

The Heckelman Site Archaeological Project 2008-2012: A Preliminary Summary

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The Heckelman site (33Er14) is located in southern Erie County, near Milan, Ohio. It is situated on a high and narrow sandy ridge above the Huron River. The site was first reported in 1962 by Arthur George Smith of the Firelands Historical Society Museum in Norwalk, Ohio. Smith described abundant surface concentrations of stone tools which compared favorably with artifacts from the Esch Mounds (33Er1), a Middle Woodland (Hopewell) site located nine miles downriver (Smith 1962:84-85). The first professional investigation occurred in the late 1960s and early 1970s with archaeologists and students from Kent State University under the direction of Dr. Orrin C. Shane, III. The exact locations of Shane's excavations remain uncertain; however, the project did identify extensive midden (trash) deposits, at least 14 pit features, and one large ditch that served to enclose the eastern portion of the site (Stothers et al. 1979:55-56). Among the artifacts recovered were pot sherds of a type known as *Leimbach Cordmarked*, which dates to the latter part of the Early Woodland period (ca. 500 to 100 BC). Shane also found numerous finely cordmarked pot sherds (*Esch Cordmarked*) and stone tools, such as *Chesser Notched* projectile points and bladelets, which most closely resemble Hopewell artifacts from southern Ohio. Shane identified this component with the *Esch phase* occupation of the Huron Valley (Stothers et al. 1979:55). Charcoal from one pit containing such remains produced a calibrated (cal) radiocarbon age range of AD 341 to 771.

The Kent State crew also discovered at least one large pit feature that contained *Madison* triangular projectile points and distinctive ceramics of the types *Mixer Dentate* and *Parker Festooned* (Prufer and Shane 1976:302). One radiocarbon determination on charcoal from this pit produced an age range of cal AD 1302 to 1645. Given the pottery types represented in this feature, the actual age is most likely within the fourteenth to fifteenth centuries AD.

In August 2008, the Cleveland Museum of Natural History (CMNH) commissioned a series of geophysical surveys at the site in an attempt to relocate the ditch feature identified by Shane, as well as other archaeological deposits. Dr. Jarrod Burks of Ohio Valley Archaeology, Inc. carried out a magnetic (gradiometer) survey, an electrical resistance survey, and a magnetic susceptibility survey over a large area of the known site. The results of the magnetic survey proved to be the most informative. The gradiometer recorded more than 100 magnetic anomalies which are likely to be of prehistoric cultural origin. The most vivid of these are two linear features which bisect the site from north to south in what was thought to be the vicinity of the prehistoric ditch uncovered by Shane. In addition, an oval ditched enclosure was identified in the northeastern corner of the site (Figure 1).

