

**ARCHAEOLOGICAL EXCAVATIONS
AT THE
BULLARD LANDING SITE
(9TW1)**

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LAMAR Institute Publication 24
LAMAR Institute
1993

ABSTRACT

The Bullard Landing site (9Tw1) in Twiggs County, Georgia, is an unplowed Late Mississippian period village with 24 small mounds. Located in the flood plain of the Ocmulgee River, this uniquely preserved village was first excavated in 1988 as part of a Mercer University archaeology program. These excavations continued in the spring of 1989 and in the spring of 1990. This report details the archaeological work conducted there through the 1990 season. Tests were made on three of the mounds, the village area between the mounds, and the area immediately outside the cluster of mounds. A contour map was also made of the site and the mounds. The major period of occupation of the site was apparently brief and occurred at about the time of the explorations of Hernando de Soto in 1540, although no Spanish artifacts have been recovered to date. Bone preservation at the site is very poor. Several earlier components were also identified.

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CHAPTER 1 INTRODUCTION AND ACKNOWLEDGEMENTS

The Bullard Landing site, in Twiggs County, Georgia, is not located at Bullard or Bullard Landing. Bullard is a former railroad stop located in the uplands on the Southern Railroad line just over 1 mile east of the Ocmulgee River. Bullard Landing is on the river directly west of Bullard, and connected to it by a small dirt road. Site 9Tw1, the subject of this report, is located 3.1 kilometers (1.9 miles) northwest of Bullard and 2.4 kilometers (1.5 miles) north of Bullard Landing (Figure 1). This places it in the midst of the broad Ocmulgee River floodplain .53 kilometer (.33 mile) east of the river and 1.08 kilometers (.67 mile) west of the uplands. At the latitude of the site the floodplain of the Ocmulgee River is 4.5 kilometers (2.8 miles) wide. The exact UTM location of the site is 260850 East and 3614700 North. The elevation above sea level is 76 meters (250 feet).

The floodplain of the river is rather featureless in the vicinity of the site. Rosston Creek (apparently a corruption of Royston Creek) flows north-south along the eastern edge of the floodplain about .8 kilometer (.5 mile) east of the site (Figure 2). The 24 mound site sits upon an old natural levee fragment of the river that has been heavily eroded. The age of this fragment is unknown. This "island" currently is elevated above the rest of the flat floodplain by only about 20-30 centimeters and is almost unnoticeable. It probably was more apparent before the floodplain was covered with a layer of Piedmont red clay alluvium during the last 150 years. The piedmont alluvium has minimized relative elevation differences within the floodplain.

The site is covered with a hardwood forest consisting heavily of river birch and beech. It is on land owned by the Bradley Paper Company. The original trees must have been cut in the last century, but it does not appear that trees have been cut from the site during this century. The area has never been farmed or plowed. A logging road was cut through the southern portion of the site during the 1960s. Whether there was road here before that time is unknown.

If the floodplain of the river is rather featureless to the uninformed observer, such is not the case for a geologist with experience in floodplain geomorphology. Bruce Dod, a geologist at Mercer University has provided us with a drawing of the former channels and upland areas in the vicinity of the site based upon his analysis of USDA ASCS aerial photographs. The photos were taken on March 9, 1972. Dod's reconstruction is presented in Figure 3, which also shows the location of the site. As can be seen, a complex web of old channels and levee fragments are represented. It is difficult to estimate the various ages of the channels, but Dod believes (personal communication 1988) that the river is currently migrating to the west away from the site at the present time. He also believes it is possible that the site was located on an island when the mounds were constructed and used. Rosston Creek was likely much more active then and may have been a major channel of the river.

The history of the site as understood is presented in the next chapter. The data presented in this report were obtained from the spring of 1988 through the spring of 1990 by the authors and students from Mercer University in Macon, Georgia. Although two shorter papers have been written on our work at the site, and the project is on-going, the time has come for a first full report including all the data recovered and a more complete account of our discoveries.

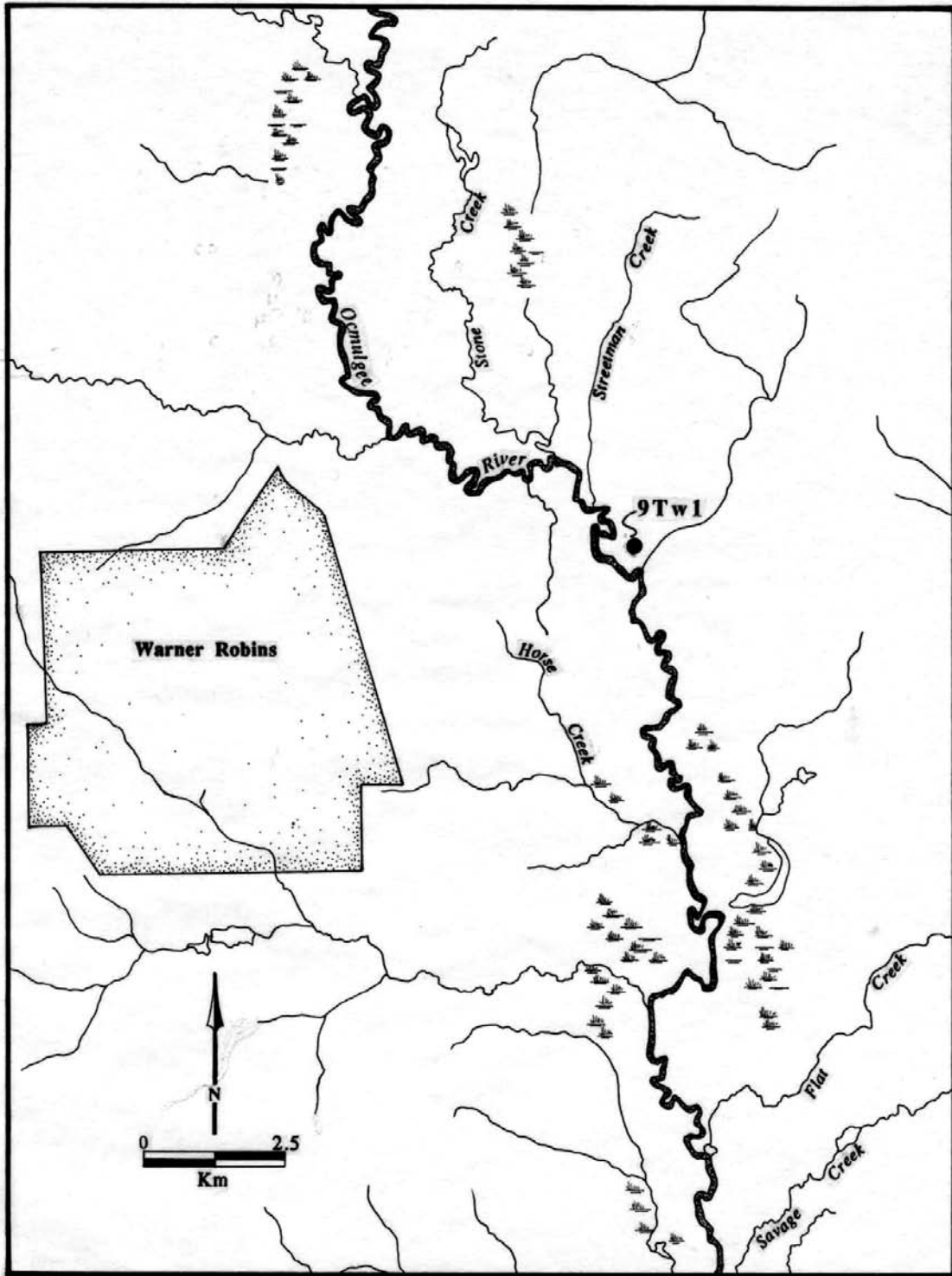


Figure 1. Site Location Map.

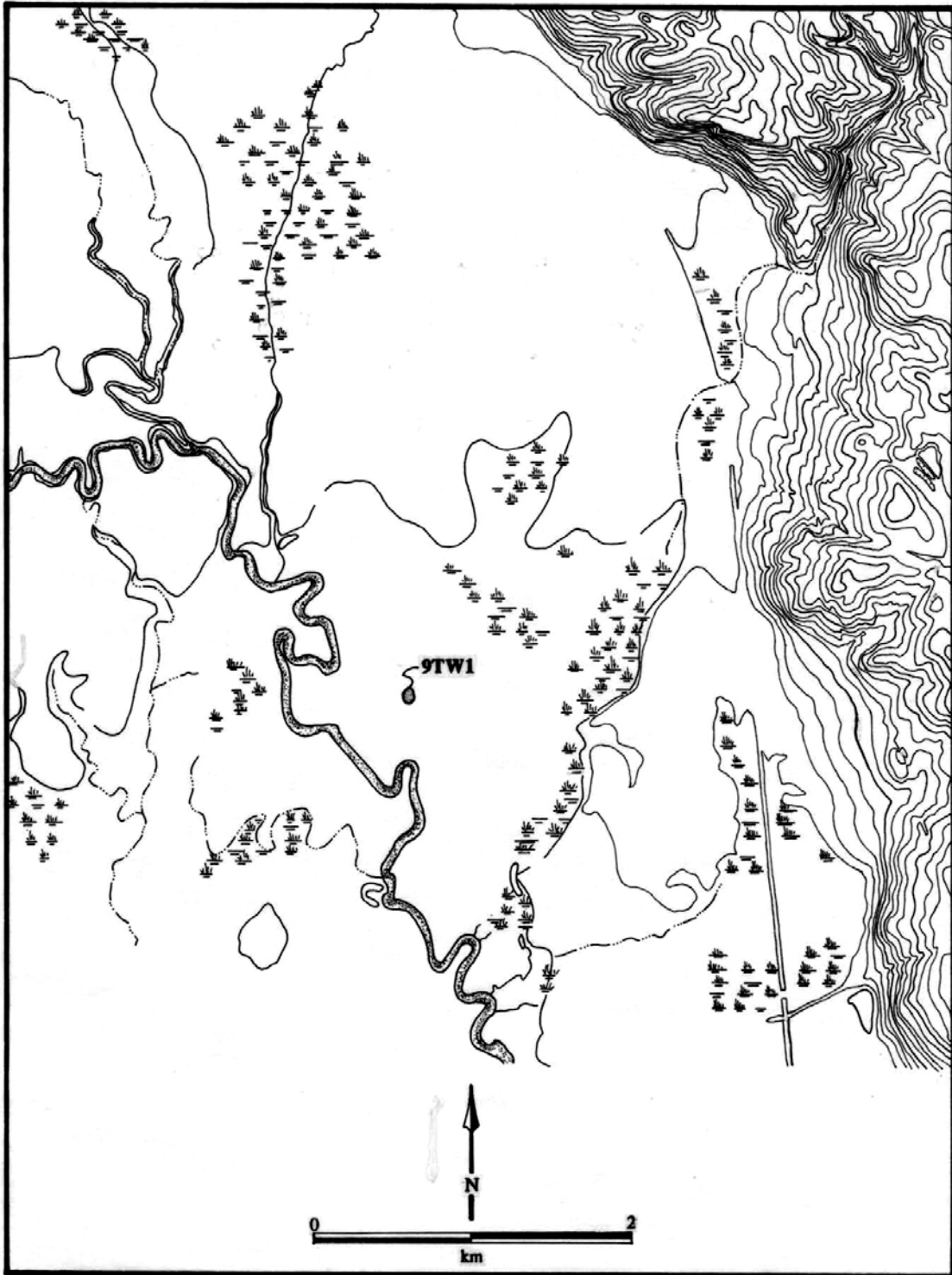


Figure 2. Local Drainage Map.

There are a great many people who have worked with us to make this report possible. We thank Mike Jones for bringing the site to the attention of one of us (Evans). We thank Jack Walker and Sam Lawson for sharing with us their knowledge of the site in the past. We thank Mercer University and Dean Sammye Greer for making the excavations possible. We thank Waldo Bradley of Bradley Paper Company for permission to conduct the research. We thank Connie Sanders, the caretaker of the area for Bradley Paper, for help with the roads and for sharing his knowledge of the site. We thank the following members of the Administration and Faculty of Mercer University for their help--Al Bond, Ted Alexander, Eric and Alexandra Klingelhofer, Bonnie Myers, Joanna Watson, and Mable Edmonston. We especially thank Bruce Dod of the Mercer University Geology Department for his help in many ways. We also thank archaeologists Dan Elliott, Rita Elliott, John Morgan, Keith Stephenson, John Whatley, Marshall Williams, and John Worth for help in the field and in other ways. We thank Sylvia Flowers and other members of the Ocmulgee National Monument staff, especially including Sam Lawson for help in many areas. We thank Tribble-Richardson Surveying Company of Macon for donating their time to gather the basic survey data that resulted in the site map during July of 1988. We thank Russell Davidson for his help with the metal detector aspects of the project and Anne Shenk for her help in the excavations. We thank Julie Barnes Smith and Rita Folse Elliott for the drawings in this report. The vast majority of the work presented here, both in the field and in the laboratory was performed by students from Mercer University. To this point, almost 100 students have contributed to the effort. Among those students who made important contributions were Jeff Baker, Saam Hinson, Suzanne Helfand, Mike Jones, Mike Watson, and Phil Walden, Jr. We thank all the students of Mercer for their help.

This version of the report was lightly edited by the first author in January of 2011.

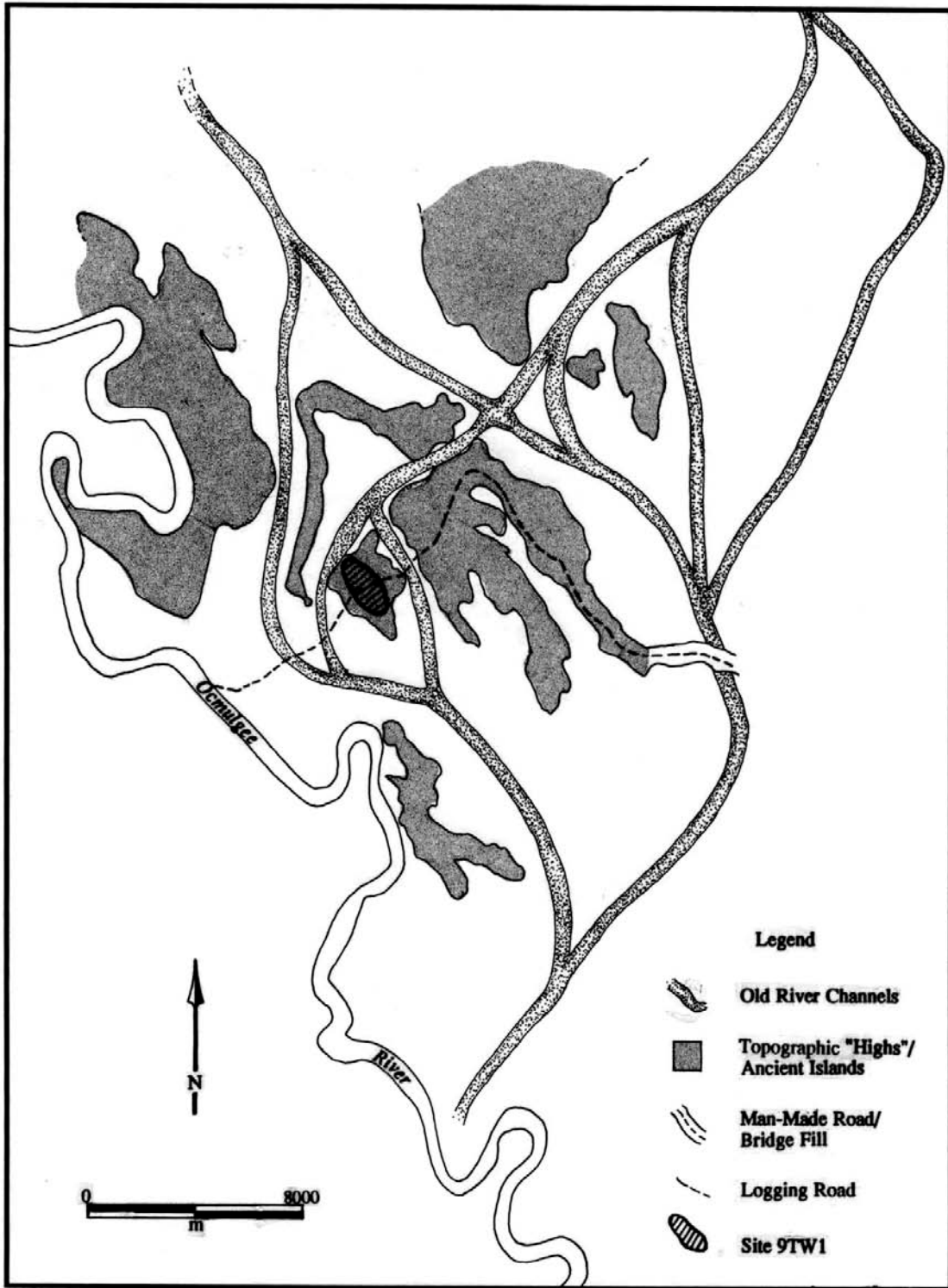


Figure 3. Old River Channels.

