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THE 1974–75 EXCAVATIONS AT MOUND BOTTOM, A PALISADED MISSISSIPPIAN CENTER IN CHEATHAM COUNTY, TENNESSEE

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Mound Bottom (40CH8) is a large complex of 14 prehistoric mounds located in a horseshoe-shaped bend of the Harpeth River, a tributary of the Cumberland, in Cheatham County, Tennessee. It, together with another mound group 3 km to the south known as the Pack site (40CH1), received sporadic archaeological attention during the first half of the twentieth century, but it was not until 1974 that systematic work was carried out at either mound center. Over portions of that and the following year, Mound Bottom was mapped in detail and excavations were carried out to document the range in variability of mound construction and community structure. Six mounds were tested and 19 houses were partially or totally excavated. House types included both single-set-post structures and wall-trench structures. Calibrated radiocarbon dates from Mound Bottom span about a 600-year period from the eighth through the fourteenth centuries.

Mound Bottom (40CH8) is a complex of Mississippian mounds and village located on the Harpeth River, a tributary of the Cumberland, in Cheatham County, Tennessee (Figure 1). The setting is a horseshoe bend of the river in which the 14 mounds and associated plaza and residential areas are located. The river encircles the 40-plus ha of the bottom on the north, east, and south, and to the west the neck of the horseshoe is constricted to only a narrow strip of land that connects the bottomland to the uplands. Roughly 3 km to the south, and on the same side of the Harpeth, is another Mississippian mound group, the Pack site (40CH1), consisting of 15 mounds, some arranged around a large plaza. The site is encircled in part by the river, and the remainder by a palisade with bastions (see Figure 1).[1] How the two mound groups were related socially, politically, and chronologically is unknown.

On a broader scale, we also cannot accurately state how the Mound Bottom site was related to the larger context of Mississippian archaeology in the Middle Cumberland drainage. Probably of immediate concern would be an analysis of the information about the Pack site in an effort to determine the possible chronological and other relationship of the two sites. There are some 26 Mississippian mound sites in the Middle Cumberland drainage (see Smith 1992), along with many village sites and numerous stone-box-grave cemeteries. Since the 1970s' work at Mound Bottom, various excavations, many salvage in nature, have been carried out at several Mississippian mound sites as well as at other types of sites, not all of which have been adequately reported. Additional analysis and reporting on several of these, as well as a restudy of older information on various sites, would be important to an initial development of an overall settlement pattern.

William E. Myer of the Smithsonian Institution conducted extensive excavations at Pack in the early 1920s and also surveyed and photographed Mound Bottom (Kuttruff 1979). Over the next decade and a half, at least three excavations were carried out at Mound Bottom—one by state of Tennessee archaeologist P. E. Cox in 1924 (Cox 1926) and two by archaeologists connected with the University of Tennessee, first George Neumann and Stuart Neitzel in 1936–37, then Charles Nash in 1940 (Kuttruff 1979). A common thread throughout the early fieldwork was an emphasis on locating and excavating stone-box graves (Autry 1983).

The state of Tennessee purchased Mound Bottom in 1973 as part of a program to preserve important archaeological properties and to promote tourism. Kuttruff began working with the Tennessee Division of Archaeology (TDOA) in 1973 and developed plans to conduct excavations at the site the following summer using Vanderbilt University archaeological field school students and archaeologists employed by the TDOA. He returned with the field school in June 1975 and was joined by O'Brien's TDOA crew, which worked through mid-November. The results of those two field seasons of work formed the basis of a dissertation (O'Brien 1977), but they were never published in accessible form. This applies to almost all of the work carried out at Mound Bottom and Pack. Although the two sites figure prominently in overviews of the Middle Cumberland region (e.g., Ferguson 1972; Smith 1992), very little of the actual fieldwork has ever been published—a point highlighted by Kevin Smith in the title of his presentation at the 2008 Southeastern

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Figure 1. Aerial view to the north of the Harpeth River valley, approximately 5 km north of Kingston Springs, Tennessee. Mound A at the Mound Bottom site is located just to the left of the A, and Mound A at the Pack site is located just to the right of and above the B. The distance between the mounds is approximately 3 km.

Figure 2. Aerial view to the southwest of the horseshoe bend of the Harpeth River containing the Mound Bottom site. Mound A is at the right. Note the elevation difference between the bottomland to the north of Mound A, near the river, and the terrace containing Mound A. It is unclear how much of the terrace is artificial and how much is natural. Also note the locations of excavation units; see Figure 3 for precise locations relative to contour map. The embankment for the northern and eastern sides of the palisade line (arrows) is visible. Photograph taken February 1976.

Archaeological Conference, "Shrouded in Myth and Mystery: Two Centuries of Interest in the Mound Bottom–Pack Locality" (Smith 2008).

Here we hope to rekindle archaeological interest in Mound Bottom by highlighting what is currently known about its community layout, architecture, and mound construction. Our intent is not to list every test unit that was excavated in 1974 and 1975, nor to detail the thousands of artifacts recovered, although a summary of the faunal remains recovered is included. Details on all that information can be found in O'Brien (1977). Rather, our decision on what to include was based on a question we asked ourselves: If we had little or no prior knowledge of Mound Bottom, and had no intent of becoming experts on the site, what would we most like to know about it?

Site Description

Eleven of the 14 mounds in the Mound Bottom group are arranged around a central plaza. One (Mound L) is located in the eastern end of the plaza and two are near the edge of the terrace east of the plaza (Figures 2 and 3). The plaza is slightly trapezoidal and is approximately 200 m east-west between Mound A and F and 130 m north-south between Mounds C and J. The western end of the plaza is largely enclosed by Mound A, which, at roughly 75 m along each side of the base and 11 m high at the southwestern corner, is the largest mound in the complex. The mound is oriented approximately 11 degrees east of north, similar to the largest mound at Pack. The lower contours at the northeastern corner of Mound A grade imperceptibly into Mound J, one of two long mounds that form the north and south edges of the plaza. Mound J is approximately 100 m long, 40 m wide, and 1.75 m high. Rising from the northwestern corner of that platform is Mound K, a small structure that is too eroded to measure reliably.

Mound B is 60 m south of Mound A and measures 40 m north-south, 35 m east-west, and 4 m high. As with the other mounds, erosion has broadened the base of Mound B considerably. There may have existed a raised platform extending from the western side of the structure. This feature, which seems to have been half as high as the mound itself, is suggested by the contours but is readily visible only when the sun is in the correct position.

East and just to the north of Mound B is Mound C, the southern twin of Mound J. The structure was probably originally flat-topped, but erosion in the center has created two low summits. The mound measures 80–90 m long and approximately 40 m wide. It is almost 3 m high at the southeast corner. Mound D is located southeast of Mound C and together with Mound E seals off the southeast corner of the plaza. This mound is almost completely eroded and may have originally been two separate mounds. The structure

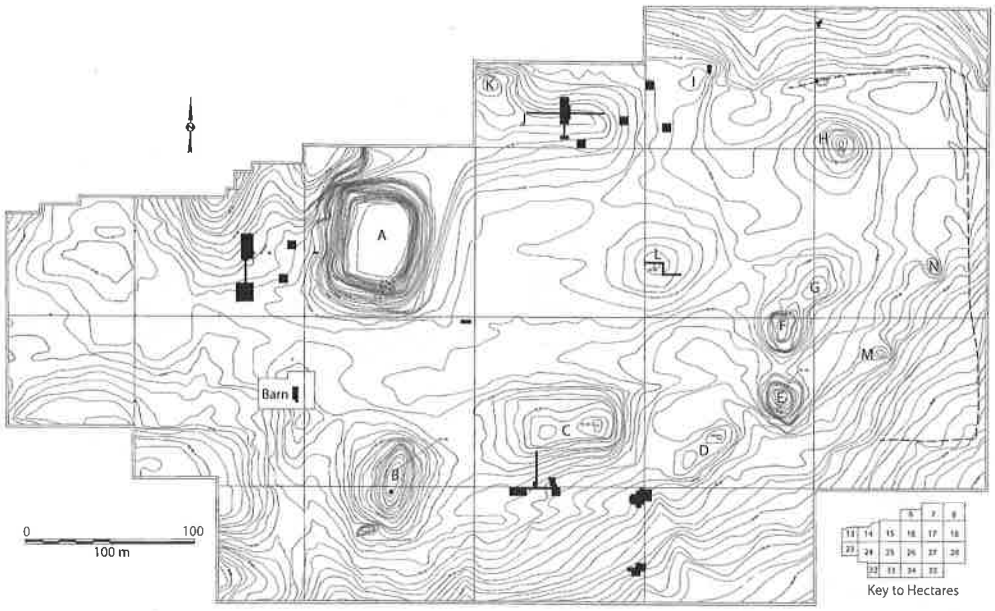

Figure 3. Contour map of Mound Bottom showing locations of mounds (lettered), excavation units (dark rectangles), and earthen embankment (dashed line). See the map key for hectare designations.

now measures 30 m × 15 m and is slightly more than 1 m high. Mound E has escaped severe erosion and is the best preserved of all the surface structures excepting Mound A. It is nearly circular, with a diameter of about 25 m and a height of 3.5 m.

