

On the Cusp: A Study of Macro- & Microwear in Middle Woodland & Mississippian Skeletal Samples from the Lower Midwest

**Jamie R. Query**<sup>1</sup> and Jeremy J. Wilson<sup>1</sup>

<sup>1</sup>Department of Anthropology, IUPUI School of Liberal Arts

Studies of dental macro- and microwear are emerging as complimentary lines of evidence to archaeological research, enabling scholars to track changes in the mode of subsistence over long and short periods. These tooth wear studies simultaneously allow for analyses within and between age and sex cohorts, providing surrogate measures of a population's dietary diversity. The current study examines dental wear for two Pre-Columbian samples from the Midcontinental United States. The first (n = 10) is from the Middle Woodland period Mann (12Po2) site, which is located on the Ohio River in southwestern Indiana. Recent radiocarbon dating conducted as part of the current research indicates the site was utilized between AD 127 and 259. Paleoethnobotanical research demonstrates that Middle Woodland people engaged in hunting and gathering, as well as a form of low-level food production that relied on indigenous starchy and oily seeds. The second sample (n = 20) is from the Mississippian period Orendorf (11F107) site in the Central Illinois River Valley. Previous radiometric assays indicate that the site was occupied between AD 1175 and 1250 with the site's inhabitants taking part in a broad-scale subsistence change to maize agriculture.

While research is ongoing and data will be forthcoming for the Mann site, measures of microwear complexity (1.49 asfc) and anisotropy (0.0032 epLsar1.8) from Orendorf reveal a diet that was rough with a low level of orientation between features on the occlusal surfaces of molars. Contrary to previous studies, individuals from Orendorf are atypical among late prehistoric, Midcontinental agriculturalists with a rougher diet more characteristic of preceding foragers or horticulturalists. In a comparison to a worldwide database, dietary roughness for Orendorf is comparable to Early Bronze Age farmers from England; however, the anisotropy value for Orendorf clusters with the Mebrak buckwheat farmers of Nepal and Neolithic samples from Israel.

Mentors: Chris Schmidt, Department of Anthropology, University of Indianapolis; Jeremy J. Wilson, Department of Anthropology, School of Liberal Arts, IUPUI