CHAPTER 2 SITE BACKGROUND

This site must have been recognized as an Indian mound center during the nineteenth century, but we have no record of this. The trees were cut from the site at least once and perhaps twice. The northwestern part of the site has many scattered small railroad spikes and other iron objects associated with railroad operations. These were located through the efforts of Russell Davidson with his metal detector. We suspect that this area was used as a storage area for such items as part of a small logging train operation used within the Ocmulgee River basin. Such logging train operations have been documented in detail for the south-central Georgia area by Mary Ellen Tripp (Tripp 1983). No records of the train-part deposit at 9Tw1 are known, however.

The earliest records we have of the site are in reference to the depression era archaeology of central Georgia. Arthur R. Kelly came to Macon in mid-December of 1933 to begin the Macon archaeological project. Someone must have told him of the site, presumably some of his local contacts. Although the identity of the site is not certain, one possible account of its discovery was provided in an address given to the 99th Annual Meeting of the Georgia Historical Society in Savannah on February 16, 1938, by Dr. Charles C. Harrold. In his address he states that in central Georgia:

"...recent research has found the remains of a village culture along the banks of the river where the primitive red men lived in circular communal houses. Right here I must pay tribute to one man, an unknown student, an automobile mechanic named Hugh Hanna. He had never heard of an Indian village until four years ago [1934] when he became enthused over the work being done in Central Georgia. ... It was he who found the group of thirty-three house rings nineteen miles below Macon, one of them 120 feet in diameter."

The straight-line distance from Macon to the Bullard site is only about 12 miles, although it would have been longer by road. Bullard seems the only known site to which Harrold could be referring in his address, although there are only 24 mounds there. Given how overgrown the site is, a miscount is certainly possible, however. We do not believe nine mounds have been destroyed at Bullard since 1934. Further, none of the mounds at Bullard are above 75 feet across. On the other hand, exaggeration is often a standard part of such addresses. If the site described is not Bullard, then another huge site is still somewhere in the swamps of the Ocmulgee nearby. Given our good contacts with local informants we doubt this however. It is interesting that all three of the sets of numbers given by Harrold (number of mounds, diameter of largest mound, and distance from Macon) are 1.5 times the actual values. Exaggeration is a wonderful thing!

Arthur Kelly apparently wrote to John R. Swanton at the Smithsonian Institution in Washington about this site, and others, sometime in the spring of 1934, although we do not have a copy of his letter (presumably it is on file at the Smithsonian Institution). We do have a copy of Swanton's return letter dated April 10, 1934. Although his letter is very general, it does mention,

in a discussion of Indian houses, that he found it interesting that "...your Bullard site so far shows only circular buildings..." Presumably Kelly had written him describing the apparently round mounds and had concluded that they were houses, or house-mounds.

We have located a second letter from Swanton dated August 23, 1934, again in response to an unlocated letter of Kelly's. This letter makes two additional brief references to the site. Swanton was deeply involved in his attempts to define the route of Hernando de Soto at that time. Kelly apparently had suggested that Bullard may have been visited by De Soto, but Swanton replied that "I think Bullard is rather higher up than the point reached by De Soto but this remains to be seen." Swanton also added in his letter that "I certainly hope that the Bullard site can be enclosed in the new park..." Here he refers to the imminent creation of Ocmulgee National Monument. Obviously the Bullard site was not included in the Monument when it was created in 1936.

Swanton published his analysis of the DeSoto route a few years later (Swanton 1939) and did include two references to Bullard site. The first of these was in reference to the town of Cofaqui, now strongly believed to have been located in the Oconee Valley to the east (Hudson, Smith, DePratter 1984). Swanton says that Cofaqui was "...perhaps as high [*on the Ocmulgee River*] as Bullard where there is a noteworthy Indian site" (Swanton 1939:179). In summarizing this part of the route later in the same document he added that the Spaniards "...marched up the Ocmulgee on its eastern side to Westlake or even Bullard." (ibid:185). As will be described later, De Soto may have visited the site, but it was nowhere near Cofaqui, as Swanton had suggested.

It is not clear whether Kelly led or implemented any excavations at the Bullard site. There are a few artifacts from the site in the collections of the National Park Service, Southeast Archaeological Center (SEAC) at Tallahassee that supposedly came from the site. The notes with these say nothing of any excavations, however. Further, an Archaeological Site Inventory Card produced at an unknown date in the 1930s located in the SEAC has "None" typed as the response to the blank "Extent of Excavation." The description for the site states that "Many mounds and house rings [*are*] in this property." It also states that the site was recommended by Dr. Charles C. Harrold, one of the main local sponsors of the Macon archaeological project in the 1930s.

Nothing more is known of the site until the early 1960s. At that time archaeologist Jack Walker was working with the National Park Service at Ocmulgee National Monument in Macon (Personal Communication). He had seen the data about the site presented above in the records at Ocmulgee, including a photo from the Charles C. Harrold collection of a man standing on one of the "house rings." He noticed that all the artifacts from the site that were at Ocmulgee consisted of lithic remains. These are listed in the National Park Service records as "39-23598, from site 2TW3, the Bullards House Circles or Royston Creek Site." Walker was interested in the Late Archaic period shell rings of the coastal region of Georgia and beyond, and based upon the apparent absence of pottery from the site, he wondered if these might actually be some sort of interior equivalent of these ring sites. He did not visit the site before he left Macon in 1962, however.

Walker returned to work at SEAC at Ocmulgee in October of 1966, and eventually visited the site in the winter of 1971. He was taken to the site by Herbert Orr, a surveyor, who had worked with Walker at several other sites in the Macon area. They were accompanied by James

L. Stephenson and noted that someone had been digging into one of the mounds. Walker relates that an irregular trench had been dug from the outside to the center of one of the mounds (probably Mound N). He and his crew spent part of one day cleaning the looters trench and found evidence of two charred posts in the outside raised-rim area of the mound and evidence of a central fire pit. Walker has prepared a sketch of what he saw for us, and this is presented here as Figure 4. He also found Lamar pottery on the mound at the time and concluded, correctly, that the mound was the remains of houses from the Lamar period. Walker did not write an account of his visit to the site and did not return to the site. The SEAC, along with all the artifacts and notes held by it from the 1930s were transferred from Macon to Tallahassee about 1972.

In the 1980s one of us (Evans) became interested in the site when student, Mike Jones, took him to visit the site. Jones had grown up in the area and his grandfather, Brady Andrews, was a caretaker for the land where the site is located. The recent history of the site as related by Mike Jones is as follows. Brady Andrews began work as the overseer for the land about 1970, although he had worked there since 1948. He took over for the former overseer and logging foreman, Earl Anderson, who had just died. Anderson had been the overseer for the previous 20-25 years. Logging operations took place in the area of the mounds in the spring or summer of 1965 or 1966, and the present logging road through the site, which cuts the edge of Mound S, was apparently made at that time. Earl Anderson, who had bulldozed the road, decided to "see what was in one of the mounds," and bulldozed Mound U for that purpose. Jones was present, as a child, when this was done and remembers that little beyond a few potsherds was found, and everyone was disappointed. John Whatley, an amateur archaeologist, has informed us that one Dudley Hall, who worked with for Bradley Paper Company after Anderson's time had bulldozed the mound, but this may be in error. Perhaps he did the work for Anderson. It is curious that Jack Walker did not notice the bulldozed mound, and it is not known who put the trench in Mound N.

The logging road through the site was reopened about 1984 or 1985 according to Connie Sanders, the present logging supervisor for Bradley Paper. They also ran a new road to the north along the eastern side of the site, but were very careful not to damage any of the mounds according to Sanders. This was specifically stated to be true for an area south of Mound N and Q that was bulldozed fairly heavily and is so noted on the site map.

The Macon Chapter of the Society for Georgia Archaeology became interested in the site independent of Evans in the early to middle 1980s. One member of the chapter, Sam Lawson, made the first sketch map ever made of the site in April of 1987 (Figure 5). He believed that one mound had been destroyed because of the bulldozing that was apparent south of Mound N and Mound Q (his Mounds F and Q), and because of the rumors that a mound had been bulldozed some years earlier. We believe that the only mound ever bulldozed on the site was Mound U (his Mound D), which he labels as "highly eroded" on his map. We give much credit to Lawson for the creation of his map and it was very useful when the more accurate map was made in the summer of 1988.

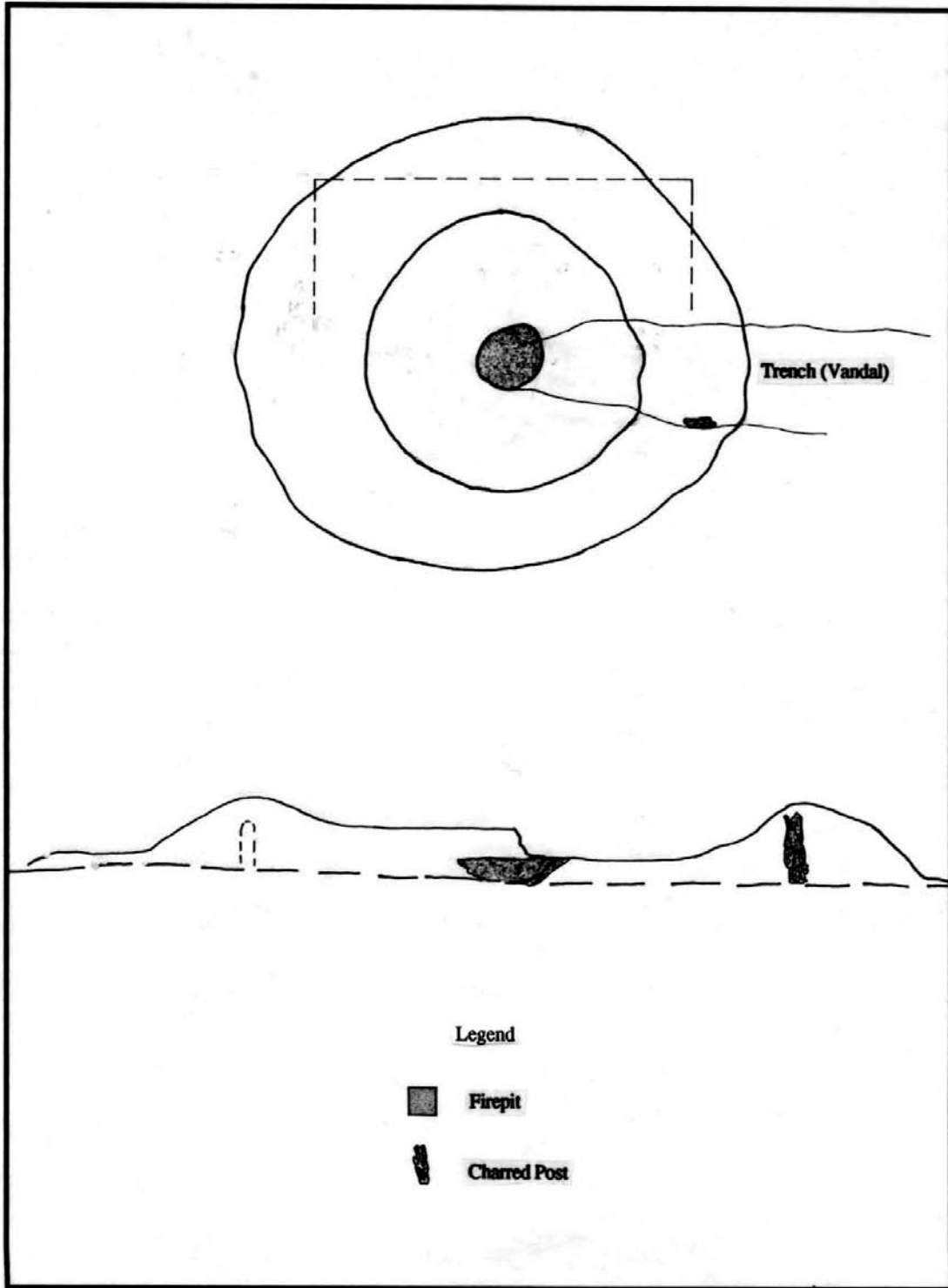


Figure 4. Walker's Sketch Map.

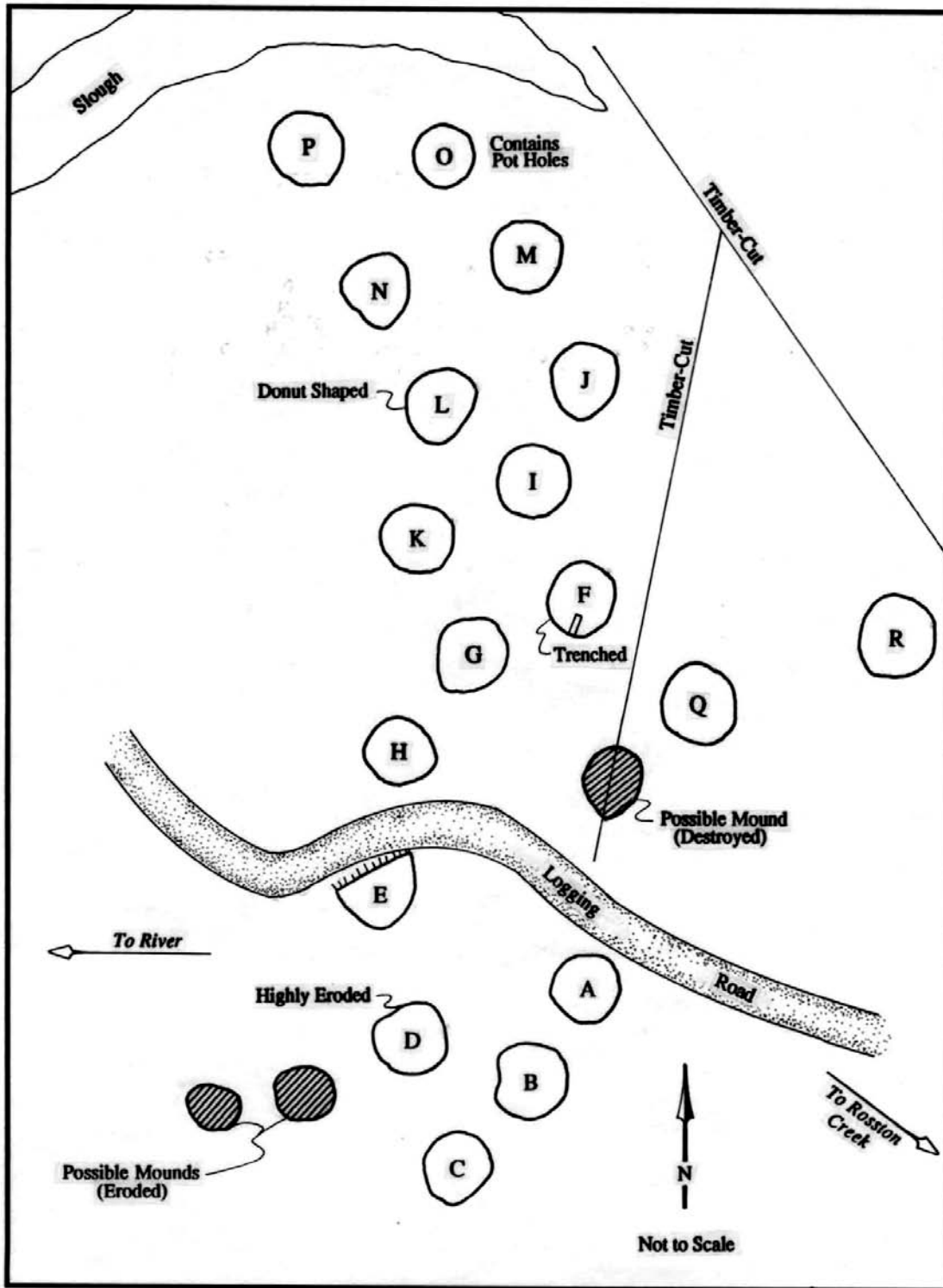


Figure 5. Lawson's Sketch Map.