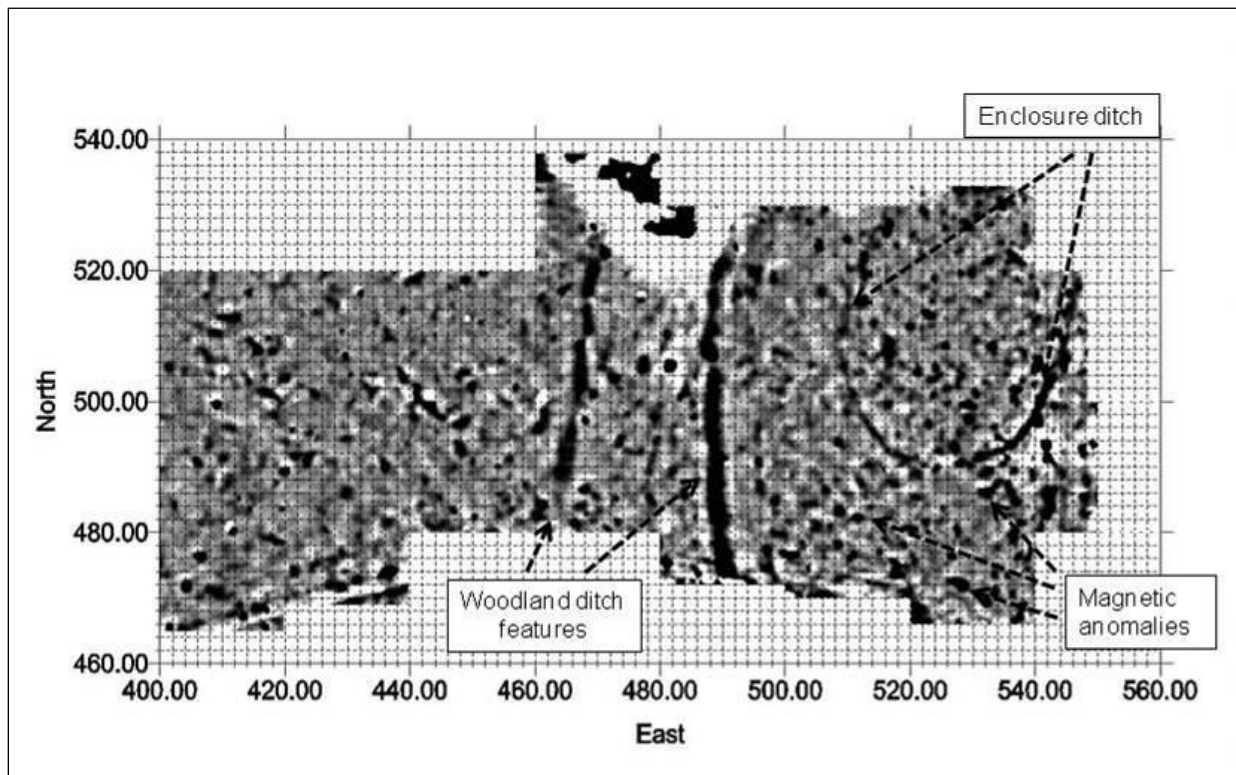


Figure 1: Map of magnetic survey results and identified cultural features.

Test excavations in 2008 and 2009 by the Firelands Archaeological Research Center (FARC) exposed several sections of the large inner (eastern) ditch identified by the magnetic survey. This ditch measures approximately two meters wide and extends to one meter below the surface. The fill of the ditch consists of stratified, light- and dark-colored soil horizons which reveal at least three episodes of filling. The dark organic layers contained a relatively high density of lithics, which include Hopewell bladelets and *Chesser Notched* points made of Flint Ridge chert and a modest collection of *Esch Cordmarked* pottery. No definitive artifacts of Early Woodland affiliation were recovered from the ditch fill, which suggests that this feature is either a Middle Woodland creation or was constructed during the Early Woodland period (as concluded by Shane) but was filled during the time of the Middle Woodland (Esch phase) occupation. Charred residue on a pot sherd found within the inner ditch produced an age range of cal AD 120 to 380, which supports a Middle Woodland age for the filling of this ditch (Stothers and Boatman 2011a:4-5). Excavation by FARC in the outer ditch took place in 2010 and 2011 and recovered Middle Woodland artifacts such as bladelets but also Late Prehistoric pottery (Stothers and Boatman 2011b). Three radiocarbon dates on samples from the fill of this ditch cover the period from cal AD 1430 to 1680.

In summer 2009, the CMNH began a new sequence of investigations within the large ditched enclosure (Redmond and Scanlan 2010). Initially, Museum staff, volunteers, and participants in the *Archaeology in Action* Program conducted a shovel-test survey of the area to the east of the large parallel ditch features to identify the spatial patterning of artifacts within the enclosed space. The results revealed that the heaviest concentrations of lithic debitage occurred

within (to the east of) the inner ditch feature. Block area excavations were then used to “ground-truth” selected magnetic anomalies detected in 2008 (Figure 2). This work identified one semi-subterranean dwelling (pit house) and several cooking and storage pit features. A radiocarbon date on a piece of carbonized hickory nut hull from near the floor of the pit house dated between cal AD1440 to 1630. Additional test excavations exposed two separate areas of the oval magnetic anomaly and revealed it to be a narrow ditch (Figure 2). The fill of this ditch contained Early Woodland pottery of the *Leimbach* series, and one radiocarbon date placed the filling of this ditch sometime between cal 350 BC and 40 BC. Other Woodland-era pit features were identified and excavated. One pit (Feature 09-03) contained Ohio Hopewell bladelets made of Flint Ridge chert and *Esch Cordmarked* pottery that resembles southern Ohio varieties of Hopewell ceramics. Another small pit feature (Feature 09-31) contained a drilled siltstone gorget and a large quantity of charcoal, a sample of which dated between cal AD 430 and 620, the transitional time between Middle and Late Woodland cultural expressions in Ohio.

