RETURN TO THE GREAT MOUND GROUP: 2016 INVESTIGATIONS AT MOUND BOTTOM STATE ARCHAEOLOGICAL AREA

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The Mound Bottom site is located along the Harpeth River west of Nashville, and with the adjacent Pack site comprises the largest Mississippian mound complex in the Nashville Basin during the eleventh through fourteenth centuries AD. The initial formation of these sites ca. AD 1000 may be tied to the arrival of Mississippian colonizers who carried with them influences seminal to the formation of the Middle Cumberland Mississippian culture. Despite its apparent importance in the late prehistoric sequence, few modern archaeological excavations have been conducted at Mound Bottom, and many aspects of the site remain poorly understood. The summer of 2016 witnessed the early stages of a new research effort at Mound Bottom which culminated in the first excavations in 40 years. Herein we discuss the results of our initial field season at Mound Bottom, including the use of LiDAR data to create the first modern map of the entire site, and subsequent ground truthing of previously unmapped above ground features.

The Mound Bottom site (40CH8) is a Mississippian mound center situated above the left descending bank of an east-west oriented meander bend in the Harpeth River in Cheatham County, Tennessee. Accounts since the nineteenth century have variously described the main site area as consisting of between 11 and 14 earthen mounds arranged around a roughly rectangular plaza encompassing nearly seven acres (Cox 1926; Haywood 1823; Moore and Smith 2009; Moore et al. 2016; Myer 1924; O’Brien and Kuttruff 2012). The plaza is anchored to the west by the largest mound at the site, Mound A, which measures approximately 75 m along each side and today stands approximately 11 m high (O’Brien and Kuttruff 2012). Remnants of a central staircase are still visible along the eastern face of this mound.

Most of the meander bend, including the site area, was used for both agriculture and animal pasture for at least a century prior to its purchase by the State of Tennessee in 1973 (Figure 1). During that period an access ramp was cut into the north face of Mound A. Plowing also obscured profiles of the smaller mounds around the main plaza, which today measure between approximately 0.5 and 4 m in height (O’Brien and Kuttruff 2012). Nevertheless, excavation data from the 1970s (O’Brien and Kuttruff 2012) and a recent magnetometer survey (Lawrence et al. 2016) suggest many of the smaller mounds were flat-topped and supported structures on their summits.

The Mississippian landscape in this portion of the Nashville Basin is not restricted to the Mound Bottom meander bend, but instead extends across ridge crests and river terraces both up- and downstream. Thirty-seven additional Mississippian sites have been recorded within a 5-km radius of Mound A. These sites are generally oriented along the Harpeth River, Turnbull Creek, or South Harpeth River, and include family farms and hamlets, small mounds (often located along bluff tops and ridge crests), stone box cemeteries, and at least two rock art sites (Smith 2008). While the specific temporal relationships of these sites to occupations at Mound Bottom remain generally unknown, one major adjacent
site is believed to be contemporaneous: the Pack site (40CH1), located approximately 1.6 km upstream also along the left descending bank of the Harpeth River.

Mound Bottom and the Pack site were together identified by William Edward Myer (1924:109) as the “Great Mound Group.” Historic accounts describe both sites protected by palisades with projecting bastions, and being connected to one another by a road or trail (e.g., Haywood 1823; Jones 1869). Together these two sites comprise the largest Mississippian mound grouping in Tennessee, and one of the largest in the American Southeast. Today Mound Bottom is managed by Harpeth River State Park as the Mound Bottom State Archaeological Area, while the Pack site is divided among multiple private landowners.

