Lithic Morphological Organization: Gahagan Bifaces from Texas and Louisiana

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This analysis of Gahagan biface morphology enlists the three largest samples of Gahagan bifaces, to include that of the type site (Gahagan Mound) as well as the Mounds Plantation and George C. Davis sites. Results indicate a significant difference in Gahagan biface morphology at the Mounds Plantation site when compared with Gahagan bifaces from the Gahagan Mound and George C. Davis sites. A test of morphological integration indicates that Gahagan bifaces are significantly integrated, meaning that those traits used to characterize their shape (blade and base) vary in a coordinated manner. Tests for allometry and asymmetry were not significant. Results augment previous inquiries, providing additional evidence for a north-south divide based upon biface morphology used to define two communities of practice. Viewed in concert with morphological shifts in Hickory (Fine) Engraved and Smithport Plain bottle shapes over the same geographic area, results lend support to an increasingly robust argument for two previously unrecognized and morphologically-unique Caddo communities of practice.

The mean consensus configuration (black) and Procrustes residuals (gray) were calculated for each site and in the combined sample. As an exploratory measure, by means of a Generalized Procrustes Analysis (GPA). This initial view of the dataset demonstrates the degree of variation that occurs at each site and in the combined sample. The mean consensus configuration (black) with Procrustes residuals (gray) superimposed by generalized Procrustes analysis for a, Mounds Plantation; b, Gahagan Mound; c, George C. Davis; and d, all specimens.

The recent discovery of variability in Hickory (Fine) Engraved and Smithport Plain bottle shapes over the same geographic area articulates with those of the Gahagan bifaces, demonstrating an allopatric relationship for two previously unidentified and morphologically-distinct Caddo ceramic/lithic communities of practice.