

Geophysical Survey and Excavations at Golden Eagle (11C120) Mound 2

Kristen E. Squires¹, Bonnie L. Etter², Claire Norton³, Angela Cooper⁴, Amanda Wissler⁵, Taylor H. Thornton⁶, Jason L. King¹, Jason T. Herrmann⁷, Jane E. Buikstra⁵

Introduction

The Golden Eagle site (11C120) is located on the Deer Plain Terrace in southern Calhoun County, IL (Figure 1). It was first reported by William McAdams in the nineteenth century as the only “embankment or enclosure” in the region (McAdams 1881:718). The site was rediscovered in the 1960s by archeologists at the Center for American Archeology (CAA) who mapped the site, conducted small-scale surveys, and recorded embankment stratigraphy exposed in an erosional ditch on the east side of the site. Golden Eagle is generally considered a Middle Woodland (ca. 50 cal BC – cal AD 400) site based primarily on the presence of several mounds and the enclosure; however, diagnostic artifacts from the Archaic to the Mississippian periods have been recovered from the site.

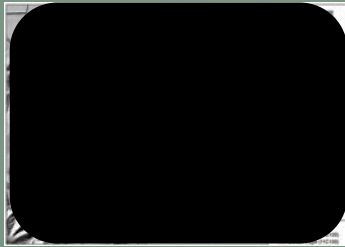


Figure 1. Golden Eagle Site.

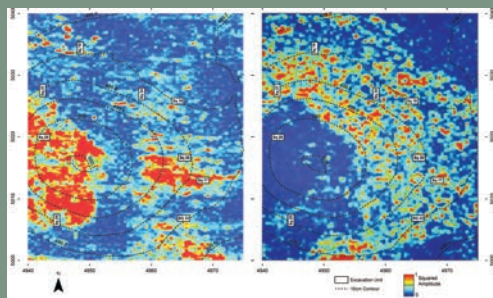


Figure 2. Ground-penetrating radar time slices. Left: 9.9–13 ns (estimated 90cmbs) from sensor. Right: 22.7–23.9 ns (estimated 170cmbs) from sensor.

In 2013, CAA archaeologists conducted multisensor geophysical surveys across the site, including ground-penetrating radar survey of Mound 2 (Figure 2). Excavations began in 2014. Eight 1x2 m test units were excavated at Mound 2 in 2015 and 2016 by the CAA and Arizona State University Field School to detect anthropogenic soils and determine the boundaries of the structure (Figure 2).

Golden Eagle Mound 2

No evidence of undisturbed moundfill was detected in SQs 14, 16, 17, 30, 33, or 34 (Figure 3), though all units exhibited a considerable amount of clay in the plow zone that was not present in other units at the site. Soil at Golden Eagle is typically sandy loam or loamy sand, and in situ clay is only present at depths greater than 1 m below the surface (King et al. 2014, Ward et al. 2015). This distinctive clayey soil may be remnants of Mound 2’s superstructure that have been redistributed by plowing.

Two distinctive moundfills were present in SQs 27–29 (Figures 4 and 5). The first moundfill was a stratum of yellow fill present below the plow zone in SQs 27 and 29. This homogeneous deposit was not present in SQ 28, though plowing may have destroyed it.

The second moundfill was a layer of banded fill consisting of irregular, alternating layers of darker, clayier soil and lighter, sandier soil (Figures 4 and 5). The process by which this banding was created is not clear, though it is likely that the darker bands are the result of clay and minerals accumulating at the interfaces of building episodes.



Figure 3. Sq 30 East Wall.



Figure 4. Sq 28 West Wall.

As seen in Figure 5, both moundfills increase in thickness toward the apparent (modern) apex of Mound 2 near SQ 28 and are truncated by the plow zone.

The structure of Mound 2 is similar to that reported for the embankment (Figure 6) (King et al. 2014, Ward et al. 2015). Construction may have begun by removing the A-Horizon; no evidence of A-Horizon was documented below either the embankment or Mound 2. Layers of sandy loam or loamy sand formed the primary components found in both structures. An additional layer of homogeneous yellow sandy soil was then deposited on top of the banded primary structure. As in the 2014 and 2015 embankment units, no diagnostic artifacts or datable materials were found in association with Mound 2.



Figure 6. Sq 1 South Wall.

Conclusion

Geophysical and excavation results from Golden Eagle confirm that portions of Mound 2 remain intact despite over a century of plowing. Importantly, results indicate similar construction techniques and materials were used to construct Mound 2 and the embankment. These structures may differ from Mound 1, which appears to have a more “classic” Middle Woodland organization based on electrical resistance tomography survey of the mound (Herrmann et al. 2104). Mound 1 remains untested and additional work is necessary to further clarify construction episodes and sequences at Mound 2. This information adds to the working knowledge of the Golden Eagle site, as we have come to a more nuanced understanding of the overall landscape that has been both naturally and anthropogenically influenced through stratigraphic formations.

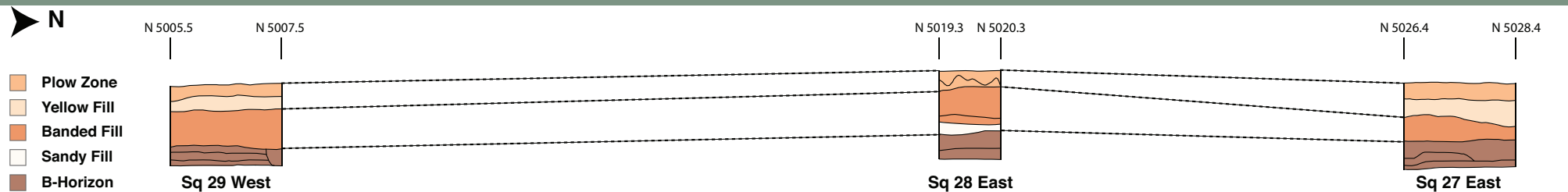


Figure 5. Mound 2 West profile illustrating major stratigraphic units. Note the absence of Yellow Fill in Sq 28.

¹Center for American Archeology, ²Southern Methodist University, ³Rhodes University, ⁴University of Tulsa, ⁵Arizona State University, ⁶University of Toronto, ⁷Ederhard Karls Universität Tübingen

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