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Data-mining quartz and quartzite: should we have standard protocols for measuring and reporting on lithic assemblages?

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Schmaus, Tekla (University of Pittsburgh), Bryan Hanks (University of Pittsburgh), David Reich (Harvard University), Margaret Judd (University of Pittsburgh) and Andrei Epimakhov (South Ural State University)

[244]

Examining Bronze Age Kinship and Community Patterning in the Southern Urals, Russian Federation, through aDNA Study

Ancient DNA studies have increased exponentially in recent years and have had tremendous impact on our understanding of early genomic patterning in many regions of the world. The vast Eurasian steppe zone has not been overlooked in these important breakthroughs. Several recent studies from this broad region have stimulated new models for interpreting population migration and gene flow among pastoralist and agropastoralist populations. However, such studies frequently encompass large spatial territories and widely dispersed sampling. This paper, in contrast, focuses more intently on small-scale regional and subregional demographic processes relating to kinship patterning and community organization during the Bronze Age within the Southern Urals region. A detailed discussion of aDNA results from a sample of 50 individuals from the Kamennyi Ambar 5 cemetery (2100–1700 cal BCE), which is associated with the Sintashta archaeological culture, will be presented. These results offer a unique opportunity to examine more effectively ancestral heterogeneity, familial relatedness, and the biological sex of children and subadults among Bronze Age people living in the central steppes. The case study offers substantial comparative potential for examining variability in social organization and kinship patterning among early pastoralist societies in the Eurasian steppe region.

Schmid, Viola (Leiden University), Irimi Sifogeorgaki (Leiden University), Gerrit Dusseldorp (Leiden University) and Wei Chu (Leiden University)

[171]

Data-Mining Quartz and Quartzite: Should We Have Standard Protocols for Measuring and Reporting on Lithic Assemblages?

Raw materials are the lowest common denominator of any debitage analysis. And yet, the fracture mechanics of eccentric raw materials are not always fully considered when performing inter-/intra-assemblage comparisons. The fracture mechanics as one constraint to be respected by the knappers greatly influence archaeological recovery of debitage products in different raw materials. Thus, our methodologies for recording debitage morphometrics may need to be adapted to specific raw materials. This means assemblage comparison and correlation can only be attempted in a context-dependent manner. We review results of assemblages in both chert and other raw materials from a range of locations across Old World to examine how such assemblages have been recorded. In doing so, we highlight various pitfalls and limitations, and propose that it is very important to provide the contextual information and describe exactly what method was used and give arguments, why it was used.

Schmidt, Christopher, Megan Hoffman (University of Indianapolis) and Grace Holmes (University of Manitoba)

[104]

Mastoid Osteoma on the Skeleton of a Known Individual from the Bethel Cemetery

Elizabeth Poland was a member of one of the prominent families interred at the Bethel Cemetery, located in Indianapolis, IN; she died in 1896 at the age of 76. Her skeleton indicated several pathological conditions including pedal arthritis, vertebral degeneration, antemortem tooth loss, and hyperostosis frontalis interna. She also had a 3+ cm osseous growth on her parietal, superior to her mastoid process. Our objective herein is to provide paleopathological analysis and diagnosis that clarifies the severity of this prominent lesion. Our differential diagnosis focused on osteoblastic lesions including primary and metastatic neoplastic lesions (e.g., osteosarcoma, metastatic breast cancer), fibrous dysplasia, osseous venous vascular malformation, intraosseous meningioma, and osteoma. Osteoma is the most likely condition based on external and internal morphology and location. Mastoid osteomas tend to form on cranial vaults as benign outgrowths and present as sizable, egg-shaped nodules on the posterior parietal. They are a rare (~1%) but persistent idiopathic condition in ancient and extant peoples. Most mastoid osteomas produce no pain or adverse symptoms and often go undiagnosed until swelling emerges behind the ear.