Mounds F and G form part of the eastern enclosure of the plaza. Mound F is circular, with a diameter of 15 m and a height of 1.75 m. Mound G is too eroded to obtain accurate measurements but at one time was perhaps equal in size to Mound F. Mound H is located 40 m north of Mound G and forms the northeastern corner of the plaza. Circular in shape, it has a diameter of 30 m and is 2 m high.

Mounds M and N are located outside and east of the ring of mounds outlining the plaza. Each is approximately 8 m in diameter and 50 cm high. Mound I is located just east of Mound J and is so eroded as to be almost unnoticeable as a structure. Mound L is anomalous in that it is located in the plaza, just west of Mound G. It is circular and has a diameter of 30 m and a height of 1 m.

Surrounding the eastern end of the plaza and its mounds is a low earthen embankment (see Figure 3). A century of plowing largely leveled the feature. It was first noticed after the grass was cut in July 1975, where segments of the northern, eastern, and southern lines of the embankment were traceable for short distances before becoming too eroded to follow. The chance discovery of a photograph taken during the 1940s from the high bluff across the river near sunset showed the same embankment but in much less eroded condition. It is barely discernible in Figure 2 and is plotted on Figure 3.

One curious feature of Mound Bottom is the apparent terrace at the northwestern corner of the plaza that contains Mounds A, J, K, and I—a feature readily apparent in Figure 2. In retrospect, a few days with a core truck could have helped determine how much of the terrace, if any, was artificial and how much was natural.[2] The terrain drops sharply to the floodplain north of the three mounds, ending at the river. Although access to the plaza would have been easiest from the west, through the 60-m gap between Mounds A and B, another entry point could have been through the gap between Mounds H and I. The terrace containing Mounds A, J, K, and I stops at that gap, and although this may be the result of erosion, it could conceivably represent the presence of a gateway, perhaps between the eastern end of the terrace and the western end of the earthen embankment. We base this possibility on an account written in the early nineteenth century by John Haywood (1823), who stated that a gateway existed on the northern side of the plaza and a large palisade with two gateways surrounded the upper portion of the area. There is also a ford of the Harpeth River to the northeast of this opening, which is also shown on one of the early maps of Mound Bottom. It is possible that it may have been there prehistorically.

Fieldwork Objectives

Several research objectives drove the two seasons of fieldwork at Mound Bottom. Some of them, in light of modern archaeological thought, seem rather dated,

whereas others transcend time and would be part of any modern field project. For example, one might contrast attempts to understand the inner workings of a chiefdom, a very 1970s topic, with defining the limits of occupation around a mound-ringed plaza, a topic that would appeal to archaeologists of any period. Defining occupation limits depends on measuring variables such as artifact density—a fairly straightforward task—whereas identifying chiefdoms archaeologically, if one were so inclined, depends on finding evidence of craft specialization, ascribed status, ranked lineages, redistribution, and a host of other sociopolitical characteristics that decades ago were identified ethnologically (e.g., Moore 1974; Sahlins 1958; Service 1962), not to mention providing an adequate definition of the term "chiefdom."

Ignoring for the moment that it may even be illusory to search for "chiefdoms" archaeologically in the Midwest and Southeast (Pauketat 2007; Sullivan 2009), the job is certainly made more difficult when something considerably less than one percent of a site is excavated. Those of us raised on the promise of the New Archaeology, however, were not too concerned at the time because we knew deep down that we could always escape problems of sample size with better ethnological theory (O'Brien et al. 2005). We were wrong, of course; the only way of escaping problems of sample size is to generate a larger sample—ideally, one designed to maximally reflect the population being sampled.

From a practical standpoint, the TDOA wanted to determine where an interpretive center might be built on the site with minimum disturbance to the archaeological record, and thus both seasons of fieldwork were geared in part to addressing differential prehistoric use of the large bottom contained in the horseshoe of the Harpeth River. Whereas the 1974 field season was dedicated to examining both on-mound and off-mound areas through excavation, we decided in 1975 to use a mix of intensive surface collection and excavation to determine where residential structures and associated features were the most and least dense. This strategy was driven in part by an increasing body of work in archaeology that not only suggested surface archaeology was a worthwhile endeavor in its own right (e.g., Redman and Watson 1970) but also demonstrated that in many cases a positive correlation existed between surface-artifact density and subsurface features such as pits and houses (e.g., Binford et al. 1970; Tolstoy and Fish 1975).

Prior to the 1974 field season, a Tennessee Department of Conservation survey crew established a grid oriented magnetic north-south over the mound complex and adjacent areas. Bronze survey pins and plates were set at the corners of each hectare (100 × 100 m) as permanent markers. Each hectare or part thereof was numbered as shown in Figure 3, and subsequent field units were designated by the north and east coordinates measured from the southwestern corner pins of each hectare. A detailed topographic map was prepared in late summer 1975 (see Figure 3).

For the controlled surface collection, selected portions of the plaza and adjacent areas were plowed and disked. After several heavy rainfalls, the prepared areas were gridded in 5-×-5-m units, and all visible artifacts were collected. Few real surprises were encountered upon analyzing the surface-collected materials from the 658 units (see O'Brien [1977] for unit locations). As expected, the plaza—presumably a nonresidential zone—contained relatively few artifacts compared to areas outside of it, where artifact frequencies (primarily sherds and chipping debris) ranged as high as 100-plus pieces per unit. The heaviest artifact densities were in Hectare 34, south of Mound C, which after excavation proved to be one of the most heavily occupied areas of the site.

Mound Excavations

Six mounds—A, B, C, I, J, and L—were tested, four of which (Mounds A, B, J, and L) are discussed in detail here. Excavations into Mounds C and I are briefly described. Several research problems drove mound excavation, the primary one being to determine the range of functions the mounds served. Our initial guess was that the more circular structures (Mounds B, I, and L) may have served as burial mounds, whereas the nearly square Mound A and the two long rectangular mounds (Mounds C and J) that defined the northern and southern edges of the plaza served other purposes. We also wanted to obtain at least a preliminary idea of the growth and development of the plaza area as it related to mound building.

Mound A

A 1-×-2.8-m unit was excavated into the west base of Mound A in 1974 to see if we could locate the contact between the base of the mound and the original surface. That contact was located, and there was no discernible evidence of previous occupation of the pre-mound surface. Four distinct mound-construction stages, together with fill episodes within each stage, were defined (Figure 4), as was an underlying zone of pre-mound fill or slope wash from an even earlier stage of construction that was not present in the excavated area. A thin layer of charcoal on the surface of Stage II yielded a date of cal. A.D. 976 ± 48 (DIC-617), and charcoal from the surface of Stage III dated cal. A.D. 1144 ± 97 (DIC-624) (all dates calibrated using CalPal

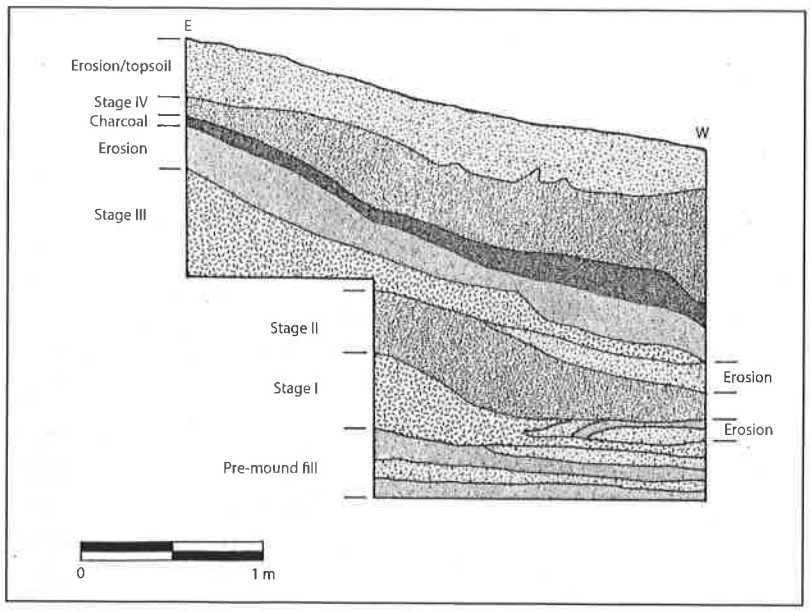

Figure 4. South profile of a cut into the western slope of Mound A showing four recognized stages of mound construction.