According to current understandings of regional Mississippian chronology, Mound Bottom and Pack were both founded during the early 11th century AD at the onset of Moore and Smith’s Regional Period I, likely by outsiders arriving in the region from the American Bottom (Moore and Smith 2009). Radiocarbon dates from Mound Bottom show early mound and house construction beginning around AD 1000 (O’Brien and Kuttruff 2012), while ceramic chronologies suggest occupations spanning the period of approximately A.D. 1050-1200 at Pack, and AD 1100-1300 at Mound Bottom (Moore and Smith 2009; Smith and Moore 2010). Major occupations at both sites ended by around AD 1350 at the beginning of Regional Period IV, after which point neither was intensively
occupied through the end of the Mississippian era. Despite the likely role of the Mound Bottom and Pack sites as paramount regional centers and seminal contributors to the development of the Middle Cumberland Mississippian, few modern archaeological investigations have been performed at either site. The most recent excavations and mapping at Pack were done as part of the Works Progress Administration’s Chickamauga Basin project, and concluded around 1937 (Moore et al. 2016), while the last excavations at Mound Bottom prior to the current effort took place in 1974 and 1975. That work was conducted by the Tennessee Division of Archaeology (TDOA) and a Vanderbilt University field school, and was lately summarized by O’Brien and Kuttruff (2012) for the journal *Southeastern Archaeology*. An archaeogeophysical survey by David Dye and colleagues from 2007-2008 (e.g., Lawrence et al. 2016; Walker et al. 2008) and TDOA mapping of possible celestial alignments in 2011 both focused on the Mound Bottom site core, but did not include any subsurface investigations and have not been published to date.

**New Investigations at Mound Bottom**

In 2016 the authors began a series of investigations which would culminate in the first excavations at Mound Bottom in 40 years. This work was prompted by examination of 4 m/pixel LiDAR imagery for both the Mound Bottom and Pack site areas provided to the TDOA by the
The LiDAR returns revealed a series of both poorly-documented and previously unrecorded above ground features throughout the Mound Bottom site area and surrounding landscape. These included a possible unrecorded mound group in the western site periphery (Figure 2A), further documentation of mounds on bluffs and ridge lines east, north, and west of the site core (Figure 2B, C, and D), and a gridwork of low raised embankments throughout the main site area. LiDAR data also revealed the absence of two previously recorded mounds on the eastern periphery of the main plaza. Ground truthing inspections and excavations were performed in the summer and fall of 2016 by the authors, with the assistance of TDOA Parks Archaeologist Bill Lawrence, Harpeth River State Park manager Gary Patterson, and a number of enthusiastic volunteers.
volunteers.

**A New Western Mound Group?**

The LiDAR DEM appears to show a cluster of four previously unrecorded mounds arranged in a roughly rectangular fashion on a ridge crest just outside of the meander bend, approximately 800 m west-northwest of Mound A (see Figure 2A). The placement of these possible mounds relative to the main plaza and their arrangement on the landform strongly recalls small plaza groups documented at the nearby Pack site, where clusters of small mounds are arranged across level ridge crests both southwest and northwest of the main mound (Myer 1924:100).

An in-person inspection of the newly-identified features west of Mound Bottom revealed them to be historic push piles composed of scrap metal and tree stumps. Ground surface inspections of rodent burrows and tree falls in the area surrounding the push piles identified the presence of heavy carbon flecking and wood charcoal consistent with historic burning, but did not encounter any archaeological materials. Simultaneous ground-truthing of other above ground features which appear west of the site core in the DEM, including a number of low earth embankments along the entry road to the site, revealed that those too were historic in origin.

**Bluff and Ridgetop Mounds**

The presence of small mounds on the ridge crest west of the main plaza at Mound Bottom, and atop bluffs to the east and north across the Harpeth River, have been known for more than a century (see Figures 2 and 3). However, it was not until creation of the 2016 DEM that all these various subsidiary mound locations have been accurately mapped relative to the main plaza.

A mound on the eastern bluff (40CH134) was first mapped in 1878 by Edwin Curtiss, who conducted excavations at Mound Bottom on behalf of the Peabody Museum at Harvard (Figure

![FIGURE 4. Detail of the eastern bluff comparing mounds from the Curtiss map (A) and the DEM (B).](image)
4A; Moore and Smith 2009). Curtiss’s map records only a single mound on the eastern bluff, which he excavated in search of burials. In 1926, Tennessee’s first State Archaeologist Parmenio E. Cox described excavating a mound “Immediately east of the Temple Mound at a distance of 2,700 feet, and across the river from the city site [on] the largest hill in that section” (Cox 1926:26). This description would seem to place the mound on the top of the eastern bluff; however, neither Curtiss nor Cox mentions the presence of more than a single mound in that location, nor does Cox’s account suggest the mound he investigated had been previously disturbed.

