

A comprehensive PXRF characterization of obsidian from the Hopewell Site, Ross County, Ohio held in the Field Museum collections

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Abstract

The Middle Woodland period (c. 200 BC – AD 300) is archaeologically most notable for the development of continental scale networks through which objects and materials were acquired by inhabitants of eastern North America. Obsidian is present in many Hopewell/Fort Ancient sites, but the nearest possible sources of this material are far to the west in Wyoming and Idaho. The eponymous Hopewell site, in Ross County, Ohio, was excavated by W.K. Moorehead between 1891-1892 to provide material for display at the 1893 World's Columbian Exposition. Subsequently, the resulting collection was incorporated into the early collections of the Field Museum. The Hopewell site is notable for the huge volume of imported material present there, including large bifaces made of obsidian. These were compositionally analyzed by James Griffin in the late 1960s. Griffin's work (and several subsequent analyses) demonstrated that two sources, Obsidian Cliff (Wyoming), and Bear Gulch/Camas-Dry Creek were present in the Hopewell assemblage. However, owing to the destructive sampling necessary to conduct compositional analyses at the time, only a handful of smaller bifaces and debitage pieces were measured. Here, we use non-destructive PXRF analysis to characterize the entire Field Museum Hopewell collection. In common with earlier analyses, we find that Obsidian Cliff and Bear Gulch obsidians comprise the bulk of the collection, with the exception of a single piece of debitage from the Malad source flow (Idaho). We discuss these results in comparison to stylistic and technological variability within the Hopewell assemblage, as well as comparison to studies of obsidian from other Middle Woodland sites.

Keywords: Hopewell, Middle Woodland period, obsidian, PXRF