2007[3]; see the later discussion of potential problems with Dicarb assays).

Mound B

Mound B, a conical mound, was tested to determine whether it was a burial structure. Numerous stone-box graves had been excavated at Mound Bottom (Autry 1983; O'Brien 1977), but, where known, they occurred in small cemeteries, possibly covered by low mounds, either well to the west and southwest of the plaza or on the northern slope of Mound I and potentially beneath that low mound. A 2-×-2-m unit was opened just south of the summit of Mound B and reached a depth of 4.2 m before it encountered yellow clay subsoil. A 5-cm-thick midden zone rested directly on the submound clay surface, evidence that at least some occupational material had accumulated prior to the first stage of mound construction.

Five construction stages were visible in the profiles (Figure 5). The first stage consisted of a 1.7-m-thick deposit of gray sandy clay containing bands of darker gray clay. The upper surface of Stage I was eroded across the profile. Stage II had layers of tan sand and battleship-gray clay interspersed throughout the main matrix. Stage III was added to the south and west of Stage II, possibly after a portion of the earlier stage had been removed. This 40-cm-thick layer consisted of a mixture of clay and marl. It did not extend up to the surface of Stage II, stopping 35 cm short of it. This would have given the mound, at least on the south and west sides, a stepped appearance. Prior to the addition of Stage IV, a 55-cm-deep pit was excavated into the surface of Stage II. Later, the pit was filled with the

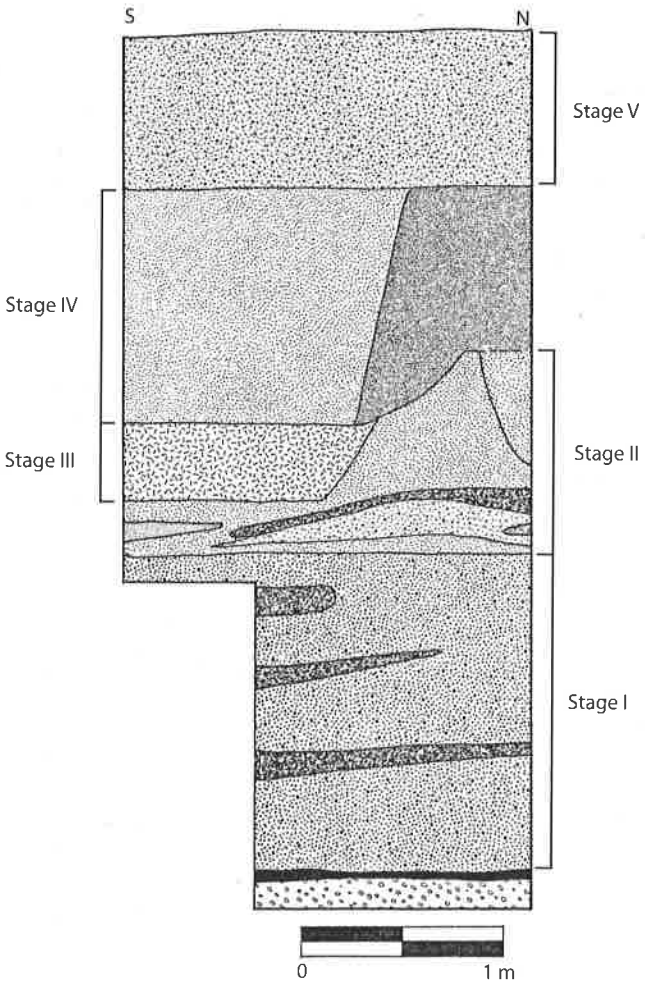

Figure 5. West profile of the 2-×-2-m test unit into Mound B showing five recognized stages of mound construction.

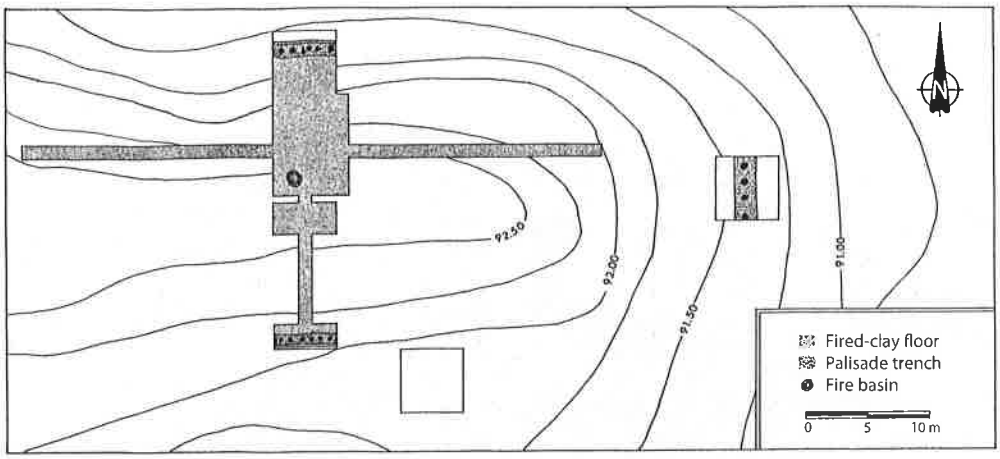

Figure 6. Plan of Mound J showing locations of excavation units. The fired-clay surface of Stage I extended across the entirety of the largest excavation unit but was not found in either of the smaller units. The large wall trenches on the north and south cut through the burned surface, but the one on the eastern end is beyond the limit of the burned floor.

previously removed soil. Stage IV was next added in two parts—a layer of gray, sandy clay 80–110 cm thick to the north and a layer of tan, sandy clay 1.15 m thick to the south. Stage V consisted of an 80-cm-thick cap of light tan, very sandy soil. The layer was most certainly thicker before erosion removed some of it. No post molds or other features were found in any of the levels. Based on the information from this single unit, we were unable to determine the function(s) the mound might have served.

Mound C

Work on Mound C consisted of a 1-m-wide trench excavated from the cluster of structures south of the mound into its southern slope (see Figure 3). The trench revealed the homogeneous first stage of Mound C resting on an old humus zone. The maximum height of the first mound stage was 1.3 m. The excavation was not carried far enough into the mound to determine if the top of that platform had a similar configuration as Mound J (see below), nor was it determined whether the mound had a second stage.

Mound I

An 11-m^2 unit northeast of the summit of Mound I excavated to record some eroding stones revealed six empty stone boxes. No bone or other material was present, the graves having apparently been previously excavated (O'Brien 1977).

Mound J

Excavations on Mound J began in 1974 near the center of the mound and were expanded later that year and in 1975 to locate and define additional construction details (Figure 6). In all, 253 m^2 were excavated on and around the mound. Initial work revealed an even and deliberately fired-clay surface about 4 cm thick on what was later determined to be the upper surface of the first stage of mound construction. A large, heavily fired-clay basin nearly a meter in diameter and 6 cm deep was built into the surface at the approximate center of the mound. Charcoal obtained from the basin fill dated to cal. A.D. 934 ± 58 (DIC-615).

Unit profiles showed that Mound J had been built in at least two stages, with the first stage capped by the burned surface (labeled Structure 2 in O'Brien 1977). Stage 1 was about 1 m high. Its fired-clay upper surface extended about 25 m north-south and at least 60 m east-west. If we assume that the fire basin was more or less centrally located, then the upper surface of Stage I would have been approximately 25 by 75 m, or about 1,875 m^2.

A wall of vertically placed logs, 30–37 cm in diameter, encircled at least a portion of the Stage I surface, with the logs set in trenches that were roughly 70 cm wide (see Figure 6). Excavation revealed the two parallel trenches and sets of post molds seen in Figures 6 and 7—one on the north side of Mound J and one on the south side—that were cut through the burned platform surface. The trench and post molds on the east edge of the mound were outside the extent of the burned surface.