CHAPTER 3 SITE LAYOUT

Mapping

The mounds were first given a series of letter names by Sam Lawson in 1987. In the early spring of 1988, Evans and students from Mercer attempted to relocate all the mounds that had been roughly mapped by Lawson. They had some difficulty in matching their observations to Lawson's map, and so they numbered the mounds anew. An attempt to make a site map was made by placing crosses on each mound and taking a series of aerial photos of the site on February 24. This work was only partially successful, however, because of the heavy tree growth in the area.

In the summer of 1988, the final horizontal and vertical surveying data necessary for producing the site map was obtained by personnel from Tribble-Richardson Surveying company using a laser-guided total station. The top of a steel section of rebar east of Mound N was arbitrary given an elevation 10.00 meters. The data from their work was plotted on a computer generated map as a series of 644 points, each with an associated relative elevation reading. The final contour map of the site was hand drawn on this sheet by Williams in the late summer of 1988. This is presented here as Figure 6.

When the first large scale excavation work was begun in the fall of 1988, the mounds were relettered to their final form, generally from north to south and west to east. These letters are so indicated on the site map in this report. The highest numbered by our project is Mound X, and thus we have mapped 24 mounds at the site. There may be other low mounds buried under the silt layer at the site, although we made a concerted effort to locate all of them. The most likely place where this may be true is on the southern end of the site.

As can be seen from the map, the mounds are oriented along an axis that runs northwest to southeast. They are on the summit of a slightly raised ridge that runs in that direction. This ridge is, in all probability, an old relic levee fragment of the Ocmulgee River. The age of this fragment is quite old, since there is Early Archaic material present on the "island." The land surface is low and swampy in all directions away from the levee fragment except in the direction of the logging road to the east. The relative elevation of the fragment is much less now it had been before 1800. The Ocmulgee River floodplain has been buried under mud washed in from the Georgia Piedmont following the development of cotton agriculture. On the northern side of the island, there is as much as 1 meter (3.28 feet) of mud, while on the other side, about 1 foot of mud is present. This may indicate that a channel was still present on the northern end of the island at the time the mounds were used, but this is still uncertain.

As stated above, a length of steel rebar was driven into the ground east of Mound N in the spring of 1988 as a reference point. A grid of stakes was placed over the site, built away from this magnetic north, but was oriented 36 degrees, 13 minutes west of magnetic north. This was done to take advantage of a logging road that skirted the mounds on the eastern side of the old levee and to match the grid with the general alignment of the levee itself. The steel pin was designated grid point 200 North, 200 East. The grid numbers increased to the north and east from an arbitrary 0 North, 0 East point at some unlocated spot southwest of the site. Stakes were placed at 20 meter

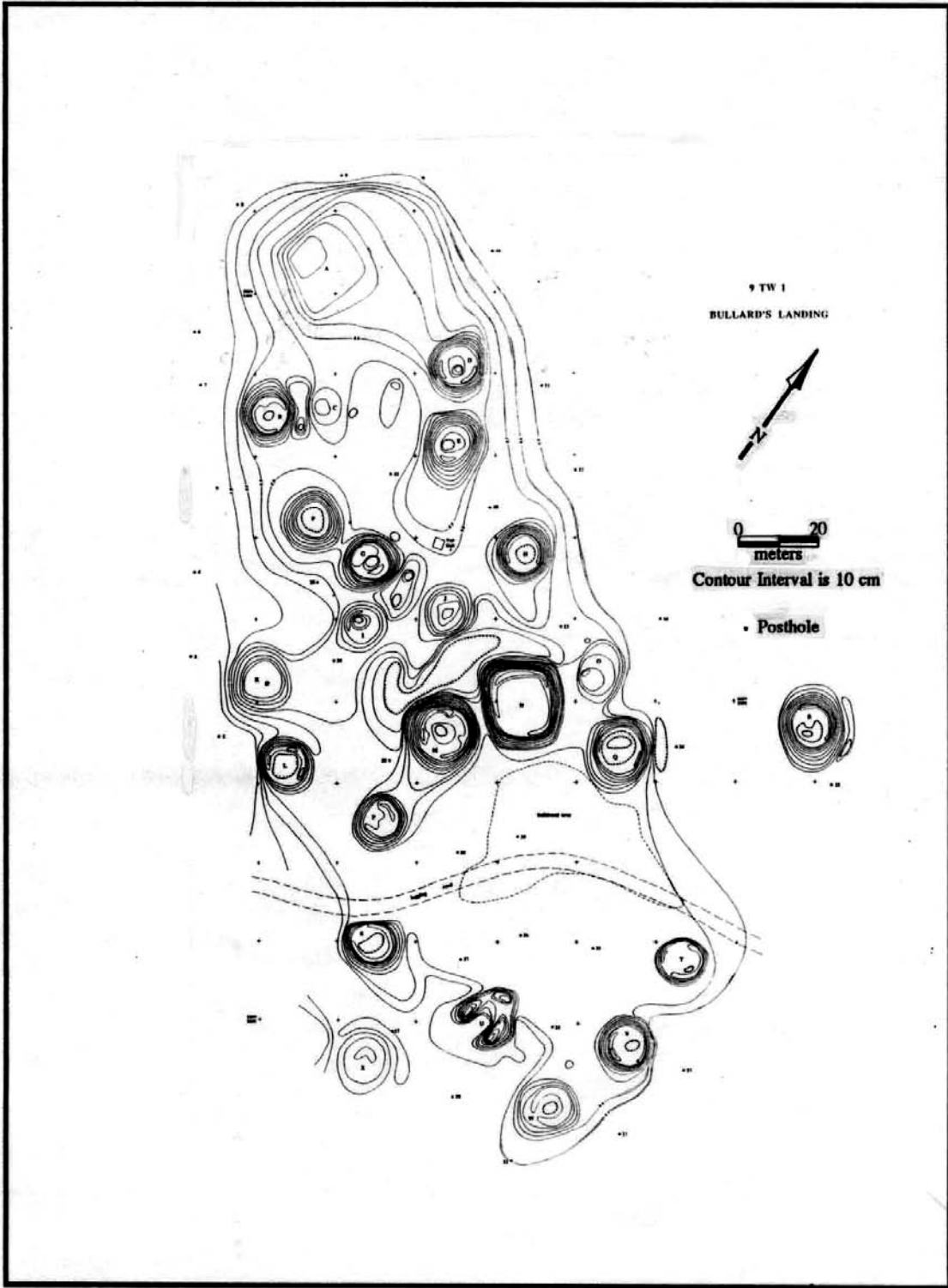


Figure 6. Site Contour Map.

intervals over the entire area covered by the mounds. The grid was used to record the locations of post holes tests, artifacts from the surface, and the locations of excavations pits. It was not, however, used to create the site map, which had been created earlier as explained above.

Site Description

The 24 mounds are in a band that is 250 meters (820 feet) long. The width of this band is complicated by Mound R, which sits out by itself to the east of all the other mounds. Ignoring Mound R, the width of the band in which the remaining mounds occur is about 100 meters (328 feet). Thus, the area of this band is about 2.5 hectares (6.1 acres). Mound R is located some 35 meters (115 feet) east of Mound Q, its closest neighbor. Why Mound R is by itself is unknown. Suggested ideas include a sentinel outpost, a menstrual hut, a sacred mound, and others. None of these are very satisfying, and we have conducted no tests on this mound to date.

As can be seen from the map, a logging road traverses the site in its southern part. Further, a large area is indicated as "bulldozed" just north of this road. We have the believable word of the people who conducted this clearing that no mounds were destroyed in this process. The apparent gap in the mounds on the lower part of the eastern edge of the site, between Mound Q and T is apparently real.

Mound U, on the southern edge of the site was bulldozed in about 1966. This mound remnant was tested extensively in our project and will be discussed in detail later. For the moment, however, our excavations there did show that the center of the mound was to the southwest of its current position and in direct line with Mounds S and W.

With this in mind, a clear plaza area is present on the southern side of the site. This is oriented with the cardinal directions and is formed of the following mounds. The southern side is formed by mounds S, U, and W. The eastern side is formed by mounds W, V, and T. The western side is formed by mounds P, M, and possibly S. The northern side is formed by mounds N and Q. As stated earlier, the gap on the northeastern side of the plaza is apparently real. The orientation of Mound R to this gap is curious and even suspicious. The main mounds on the plaza are backed by two very low mounds, Mound O and Mound X, in analogous locations just outside the northern and southern sides of the plaza. Mound M and Mound N form the northwestern corner mounds of the Plaza Group and are the largest mounds on the entire site. They are also located in the center of the entire site and are presumably of some special nature. The distance between the mounds in the Plaza Group is about 12 meters (40 feet) in most cases. Mound M and Mound N are only 2 meters apart, while the gap between Mound Q and Mound T is almost 40 meters (131 feet).

To the north of the Plaza Group are 12 other mounds that do not seem to be formed about any obvious plaza areas. There are several depressions in the area between these mounds, often immediately beside the mounds. The largest of these is just west of Mound M and Mound N. Other large depressions are just east of Mound G and between Mound B and Mound C. Additionally, small depressions were present from east of Mound Q, east of Mound R, between Mound S and Mound U, and between Mound W and Mound U. These depressed areas are likely borrow pit areas for some of the soil used to build the mounds. These do not appear extensive enough, even considering the burying of deep features on the site under recent mud, to account for

the volume of soil used to construct all the mounds, however. Perhaps these low areas were used for repair or latter stage construction of some of the mounds.

The most northerly of all the mounds, Mound A, is interesting in several ways. First is its unique position on the edge, perhaps adjacent to an open channel or oxbow of the river. Second, the mound, while very low is quite large. Third, this mound is more obviously rectangular than any other mound, even including Mound N. Further it has no raised rims as do almost all of the other mounds.

Most of the mounds at the site appear round or oval in form (perhaps due to erosion) on the contour map and to the eye in the field. These range in diameter from about 12 meters (40 feet) on the low end to 20 meters (66 feet) on the upper end. Most are about 15 meters (49 feet) in diameter.

The raised rims occur on all the mounds except Mound A, C, J, O, and X. The main common thing these mounds have is their very small height (30 to 40 centimeters). Whether they are a functionally distinct class of mound is uncertain at present. A post hole test was placed in the center of Mounds A and X. Both of these produced daub and charcoal consistent with a hearth in the center of a house. The low raised rims on the other mounds usually surround the entire summits of the mounds. This is not too clear from the topographic map of the mounds because of the contour interval selected and the randomness associated with making such a map. The rims were of course, always the highest parts of these mounds that had them. The highest mound was Mound N, with a maximum elevation above the average ground height of 1.2 meters (3.9 feet). By adding an average of 30 centimeters (1 foot) to the height of the mounds because of the red mud, Mound N would have originally been about 1.5 meters (4.9 feet) high. Relative to the borrow pit just west of the mounds this height would have been even higher. The major point here, however, is not how *high* the mounds were, but how *low* they were.

Many of the mounds in the northern half of the site, where there is no apparent plaza, seem to occur in pairs. Examples of note are Mounds B and C; Mounds D and E, Mounds F and G, and Mounds K and L. The closeness of Mounds M and N on the Plaza Group is also noteworthy. This pairing is perhaps more significant when it is remembered that paired structures are a common feature in large mounds excavated throughout the Lamar area. Examples include the Dyar site (Smith 1981), Toqua (Polhemus 1985), and Hiwassee Island (Lewis and Kneberg 1946). This is perhaps even more significant when it is realized that the combined size of Mounds M and N are exactly the same size as the bases of the mounds just mentioned. This point will be amplified later in this report.

On the eastern side of the site a noteworthy geological aspect of the site found by posthole testing should be mentioned. A thick band or layer of water-worn pebbles forms the original surface under the mud. This band is some 25 meters (82 feet) wide and runs from the extreme northeastern part of the site above Mound D down to the southeastern part of the site past Mound T. This band runs under Mounds O and Q. Mounds D, H, M, and T were built immediately adjacent to this pebble band on its long southwestern border. The layer was undoubtedly caused by water separation of this size rocks at a time when this was an active channel of the Ocmulgee River. This time was long before the mounds were built, however.

CHAPTER 4 VILLAGE EXCAVATION UNIT

A single 2 meter by 2 meter excavation square was placed in the area between the mounds at the site. We hoped to see if there were house remains in this area and to determine if there were earlier components buried in the deeper sedimentary deposits at the site. This unit, Excavation Unit 1, was excavated in late September of 1988, before the grid was expanded into the area of this area of the site. Unfortunately the unit was not aligned with the grid once the grid was placed in this area, but was twisted 20 degrees east of grid north. This made its actual alignment 16 degrees west of magnetic north. The calculated grid location for the northwestern corner of the unit was 239.8 North and 165.25 East. The unit is shown on Figure 6.

The unit was slightly north of a line between Mound G and Mound H, about 10 meters from the former and 13 meters from the latter. This location was chosen for three reasons. First, it was near the center of the northern cluster of mounds and thus the site. Second, it is in a part of the interior of the site that was not apparently disturbed by borrow pit activities. Third, a tree tip just to the west of the unit showed evidence of many small daub fragments.

The unit was excavated in 10 centimeter levels, and all of the soil was screened through 1/4 inch mesh hardware cloth for artifact recovery. The excavation unit was taken to 70 centimeters in depth in the first phase of work on the unit. The bottom of the unit was becoming very wet by that depth, however, and work was halted at that point. One month later, in late October, the water level had dropped sufficiently so that two additional levels could be excavated. The final depth of the unit was thus 90 centimeters (Plate 1).

No distinct post molds were found in the unit, and the only possible feature noted was a probably tree stump. The profiles for all four walls of the unit are presented in Figure 7. There were four layers visible on these walls. The top one was a thin layer of recent humus and clay that was dark brown in color. This varied from 6 to 12 centimeters in thickness. The second layer was an orange-red clay loam that represented the flood deposits of Piedmont origin that have been deposited since about 1800. This deposit varied from 12 to 20 centimeters in thickness. Thus the top 20 to 25 centimeters of the soil in the unit were of recent origin. In a few spots this recent alluvium reached 30 centimeters in depth. There were very few artifacts recovered from these layers.

