

ECOLOGY – POSTER #26

Holocene occupancy trade-off of *Neotoma* species near Pyramid Lake, Nevada, as determined from paleomidden fecal DNA

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Western North America has one of the most complete records of late Pleistocene and Holocene community changes thanks to preserved paleomiddens constructed by *Neotoma* species. While much has been gleaned about demographic and distributional shifts through periods of climate change based on specimen identification alone, we have only begun to scratch the surface regarding what questions may be possible to answer using DNA from this record. Here, we report ancient DNA amplification and sequencing from paleomidden *Neotoma* fecal pellets, which constitute major fractions of the paleomidden strata and are ideal for destructive molecular sampling. For each Holocene time period as far back as 9,570 ybp from our site near Pyramid Lake, Nevada, we are able to identify not only which *Neotoma* species added to the midden but also what intraspecific mitochondrial clade it belongs to. The ability to identify occupants to species and clade will make it possible for us, among other things, to identify movement and occupancy of different clades through time and more accurately model temporal demographic trends in relation to Pleistocene-Holocene climate change.