The fired first-stage surface of the platform was well preserved, but there was no indication that the structure was roofed. Although there clearly was a perimeter wall on the northern, southern, and eastern sides of this platform, no interior post molds were located on the surface of the first stage. Although the excavations may not have been extensive enough to reveal interior support posts, with the information

Figure 7. View west of the large wall trench along the southern edge of Stage I of Mound J. Note that the trench was cut through the fired-clay surface. The tops of the post molds are just becoming visible in the wall trench.

currently available a clear-span roof of some 25 m by 75 m seems unlikely.

The addition of the second stage expanded the length and width of the mound and raised its height, but plowing and erosion precluded determination of its original height. Portions of presumably later walls, possibly associated with Stage II, were defined in the north-south profiles of a 5-×-5-m unit on the southern slope of Mound J (Figure 8). There, large posts had been repeatedly sunk into and pulled from the original mound and the overlying erosional zone. Evident in the western profile (see Figure 8, top) were the remains of what appear to be three logs, perhaps once having served as steps on the southern slope of Stage I. Large post molds such as the ones seen in the profiles were not found in the floor of the unit, leading us to suspect that the unit just happened to be placed in a gap in the wall.

Mound L

A 1-m-wide Z-shaped trench was excavated through Mound L (see Figure 3). A small section of the north-south profile is shown in Figure 9. A small platform is evident in the northern (right) half of the profile, and others were evident in other sections of the profiles. Several post molds, such as the one near the southern edge of the platform and originating from its surface, suggest there might have been a small structure on top of the platform. The platforms were then covered with additional material to consolidate them into a much larger and slightly higher mound. No evidence was found to suggest what might have been on the surface of the final mound stage. Charcoal from mound fill dated to cal. A.D. 768 ± 105 (DIC-621), the earliest date from the site.

House Excavations

Excavations aimed at locating the remains of houses were placed south and southeast of Mound C in Hectares 26, 34, and 35; west of Mound A in Hectare 14; and under a nineteenth-century barn southwest of Mound A in Hectare 24 (see Figure 3).

Hectare 14

We speculated that houses near Mound A would be larger than those elsewhere on the site and perhaps would contain goods not found elsewhere. Work began in 1974 with the excavation of two 5-×-5-m units about 10 m west of the base of Mound A. No features or structures were present, and little cultural material was present in either unit. Two additional 5-×-5-m units were begun about 30 m west of Mound A and then expanded. In one unit we defined the remains of four rectangular wall-trench structures (Figure 10), each 4–5 m on a side. House 1 contained four prepared-clay fire basins and one shallow pit. Fired-clay areas suggest the structure may have had a prepared floor. Charcoal from the floor yielded a date of cal. A.D. 976 ± 48 (DIC-616). House 2 was represented by only the west wall and a small segment of an east wall. It most likely predated House 1. Only the northwestern corner of House 3 was exposed, and portions of three walls of House 4 were defined. A centrally located prepared-clay fire basin was present in House 4. Whereas the houses are similar in size to those in other areas of Mound Bottom, some mica, copper, shell, numerous fine-paste sherds, and one negative-painted bottle were recovered from this area, suggesting a possible differentiation from the other excavated structures at the site.

A unit that eventually measured 111 m^2 was excavated 12 m south of the area containing Houses 1–4 (Figure 11). The remains of two adjacent structures, Houses 22 and 23, and a number of other features were defined within a large rectangular basin that had been excavated to a depth of 40–50 cm below the 1974 ground surface (Figure 12). Two wall-trench houses

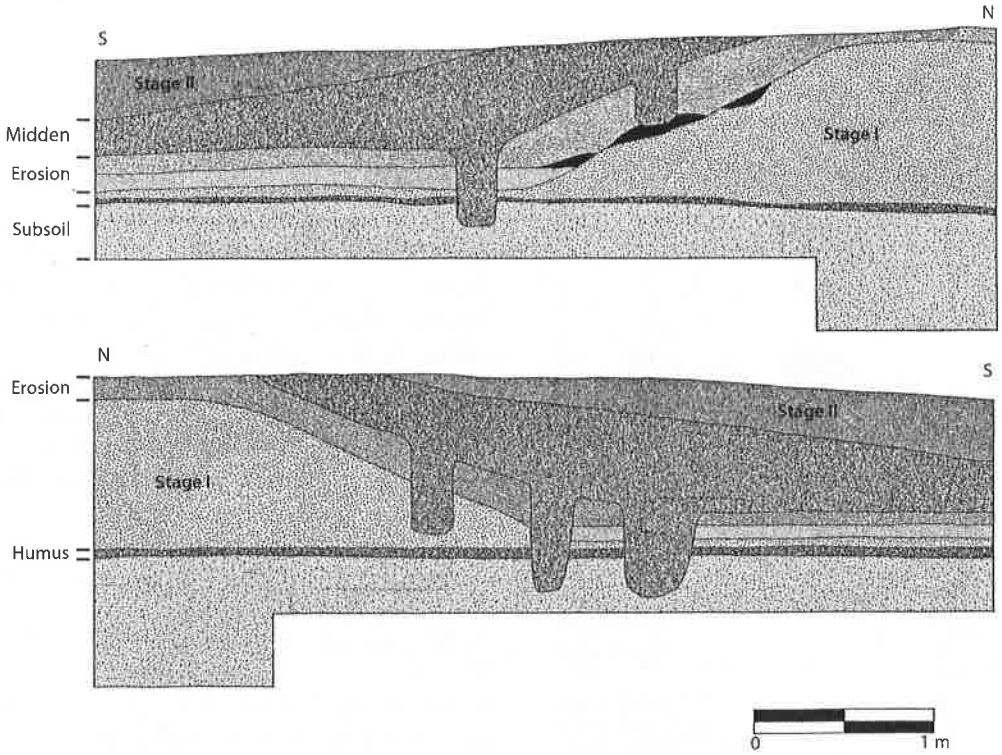

Figure 8. Profiles of the 5-×-5-m unit on the southern flank of Mound J: (top) west profile showing both stages of mound construction, intervening midden and slope wash, and two large post molds; (bottom) east profile showing the same stratigraphic units and three post molds. Note the remains of three logs (shown in black) in the west profile possibly representing steps.

had then been built within the basin. House 22, about 4 m square, was recognized by portions of three wall trenches. A line of post molds and other scattered ones were in the floor, perhaps representing an earlier single-set-post house. A prepared-clay fire basin was near the western wall of the house. House 23 was a slightly trapezoidal 3.5-×-3.75-m wall-trench structure that contained a prepared-clay fire basin near the center. The two visible corners were open, with a small post mold in one opening, and there was a gap in the west wall trench.

Evidence suggested that after the two houses were erected, excavated soil from the basin was placed against the walls and possibly over some of the roof area. After abandonment, the houses collapsed, and the earthen fill from around the walls partially collapsed into the pit. Although plowing had obliterated any surface evidence, this feature would originally have had the doughnut-shaped arrangement common to many "house circles" that were often reported at sites in Tennessee, including Mound Bottom, during the late nineteenth and early twentieth centuries and which are still visible at a number of sites, including Pack. After abandonment and collapse of the structures, the depression was filled with debris, including large numbers of sherds, stone tools, pieces of debitage,

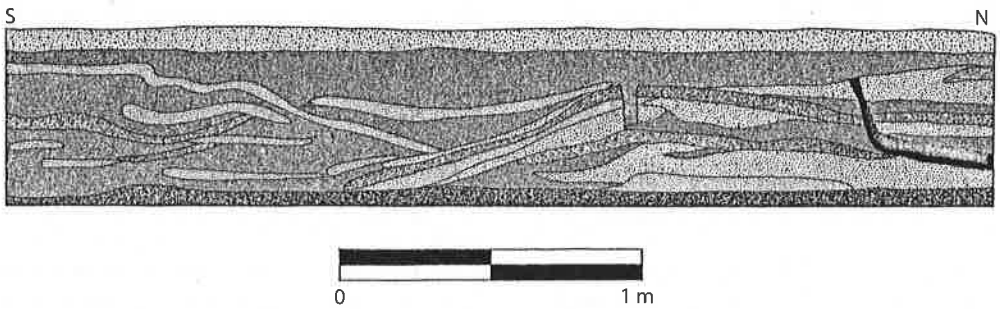

Figure 9. West profile of the north-south section of the Z-shaped trench through Mound L. Evidence of a smaller platform mound is evident in the right half of the profile. One post mold is present near the south edge of the platform. The dark line at the extreme right is an animal burrow.

