

use of exotic resources. Complete carcasses of large game appear to have been frequently transported to the site, where they were exploited for their meat and marrow. Comparisons with other Middle Preclassic faunal assemblages indicate significant differences in terms of taxonomic composition.

Boisvert, Richard (NH Div. of Historical Resources) and Thomas Williams (Texas State University)

[133] *Sourcing Rhyolites in New Hampshire Paleoindian Sites with Greater Precision Using a Portable X-Ray Fluorescence Device*

The availability of portable X-ray fluorescence (XRF) devices, such as the Bruker Tracer III-SD XRF spectrometer, has made characterization of stone tool sources such as obsidians, substantially more effective and efficient. Two sources of visually similar yet geologically distinct rhyolites have been intensely sampled and shown to be geochemically distinct according to a suite of trace elements. These are the Mt. Jasper lithic source in Berlin, NH and the rhyolites found in the glacial till of Jefferson NH, 30 kilometers distant. Analysis using this technology of tools and debitage from Early and Middle Paleoindian sites in Randolph, Jefferson and other sites has revised our approach to visual identification of rhyolite varieties and revealed unexpected distributions and patterns of usage.

Boling, Mark (Southwestern Energy Company)

[98] *Discussant*

Bollwerk, Elizabeth (University of Virginia)

[152] *Open(ing) Archaeology: A Model for Digital Engagement*

This paper begins with a brief introduction of the Open Authority and Co-Creation models and explores their role in altering and revolutionizing archaeological practice. The focus then shifts to a discussion of engagement methods that archaeologists are currently utilizing on the web, including blogging, crowdfunding, and social media and evaluates their success as co-creative projects. These methods are compared with co-creative methods that are being utilized by other scientific disciplines, in particular, crowdsourcing. This paper concludes by considering 1) the obstacles and challenges facing the implementation of archaeological co-creative projects that are web based and 2) best practices for digital co-creative engagement identified from successful projects.

[152] *Chair*

Bolnick, Deborah, Elizabeth Pintar (Austin Community College), Jorge Martínez (ISES-Universidad Nacional de Tucuman), Marcela Diaz-Matallana (Pontificia Universidad Javeriana) and Jaime Mata-Míguez (University of Texas at Austin)

[93] *Ancient DNA from Early Human Burials in the Argentine Puna: Insights into Burial Practices and South American Population History*

Although the earliest archaeological sites in South America date to the late Pleistocene, little is known about the genetic makeup or mortuary behavior of early hunter-gatherer populations in South America. To help shed light on the burial practices of these hunter-gatherers, as well as the early population history of this region, we extracted ancient DNA from the remains of 13 individuals excavated from early and mid-Holocene archaeological sites in the southern Argentine Puna. These remains are from four locations in the Antofagasta de la Sierra region of northwestern Argentina, and date between 9200 and 3200 YBP. We sequenced 372 base pairs of the first hypervariable region of the mitochondrial DNA to define maternally-inherited genetic lineages, and analyzed a length dimorphism in the amelogenin gene to investigate the sex of each individual. We found that maternally related individuals were sometimes buried together, and several individuals exhibited a mtDNA lineage that is rare in indigenous American populations today. Our results shed light on the early population history of this region and help elucidate the genetic affinities between the prehistoric inhabitants of the Puna and other regions in South America.

[93] *Chair*

Bolnick, Deborah [291] see Mata-Miguez, Jaime

Bond, Sarah [64] see Killgrove, Kristina

Bongers, Jacob [105] see Jones, Terrah