The third level in the unit was a dark-brown clay loam that was the topsoil of the floodplain before modern agriculture was initiated upstream (Trimble 1974). This topsoil layer varied from 10 to 20 centimeters in thickness and was filled with artifacts, notably potsherds. The bottom depth of this soil varied from 40 to 48 centimeters below the present ground surface.

The final recognizable level was mottled-brown loamy sand that went as deep as were able to excavate (90 centimeters). This relatively coarse sand contained a wide variety of lithic materials dating well back into the Archaic period. Although the quantity of flakes was decreasing at the 90 centimeter depth, we never really reached culturally sterile levels. To excavate deeper will take a period of extraordinary drought or the use of a well point and pump system. This is further made clear by the fact that this specific unit was at a relatively high point

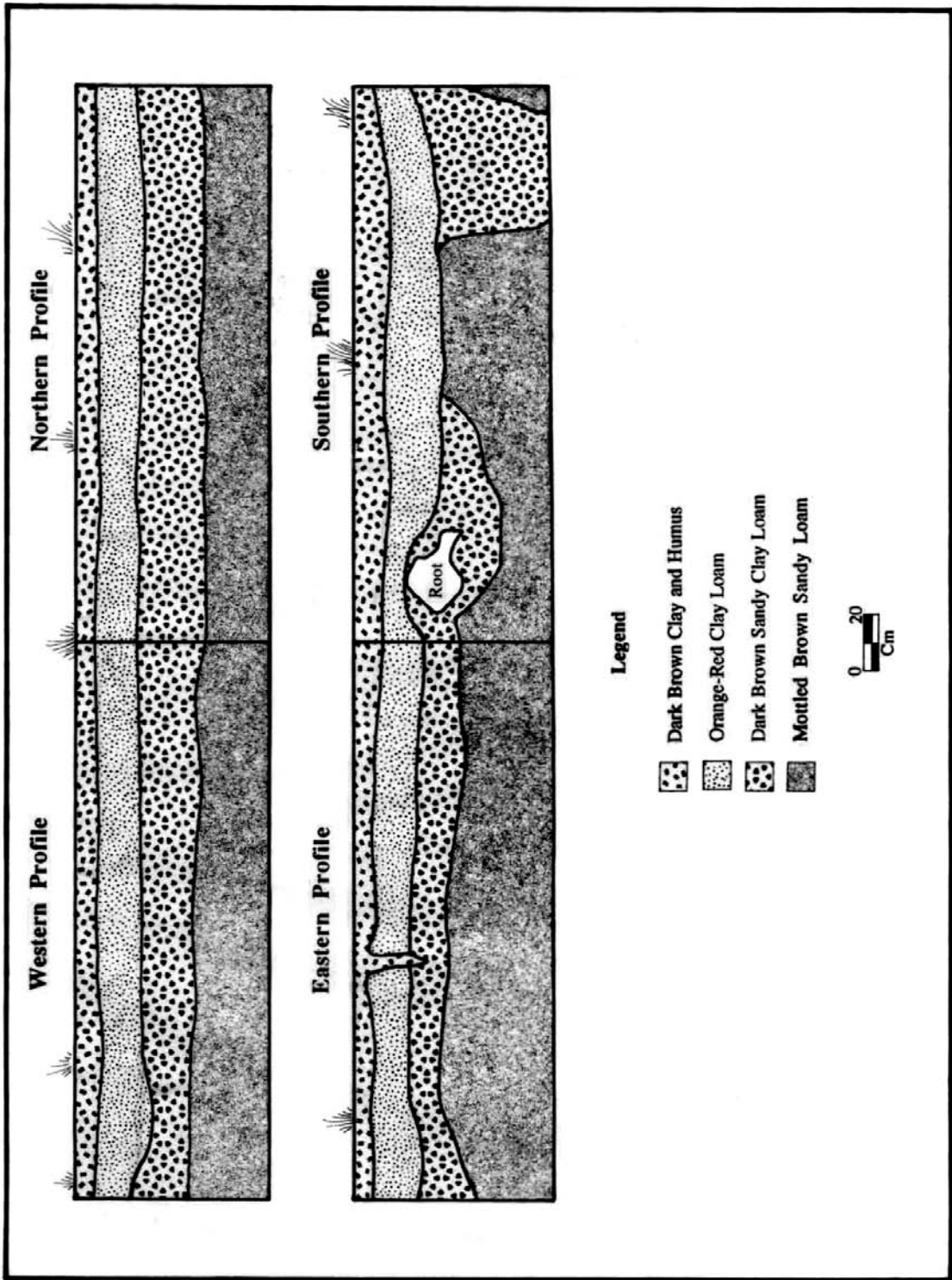


Figure 7. Excavation Unit 1 Profiles.

on the old levee fragment that forms the site. In lower parts of the site the water table will obviously be reached at a more shallow depth.

The pottery from the unit was almost all in the upper levels. These are analyzed in detail later in this report, but it can be noted here that at least two additional components were discovered in this part of the unit. The first of these is a Late Archaic Fiber Tempered pottery component. Many stone tools were also associated with this component. The second newly discovered component was a Late Woodland Simple Stamped pottery component. This is most comparable to what has been called Mossy Oak Simple Stamped. This material has recently been reexamined and has been renamed Vining Simple Stamped by Elliott and Wynn (1988). A great many small triangular-shaped arrow points were located in association with this material. Further comments on both of these components will be presented in the artifacts chapter.

Although there was definitely pottery from the period of the construction and use of the mounds, it was not as plentiful as had been expected. Further, as mentioned above, no evidence of features or house construction was noted. We also found virtually no daub in the unit and are left wondering about the daub concentration just to the west that had been one of the reasons we placed this unit here in the first place. Excavation Unit 1 was backfilled in November of 1988.



Plate 1. Village Excavation Unit.

CHAPTER 5 EXCAVATIONS ON MOUND N

Introduction

Mound N is the largest mound at the site in both height and maximum diameter. Its average height is 1.10 meters (3.6 feet) on its eastern and southern side, while on the western side it is up to 1.50 meters (4.9 feet) high. The latter figure is larger because there is a large borrow pit in the midst of the village in that location. Since there is about 30 centimeters of red clay alluvium on average covering the village in the area of this mound, its true height is at least that much higher. Clearly, however, for the *highest* mound, it is not very high.

The mound is relatively rectangular in shape--almost square--and is oriented in a northwest-southeast direction. The maximum basal dimensions along this axis are 24 meters (78.7 feet) northwest-southeast and 22 meters (72.2 feet) southwest-northeast. The summit of the mound has a pronounced raised rim around its entire perimeter, even though it does not show up that way on the contour map of the site (Figure 6). This raised rim is up to 25 centimeters higher than the low center of the mound. The diameters of the summit in the same directions as the basal dimensions are 15 and 14 meters (45.9 and 49.2 feet) respectively.

This mound is located near the geographical center of the site and is virtually touching Mound M, which is only 2 meters (6.6 feet) away. Indeed, it appears that these two large mounds formed a pair of mounds. Our off-hand guess is that they formed the political center of the little village. Mound Q is only 8 meters (26.2 feet) away to the east, and tiny Mound O is 4 meters (13.1 feet) away to the northeast. The large borrow pit on the western side of Mounds M and N separate them from Mounds H, I, J, and the other mounds in that direction.

The fact that this mound was the largest one did not go unnoticed by looters in the past. The biggest excavation on the site, other than the bulldozing of Mound U, took place here at some point in the past. We do not know when this was, but it may have been in the 1960s. Archaeologist Jack Walker has told us there was a similar hole on a large mound at the site when he visited there about 1971. When we began work on Mound N, a long, heavily eroded, trench-like excavation was present on the mound. This looked like the unbackfilled remains of an earlier archaeological test trench, but we have no information about any earlier archaeologist digging it. It is barely possible that it was placed in the mound under Arthur Kelly's direction in the 1930s, but we have no information to support this possibility.

The trench had eroded until it was no more than 40 centimeters deep in most places, and was about 75 centimeters wide. It ran in a fairly straight line from the southern edge of the southeastern side of the mound, went through the raised rim, and, terminated in a larger excavation near the mound center. The total length of this trench was about 10 meters, and it was oriented at 35 degrees west of magnetic north. Some areas along the length of the trench had clearly been dug deeper than other areas.



Plate 2. Mound N, General View.

Excavation and Description

Given that the area along this trench had already been badly damaged by the trench, and that it was reasonably straight, our plan of work on the mound was clear. We simply widened the trench slightly to permit us to view intact mound fill, cleaning and squaring it up as we went. We excavated all loose and disturbed fill first, and then continued the excavation of the trench down through the mound to the sterile soil beneath it. Surprisingly, the original trench had apparently penetrated to the pre-mound in only a very small area near center of the mound.

The final length of the cleaned trench in Mound N was 11.9 meters (39.0 feet) along the eastern wall and 11.6 meters (38.0 feet) along the western wall. The northern end of the western wall was more disturbed than the eastern wall and is less useful there for interpretations. We had extended the trench a bit further to the south outside the mound into the village deposits than the original looter's trench so we could see a full profile of the edge of the mound. The original walls of the looter's trench were not parallel and, although we straightened them somewhat, they were still not perfectly parallel when we completed our work. It would have taken much more time and would have unnecessarily forced us to remove more of the intact parts of the mound.



Plate 3. Mound N Excavation Trench.

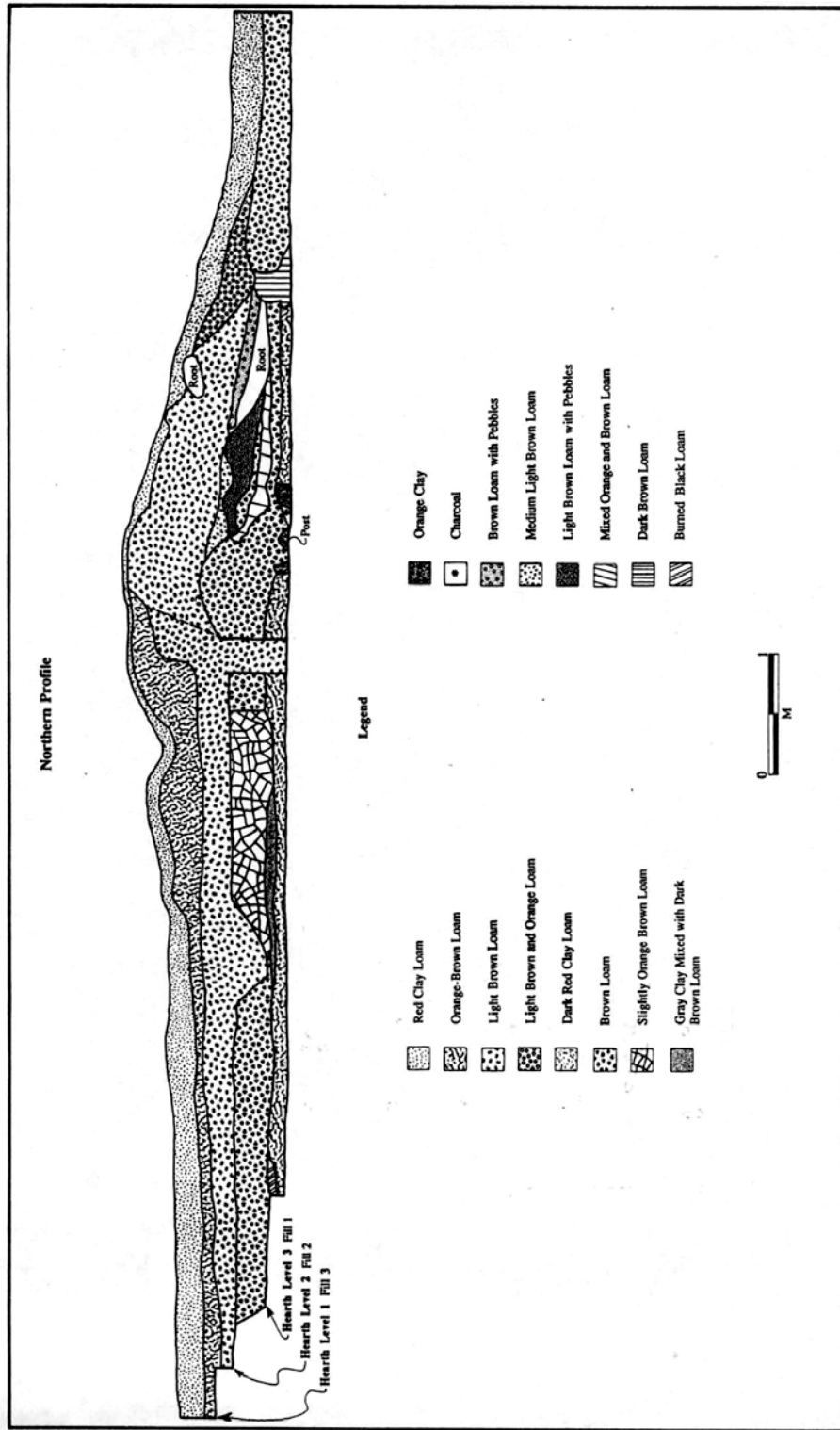


Figure 8. Mound N Trench, Northern Profile.

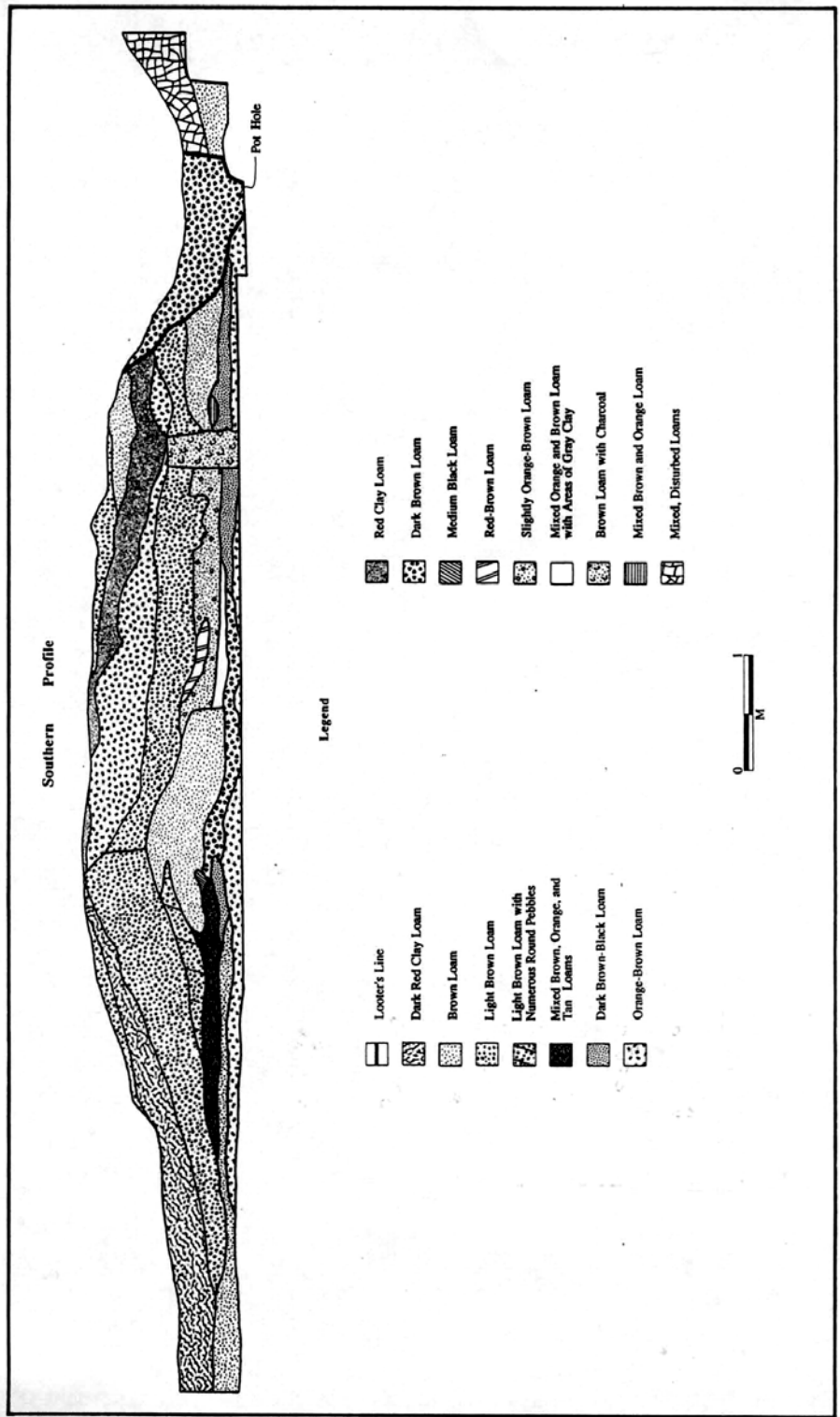


Figure 9. Mound N Trench, Southern Profile.