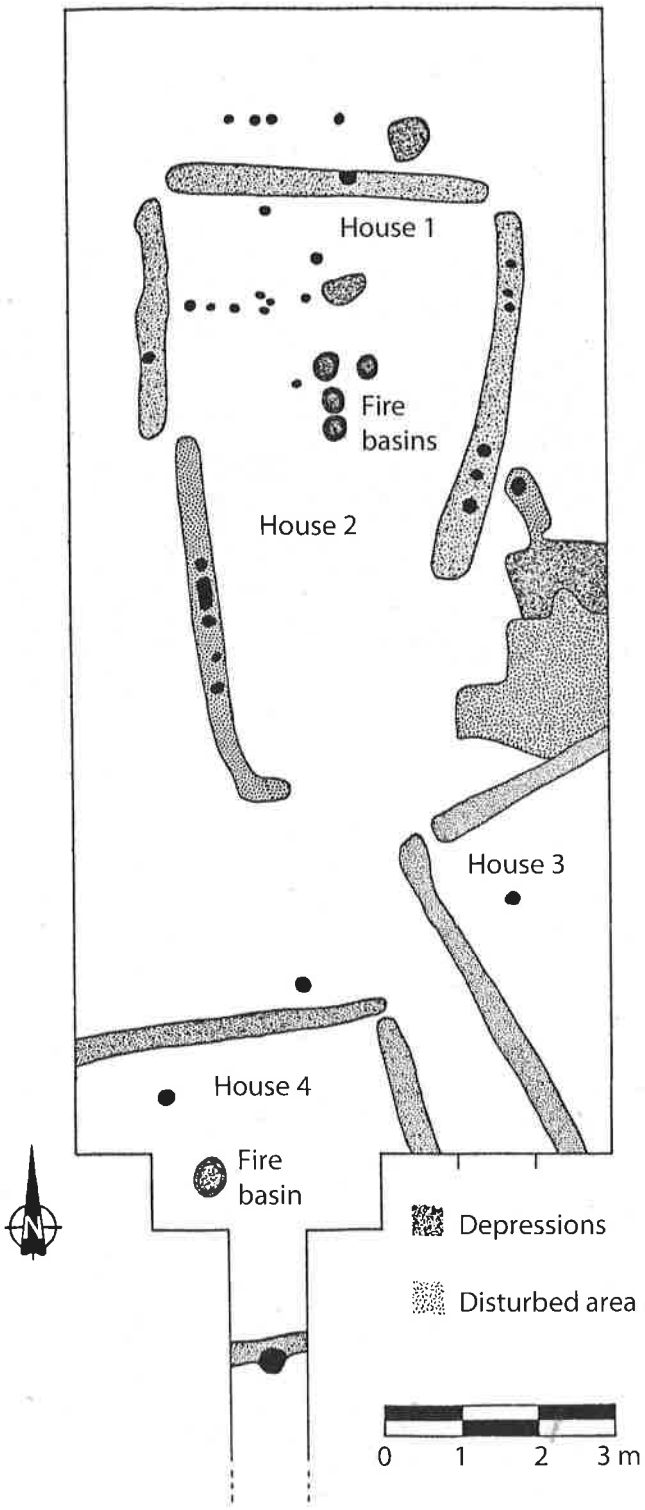

Figure 10. Excavation plan of unit west of Mound A containing Houses 1–4.

and animal bones (see Figure 12). A radiocarbon date of cal. A.D. 1293 ± 67 (DIC-618) was obtained from charcoal recovered from the fill. After the pit was filled, another structure (unnumbered) was built on top of it, represented by four post molds and piles of small pieces of limestone (see Figure 11).

Hectare 24

Excavation in Hectare 24 consisted of opening 24.75 m^2 beneath a small nineteenth-century barn located south and slightly west of Mound A (see Figure 3). If any plowing had been carried out prior to barn construction, it was done with mule and chisel plow, which does not leave the deep scars that mechanized plowing and disking do. Thus we hoped there would be significant undisturbed deposits beneath the barn floor. We were not disappointed; plowing had indeed been shallow—5 to 8 cm—and a well-defined and well-preserved burned house lay below the disturbed layer (Figure 13). The structure (House 14) was defined on three sides, the eastern side being left unexcavated because it extended under a large partition within the barn. The house measured approximately 7.5 m north-south and an indeterminate distance east-west, making it one of the three largest known houses at Mound Bottom.

Small single-set posts, 4–8 cm in diameter and spaced 10–20 cm apart, served as the major wall elements. Each charred cedar wall post was still in its original position—angled into the ground (see Brennan 2007) with the above-ground portions bowed in toward the center of the house. We assume that the roughly elliptical structure was beehive-shaped, with the saplings bent in toward the center of the structure and lashed at the top. Split cane was interwoven among the posts. Since no fired daub was present, we assume the structure was probably thatched. Charcoal from one of the posts produced a date of cal. A.D. 1339 ± 48 (DIC-619).

Included among items on the floor when the house burned were eight ceramic vessels, a variety of stone tools, and stacks of corncobs. Seven of the 15 stone food-preparation implements recovered from the floor occurred within a small area near the southwestern corner of the house: five intact manos of various shapes, a rectangular mano that had its broken edge retouched to create a cleaver, and a metate. The other eight food-preparation implements, primarily manos, were spread out along the inside perimeter of the structure.

The burned-clay layer in the southwestern corner of the house was presumed to be a hearth remnant. Whereas very little pottery came from directly on or above this feature, the area around it was full of sherds, including pieces of three large shouldered jars and one hooded jar that were crushed when the structure burned and collapsed (see Figure 13). A meter to the east was another crushed jar, and 1.5 m north of the

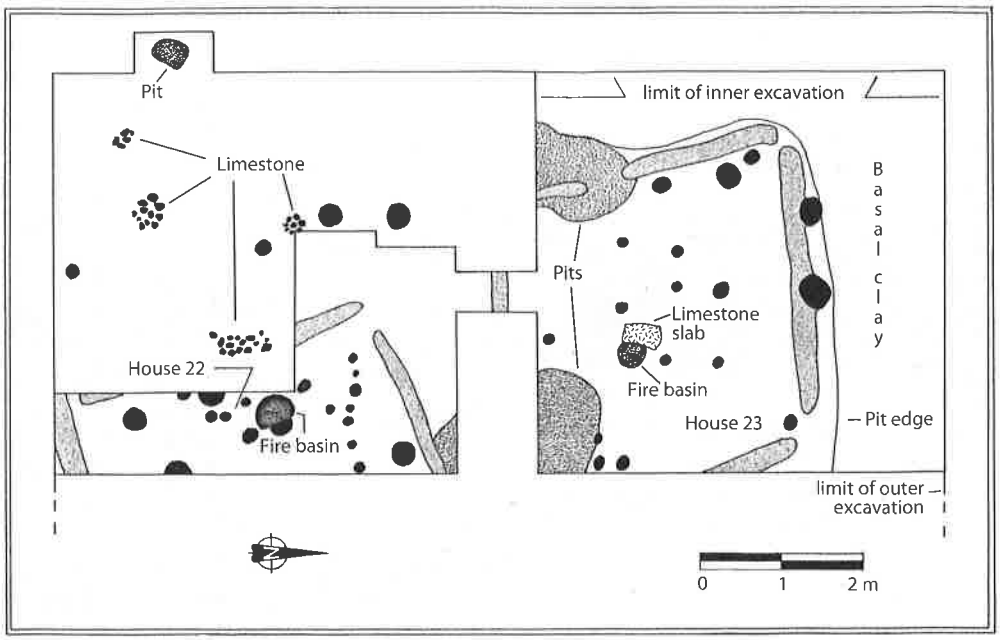

Figure 11. Excavation plan of unit containing Houses 22 and 23. Both houses were constructed in a large basin (see Figure 12). After the houses were torn down or naturally deteriorated, the basin was largely filled with trash, and at least one structure or wall was built on top of the filled area.

four vessels was an intact small, hooded bottle. Two more large jars were found broken in place along the northwest wall, next to a pile of charred corn cobs. The hearth area also produced by far the highest frequency of lithic debris, with unit totals dropping off to the north. Included in the 1,163 pieces of stone were small cores, core-reduction pieces of various sizes, and retouched flakes, some with steep retouch along an edge. When standardized by volume, the number of pieces recovered from the 4-cm-thick floor deposit was higher than that from any other house floor or midden deposit at Mound Bottom, presumably because the floor was never cleaned after the structure burned.

