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ABSTRACT BOOK

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Proboscidean biogeography in midwestern North America, with a comment on the extinction of *Mammut americanum*

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The North American Midwest has one of the highest densities of terminal Pleistocene proboscideans on the continent (Osborn 1936:177; 1942:1133). Although regionally dominated by the American Mastodont (*Mammut americanum*), two species of mammoths (*Mammuthus primigenius* and *M. jeffersonii*) are also sympatric (Saunders et al. 2010). A recent census of Proboscidea in regional museum collections produced a dataset of >1600 specimens, vouchering 576 different localities. Although single-animal localities are by far the most common, multi-animal (e.g., Boney Spring, MO, Saunders 1977) and multi-taxic (e.g., Minooka, IL--Riggs 1936; Jones Spring, MO--Saunders 1988) assemblages are also present. During the Last-Glacial-Maximum (LGM), *Mammuthus* is the dominant proboscidean across the

midwestern landscape. *Mammut* is rare or absent from the region during this time. During the subsequent post-LGM period, *Mammut* becomes the dominant taxon in forested and parkland habitats east of the Mississippi River and throughout the Ozark uplift. At this time, *Mammuthus* are more common in grassland habitats in the western part of the study area, although they maintain small local populations in forested and parkland areas until their local extirpation at 13,470 cal BP (~11630 ¹⁴C BP).

Mammut populations decrease in situ until ultimate extinction ~12,700 cal BP (~10,800 ¹⁴C BP). Regional populations of terminal Pleistocene *Mammut* are morphologically diverse suggesting distinct local populations with limited gene flow. All multi-animal death assemblages in the study region occur within 500 years of the terminal extinction date.

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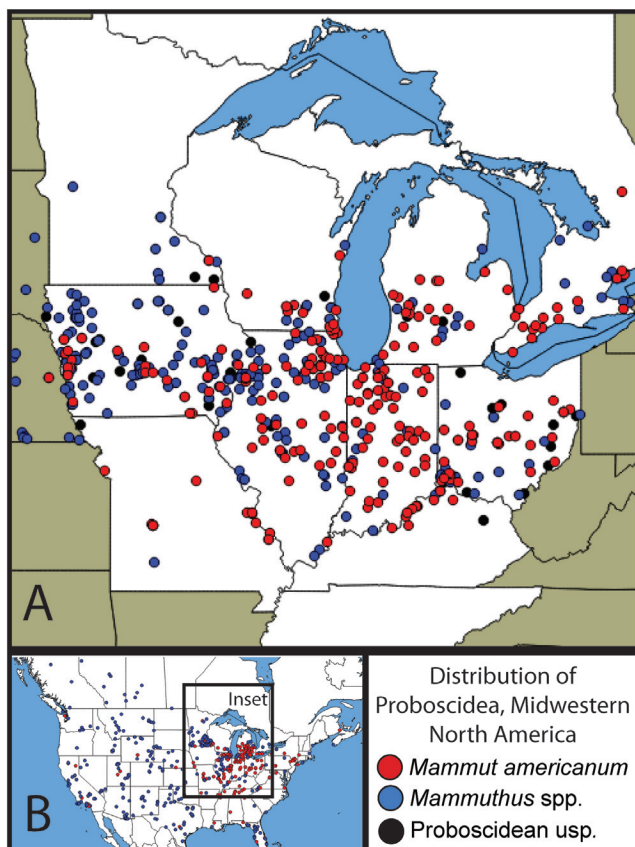


Fig. 1. **A**, Distribution of Proboscidea vouchered in Midwestern museum collections (N=576). *Mammuthus* spp.=271 localities; *Mammut americanum*=248 localities. **B**, North American distribution of Proboscidea south of the Laurentide Ice sheet (primary data source, Neotoma Paleocology Database, <http://www.neotomadb.org>; 2013).

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