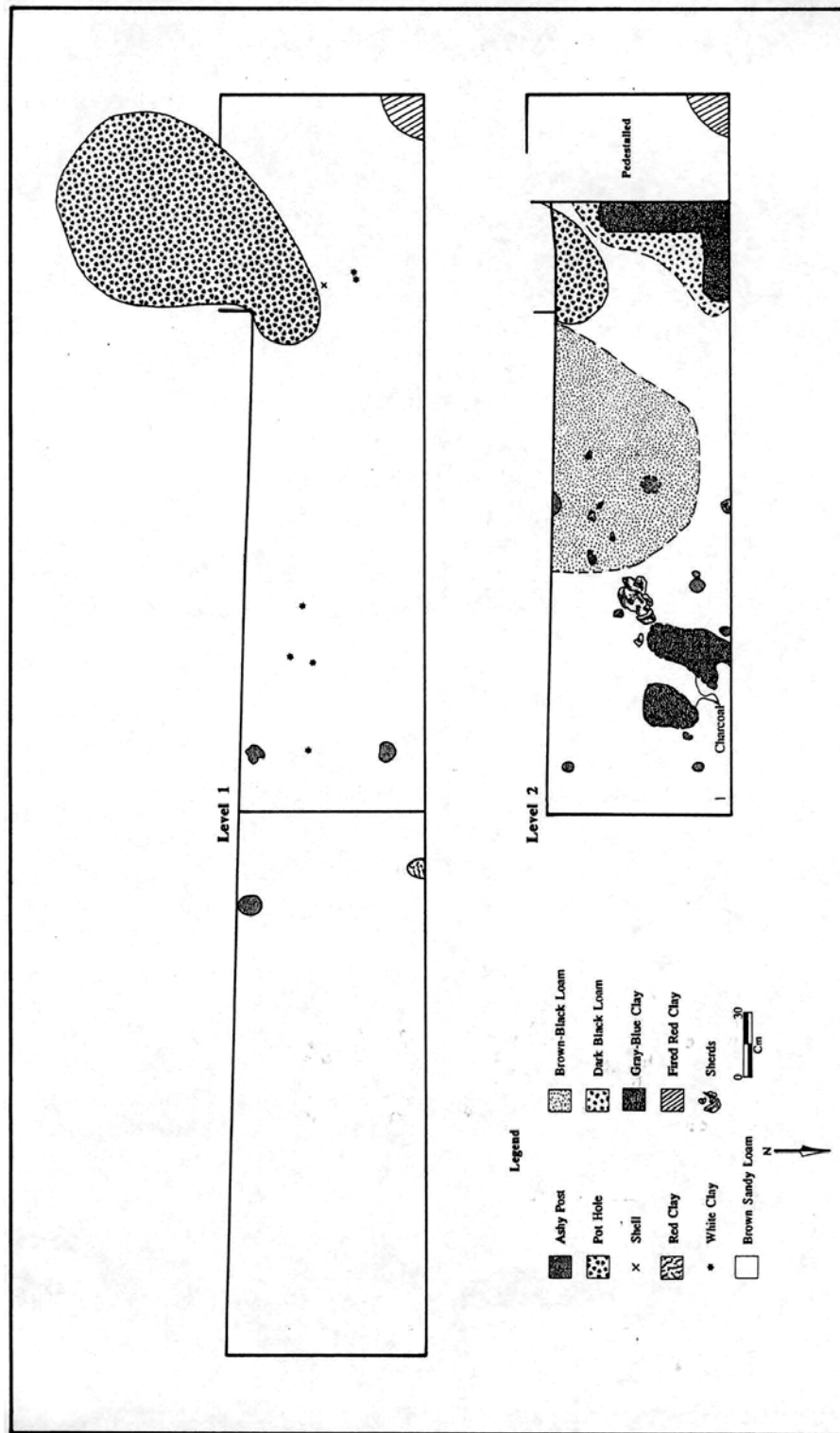


Figure 10. Mound N Trench, Floor

The maximum width of the trench after completion was 1.19 meters (3.9 feet) on the outside and 1.05 meters (3.4 feet) at the center of the mound.

We initially screened much of the mound fill (1/4 inch mesh), but soon realized that the bulk of it was virtually sterile. There were a few artifacts from earlier periods, but almost no Lamar period sherds were included in the fill. It is clear that much of the fill came from close to the mound. In particular, the fill of at least the final stage on the eastern side includes huge numbers of the small quartz pebbles known to occur in a natural band immediately beside the mound in that area.

As we deepened and cleaned the trench, a few post molds became visible in a darker floor level under the raised rim outside the mound. This level also yielded several small clusters of potsherds apparently in place on the house floor. The apparent floor level was screened in its entirety, but there were few materials recovered other than these sherds. A portion of a distinct, stratified hearth area was discovered in the end of the trench near the center of the mound.

We drew the floor plan of the trench as well as both long profiles of it (Figures 8, 9, and 10). These profiles were not easy to interpret because there was very little difference in the colors of the various levels, and because only one of the house floors yielded much burned debris. The best profile to use in explaining our interpretations of the sequence and method of construction of the mound is the northern profile, Figure 8.

This was the longest profile and the one least disturbed by lateral looting pits, particularly near the center of the mound. As stated above, its full length was 11.9 meters (39.0 feet). At the peak of the rim on the edge of the mound the maximum height of the profile was 1.4 meters (4.6 feet). On the outside edge of the trench, its maximum depth below the present ground surface was 50 centimeters. At the center of the mound, we stair-stepped the profile to keep from disturbing too much of the center fire pits in the mound. Thus, the depth at this end of the trench was only 30 centimeters below the present level of the center of the mound.

The first observation about the profile is the location and depth of the modern red-clay alluvium. This is deposited over the entire mound, and not just in the village area outside the mound. Flood waters of the Ocmulgee River completely covered the site and all its mounds in the spring of 1990. At that same time, these disappearing islands became the havens for hundreds of deer and pigs. These animals were apparently stranded on the mounds for several days and thoroughly dug up their surfaces. Figure 8 shows that the red clay had a depth of 30 centimeters outside the mound, 25 centimeters at the center of the mound, but only 2 or 3 centimeters on the crest of the raised rim of the mound. It may be assumed that the full original height of the crest was slightly higher than at the present. Erosion of this feature is actively promoted by its shape. The alluvium was thicker at the center of the mound because silt-filled flood waters would remain in the basin shaped tops of the mounds for some days as a pool that diminished in size toward the center.

The easiest way to determine the number of stages for this mound and the method of its construction is based upon the hearth area in the center of the mound on the left side of Figure 8. There was clear evidence of three stacked hearths present in this location. Thus, we strongly believe that the mound had three occupation stages and living floors. The only floor that is clearly visible in the profiles was the bottom or first one. This is the floor that produced the clusters of

sherds on its floor mentioned above. The structure associated with it had apparently burned since there was a moderate amount of charcoal on the floor.

Neither of the other floors were seen in the profile or the excavation of the trench. The looting likely destroyed any evidence of these and it does not appear that either had been burned. The layers of soil in the profile do show clear breaks where the thin floor levels should have been located and we are confident that they were present at those levels. The middle of these floors would be located between Fill 1 and Fill 2. The top floor would be located between Fill 2 and Fill 3. There is no evidence from either the hearths of excavation that there was a floor on the top of Fill 3, directly under the red-clay alluvium.

Fill 1 is relatively even in thickness, varying from about 25 to 35 centimeters. The top of this fill is slightly lower near the center of the floor near the hearth. Fill 2 varies in thickness from about 25 centimeters on the outside to only 10 centimeters near the center of the floor. It also is lower at the center of the structure than on its outside edge. Finally, Fill 3 varies in thickness from as much as 50 centimeters on the outside edge to as little as 6 centimeters near the center of the mound. It also is sloped toward the center of the completed mound. This variation is significantly greater than the other two fill layers.

Under the bottom or first floor in the mound the soil is a orange-brown loam that underlies all of the mound. This logically should be the original topsoil of the levee, but it is not. The natural topsoil of the site is a darker brown loam that shows on the outside of the mound in the two profiles under the recent red-clay alluvium. Further, the elevation of the first floor level on top of this orange-brown loam is 10 to 20 centimeters below elevation of the village top soil. This shows that the original topsoil in the area of the first house had been removed before the house floor was established. The orange-brown loam is probably the original subsoil at the site. The removed topsoil was probably used to help create the first raised rim on the edge of the mound.

There is some confusion about these raised rims on the edge of the mound. The profiles show only two stacked deposits of earth on the mound edge. The lower is the brown loam one just mentioned. The second clear deposit is formed from a lighter brown loam and appears to come all the way to the present surface. The center high points of these two deposits do not occur at the same places on the profiles. In both cases, the top of the lower deposit is located towards the interior of the mound in comparison to the top one. The difference varies from 30 to 50 centimeters. Thus, the earlier mound stages were not as large in total diameter as was the final one.

Still, the evidence of the hearths and the fill layers from the center of the mound strongly suggests three stages of construction. Where is the middle raised rim? There are two possibilities for this answer. The first is that the second mound floor used the same raised rim as the first house floor. The second, and the one that we favor, is that the second raised rim was made of the same fill type as the final one, and we could not distinguish it in the profiles. Indeed, there is some tentative support for this in both profiles. Just outside the first raised rim is an angled deposit of light-brown loam, with pebbles, that may represent the basal parts of this ill-defined middle raised rim. Indeed, this part of the profile is the most confused of both profiles. Future excavations in other parts of this mound may help straighten out this confusion.

Mound Construction Sequence

It is always difficult to discuss how a mound was constructed and used with only test excavations on it. In this case, we have a substantial, but narrow trench into this mound, but no other excavations. In spite of this limited excavation, we believe that it is possible to suggest how Mound N was constructed. The evidence from Mound U also was important in the interpretations we make here.

To determine the nature of the mound layers and the houses on the mound, we are strongly influenced by the nature of the final mound stage. That is, the last floor was apparently *under* the last fill stage. Further, this fill was strongly tapered in thickness from the outside of the mound toward the inside. Given that erosion of this layer would have worked in the opposite direction, this pattern was probably even more pronounced when the mound was first abandoned. It seems highly unlikely that the builders would place such a layer over an abandoned house floor, particularly in this tapering manner, as a final act before leaving the site. We conclude that the best interpretation for this final structure was that of an earth-covered building that had collapsed. The quantity of earth covering the center of the structure would have been only a few centimeters maximum, perhaps no more than 2-4 centimeters.

With this in mind, it is also likely that the earlier stages were also earth covered buildings. We believe the sequence of construction for the entire mound was as follows. The first thing that was done was to remove the topsoil from the area that was to become the floor area of the first structure at this location. This soil was likely initially placed outside the area of the low outer wall of the structure. After the low wall had been created of posts and beams, the removed earth was placed in a tapering manner from outside the structure all the way to the center of the low-angled roof. This structure, Structure 1, may well have burned. When it collapsed, the earth from the roof fell onto the floor, and the first raised rim was incidentally created. Because the collapsed roof dirt was sloping too strongly toward the center of the structure, and thus making the second floor too unlevel, the dirt was leveled somewhat. After that, a new earth covered building was made, but with dirt brought in from somewhere else, perhaps from the large borrow pit just west of the mound. This second structure was a bit larger than the first, at least by a meter. The second earthlodge apparently did not burn, but appears to have collapsed due to age. The third floor was made on the surface of the collapsed second structure roof deposit, which was also spread out a bit to make the new third floor more nearly level. In both the second and third structures, however, the floors still did slope somewhat toward the center of their respective structures. The final structure apparently collapsed on its own, as the dirt was not spread out at all. It is quite possible that the collapse of this final structure occurred sometime after the Indians who had lived at the site abandoned the town. There is no evidence at all of reuse of the mound after this collapse.

CHAPTER 6 EXCAVATIONS ON MOUND U

The focus of the excavations for the entire spring 1989 season was on Mound U near the southern edge of the site. Because of extreme spring rains and the low-lying nature of the site in the Ocmulgee River floodplain, the crew was able to conduct excavations on the mound for a total of only 10 working days.

Mound U had been initially tested in the fall 1988 season and the work on Mound U was started at the end of that season. This mound was selected for excavation for several reasons. First, the mound had been partially bulldozed in 1965 or 1966, and we felt that it was ethically incumbent upon us to recover what information we could from this compromised mound before we began dismantling one of the intact ones. Second, it was quickly determined that, despite the bulldozing, a substantial portion of the floor of a house in the mound was still intact and, because of the bulldozing, made more readily accessible.

Initial examination of the mound revealed three distinct remaining mound segments. First there were two long, parallel ridges on the western and eastern sides of the mound running north and south, separated by a low center area. Finally there was a long, east-west running ridge on the northern side of the bulldozed mound area. All this seemed to indicate that the inquisitive bulldozer operator had made a single pass through the mound from south to north, leaving the pushed material on the northern side of the mound. As we later learned, this simple interpretation was not quite correct.

The crew began work in the fall 1988 season by clearing the low, bulldozed center portion of the mound and discovered that the bulldozer had apparently come down to within a few centimeters of the floor of at least one enclosed structure, but had not removed it. Most of this soil was screened to recover artifacts, but they were very rare. It was and is unclear if there had been upper floors destroyed. The crew also cleaned the eastern face of the western-most north-south mound segment of the mound--the side toward the center of the mound--into a long north-south profile. This was made before we understood the sequence of bulldozing of the mound, and the data on this profile are now known to have been somewhat compromised by the bulldozing operations, but it was the only possible profile we could make.

Although the crew located what was apparently a hearth and food preparation activity area in the flat bulldozed center of the mound in the fall 1988 season, there was insufficient time to discover any of the presumed walls or edges of the house and determine how the house had been constructed. This was our main focus for the spring 1989 season. It did appear, however, that there might have been two stacked hearths in the center of the mound.

In order to discover these walls, whatever their form, it was obvious that much bulldozed earth on the northern side of the mound would have to be removed, and our own back dirt piles placed on the southern side of the mound would have to be cleared away. A large oak tree on the eastern-side mound segment made it impossible to expand the excavations in that direction. It was hoped that expansion into the western mound segment could be avoided, but that later proved to be impossible. Because so much of the mound fill that had to be moved was disturbed from its original context, and because the fall 1988 work

revealed that very few artifacts were present in this fill, we decided to forego additional screening operations and simply attempt to discover the size and shape of the structure that had been in the mound.

The necessary features needed to define the structure were quite difficult to discover because only a small portion of it had burned. The burning of ancient structures makes their discovery and definition much simpler because charred beams and posts preserve so much better than uncharred ones. Fortunately, a small segment of the Mound U structure, located in its southern portion, was burned. This provided clues that allowed us eventually to delineate how the structure had been constructed. The final excavation map for the mound is presented in Figure 11.