Hectares 26 and 34–35

The majority of the excavations conducted in 1975 occurred south of Mound C in Hectare 34 and two adjacent hectares (see Figure 3). A total of 101 m^2 was excavated in the extreme northeastern corner of Hectare 34 and the northwestern corner of Hectare 35. Two distinct wall-trench house patterns were found—House 10, measuring 7.1 by 6.3 m, and House 9, measuring 5.1 by 4.8 m (Figure 14). Stratigraphic evidence showed that House 10 was constructed first. A wall trench 20–30 cm deep was excavated, open at least at two corners, around the area to be enclosed. Posts measuring 20 cm in diameter were then placed at the two open corners of the trench. No post molds were evident in the fill or bottoms of the trenches. The southern wall trench was broken just east of the southwestern corner of the structure. This 60-cm-wide gap could have served as a doorway.

House 9 was constructed inside the area bounded by House 10. It was also constructed using the wall-trench technique, with trenches averaging 10–15 cm wide. It was open at all four corners, with small corner posts in two of the openings. The northern wall trench extended almost a meter past the northeast corner and possibly functioned as a windscreen that protected the entrance at that corner of the house from northern exposure. Five small post molds were found in the northeastern corner of the room, running diagonally from the north

Figure 12. Photograph (looking southwest) of House 23 in a portion of the basin containing Houses 22 and 23. Note in the profiles the zone of refuse on the floor of the basin and the fill above.

Figure 13. Photograph looking down on House 14 (east to the top). The charred wall posts of the house are visible to the left, and a concentration of crushed pottery vessels is at the lower right. Other broken vessels are at the top right. Several stone tools and a small intact jar are on the floor.

to the east wall. The average spacing between the post molds was 40–50 cm, except for one opening that measured 80 cm. It is possible that this row of post molds represented an interior partition to shield the interior from the doorway.

Two scatterings of pottery were found on what appeared to be the floor of House 9. This was not a prepared surface but only a common level containing the pottery and a fire basin. Two broken jars were found near the northeastern corner, and five broken jars and two bowls were found in the southwestern corner. Most of the vessel bases were still in place on the ground, with the most serious damage, probably from plowing, occurring on the upper portions of the containers. The combined vessels presumably represent an assemblage used in everyday cooking and storage by one household, similar to those found in House 14. The assemblage consists of three shouldered jars with tall, vertical to slightly excurvate necks (one with a thickened rim); one shouldered jar with a short, excurvate neck; one shouldered jar with a short, excurvate rim; one shouldered jar with an everted neck/rim; one hooded jar; one incurving-wall bowl with a direct rim (meaning there is no change in angle from wall to lip); and one semihemispherical bowl with a direct rim.

The pattern of single-set-post molds seen in the west-central portion of Figure 14 was at first thought to be a separate house structure, constructed prior to or after the construction and/or abandonment of Houses 9 and 10, but various lines of evidence demonstrated that the post molds postdated the abandonment and dismantling of House 10. The enclosure (Structure 1) measured roughly 4.5 m on a side. Several post molds of various sizes were found in the west side of the enclosure, but no function could be assigned to them. A 50-cm-wide opening was present in the south side of the wall or fence and may have functioned as an entrance.

Excavation along the border of Hectares 34 and 26 (see Figure 3) was designed to determine if intact house

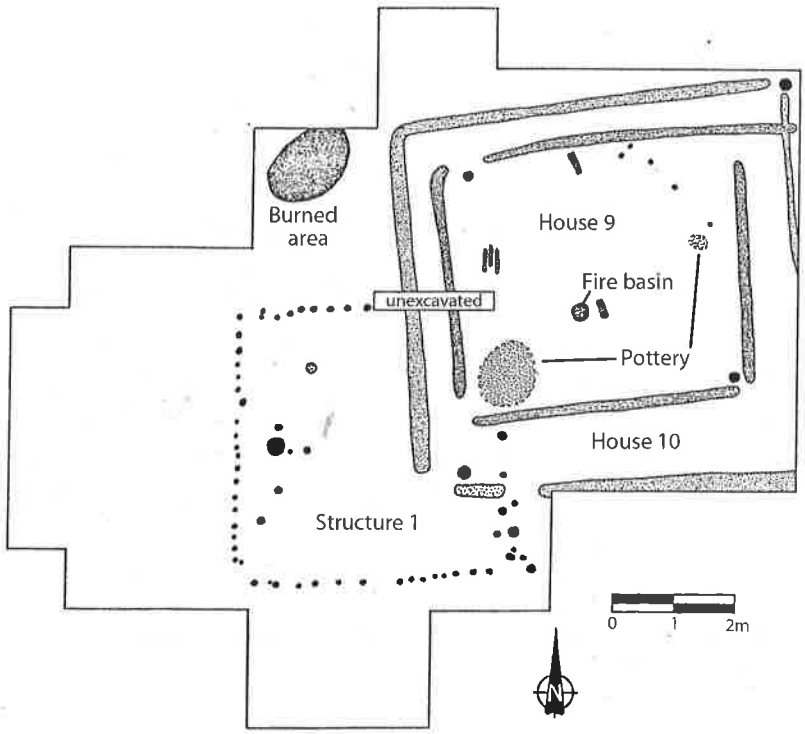

Figure 14. Plan of excavations in Hectares 34 and 35 containing Houses 9 and 10 and Structure 1.

Figure 15. View east of House 13. The house extends into the unexcavated north wall of the unit. The post molds in the foreground wrap around a hearth area. Various broken ceramic vessels and stone tools are present on the floor of the house.

floors could be located beneath slope wash from Mound C, where the overburden might have protected them from agricultural activities. As noted earlier, surface collections from Hectare 34 contained some of the highest frequencies of artifacts seen at Mound Bottom, indicating substantial residential activity in the area. Excavations near the center of the hectare boundary revealed numerous wall trenches and pits, many of which intruded into other features. Portions of at least five presumed houses were excavated, including one with a circular wall trench. Circular wall-trench houses are not unheard of on Mississippian sites (e.g., Chapman et al. 1977; O'Brien 1972), but they are uncommon.

The northernmost 4-×-2-m section (Figure 15) contained the remains of House 13, a wall-trench structure whose eastern end was protected by a semicircular arrangement of posts that curved inside the house from the west side of the doorway. The wall trenches were deep, extending into the subsoil an average of 35 cm. Post molds 10–25 cm in diameter were found in the trenches at odd intervals. Numerous broken ceramic vessels were found on a burned-clay floor, alongside several stone tools, including a large metate with an elongate trough on one side, two manos, and several items of Dover chert. The latter included a well-crafted, thin biface found just outside the south wall of the structure and a well-made hoe recovered just inside the entryway. Alongside the hoe were 21 flakes, most exhibiting the sheen characteristic of the working end of a hoe, and one core fragment; all 21 flakes could be fitted back on the hoe.

Scattered charred timbers were recovered from almost every unit; one sample of charcoal taken from the floor of House 13 dated cal. A.D. 889 ± 74 (DIC-620). The wood was all cedar, which grows in abundance on the hillsides above Mound Bottom. The larger pieces ranged in diameter from 3 cm to 5 cm and would have served as wall posts or roof framing, or both. Smaller pieces, ranging 1–2 cm in diameter, would have served as wattle for the walls and as roofing material. Small concentrations of cane, split and unsplit, were found throughout the midden layer.

The excavation unit was expanded to the north and west to determine if more house patterns could be found. Expansion of a narrow trench to the west (see Figure 3) uncovered a dark black stain that ran across the units and into the north wall. As additional units were excavated, it became obvious that a heavily burned surface lay well above the dark stain. Once the 5-cm-thick burned surface was mapped and photographed, it was removed and the entire area excavated to the surface of the dark stain, which proved to be the surface of a filled-in house basin. A rectangular house basin had been cut into the subsoil 15 to 20 cm deep, and House 12 was erected inside (Figure 16). The wall posts were individually sunk into the subsoil an average of 35 cm. The diameter of the post molds ranged from 10 to 17 cm. The double line of post molds apparently was the result of rebuilding.

A large cedar post from House 12 dated to cal. A.D. 1092 ± 75 (DIC-622). A fire basin was found near the middle of the house, and traces of a burned-clay floor were discovered near the fire basin. To the west of the burned-clay layer, a fine sandy layer was found directly overlying the basal yellow clay. The sand, abundant in the bed of the Harpeth River, had been deliberately spread over the clay and then ground in to form a floor.