During the summer of 2010, CMNH expanded the investigation of the oval enclosure. Bulldozer stripping of a six meter wide by thirty-three meter long transect across the enclosure exposed numerous pit features, a few of which dated to the Early and Middle Woodland periods (Figure 2). Also recorded were a few Late Prehistoric period storage and cooking pits and possible dual stockade lines which appear to be unassociated with the Early Woodland enclosure (Redmond and Scanlan 2011). Several unusual features uncovered in the enclosure interior include two large post pits, small pits containing flaking debris from large bifaces (cache blades), and a large Middle Woodland fire-pit (Feature 10-21). Botanical inventory of several pit contexts identified small numbers of starchy- and oily-seeded annuals such as chenopod, sumpweed, maygrass, and squash. Also present was hickory nutshell; however, food remains are generally rare, which suggests that the occupation of the enclosure area during the Early and Middle Woodland periods was non-domestic (ritual-ceremonial?) in nature.

In 2011, additional sections of the stockade line were recorded along with a portion of a rectangular house structure which is thought to date to the Late Prehistoric village occupation. A sample of charcoal from one stockade post produced a date range of cal AD 1410-1450. The remains of a second structure were identified within the oval enclosure. This square dwelling measured almost nine meters in width and enclosed several small pit features containing pottery, a few stone tools, and charred remains of goosefoot and bottle gourd. Five radiocarbon dates place the use of the house at about cal AD 600 and after the Hopewell occupation of the site.

Figure 2. Plan of 2009-13 CMNH excavations showing excavation blocks and features.

A 6 by 30 meter transect was opened in summer 2012 in order to exposed a complete Late Prehistoric house structure and adjacent sections of the stockade barrier (Figure 2). This goal was achieved with the discovery of a 4.5m by 9.0m rectangular dwelling located just within the stockade barrier. In addition, the area located within the larger enclosed area (i.e., east of the parallel ditches) and south of the oval enclosure was explored with 10 randomly-placed excavation units which provides a statistically-valid sample of the cultural deposits which remain in this area. In the process, several additional Woodland pit features were discovered, along with

the remains of a large, early Late Woodland (Green Creek Phase) storage pot, which may have been deposited within the walls of a second large structure.

Current Interpretations

To date, four seasons of excavations at this complex site reveal distinct changes in Native American settlement patterns, subsistence systems, and social behavior. Beginning with the construction of the oval enclosure as much as 2,800 years ago, native peoples of the area congregated at this bluff-top location to participate in socially and religiously important activities. Such gatherings included the erection of large wooden posts and the manufacture of symbolically-charged objects such as bladelets made of colorful Flint Ridge chert, triangular cache blades (preforms) of Upper Mercer chert, and ornaments made from mica. By 2,000 years ago, at least temporary dwellings were constructed both inside and outside the enclosure walls. More substantial structures appeared 600 years later. For all of these Woodland inhabitants, the cooking of meat and use of plant foods—including squash, bottle gourd, and domesticated goosefoot seeds—occurred to some degree; however, hunting, fishing, and gathering, were not regular activities. Instead, these people were more focused on the construction and use of the earthwork enclosures and the carrying out of seasonal rituals and ceremonies. Strangely, the Heckelman site appears to have been abandoned for the next six centuries.

Around 700 years ago, maize farmers re-settled the bluff-top and established a one-acre village surrounded by a defensive stockade. They constructed rectangular, longhouse-like dwellings that were occupied by several families. Maize and squash were undoubtedly grown in the vicinity and the harvest stored in large, flat-bottomed pits. Food remains point to active hunting of deer and other mammals, birds, and fishing in the Huron River and possibly Lake Erie.

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