The 2016 DEM shows two low, flat-topped mounds arranged along a roughly north-south axis in this area (Figure 4B; see Figure 2B). Visual inspections by the authors and Bill Lawrence confirm that the two mounds on the eastern bluff remain extant. Their arrangement suggests that the group originally consisted of three platform mounds, a larger central mound flanked to the north and south by two others. It may be that Curtiss and/or Cox entirely excavated the northernmost of the three.

Figures 2 and 3 present the first time since 1878 that the main plaza of Mound Bottom and the eastern bluff mounds have appeared together on a single map, and are the most accurate plotting of their relationship to date. Mound A has been previously noted as being oriented 11 degrees east of North (O’Brien and Kuttruff 2012), apparently out of alignment with the rest of the mounds on the main plaza. Lawrence and colleagues (2016; Walker et al. 2008) have proposed that the placement of the eastern bluff top mounds relative to Mound A indicates the large mound was deliberately oriented to face the bluff top group. Using the LiDAR DEM and ARCMap toolkit we were able to better calculate the orientation of Mound A along all four axes at the summit and base of the skirt. Although these portions of the mound have undoubtedly been impacted by plowing and erosion, our measurements show that Mound A is oriented between approximately 13.67 and 14 degrees east of North and is indeed, albeit imperfectly, aligned to face the eastern bluff top mounds (see Figures 2 and 3).

Another small Mississippian mound was once situated across the Harpeth to the north of Mound Bottom, along the same landform that holds the Mace Bluff Petroglyph (40CH90)(see Figures 2C and 3). Cox visited a mound in this area on March 21, 1926, and describes the “Signal mound” as providing a “splendid view” of both Mound Bottom and the Pack site (P.E. Cox, Cheatham County Expedition --- Field Notes; Field notes booklet No. 1, pp. 12-14. State Librarian and Archivist Papers from 1919-1933, Record Group 122, P.E. Cox Papers, Series 1, Tennessee State Library and Archives, Nashville). The mound had been “partially explored” prior to Cox’s visit.

The mound on the northern bluff was first recorded in the TDOA site file in 1985 as 40CH111, by which time only low remnants survived. A faint circular signature on the DEM reveals the possible location of the remnant bluff top mound, nearly due north from the easternmost edge of Mound J at a distance of approximately 392 m (see Figure 3). State Archaeologist Michael Moore and colleagues (2016:127, Figure 6.1) recently described 1936 WPA excavations at the site of Woodard Mound as taking place on the north bluff. However, recent reconsideration of the
The Great Mound Group

data suggests that the Woodard Mound site is instead located downstream past the Narrows of the Harpeth, at the location of site 40CH4 (Michael C. Moore, personal communication, January 11, 2017).

Earthworks along the narrow ridge crest running into the Mound Bottom meander bend from the west were first mapped in 1923 (Myer 1924: Figure 109) (Figure 5). That map shows two mounds at the neck of the Harpeth meander, and two others along the toe slope to the east. In 1940 Charles H. Nash excavated at least one low burial mound on the easternmost extent of the ridge (Autry 1983; Moore et al. 2016), and uncovered evidence of previous excavation in the area, likely by Cox. The DEM shows that while the easternmost mounds are no longer extant, the two located on the western portion of the ridge remain (see Figure 2D). A visual inspection by the authors confirmed the presence of these mounds, as well as of a low earthen embankment running along the southernmost edge of the bluff. The placement of the western ridgetop mounds orients them on a nearly straight east-west axis with the 40CH134 mound group on the eastern bluff (see Figures 2 and 3).

**Mounds M and N**

Prior to the 2016 DEM, the most precise map of Mound Bottom was created during the 1974-1975 TDOA excavations. That map employed 25-cm contour intervals, focused on the main plaza, and identified for the first time the presence of two mounds on the far
eastern extent of the site core, designated M and N (Figure 6A; see Figure 2E). These mounds are described as being approximately 8 m in diameter and 50 cm high (O’Brien and Kuttruff 2012), and raised the total number of mounds around the main plaza to 14.

In his dissertation on Mound Bottom, Michael O’Brien (1977:38) postulates that Mounds M and N “...are probably two of the many low residential mounds which were scattered outside the central plaza but yet inside the protective wall.” No excavations were made into mounds M or N during the 1970s work at Mound Bottom, nor was the area systematically surface collected, and it is not clear how or if these mounds were identified beyond their topographic signatures.

