

Red deer antler punches in the Terminal Mesolithic Ertebølle Culture.

Use wear traces and experimental studies on worked antler tines from the site of Grube - Rosenhof LA 58 (Northern Germany)

Zwischenstücke zur Artefaktherstellung (Punches) aus Rothirschgeweih aus der spätmesolithischen Ertebølle Kultur. Gebrauchsspurenuntersuchungen und Experimente zu bearbeiteten Geweihsprossen von der Fundstelle Grube – Rosenhof LA 58 (Norddeutschland)

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ABSTRACT - The technological concept for flint blade production by indirect percussion (punch technique) in the terminal Mesolithic Ertebølle Culture in Southern Scandinavia seems quite well understood. Several worked antler tines were detected in the bone and antler inventories from coastal sites which form parts of the flint working tool kit used by Ertebølle knappers. Experiments were carried out by Danish and Swedish modern flint knappers, but their results have not been proved on materials from northern Germany. Based on technological aspects and use wear traces this study presents a selection of worked antler tines which are interpreted as punches, conducted from the coastal site of Grube-Rosenhof LA 58 in eastern Schleswig-Holstein. It will be stated that such tools were particular common in northern Germany and opened new possibilities for shaping flint as the most important stone material used by Stone Age hunters and farmers. The recorded sample of worked antler tines clearly demonstrates that punch technique was utilized within the terminal Mesolithic of northern Germany for serial production of regular blades. The investigation and knapping experiments are part of a larger project on flint blade technology in Ertebølle Culture (and early Neolithic) where worked antler tines from other northern German coastal sites should be included.

ZUSAMMENFASSUNG - Das technologische Konzept zur Klingenerstellung mittels indirekter Schlagtechnik (Punchtechnik oder Zwischenstücktechnik) in der endmesolithischen Ertebølle Kultur Südkandinaviens ist weitestgehend bekannt. Aus den Knochen- und Geweihinventaren der Küstenplätze stammen zahlreiche abgetrennte Geweihsprossen, die zum Standardrepertoire der ertebøllezeitlichen Flintschläger gehören. Versuche zur experimentellen Klingenerzeugung wurden verschiedentlich von dänischen und schwedischen Flintschlägern durchgeführt, allerdings sind ihre Ergebnisse nicht an bearbeiteten Geweihsprossen von norddeutschen Fundstellen überprüft worden. Basierend auf technologischen Merkmalen und Gebrauchsspurenanalysen wird in der vorliegenden Studie eine Auswahl von bearbeiteten Geweihsprossen von der Fundstelle Grube-Rosenhof LA 58 (Ostholstein) vorgestellt, die als Zwischenstücke zur indirekten Klingenerstellung interpretiert werden. Solche Geweihsprossen sind in den steinzeitlichen Küsteninventaren Norddeutschlands sehr zahlreich und ermöglichten den steinzeitlichen Jägern und Bauerngesellschaften eine zielgerichtete Bearbeitung ihres bevorzugtesten Rohstoffes, des Feuersteins. Das umfangreiche Ensemble von bearbeiteten Geweihsprossen verdeutlicht, dass die Zwischenstücktechnik im Endmesolithikum Norddeutschlands die gängige Methode darstellte, um regelmäßiges Klingen in Serie zu erzeugen. Die hier vorgestellte Studie und die durchgeführten Schlagexperimente sind Teil eines Gemeinschaftsprojektes zur Untersuchung der ertebøllezeitlichen und frühneolithischen Klingentechnik, in die auch bearbeitete Geweihsprossen von anderen Fundplätzen einbezogen werden.

KEYWORDS - Northern Germany, Terminal Mesolithic, Ertebølle, worked antler tines, punch, use wear, flint knapping experiments
 Norddeutschland, Endmesolithikum, Ertebølle Kultur, bearbeitete Geweihsprossen, Geweihzwischenstücke, Gebrauchsspurenanalysen, Flintschlagexperimente

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Introduction

The site of Grube-Rosenhof LA 58 (abbreviated as Rosenhof) is located in the eastern part of Schleswig-Holstein (Fig. 1) and was discovered in 1968 and partially investigated between 1969 and 1980 by H. Schwabedissen from Cologne University (Schwabedissen 1994). During this excavation an overall area of c. 330 m² were investigated systematically. More than 100 conventional ¹⁴C dates suggested that the coastal settlement was inhabited from c. 5'000 until 3'900 calBC, meaning that it covered both the preceramic and ceramic stages of the Ertebølle Culture. But some questions remained unclear, for instance at which time the first pottery was introduced and when the early Neolithic period started and pointed-base vessels and oval lamps were replaced by

funnel beakers. Thus, in 2001 and 2002 some more 60 m² were investigated from the refuse area of the settlement (new excavation, Rosenhof area A) and later published by J. Goldhammer in a monograph (Goldhammer 2008).

These results have led to a reinterpretation of Schwabedissen's findings, as the earliest AMS-¹⁴C dates from the basal find layers do not provide any indication of an occupation prior to 4'900/4'800 calBC (ibid. 2008). Direct sampling of antler axes and charred food remains on ceramic vessels has dated the introduction of pottery and T-shaped axes to around 4'600 calBC.

