Public Abstract

First Name:Jason
Middle Name:Andrew
Last Name:Christy
Adviser's First Name:Lee
Adviser's Last Name:Lyman
Co-Adviser's First Name:Todd
Co-Adviser's Last Name:VanPool

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IN THREE CAVE SITES FROM CENTRAL MISSOURI
FROM MAMMALIAN BODY MASS DISTRIBUTIONS

Abstract

The Mid-Holocene was a dynamic period of changing environments. The climate was becoming more dry (Xeric), and prairie grassland was encroaching into areas previously inhabited by deciduous forest. Mammal taxa were changing as well to accommodate the changing flora. The mammal faunas from three cave sites in Central Missouri were chosen to test two methods of paleoecological reconstruction. The Cenogram Method uses the distributions of body masses of represented taxa to infer environmental conditions, whereas the Body Mass Clump Method concerns relationships between the distributions of clumps and gaps between clumps of body masses of multiple taxa and the environment. Previous studies at the cave sites have shown a forest edge environment during the early Holocene, changing to a predominantly prairie habitat during the Mid-Holocene (Hypsithermal) event, and returning to forest edge towards the historic period. Both the cenograms and the body mass clumps concur with these previous assessments for Rodgers Shelter, and Arnold Research Cave. The early Holocene was a mixed forest and grassland environment, with more grassland during the Hypsithermal, and returning to a mixed forest and grassland at the end of the Hypsithermal. Graham Cave however, was prairie type habitat throughout the Holocene with little habitat change.