As it turned out, the mound had been bulldozed to a far greater degree than had been anticipated. The entire southern end had apparently first been bulldozed away with a series of west-to-east cuts and then, and only then, did the bulldozer make the final south-to-north cuts described above. Once this fact was discovered our work of defining the structure became much simpler. This also allowed us to realize that the mound had originally been in a straight line with Mound S and Mound W.

As finally defined, the structure in the mound revealed the following characteristics. It was generally rectangular to square, but with strongly rounded corners, and oriented almost exactly northwest to southeast. Its exact size is difficult to determine with precision, but was approximately 10 meters (32.8 feet) across the floor or living area. The hearth found in the fall 1988 excavations was in or near the exact center of the structure. It was filled with ash and measured 70 centimeters (28 inches) in diameter. The center area of the structure surrounding the hearth was of a much darker brown soil than the rest of the floor, likely resulting from cooking activities in the center of the house. This dark area was generally rectangular, oriented in the same manner as the structure itself, and was approximately 4.2 meters (13.8 feet) across.

The locations of two large center support posts were discovered at the outer edges of this dark center zone. The northern of these two posts was 45 centimeters (18 inches) across and the southern one was 40 centimeters (16 inches) across. There were probably two other center support posts that formed a center square along with the two that were discovered. These other two projected posts were under areas that could not be excavated due to the presence of trees. The distance from the center of the hearth, and presumably the structure, out to each of the two discovered center posts was 2.5 meters (8.2 feet).

The outer wall of the structure was probably made in the following manner. Individual posts, approximately 15-20 centimeters (6-8 inches) in diameter were placed vertically at a distance of approximately a meter (3.2 feet) apart. These figures are not exact because the crew had great trouble defining individual posts due to poor preservation and the desire not to dig the floor completely away. The height of these individually set wall posts was probably not above 50 centimeters (20 inches) above the ground or floor surface. A log or beam was then placed horizontally from post to post on the tops of the vertical posts. One of these short horizontal beams was discovered in the southern part of the structure in one of the few places it had been burned. The beam apparently rolled toward the interior of the structure, off the tops of the wall

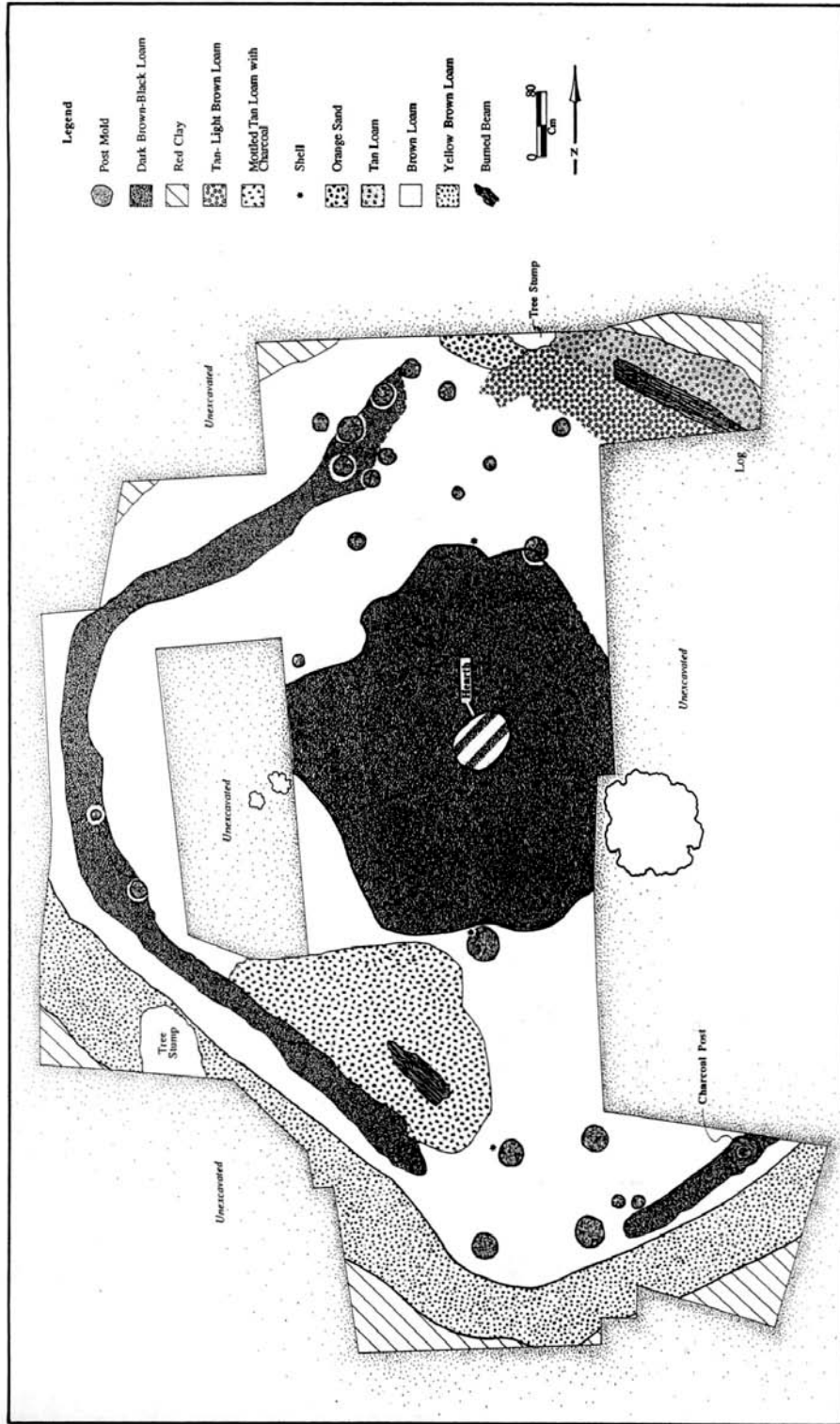


Figure 11. Mound U, Excavation Map.

posts at that point, as it burned. A similar burned horizontal beam was later located in the northeastern part of the structure.

The four center support posts apparently projected about 3 to 4 meters (10-13 feet) above the floor and were joined at their tops by four beams formed into a square. The rafters of the structure were then apparently placed from the ground on the outside of the structure, diagonally up across the low outside wall horizontal beams, and finally up to the horizontal beams forming the high center square. The fact that the rafters apparently went all the way to the ground is supported by the fact that there is floor midden out slightly past the area of the outside wall posts. This is most apparent on the southern side of the structure where an average of 15 to 30 centimeters (6-12 inches) of floor midden existed outside the wall post area.

The rafters were apparently then covered with cane mats, small branches, etc., and earth was spread over this base. The earth covering was thickest at the outside edge of the house and thinnest at the top center, just like the structures on Mound N. Although a small part of this house had been burned, most of it had not burned. As it collapsed, the earth covering fell in place. The area immediately outside the wall posts was buried under the most earth and formed the rim of the resulting basin shaped mound. Therefore, the wall post area on all the other mounds is at or immediately inside the highest part of the outside rims of the mounds. It must be admitted that, due to the lack of burning of the structure and poor preservation, none of the roof timbers or high center beams was discovered in our excavations on Mound U.

The only area that showed any possibility of definition as the door for the Mound U structure was at the northern corner of the remains. This opens directly on the apparent plaza area of the site as shown on the main site map. It was not possible to remove enough earth at that area to confirm this positively, however.

The house floor, as far as revealed, was very clean. A few very small clusters of potsherds were found lying flat on the floor, primarily in the center work area of the house. Nothing approaching complete vessels, useful ground stone tools, or other artifacts were found on the floor. Coupled with the unburned nature of most of the structure, this house was probably cleaned out of useful material upon its abandonment, perhaps due to the partial burning. The structure may have been old and in need of repair when it partially burned and was then deemed unfit for reconstruction by its inhabitants. The sherds that were recovered on the floor of the structure included multiple line bold incised bowl sherds that are identical to those from the other excavations at the site and date to the same period--essentially the time period of the Spanish explorer, Hernando de Soto--1540 A.D.

The mound was too badly bulldozed to address the question of how many stages were involved in the construction of the mound. We believed that there was a second hearth above the first in the center of the structure based upon the fall 1988 work. Given the way Mound N was built, and the estimated original size and height of Mound U, it seems most likely that there indeed was a second stage to it, but not a third. Unfortunately, we will probably never be certain of the number of stages in this compromised mound. The floor found is certainly the original floor, however.

The fact that the mound had been more extensively bulldozed on its southern end than had been previously assumed actually placed it in better a straight alignment with Mound S and Mound

W as mentioned above. These three mounds form an essentially straight east-west line on the southern part of the most obvious plaza at the site. In short, we believe that Mound U is the remains of a collapsed earth-covered structure or earthlodge that opened onto the main plaza at the site.

CHAPTER 7 EXCAVATIONS ON MOUND P

1988 Excavations

Mound P is located 11 meters south of Mound M in the south-central part of the site. Its maximum diameter is 14 meters, and its present maximum height is 60 centimeters. This mound, like most of the others, had a distinct raised rim around most of its summit, but the rim was most distinct on the northern edge. The mound was selected for testing simply because it was close to our base camp on the road at Mound S. The area selected for testing on the mound was chosen with a specific test in mind, however.

It is common on mounds in the Oconee Valley for garbage to be dumped or deposited off the northeastern corner of the mounds. This was true at Dyar (Smith 1981), Shoulderbone (Williams 1990a), and Shinholser (Williams 1990b). It was also true at Tugalo on the upper Savannah River (Williams and Branch 1978). With this pattern in mind we decided to place a test on the northern to northeastern edge on a mound, Mound P, to test this idea for the Bullard Landing site. This work was conducted in October of 1988.

The test excavation on the edge of the mound was initially begun as a unit that was 1.5 meters wide and 2.0 meters long. It was later extended an additional 1 meter to the north so that the final size of the unit was 1.5 by 3.0 meters. The pit was excavated in two levels. The first was the top 30 centimeters, which included all of the red clay alluvium. The second level, to a depth of 40 centimeters, included the original topsoil.

The reason for extending the trench to the north was simple. We found a large cache of broken pottery vessel fragments immediately under the red clay alluvium on the surface of the buried topsoil, immediately off of the edge of the mound. The majority of the pottery cluster was in the 1 meter extension. These sherds were likely disposed there by the occupants of the mound and, thus, this supports the observations about the location of mound dumps. Plate 3 presents a photograph of the excavation unit.

The mound itself appeared to consist of two separate levels. The top level is a brown loam soil. Under this is a very dark-brown to black sandy loam with much charcoal, some freshwater clam shell, and some animal bone. This represents the richest midden found anywhere on the site and the only place that had any shell and animal bone preserved. Why this midden is in this place is uncertain, but this will be taken up again later in this report in general discussion of the structure of the mounds. There were no postholes or features located on the floor of the excavations unit. It should be pointed out that the lower black midden, possibly resulting from a burned house, was exposed only immediately adjacent to the eastern profile and not over the bottom of the entire trench. The midden here should be further examined at some future point.

1990-91 Excavations

During the fall of 1990 Mercer University continued the archaeological excavations at the Bullard Landing site. The work during this field season concentrated almost exclusively on Mound P. In the spring of 1989 excavations on the bulldozed Mound U had yielded much detail about how the mounds at the site had been constructed (see below). The 1990 excavations on the

undisturbed Mound P were undertaken to test some of the ideas developed at Mound U. Specifically, the excavations were designed to test the hypothesis that most of the mounds, including Mound P, were the remains of collapsed earth-covered houses or earth lodges.

The 1990 excavations in Mound P were conducted in three stages. The first was to reexcavate the 1988 test pit on the northern edge of the mound. This was accomplished in short order, and the charcoal layer that had led to the original speculations about the burning of one or more of the houses that presumably comprised this mound, was reexposed in the southern end of the 3.0 by 1.5 meter unit.

The second phase of the 1990 excavations was conducted as follows. It was hoped that there would be sufficient time during the season to excavate completely a quarter of the mound. To this end, the northeastern quarter of the mound was staked out. The western boundary of this unit was the western wall of the 1988 unit on the northern edge of the mound. This line was extended south from the unit to the very center of the mound, and a line from that point turned 90 degrees to the east and run off the mound in that direction.

Within this quarter of the mound the first job consisted of removing the recent red alluvium that had been deposited in the basin-shaped summit of the mound by flood waters over the last 175 years. This was very thin on the outer raised-rim edge of the mound, but was up to 15 centimeters thick near the center of the mound. This material was carefully shoveled out and was not screened since it presumably contained no artifacts.

In one small place in the east-central part of the mound summit a number of large pot sherds began to be found almost immediately as we began removing the red clay alluvium. This turned out to be the location of a large reconstructed pottery vessel. No other artifacts were located in this recent red clay level, and only a small part of the vessel extended up into the red clay. Presumably the inverted vessel was virtually sticking out of the top of the mound before the red clay alluvium began to be deposited by nineteenth century floods.

After the red clay had been successfully removed from the northeastern quarter of the mound summit, it became clear that there would not be sufficient time to excavate all of this quarter completely to sterile soil in the time available. Thus a new strategy was undertaken to test the mound. This consisted of extending the reopened excavation unit on the extreme northern edge of the mound south all the way to the center of the mound. We began excavating this section of the mound in arbitrary and then natural levels, when encountered, down into the mound. All of the soil from the new trench was screened through 1/4 inch mesh hardware cloth for artifact removal. By the end of the fall quarter for 1990, the trench had been taken down almost all the way to sterile soil under the mound. The long eastern and western profiles and the short southern profile near the center of the mound were drawn, and the excavation was cleaned and photographed (Figures 12 and 13). The stacked hearth area in the center of the mound showed clearly in the southwestern corner of our trench. We did not excavate this area completely away, and only the northeastern quarter of the hearths were in our trench.

The intention at that time was to come back in the winter or spring to finish the final excavations, add this information to the existing profiles, and backfill the excavation. The winter and spring of 1991 were unseasonably wet, and it was not possible to get back to the site at all before the end of the school year. In the fall of 1991, two brief trips to the site with students made

these two final goals possible. Since the time and labor available in 1991 was limited, a single 25 centimeter wide trench was placed in the floor of the excavation below the eastern profile of the larger trench. This penetrated the last few centimeters to sterile soil. The additional bottom details of the eastern profile were recorded at that time. There were no changes necessary to the other profiles. The entire trench was backfilled in the late fall of 1992 following the completion of this final part of the testing of Mound P.

Interpretation

Based upon our excavations in Mound P, although they were not as extensive as had been originally hoped, it is possible to conclude a number of things. First, there were apparently two houses placed on top of one another in this mound. The bottom house--the initial one on this spot--had indeed been burned. Whether this burning was intentional or accidental is uncertain, however. The second or final house on this spot was definitely *not* burned and simply collapsed after its wooden frame had rotted away. The large pottery vessel recovered had been in storage upside down directly on the floor of the final house. Thus, the occupants left this vessel on the floor of their house when they abandoned it. This might imply that the occupants of the house, and perhaps the entire town, left relatively rapidly.

A number of other observations are recorded here without further explanation. There was a layer of clean soil placed over the burned and collapsed debris of the initial house, before the second house was constructed. The second house was slightly smaller than the first. There was a portion of the center fire pit area for both houses located in the center of the mound in the southwestern corner of our excavation trench. In both cases, the fire pit area was raised 10-15 centimeters above the general level of the floors of the houses through the accumulation of ashes and burned clay. The floor area of the top structure was very difficult to detect because the house had not been burned. That floor consisted of a thin zone that had a few potsherds pressed flat in to it, and which had small amounts of charcoal included in it. The bottom house floor was quite clear because it had been burned so extensively.

The top floor was, of course, completely removed in the area of our trench, but the bottom floor was only removed in the 25 centimeter wide trench along the eastern wall of the excavation trench. The remainder of this floor in the bottom of our trench was left undisturbed and soil was backfilled onto it.