The material from the new excavation comprises approximately 320 pottery fragments which belong to thick-walled, coarsely tempered pointed-base vessels. The number of lithic artefacts totals c. 5'500 pieces,

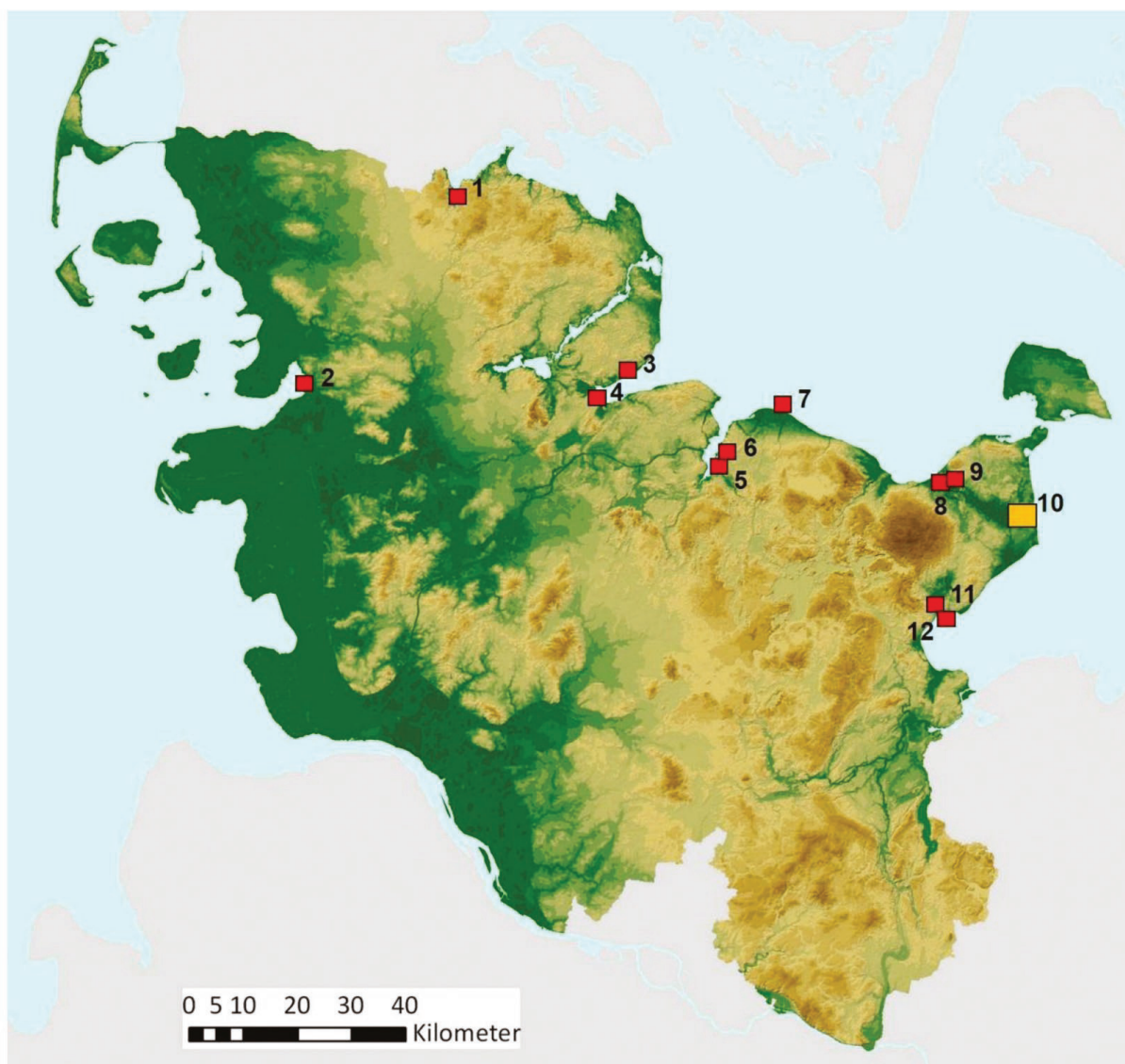


Fig. 1. Coastal sites of the Ertebølle Culture with red deer antler punches in Schleswig-Holstein. 1 - Flensburg LA 105. 2 - Husum LA 11. 3 - Karlsminde LA 86. 4 - Eckernförde LA 29. 5 - Kiel-Ellerbek LA 1. 6 - Neumühlen-Dietrichsdorf LA 1. 7 - Schönberg LA 7. 8 - Wangels LA 505. 9 - Wangels LA 223. 10 - Grube-Rosenhof LA 58. 11 - Neustadt LA 156. 12 - Neustadt LA 159.

Abb. 1. Küstenfundstellen der Ertebølle Kultur mit Zwischenstücken (Punches) aus Rothirschgeweih in Schleswig-Holstein.