House 12 was abandoned, the pit was filled, and House 11 was constructed on a new surface. We were unable to see the House 11 post molds in the dark midden that accumulated in the House 12 basin; they were recognized in the floor of House 12 only after the fill was removed from the basin (see Figure 16). Diameters of the post molds ranged from 10 cm to 17 cm, and their spacing varied from 10 cm to 30 cm.

Figure 16. View east of Houses 11 (at the top of the photograph) and 12 (the double lines of post molds in the foreground) and associated features. House 12 was constructed first; the edge of the pit in which it was built is visible just outside the western and southern lines of post molds. Associated pits and a charred post are present west and south of the house. The fire basin in the center of photograph belonged to House 12. After abandonment, the pit and surrounding area were filled in, and a new structure, House 11, was erected.

Pieces of large charred cedar posts were found in several post molds, one of which was radiocarbon dated to cal. A.D. 1353 ± 47 (DIC-623). We estimated that House 11 could well have contained close to 80 m^2 of floor, several times that of most houses at Mound Bottom.

Excavations along the southern half of the border between Hectares 34 and 35 were based on the presence of an inordinate amount of daub in the surface collections, including over a kilogram from one 5-×-5-m unit alone. Fifty-four square meters were opened, exposing a single structure, House 15, and several pits and natural depressions. The house was a combination of the wall-trench type and the single-set-post type. The southwestern wall had been set in a trench, but the northwestern wall had not. Plowing and disking had destroyed the other walls. A small, 10-cm-thick midden that overlay the northwest wall of the house contained considerable amounts of bone, pottery, and lithic material, as well as 37 kg of daub. The midden undoubtedly postdated abandonment of House 15.

Other midden-filled depressions in the area were rich sources of pottery, bone, and lithic material, and when the artifact assemblage is taken in the aggregate, it tells us quite a bit about the activities undertaken by one or a few residential groups living in that part of the community. As was true in other residential areas, the most common vessel form was a shouldered jar with a tall, vertical to slightly excurvate neck, with or without rim lugs. A single rim sherd from a bowl and three bottle fragments were found. The lithic assemblage from the depressions is what would be expected from household deposits, with the most numerous tools being flakes with steep lateral retouch or light edge retouch. With respect to faunal remains from the depressions, not surprisingly, the remains of white-tailed deer dominated the assemblage, followed by squirrel, turkey, and Eastern box turtle. Several avian taxa other than turkey were represented, including whooping crane and common loon.

Discussion

Six mounds, 19 houses, and two other structures were excavated at Mound Bottom during the three-month 1974 season and the seven-month 1975 season. Based on that fieldwork, we can draw several conclusions, one admittedly tentative, about Mississippian period life in a large river bottom in central Tennessee. The tentative conclusion has to do with the length of occupation of Mound Bottom. The 10 radiocarbon dates suggest quite a lengthy occupation—something on the order of 600 years if the mean calibrated assays are considered (Figure 17). The earliest date, cal. A.D. 768 ± 105 (DIC-621), came from the interior of Mound L, the lone mound in the plaza, followed by four closely spaced dates: cal. A.D. 889 ± 74 (DIC-620) from a fire basin in House 13, cal. A.D. 934 ± 58 (DIC-615) from the prepared-clay hearth on Mound J, and two dates of cal. A.D. 976 ± 48 (DIC-616 and DIC-617), one from House 1 and the other from Stage II of Mound A. The three latest dates fall into a 60-year period that spans the end of the thirteenth and first half of the fourteenth centuries: cal. A.D. 1293 ± 67 (DIC-618) from the midden overlying Houses 22 and 23, cal. A.D. 1339 ± 48 (DIC-619) from the floor of House 14, and cal. A.D. 1353 ± 47 (DIC-623) from a post inside House 11.

On the face of it, the suite of radiocarbon dates suggests that perhaps Mound L, which is an oddity in terms of its location, was a very early structure, built before the plaza was planned and constructed, which, based on dates from Stage I of Mound J (cal. A.D. 934 ± 58; DIC-615) and Stage II of Mound A (cal. A.D. 976 ± 48; DIC-617), occurred sometime over the next century or so. Based on the date from Stage III of Mound A, cal. A.D. 1144 ± 97 (DIC-624), mound construction lasted at least another century or more. Dates from the houses range from cal. A.D. 889 ± 74 (DIC-620), for House 13, to cal. A.D. 1353 ± 47 (DIC-623), for House 11. Where houses were superimposed and samples were collected from multiple levels, the dates are in correct stratigraphic order.

As helpful as the dates appear to be, we urge caution when using or citing them because the now-defunct Dicarb Radioisotope Company produced them. Statis-

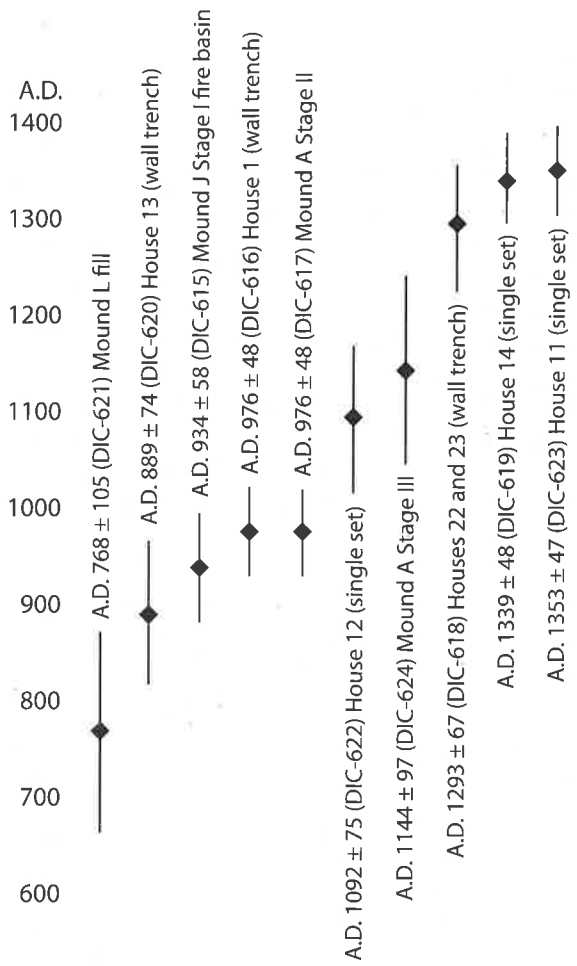

Figure 17. Calibrated radiocarbon dates from Mound Bottom. Assays were calibrated using CalPal 2007. We urge caution in using these dates for anything more than approximations (see text for explanation).

tical testing by Reuther and Gerlach (2005), in which they compared radiocarbon assays produced by Dicarb to those produced by Beta Analytic, Geochron Laboratories, and the NSF–Arizona AMS Facility on materials excavated in northern Alaska, showed that assays produced by Dicarb are consistently younger than assays produced by other laboratories, with differences ranging between 350 and 1,440 years. Whether this same phenomenon applies to the Mound Bottom assays is unknown, but again, caution should be used for anything more than using the dates for more than a general picture of the time of community occupation and abandonment. However, also supporting the early occupation at Mound Bottom is the notable absence of wide strap handles considered characteristic of ceramic vessels of the later Mississippian sites in Middle Tennessee (Smith 1969).

With respect to houses at Mound Bottom, there were two types: single-set-post structures and wall-trench structures. One single-set-post structure, House 14, had burned, and the remains were sufficiently well preserved to suggest that the vertical wall members were supple enough to have been bent over and lashed together at the top. This would have given that structure an elongated rectangular, beehive shape. One, House 15, appears to be a hybrid, having both types of wall construction. The average house size, regardless of type, was roughly 4 m^2, although Houses 10, 11, and 14 were considerably larger. In a few instances, wall trenches were connected at the corners—the northwestern corner of House 10, for example (see Figure 14)—but in most cases the trenches were unconnected. Also, in a few instances small posts were set in the gaps between wall trenches, as in Houses 9 and 10 (see Figure 14). Sometimes post molds were found in the wall trenches, as in House 15, but in many cases they were not. Wall trenches often contain one or more post molds, but not in any abundance. A typical arrangement is seen in Houses 1 and 2 (see Figure 10). Single-set-post houses, such as Houses 11 and 12 (see Figure 16), appear to have been more permanent, and certainly more substantial, than the wall-trench houses, but we are guessing that they would have required much more effort to maintain. House 15 appears to be a hybrid of the two types of construction, as one of the two excavated walls was set in a trench and the other single-set. Perhaps it dates to the early period of wall-trench construction, circa A.D. 1150, when builders were possibly experimenting with the construction of curtain walls (Alt and Pauketat 2011).