Mounds M and N do not appear in the 2016 LiDAR DEM (Figure 6B). Visual inspections of this portion of the site have additionally confirmed that no above ground footprints persist for either of these features. The site has not been cultivated since the 1970s, and thus it seems improbable that these mounds would have disappeared over the past 40 years. Rather, the previous identifications of Mounds M and N based on their apparent topographic signatures may represent mapping errors instead of actual above ground features.
Possible Palisades

For nearly two centuries, conventional wisdom has held that both Mound Bottom and Pack were partially surrounded by defensive palisade walls. The earliest account of this feature at Mound Bottom appears to be from Judge Haywood (1823:129), who writes:

All around the bend except at the place of entrance, is a wall on the margin of the river. The mounds are upon the area enclosed by the wall. ... There are besides the entrance two gateways; from thence to the river is the distance of 40 yards. The wall is upon the second bank. ... On parts of this wall, at the distance of about 40 yards apart, are projected banks, like redoubts ... on which persons might have stood [Haywood 1823:129-130]

Several decades later, Joseph Jones (1869:57; 1876:36) states that “extensive fortifications” surround both Mound Bottom and Pack.

The accounts of both Jones and Heywood suggest these authors relied on second hand information to form their descriptions, and to date no first-hand descriptions of the palisade at Mound Bottom have been identified in antiquarian literature. A century after Haywood’s account and following a physical inspection of the site, Myer (1924:114) writes that the alleged palisade feature was absent, a fact he attributes to plowing: “The accounts of the early white visitors to the region indicate that a line of walls with towers every 40 paces at one time extended around the edge of this river bottom. If so, all trace has disappeared under long cultivation.”

During past visits to the site, the senior author had noted a slight rise and adjacent low dip extending in a generally east-west orientation along in the river terraces south of the main plaza. On at least one occasion, an eminent scholar from the region had suggested that this feature was likely the remnants of the southern palisade line. However, the LiDAR DEM allows us to conclusively identify that feature as the left descending bank of a relic channel of the Harpeth River, which continues both north and south of the site (see Figure 2).

During the 1970s TDOA excavations, investigators noted the presence of intersecting low embankments enclosing the eastern end of the plaza. Both Kuttruff (1979) and O’Brien (1977:36) identify as the “Inner Palisade”:

Surrounding the east end of the plaza and its mounds is a 50 to 75 cm high dirt embankment. A century of plowing has resulted in the almost complete destruction of this feature. It was first noticed in Hectare 8, before the grass was cut and burned in October, 1975, but was not traceable to the south until after the grass cover was gone. The low rise at first appeared to be the result of plowing, but excavation showed this impression to be erroneous. A chance observation of a photograph taken during the 1940’s from the high cliff across the river at sunset showed the same ridge, but much less eroded. Fragments of the north and south walls were traceable for short distances but then became too eroded to follow. [Kuttruff 1979:17--18]

Although the height of this linear feature exceeds the 25-cm contour intervals of the 1970s topographic map, it does not appear on that document except as indicated by a dashed line (see Figure 6A). During the 1970s testing effort, a
2x2-m test unit (Hectare 8, Area B) was placed on the northern of these earthen embankments, to the north of Mound H. No artifacts were recovered from within this test, which consisted of a single stratigraphic layer measuring just over one meter in depth and ending in “yellow basal clay” (O’Brien 1977:128--130). No buried A-horizon or midden deposit was present, although a wall trench and storage pit were reportedly discovered cut into the clay beneath the bank of earth. In the final interpretation, O’Brien suggested that site deposits in this area had been deliberately cleared down to contact with subsoil, after which artifact-sterile soil had been deposited in a single event as part of palisade construction. The northern embankment was also identified by Walker et al. (2008), who noted it as a bright linear reflection in the magnetometer data.

