultural layers, if at all present, may be no more than a few millimeters thin, or they may appear as a more or less diffuse horizon of subsoil material with a scattering of archaeological remains.

Conclusions

Obviously, such elusive settlement remains are difficult to identify by traditional archaeological prospection (e.g., machine trenching) (Eriksen 1999). Depending on the resources available for fieldwork as well as the local topography and soil conditions, supplementary reconnaissance walks in ploughed soil, small test pits dug by hand, systematic corings, or even very narrow machine trenches may be used to clarify stratigraphic relationships and aid in the localization of sites (Eriksen 2001, 2006). However, as local archaeological authorities everywhere are subject to an increasing economic strain, with manpower often being a limiting factor, there also is a manifest need for faster and more efficient methods of investigation. In conclusion, it is argued that a combination of conventional archaeological field-methods and advanced geophysical prospection may hold a significant potential for negotiating this need (Corradini et al. 2020).

Acknowledgments

The research was mainly conducted in the context of subproject B1 "Pioneers of the North: Transitions and Transformations in Northern Europe Evidenced by High-Resolution Datasets (ca. 15000–9500 BCE)" within the Collaborative Research Centre 1266 "Scales of Transformation – Human-environmental interaction in prehistoric and archaic societies" of the German Research Foundation (DFG, German Research Foundation, project number 290391021-SFB 1266).

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