Experimental Investigations into Site Formation Processes and the Earlier Palaeolithic Record

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This poster summarizes ongoing doctoral research exploring the taphonomy of lithic assemblage formation, with reference to the open-air sites and find spots (the archaeology of river floodplains) of the Lower and Middle Palaeolithic periods in Northern Europe.

Introduction

Re-worked lithic assemblages from open-air settings represent a significant component of the earlier Palaeolithic record. However, their derivation creates obvious interpretative difficulties (the loss of primary context spatial and environmental associations for example), while the degree of re-working is also highly variable (e.g. contrast the locally re-worked artifacts of the Clacton golf course and the heavily abraded bilaces of the Solent River’s terrace assemblages). While recent studies have nonetheless emphasized the usability of such data, a full understanding of assemblage taphonomy is clearly central to such work.

Methods

Although previous experimental research has explored post-depositional processes of Palaeolithic assemblage formation a number of outstanding problems remain. The first goal of this project is to identify the impacts of a range of variables to be investigated, including:

- River type
- Flow velocity
- Channel morphology (incl. the character of the bed sediments)
- Artifact discard location

Tumbling

Previous tumbling experiments have explored rates of artifact abrasion development on a range of raw material types. These experiments will expand available data sets by testing the effects of a wider range of variables, including:

- Artifact type and raw material
- Matrix (sediment type and quantity)
- Time
- Speed (flow velocity)

Trampling

Although the impacts of trampling upon lithic assemblages have been previously studied, this research focuses specifically upon the modification of artifacts prior to their incorporation into active fluvial channels. The key variables in the experiments are:

- Duration and frequency of trampling
- Substrate type and condition
- Vegetation type
- Intervals between discard and fluvial entrainment

Discussion

The research seeks to develop experimental data sets which can applied to the interpretation of artifacts occurring in both high and low energy fluvial sediments on European earlier Palaeolithic sites (e.g. the Thames and Solent river terraces, Clacton, High Lodge, and Caours). Such taphonomic research is an important step towards "getting the pattern right", and using derived data to reliably assess human presence and activity over both short and long-term times-pans.

References


Experimental Programs

1. Field-based fluvial transportation (artifact dispersal & modification)
2. Tumbling (artifact modification)
3. Trampling (artifact dispersal & modification)