Lithic Morphological Organization: Gahagan Bifaces from Texas and Louisiana

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This analysis of Gahagan biface morphology exploits 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) superimposed by generalized Procrustes analysis for a, Mounds Plantation; b, Gahagan Mound; c, George C. Davis; and d, all specimens. Results indicate a significant difference in Gahagan biface shapes produced at Mounds Plantation when compared with those from Gahagan Mound and George C. Davis. The test of morphological integration indicated that Gahagan bifaces from the Gahagan Mound site include a significantly greater range of shapes than the Mounds Plantation sample (standardization?). The test of morphological integration indicates that the base and blade shapes of the Gahagan bifaces vary in a coordinated manner. Lastly, the comparisons of mean consensus configurations highlight that Gahagan bifaces from the Gahagan Mound site generally exhibit a lower degree of blade recumabent and a less convex base than those from the George C. Davis site.

Archaeologists working in the region have a long history of exploring and developing novel analytical applications to further expand upon the local cultural landscape. This analysis of Gahagan bifaces augments an ongoing research program aimed at delimiting the vagaries associated with the many bottle shapes used by Caddo potters. Thus, this study serves as an example of how different categories of material culture might be used to identify dynamic shifts in morphology used by makers through time and space. 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 analytical relationship for two previously unidentified and morphologically-distinct Caddo ceramic communities of practice.

Communities of Practice

North

(Mounds Plantation)

South

(Gahagan Mound + George C. Davis)