Research Article

Geoarchaeological contexts for Late Pleistocene archaeological sites with human-modified woolly mammoth remains in southeastern Wisconsin, U.S.A.

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Abstract

This paper defines the geomorphic and stratigraphic contexts, and site formation processes for the Hebior and Schaefer woolly mammoths in southeastern Wisconsin. Both mammoths were butchered, and there are artifacts associated with the faunal remains. Radiocarbon ages obtained from purified mammoth bone collagen range between 12,200 and 12,600 yr B.P. for the Schaefer and Hebior mammoths and between 13,440 and 13,510 yr B.P. for the nearby Mud Lake and Fenske mammoths. These ages indicate human use of an ice marginal landscape 1000–2000 years before human–mammoth interaction in the American southwest. They also indicate these sites are pre-Clovis in age and may be associated with the recently defined non-Clovis Paleoindian variant called the Chesrow complex. Chesrow complex sites are located on glacial lake and moraine features or in deposits that are of similar ages as the butchered mammoths, but they have not been unequivocally linked to the mammoth sites. Geomorphic and stratigraphic data were collected from profiles in archaeological excavations and backhoe trenches, and from cores. The Hebior and Schaefer sites lie in a topographic low between two end moraines. Mammoths remains rest on deglacial deposits and are encased in the post-glacial deposits. At Hebior, these deposits consist of glaciolacustrine clays overlain by a thin stratum of glaciofluvial sands, on which the bones rest, overlain by laminated peat and muck. Sills and dikes of sand cross-cut the organic deposits and formed late in the depositional sequence. At the Schaefer site, the bone pile rests on glaciolacustrine clays and is encased in clastic pond deposits and laminated peat and muck. Contextual analysis indicates the bone piles are *in situ* and were preserved initially by inundation in ponds and subsequently by organic deposition in wetlands. Radiocarbon ages, stratigraphic/geomorphic contexts, and taphonomic studies indicate the Hebior and Schaefer mammoths are *in situ* evidence for human interaction with megafauna very near the active glacial ice margin in the mid-continent by 12,500 yr B.P. and perhaps as early as 13,500 yr B.P. © 2003 Wiley Periodicals, Inc.

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