At least two houses had what appeared to be small windscreens to protect the entryways. Most houses had a single prepared-clay fire basin in the center of the dwelling, although it was not unusual for more than one to be present. House 1 had four basins placed close to one another. Open hearths, characterized by areas of fired clay, were present in some of the structures, not always in the center of floors.

Almost every residential structure that had an accompanying artifact deposit, such as an intact house floor or refuse pits, contained items related to three basic activities: food procurement, preparation, and storage. Every house, or deposit within one, that was extensively sampled yielded fragments or complete examples of manos and pitted slabs. Some house deposits yielded metates, either complete or broken. Also present in all deposits were retouched flakes and other small tools used for cutting and scraping. Almost all house deposits contained small triangular arrow points and hoes and hoe fragments, especially flakes removed during hoe sharpening. Over 95 percent of the lithic material from Mound Bottom was Fort Payne chert, undoubtedly obtained from extensive stone and gravel deposits in and along the Harpeth River. Imported material, primarily Dover chert, was found

Table 1. Frequency of Skeletal Elements by Species across Assemblages.

Species	No. of Fragments
Cervus canadensis (elk)	6
Canis familiaris (dog)	2
Canis lupus (wolf)	1
Didelphis marsupialis (opossum)	1
Marmota monax (woodchuck)	1
Oryzomys palustris (rice rat)	4
Odocoileus virginianus (deer)	2,129
Ondatra zibethica (muskrat)	6
Procyon lotor (raccoon)	11
Sylvilagus floridanus (rabbit)	16
Sciurus sp. (squirrel)	126
Ursus americanus (black bear)	4
Anas platyrhynchos/rubripes (mallard/black duck)	9
Anas sp. (duck)	1
Anser sp. (goose)	1
Colinus virginianus (bobwhite)	1
Corvus brachyrhynchos (crow)	1
Ectopistes migratorius (passenger pigeon)	5
Gavia immer (common loon)	1
Grus americana (whooping crane)	1
Meleagris gallopavo (turkey)	167
Aplodinotus grunniens (freshwater drum)	8
Ictalurus punctatus (channel catfish)	1
Ictalurus sp. (catfish)	1
Moxostoma sp. (redhorse)	10
Percidae (perch family)	1
Chelydra serpentine (snapping turtle)	2
Pseudemys sp. (cooter/slider)	3
Terrapene carolina (box turtle)	243
Actinonaias carinata (mucket)	1
Amblema plicata (three-ridge)	3
Elliptio dilatata (lady finger)	48
Lampsilis ovata (pocketbook)	3

well distributed across the site, evidence that all households apparently had equal access to local as well as nonlocal stone.

The most represented ceramic vessel at Mound Bottom—the "universal cooking container"— is the tall, straight to slightly everted-neck jar. O'Brien (1977) originally subdivided these vessels into classes using several sorting criteria, some of which undoubtedly have functional implications, but the overall theme is similar: a jar that stands approximately 20–30 cm high and has a maximum width of roughly 25 cm. The remains of some 300 individual jars of this type were identified in the assemblages, dwarfing the frequencies of all other types of ceramic vessels. Some specimens have rim lugs—either two lugs, one across from the other, or two pairs of lugs across from each other—and others loop handles. Some of the loops are slightly flattened, but no strap handles were found, a feature that has chronological implications if the received wisdom is correct that strap handles are late in the Mississippian sequence of the region (Smith 1969). Other vessel forms include a few plates and bowls of various dimensions.

Faunal remains were well distributed over the site. Although some deposits were too shallow as a result of plowing for the preservation of bone, it can be assumed that all house middens contained a wide variety of mammal, bird, and reptile remains. Collection methods precluded recovery of fish remains, but given the proximity of the river, they were surely part of the diet. Table 1 lists the frequency of skeletal elements by species across the assemblages excavated in 1975. White-tailed deer (*Odocoileus virginianus*) was far and away the most represented species, with 2,129 identifiable elements, followed by box turtle (*Terrapene anadens*), turkey (*Meleagris gallopavo*), and squirrel (*Sciurus* sp.). Taxa represented by one or a few elements include elk (*Cervus canadensis*), dog and wolf (*Canis familiaris* and *C. lupus*), woodchuck (*Marmota monax*), and black bear (*Ursus americanus*). Based on present evidence, any differences in the distribution of taxa among the various houses appear to be products of sample size. By that we mean a positive correlation exists between the chance of a taxon being represented and the size of a faunal assemblage.

Faunal analyst Emanuel Breitburg also conducted a detailed analysis of deer remains from Houses 1 and 4 to determine the age of animals at death and which parts of the animals were being brought back to the residences (O'Brien 1977). The assemblage indicates that whole deer clearly were being brought back. In the House 4 deposit were an antler section, a maxilla fragment, and 15 dental elements, indicating that the head of the deer was not removed in the field. Forty-five rib fragments were found in the deposit, all within the confines of the structure. Some of the fragments could be reconstructed, and most if not all of the ribs may have dated to a single butchering episode. Scapula and pelvic sections were plentiful, as were all the long bones. Also present were foot bones, including phalanges. In House 1, the presence of elements from at least one juvenile indicates that young as well as older animals were taken.

Conclusions

Despite the information summarized here, residential patterns at Mound Bottom are still poorly understood. This is not surprising, given the small percentage of the main occupational area that has been surface collected and excavated. Despite significant gaps in knowledge, it is not altogether speculative to suggest that there are differences between at least a few of the residences, the most notable being House 1, located to the west of Mound A and apparently one of the closest residences to the largest of the 14 mounds in the complex. There was nothing in terms of size or layout that suggested House 1 was out of the ordinary, although it did have four prepared-clay fire basins, three more than any other excavated house. It was the artifact assemblage that made House 1 an anomaly. It was the only structure to produce mica and copper, and it also contained the largest concentration of shell (*Elliptio dilatata*), which we

suggest may represent a workshop for bead production (O'Brien 1977). House 1 and the area immediately adjacent also contained an inordinately high density of figurine fragments and fine-paste pottery, especially bowls and portions of one negative-painted bottle. Whether the structure was the residence of a craftsman, which O'Brien (1977) speculated could have been the case, is unknown. Or were it and other structures in Hectare 14 residences of an elite segment of Mound Bottom society? That remains to be determined as well.

Certainly the 99 burials from Mound Bottom do not hint at much in the way of social differences (Autry 1983; O'Brien 1977). A possible exception might be Neitzel's 1936 work at a small cemetery located on a slight rise west of Houses 1–4 that produced several burials that rank at the top of the sample in terms of items interred with the dead. One burial contained two small ceramic vessels, a mussel-shell spoon, and a stone pipe. A second contained two well-made slate ear spools, and a third contained four intricately carved bear claws of cedar that had been covered with sheets of hammered copper. Two were found under each mastoid of the skull and apparently functioned as earrings or pendants. Neitzel's field notes state that the body had been interred on a mat (Neitzel 1936). Again, these burial inclusions, as interesting as they are, do not provide much in the way of support for striking social differentiation within the Mound Bottom population.

A small sample of burials and houses, however, does not negate the possibility that Mound Bottom contained a socially differentiated population, and we rather think it did, based on considerably more in-depth work at contemporary Mississippian centers across the Southeast (e.g., Blitz and Lorenz 2006; Knight 1990; Knight and Steponaitis 2007). But, over time, we have become a little more conservative in how we approach the archaeological record than we once were, and we tend to shy away from weaving too many stories about social and political organization, especially when basing them on something like a 0.01 percent excavation sample. This is a much safer tack, but to tell the truth, we still get a little wistful when we remember those halcyon days of the 1970s when we knew less but enjoyed it more.

Notes

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[1]Approximately 600 m of the embankment and the regularly spaced bastions of this palisade line are in an excellent state of preservation. We are unaware of any other palisade in the Southeast with this degree of preservation. Other large sections of the palisade are readily discernible. One bastion was tested during 1936–37.

[2]At Pack, there is a clearly defined terrace below the western side of the plaza.

[3]Because radiocarbon-date calibration often produces irregular probability distributions, calibrated dates usually are reported as ranges, but CalPal computes a calibrated calendric age in addition to the date range. For ease of presentation, we use the calendric age and one-sigma standard error.

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