All of the evidence from our excavation of the two collapsed houses in Mound P strongly supports our interpretation of them as earth lodges. Indeed, the case for this is much stronger now than it was after the excavations on the bulldozed and thus heavily damaged Mound U. Further, there is no reason to suspect that the activities of the people who lived in the house were anything other than normal domestic ones. It does seem likely that the same family who built the first house built and occupied the second house after the first one burned. There is no way to determine how long the first house had been occupied when it burned. It could have been as little as a few months, or perhaps as long as 10-15 years. Likewise, there does not seem to be any way of knowing how long the final house was occupied before it was abandoned. We suspect, however, that the total use of both houses, and thus the mound, was probably less than 30 years. The section of Mound P excavated in the fall of 1990 was backfilled in the spring of 1991. Future

work at Mound P should attempt to excavate a larger section of the mound, perhaps to determine something about the use of space within one of the houses.



Plate 4.

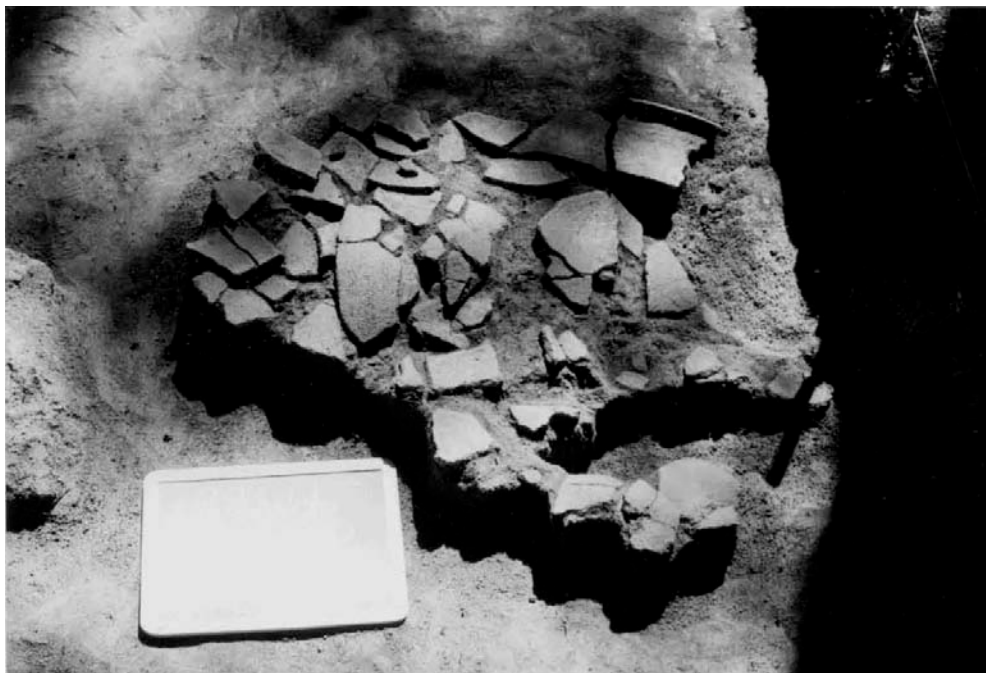


Plate 5.

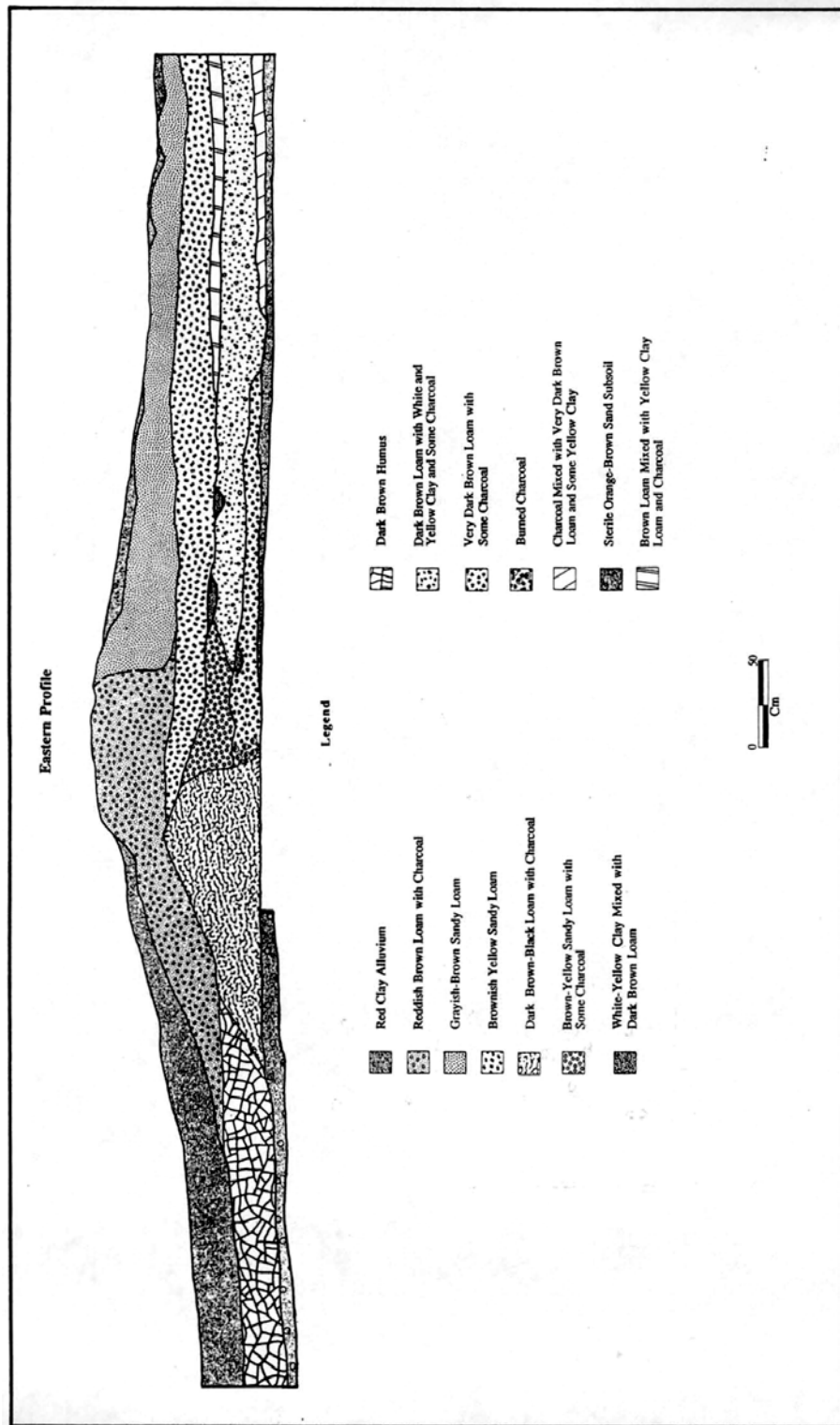


Figure 12. Mound P Trench, Eastern Profile.

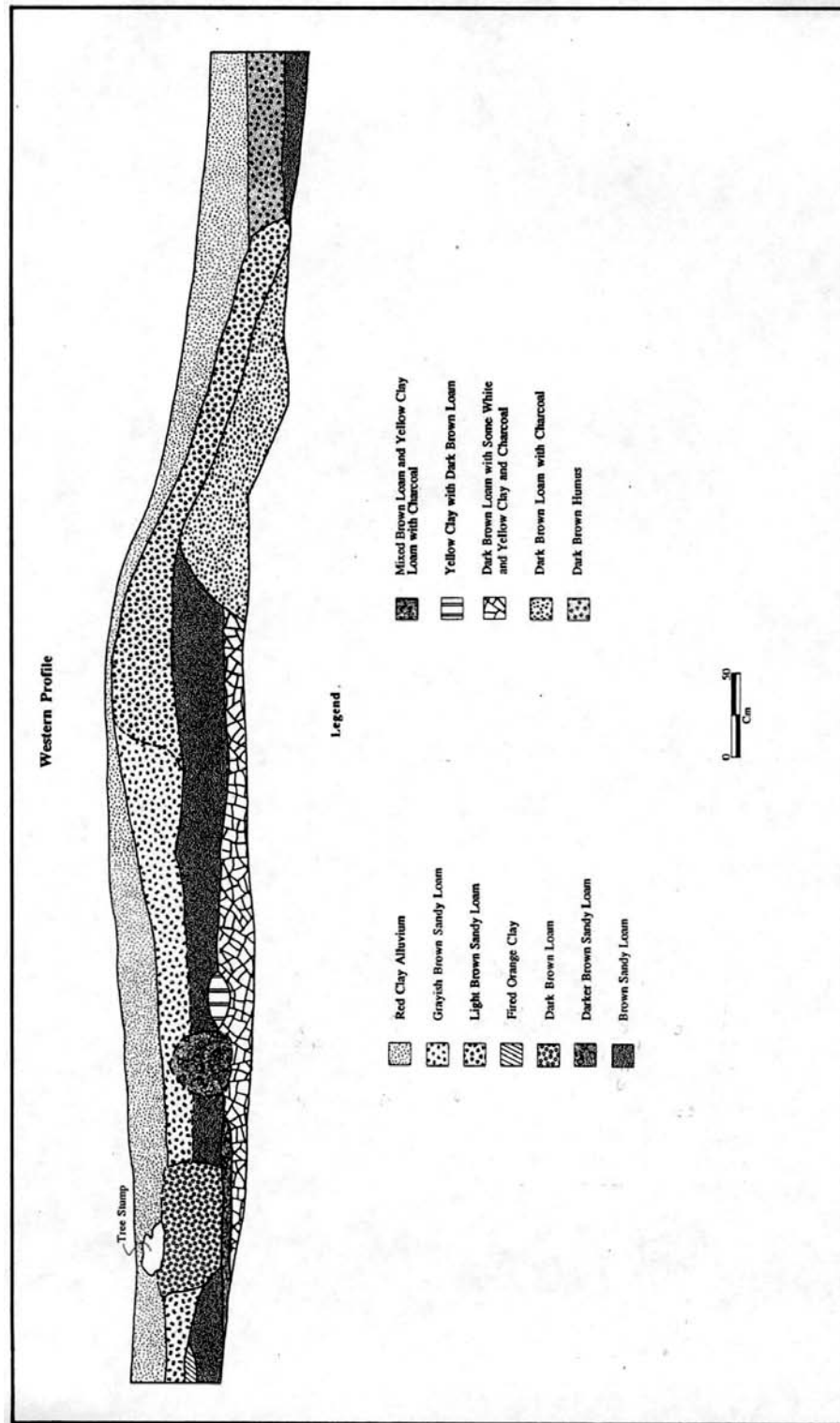


Figure 13. Mound P Trench, Western Profile.

CHAPTER 8 SEARCH FOR THE PALISADE

Most sites of the size and time period of the Bullard Landing site have palisade walls or ditches or both surrounding them. Examples in Georgia include the nearby Lamar site (Smith 1973), the Shoulderbone site in Hancock County (Williams 1990a), and the King site in northwestern Georgia (Hally 1975). With this fact in mind we began to search for a ditch or palisade around the Bullard site in the spring of 1990, again with students from Mercer University. Only about six field days were available for work at the site so the project was limited. Some progress was made however.

The first aspect of the project included a search for a ditch surrounding the site. There as no visible indication of any ditch surrounding the site, but we believed that one might have been present at one time that had been completely filled with Piedmont sediments in the last 175 years. Given that even the tops of the mounds had mud in them and the entire village area had a minimum of 20 centimeters of this alluvium, it seemed quite reasonable that such a ditch could be completely invisible on the present surface. The simplest way to determine if this was the case was to place a series of post hole tests at fairly close intervals in straight lines going away from the area of the mounds. The soil from each hole was examined to determine the depth of the red clay alluvium. Our assumption was that if we placed a posthole in a buried ditch, the depth of the red clay should be much greater than in the areas on either side of the ditch.

Using this technique, 15 separate lines of posthole tests were made surrounding the entire site. The location of these lines is noted on Figure 14. These lines varied from 8 to 33 meters in length and posthole tests were placed along almost all of the lines at approximately 2 meter intervals. In this manner, 130 posthole tests were placed in the outer edge of the site.

The only location where there was any depth of red alluvium greater than 30 centimeters was around the extreme northern end of the site. This is the probable location of an old relic channel of the river rather than a palisade ditch, however. The deep area is wide in that location, but we did not trace it all the way to the north away from the site. Because we found no other indications of a ditch around the site with these tests, we must tentatively conclude that there never was a man-made ditch surrounding the town. It might be argued that our interval of 2 meters was insufficient to locate the ditch, but the chances that we would have missed it on *all* of these lines is next to zero.

In order to test the idea of whether there may have been a palisade wall around the site without a companion ditch, excavation was necessary. To test this idea we excavated a trench that was 15 meters long and 1 meter wide. This trench was begun near the grid southwestern corner of Mound B on the northwestern part of the site. Its angle of orientation was 245 degrees from magnetic north, and it was extended to the west away from the mounds. The reason for choosing this location was based upon the fact that it was relatively open, free from flood debris, was relatively flat, and was dry.

The soil the trench was not screened. This was done because of field and lab time limitations. There appeared to be very few artifacts present in the fill, however. The soil was piled next to the trench and eventually replaced in the trench. Thus all the artifacts from it are still

close to their original locations, although no longer vertically separated. The total depth of the trench was 50 centimeters. There were relatively few post stains in the floor and no features. The post stains were not excavated. The majority of them were in a suspicious area near the center of the trench. There was a slight possibility that this might have represented a wall, perhaps a palisade, but the pattern was not very clear. We did not have time in the Spring of 1990 to place any tests at right angles to this trench at this location to see if the posts were part of a wall. The entire trench was backfilled in the spring of 1990. In the fall of 1990, however, we were able to reopen the center area of the trench, and expanded it 1 meter to the south and 3 meters to the north. This expansion made it clear that what we had found was the remains of a large tree stump and not a palisade wall. Thus there is no evidence, at least on the western side of the site, of a palisade wall. It should be noted that the soil to the east of the tree stump area was slightly darker and yielded more Lamar pottery, although not a large amount. This fact might support the idea that the general village activity did diminish in this area to the west.

In summary, the evidence is fairly clear that there was no palisade ditch surrounding the Bullard site, and the evidence for a palisade wall is also lacking. All this is very interesting in light of the route of De Soto through central Georgia in 1540 (Hudson, Smith, and DePratter 1984). The only account that presents any detail for the part of the De Soto expedition in the area of the Bullard site is the account of De Soto's personal secretary, Ranjel. He states that:

...they came to a village, which was on an island in this river, where they captured some provisions; and, as it was a perilous place, before canoes should appear, they turned to go back the way they came; but first they breakfasted on some fowl of the country, which are called guanaxas and some strips of venison which they found placed upon a framework of sticks, as for roasting on a gridiron (Ranjel 1922:87).

The most important part of this passage is the fact that the site De Soto visited in this area was on an island. If a site was on an island it has a natural defense surrounding it in the form of the river and would likely have very little need for a palisade wall or, more likely, a palisade ditch. Given that our geologist, Bruce Dod, has suggested that the Bullard Landing site may have been on an island in 1540 (albeit very large), that this site dates to the correct time period, and that it would have a lower logical need for a defensive ditch if it were on an island, it is possible that 9Tw1 may be the first site of the Province of Ichisi visited by the De Soto expedition.

