ANALYSIS OF AN OBSIDIAN BIFACE FRAGMENT FROM A HOPEWELL OCCUPATION ASSOCIATED WITH THE FORT HILL (33HI1) HILLTOP ENCLOSURE IN SOUTHERN OHIO

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Ohio Historical Society archaeologists recovered an obsidian biface fragment from an occupation site associated with Fort Hill in southern Ohio. Chemical analyses of this biface indicate that it was quarried from Obsidian Cliff, Yellowstone National Park, Wyoming and chipped into its final form at around A.D. 243. This discovery adds to our understanding of the relationship between objects crafted from exotic raw materials and the Hopewellian hilltop enclosures.

INTRODUCTION

Fort Hill (33HI1) is a large, Middle Woodland hilltop enclosure located on a prominent bluff in southern Ohio (Squier and Davis 1848: Plate V). It consists of an earthen and stone wall approximately 2.4 kilometers long with an interior ditch. The wall varies in height from 1.8 to 4.6 meters.

Archaeological investigations at this site have been limited to documenting the form of the earthwork (Locke 1838; Squier and Davis 1848), describing surface collections of artifacts in the vicinity (Overman 1887; Morgan and Thomas 1948:32), conducting excavations at a Hopewell village site associated with two circular earthworks located approximately 1.6 kilometers south of the summit of Fort Hill (Baby 1954:86), and the excavation of a small trench through the wall of the hilltop enclosure (Prufer 1997). The assemblage of artifacts collected from Baby's excavations at the William Reynolds enclosure (33HI9) and the associated occupation area include a number of diagnostic Hopewell artifacts (Baby 1954; Prufer 1968, 1997). One of the most interesting items in the collection is a fragment of an obsidian biface found in the fill of a postmold (Figure 1). Griffin referred to the obsidian biface as the first find of obsidian that may have had a connection with the occupation of the so-called hill forts of southern Ohio (1965:119), although subsequent discoveries at Fort Ancient (Blosser and Glotzhober 1995:8; Essenpreis and Moseley 1984:26) have made this find less of an anomaly.

Evans and Meggers (1960) described an early attempt to provide an obsidian hydration date for the specimen. They reported a hydration rim of 5.7 microns and calculated a date of 7200 years B.P. They noted that this age estimate was older than expected (1960: Table 1, pp. 518-519).

The purpose of this paper is to present a new obsidian hydration date calculated for the Fort Hill obsidian biface fragment, one that is more consistent with the inferred cultural affiliation. In addition, we report the results of an X-ray fluorescence analysis of the specimen from which we infer that it was quarried from Obsidian Cliff in northwestern Wyoming (Skinner and Davis 1996).

CONTEXT OF DISCOVERY

According to the field notes of William Sassaman, the field director of the Ohio Historical Society excavations at the Hopewell occupation below Fort Hill, Robert Goslin uncovered the obsidian biface fragment while cleaning out a post hole in Square 25R-230 (Sassaman 1954:30). This postmold was a part