The LiDAR data for Mound bottom revealed a grid of raised embankments spread across the site area (Figure 7). These features enclose the main plaza to the east, north, and south, and further separate that space into discrete, similarly sized units. The easternmost of these embankments, along with intersecting berms to the east, correspond to the dashed lines of the “inner palisade” (O’Brien 1977; O’Brien and Kuttruff 2012) (see Figure 6). Based on this identification, it initially appeared plausible that the raised embankments might present a network of palisades.
Ground Truthing

In June of 2016, with the assistance of Bill Lawrence and several volunteers, the authors undertook two weeks of excavations to examine the grid of raised linear features identified in the Mound Bottom DEM. With the site mowed short these features were visible to the naked eye. Excavations were placed perpendicular to embankments at the foot of Mound A and along the northeastern edge of the site core, and as well as at the intersection of embankments to the east (see Figure 7).

None of the test units encountered midden or intact deposits. Units near Mound A were essentially sterile in terms of both artifacts and features, with the exception of a north/south linear discoloration encountered at approximately 37 cm below ground surface, immediately above subsoil. That feature was less than 4 cm thick and exhibited no coherent profile. The unit placed on the eastern embankment was similarly unremarkable, yielding undifferentiated, nearly-sterile soils extending approximately 70 cm below surface before transitioning to subsoil. Both these units yielded a small collection of lithics and eroded fragments of Mississippi Plain ceramics, as well as U-shaped metal fence staples.

A final test unit was placed perpendicular to the crest of the northern embankment, approximately 7 m east of the 1970s unit. While that test is reported as being artifact-free, the nearby 2016 unit produced exponentially more lithic material that any of the other locations tested during ground-truthing. At approximately 61 cm below ground surface, excavators encountered a faint linear charcoal stain extending east/west across the unit, oriented in the same direction as the embankment itself. This feature was immediately underlain by parallel bands of light soil approximately 32 cm apart. It was initially anticipated that this feature might represent the edges of a wall or palisade trench. However, the feature disappeared in less than 2 cm without resolving. A radiocarbon sample from the linear charcoal deposit was submitted to Beta Analytic, Inc. for dating, and returned a conventional radiocarbon age of 100 ± 30 BP (wood charcoal, $\delta^{13}C=-11.0$, Beta 442865). The northern test unit was ultimately terminated at 89 cm deep, after transitioning to yellowish brown silty clay.

Conclusions

Through a combination of remote sensing data and ground-truthing we can now take a better account of the total mounds at Mound Bottom, which have been variously reported as numbering between 11 and 14. The main plaza includes 12 definite mounds (see Figures 2 and 3), while previously recorded mounds M and N do not appear to be extant features. With the two surviving mounds identified along the western ridgetop, the total mounds within the Mound Bottom meander bend today numbers 14. Two additional mounds survive across the Harpeth River on the eastern bluff top (40CH134), and remnants of a single mound stand on the bluff to the north (40CH111).

Shortly before completion of fieldwork, investigators located an oblique aerial photo of the site taken in 1938 (Figure 8). That image shows a patchwork of fence rows which directly correspond to the gridwork of earthen berms. Based on both the radiocarbon data and historic imagery we may conclude that the grid of low embankments seen in the LiDAR data,
including the eastern and northern features previously identified as the “inner palisade,” are not original to the site and instead are the result of historic agricultural practices. Despite assertions by historic sources that Mound Bottom is surrounded by a palisade, actual physical evidence of that feature has yet to be identified.

The vast majority of excavation data from both Mound Bottom and the Pack site exist as unpublished or archival materials, and consequently are not widely available for researchers. In addition, neither site has undergone modern evaluation at a scale that even begins to approach work done on other major regional Mississippian centers. Consequently Mound Bottom and Pack have not substantially contributed to modern research questions on the formation or trajectory of the Middle Cumberland Mississippian or the broader Mississippianization of the interior Southeast. Hopefully the work presented here marks the initial steps in reversing that trajectory. In coming years we plan to further assess Mound Bottom with a complete suite of geophysical and remote sensing techniques, and thereby lay the groundwork for new investigations of this important Middle Cumberland Mississippian site.

Notes:
1 This article employs mound designations established during the 1974-1975 Tennessee Division of Archaeology excavations, with Mound A being the largest platform mound at the site, and subsequent designations moving counterclockwise around the plaza.
2 See both Moore and Smith (2009) and Moore et al. (2016) for thorough excavation histories of the Mound Bottom and Pack sites.

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