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Reconstructing depositional histories through bone taphonomy: Extending the potential of faunal data

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1 **Reconstructing depositional histories through bone taphonomy: Extending the potential**
2 **of faunal data**

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8 ***Abstract***

9 Reconstructing the sequences of deposition of archaeological material is central to the
10 interpretation of archaeological sites and provides the foundations for how site chronology
11 is understood. Generally stratigraphy provides the most direct evidence for understanding
12 depositional histories. However, in certain instances stratigraphic relationships may be
13 obscured or unobservable and therefore other sources of evidence must be drawn upon for
14 defining deposits and reconstructing sequences of deposition. This is a particular problem at
15 dark earth sites, which are homogeneous in terms of the colour and texture of deposits, and
16 also in artefact-rich samples, which have little sedimentary matrix.

17 This paper explores the potential of a new approach to the analysis of bone taphonomic
18 data for the purposes of deciphering depositional histories when stratigraphy is
19 unobservable. Integral to this method is rigorous statistical analysis of modification data
20 combined with an assessment of the taxonomic and anatomical composition of deposits, in
21 terms of their susceptibility to modification. This facilitates more confident interpretation of
22 modification patterns, as deposit composition can be discounted from responsibility for
23 significant differences. The approach is tested on a sample area of the later prehistoric
24 midden of Potterne, Wiltshire, UK. Through detailed recording and statistical analysis of
25 bone modifications (weathering, gnawing and trampling), this research demonstrates that
26 bone taphonomy is not only useful for identifying distinct depositional events in apparently
27 homogeneous strata, but can also provide detail on the nature of processes responsible for
28 the formation of the deposit.

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