Beyond structures: A microscale multi-proxy approach to understanding the social dimensions of tool using areas at the Early Mesolithic site of Star Carr, UK

Jessica Bates[*1], Nicky Milner[1], Aimée Little[1], and Chantal Conneller[*2]

[1]University of York [York, UK] – Heslington, York, YO10 5DD, United Kingdom
[2]The University of Manchester [Manchester] – Oxford Rd, Manchester M13 9PL, United Kingdom

Abstract

During recent excavations at the Early Mesolithic site of Star Carr, North Yorkshire (UK), nearly 24,000 flints were found and at least three structures were identified; the oldest ever found in the UK. Microwear results from a study of 126 flints (Conneller et al. 2018) have shown that a range of activities were undertaken across the site, such as plant working, axe manufacturing, bead making, hide and antler processing. From initial analysis, there appears to be variability in tool-based activities undertaken in and around the structures. However, the full extent and nature of these activities remains unknown, and it is unclear to what extent tool-using activities within the structures can provide insights into the functions of these structures, and how they relate to other tool-using areas at Star Carr. Due to large scale excavation, the site offers a unique context in which the results from the microwear analysis can be integrated with high-resolution spatial analysis and Bayesian statistical modelling, with potential to reveal discrete episodes of activity.

This paper presents a multi-proxy approach of using microwear analysis alongside spatial and Bayesian modelling to explore the use of flint tools found in and around the three structures, showing unique glimpses of spatial and temporal patterns in tool-using behaviours. GIS was implemented throughout all stages of analysis as a spatial model which was used to: 1) establish which flints to sub-sample, 2) plot the results of microwear analysis, 3) explore spatial patterns in tool use within and between the different structures. A Bayesian statistical model detailing the chronology of human occupation has previously been established for the site (Bayliss et al. 2018), which was incorporated into this research to enable insights into possible changes in behaviour and the use of these structures during the site's use. Through a spatial and temporal understanding of the microwear data found in and around the structures, the results of this research will contribute to more nuanced narratives into the social spaces created within and around the structures. It is hoped that the future potential of applying a microscale approach, alongside a range of complimentary modelling methods, to understand elusive spaces in the Mesolithic will be seen.

[*]Speaker