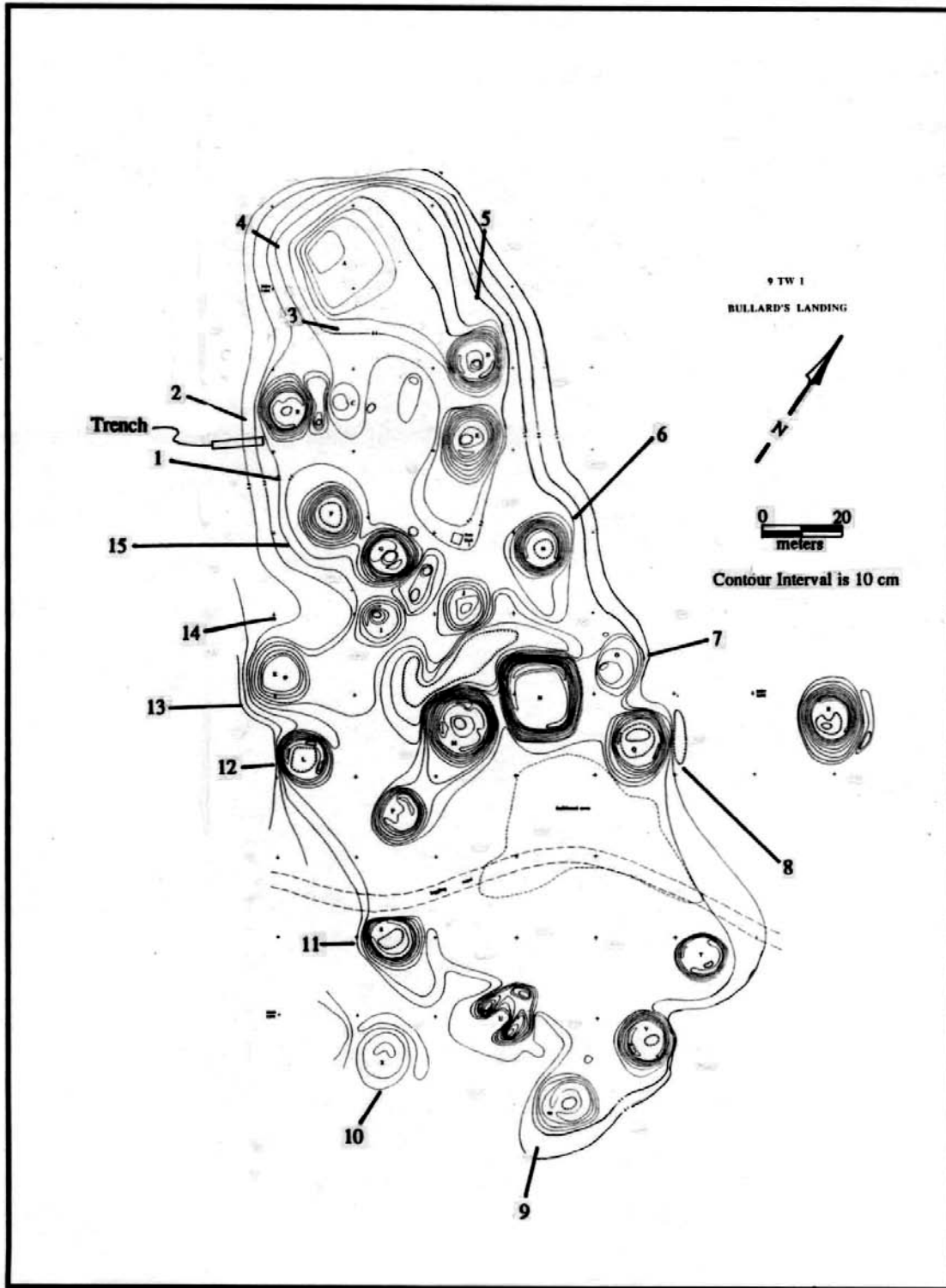


Figure 14. Location of Post Hole Tests and Trench 1.

CHAPTER 9 CERAMICS

The vast majority of the ceramics recovered from the Bullard Landing site date to the same period as that of the mounds--the Late Lamar period. Typologically these sherds are Lamar Complicated Stamped, Lamar Bold Incised, and Lamar Plain. The phase assignment within the Lamar period would be the Cowart's phase (Williams 1975), sometime between approximately 1450 and 1575 A. D. More research is needed in the Macon area to refine the Lamar period ceramic chronology, as is discussed in Williams and Shapiro (1990). It may well turn out that the Bullard site should be the type site for a new, more narrowly focused phase, but we do not feel ready to propose it at this time. Our best guess is that the mound occupation at the site dates to a short period around the time of De Soto, ca. 1540 A.D.

There are other earlier ceramic occupations at the site, however. These were revealed only in Excavation Unit 1, the village test unit. This included ceramics from the Late Woodland Vinings or Mossy Oak phase, as well as the Late Archaic period. The latter are represented by plain Fiber Tempered wares, presumably of the Stallings Island series. The 359 sherds recovered from the village unit are presented by decoration style and 10 centimeter level in Table 1.

As can be seen from this table, the vast majority of the ceramics were from Level 4, with much smaller amounts from Levels 3 and 5. There is little discernable ceramic stratigraphic separation between the Late Woodland Simple Stamped wares and the Lamar materials. The majority of the plain pottery dates to the Lamar period. The Fiber Tempered wares were all from Level 5, a scant 10 centimeters deeper. While this was gratifying, it is clear that there is not much potential, at least in general midden context, for future refinements of the central Georgia ceramic chronology at this site--there just was not enough physical separation. The interesting thing is that there was so *little* buildup of floodplain deposits on this old levee fragment for the last 4000 years. The upper two or three levels all were deposited during the last 175 years. The buildup on the levee appears to have been on the order of 5-7 centimeters per thousand years during prehistory.

Table 2 shows the ceramics from the Mound N excavations. The Lot Numbers refer to specific locations listed in the catalog in the appendix. Only 187 sherds were recovered from the mound, a low number. While the number is perhaps artificially reduced by the nature of our clean-up operations on the looters trench there, we still believe that the floors in the mound were kept relatively clean. All of the sherds from the mound date to the Late Lamar occupation. Lamar Plain sherds accounted for 63.6 percent of the collection, while Lamar Complicated Stamped accounted for 24.1 percent. The Lamar Bold Incised sherds numbered 20 and accounted for 10.7 percent of the sherds. The so-called Medium Incised sherds in the table are segregated there because these sherds with incision widths of between 1 and 2 millimeters have been shown to be late period markers in the Oconee Valley to the east (Williams 1983). They are included above with the Bold Incised sherds, and in the original definition of that type, for summary purposes.

Table 1. Village Excavation Unit, Ceramics by Level

Level	Plain		Bold Incised		Medium Incised	Simple Stamped		Complicated Stamped	Punctated & Stamped	Fiber Tempered	Totals
	Body	Rim	Body	Rim	Body	Body	Rim	Body	Body	Body	
1	0	0	1	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	0
3	7	0	0	0	0	3	0	1	0	0	11
4	194	5	2	1	1	80	2	23	1	0	309
5	9	0	0	0	0	1	0	1	0	23	34
6	3	0	0	0	0	0	0	1	0	0	4
7	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0
Totals	213	5	3	1	1	84	2	26	1	23	359

Table 2. Mound N, Ceramics by Lot

LOT	Plain		Bold Incised		Medium Incised		Punctated & Incised	Stamped & Incised	Complicated Stamped	Rectilinear Stamped	Curvilinear Stamped	Totals
	Body	Rim	Body	Rim	Body	Rim	Rim	Body	Body	Body	Body	
1	15	0	1	1	0	0	0	0	1	1	0	19
2	0	0	0	0	0	0	0	0	0	0	0	0
3	4	1	0	0	0	0	0	0	3	0	2	10
4	4	0	0	0	0	0	0	0	3	0	0	7
5	9	1	0	0	0	1	0	0	2	0	0	13
6	2	0	0	0	0	0	0	0	0	0	0	2
7	0	0	0	0	0	0	0	0	0	0	0	0
8	2	0	2	1	0	0	0	0	1	0	0	6
9	0	0	0	0	0	0	0	0	0	0	0	0
10	7	0	1	2	0	0	0	0	1	0	0	11
11	4	0	0	0	0	0	0	0	2	0	0	6
12	22	0	0	0	1	0	0	0	3	0	0	26
13	9	0	0	1	0	4	0	2	9	0	0	25
14	9	0	1	0	1	0	0	0	0	0	0	11

LOT	Plain		Bold Incised		Medium Incised		Punctated & Incised	Stamped & Incised	Complicated Stamped	Rectilinear Stamped	Curvilinear Stamped	Totals
	Body	Rim	Body	Rim	Body	Rim	Rim	Body	Body	Body	Body	
15	0	0	0	0	0	0	0	0	0	0	0	0
16	26	2	0	0	2	1	1	0	10	0	0	42
17	1	0	0	0	0	0	0	0	3	1	2	7
18	1	0	0	0	0	0	0	0	1	0	0	2
Totals	115	4	5	5	4	6	1	2	39	2	4	187

Table 3 shows the sherds from Mound U, the bulldozed mound. Again all the sherds are from the Lamar occupation. Indeed, practically no sherds from other occupations were found on the site away from the area of the village excavation unit. The total sherds recovered was 820. Of these, Lamar Plain accounted for 418 sherds, 51.0 percent of the total. Lamar Complicated Stamped accounted for 307 sherds, 37.4 percent of the total, and Lamar Bold Incised accounted for 80 sherds, 9.8 percent of the total. The total punctated sherds was 15, and accounted for only 1.8 percent of the total sherds recovered from the mound.

Table 4 includes the sherds from Mound P. The Lamar Plain sherds numbered 335 and accounted for 61.8 percent of the total. Lamar Complicated Stamped sherds numbered 162, and accounted for 29.9 percent, while the Lamar Bold Incised numbered 42 and accounted for 7.7 percent of the sherds from the mound. A single Late Woodland simple stamped sherd was recovered from the fill of the mound.

The percentages for the three main Lamar types are fairly constant for the three mounds except for Mound U. This mound had a lower percentage of plain and a higher percentage of complicated stamped compared to the other mounds. Whether this is a result of sampling error is unknown, but it does say that the ceramic collections from all the mounds are not identical. This might be useful for future social or chronological comparisons from all of the mounds.

Table 5 summarizes the ceramic collections from the mounds and village excavations. The total number of sherds for all these excavations is only 1908. While this is not a great number of sherds, the fact that the site has never been plowed means that the average size of these sherds is larger than from most sites. Excluding the Late Woodland simple stamped sherds and the Late Archaic fiber tempered sherds, the total Lamar period sherds was 1798. Of these, the plain sherds accounted for 60.6 percent, the complicated stamped accounted for 30.0 percent, and the incised accounted for 8.2 percent.

Table 6 lists the 173 rim sherds from the major excavation units at the site. Simple rims are unmodified rims, without rims strips or folds. Folded rims may be either folded or have had an extra strip of clay added to the exterior lip area of the vessel. Typically, the simple rims belong to the tops of incurvate rim bowls and are decorated with incising. The folded rims are typically on excurvate rim jars, which are usually complicated stamped. The folded rims are usually modified by either finger pinches, stick notches, or are punctated with hollow reed cane. The folded pinched rims number 36 specimens and account for 52.2 percent of the folded rims.

Notched rims numbered 3 and account for only 4.3 percent of the folded rims. Surprisingly, the cane punctated rims numbered 30 and accounted for 43.5 percent of the folded rims.

In the Oconee Valley to the east cane punctated folded rims are present only in the early Lamar period. Here in the Ocmulgee Valley and in the Flint River valley to the west (Worth 1988?) this rim style is also present and quite common during the Late Lamar period. There is a difference between the early cane punctating in the Oconee Valley and the late cane punctating of the Ocmulgee and Flint River valleys, however. The canes selected for use in the Ocmulgee Valley were about twice the diameter of those in the Oconee Valley--approximately 12 millimeters as opposed to about 6 millimeters. Why this was the case we do not know. The differences in numbers by excavation unit reflect the amount of excavation more than anything else.

Table 3. Mound U, Ceramics by Lot

LOT	Plain		Bold Incised		Medium Incised		Punctated & Incised		Stamped & Incised		Complicated Stamped		Rectilinear Stamped		Curvilinear Stamped		Punctate	Totals
	Body	Rim	Body	Rim	Body	Rim	Body	Rim	Body	Body	Rim	Body	Rim	Body	Rim	Body		
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	21	1	2	3	1	0	0	2	0	31	0	0	1	0	0	0	0	62
4	3	0	0	1	0	0	0	0	0	0	1	1	0	3	0	0	0	9
5	14	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	21
6	4	0	0	1	0	0	1	0	0	7	0	0	0	0	0	0	0	13
7	3	1	1	0	0	1	0	0	0	8	0	0	0	0	0	0	0	14
8	42	2	1	4	0	2	0	0	0	44	0	0	0	0	0	0	0	95
9	23	0	1	3	0	0	0	0	0	7	0	0	0	0	0	0	0	34
10	5	0	2	0	0	1	0	0	0	5	0	0	0	0	0	0	0	13
11	5	0	1	0	0	0	0	0	0	7	1	0	0	0	0	0	0	14
12	5	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	7
13	4	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	9
14	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
15	36	6	6	2	0	3	0	0	1	44	0	0	0	0	0	0	0	98
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	3	0	0	0	1	1	0	0	5
18	3	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	9
19	4	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	7
20	2	3	2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	11
21	7	2	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	16
22	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
23	6	3	1	1	0	0	1	1	0	2	0	0	0	0	0	0	0	15

LOT	Plain		Bold Incised		Medium Incised		Punctated & Incised		Stamped & Incised	Complicated Stamped		Rectilinear Stamped		Curvilinear Stamped		Punctate	Totals
	Body	Rim	Body	Rim	Body	Rim	Body	Rim	Body	Body	Rim	Body	Rim	Body	Rim	Body	
24	16	1	1	0	1	1	3	0	0	13	0	0	0	0	0	2	38
25	4	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	9
26	30	4	3	4	0	0	0	0	0	15	1	0	0	0	0	0	57
27	23	3	0	1	0	1	0	0	0	16	1	0	0	8	0	0	53
28	5	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	8
29	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
30	13	1	0	1	1	0	0	0	0	3	0	0	0	1	0	0	20
31	26	2	3	0	3	0	1	1	0	2	0	11	0	5	1	0	55
32	25	0	0	0	0	1	0	1	0	1	1	0	0	3	0	0	32
33	24	1	10	0	0	0	0	0	1	3	0	6	0	10	0	0	55
34	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
35	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	3
36	6	4	1	0	0	0	0	0	0	3	1	0	0	0	0	0	15
Totals	379	39	35	24	11	10	6	5	2	246	6	18	1	34	2	2	820

Table 4. Mound P, Ceramics by Lot

LOT	Plain		Bold Incised		Medium Incised		Punctated & Incised	Punctated & Stamp	Complicated Stamped		Rectilinear Stamped	Curvilinear Stamped	Simple Stamped	Totals
	Body	Rim	Body	Rim	Body	Rim	Rim	Body	Body	Rim	Body	Body	Body	
1	42	2	5	5	0	2	0	0	27	4	0	2	0	89
2	64	7	8	0	3	2	0	0	38	5	0	0	0	127
3	91	5	0	0	4	1	0	0	35	1	0	0	0	137
4	44	6	2	2	1	0	0	0	0	0	0	0	1	56
5	37	2	0	1	5	0	0	1	27	0	0	0	0	73
6	10	1	0	0	0	0	0	0	6	0	0	0	0	17
7	15	2	0	0	0	0	1	0	2	0	2	2	0	24
8	1	1	0	0	0	0	0	0	1	0	0	0	0	3
9	5	0	0	1	0	0	0	0	10	0	0	0	0	16
Totals	309	26	15	9	13	5	1	1	146	10	2	4	1	542

Table 5. Ceramic Summary, Main Excavation Units

	Plain	Fiber Temp Plain	Bold Incised	Medium Incised	Simple Stamped	Comp. Stamped	Punctated & Stamped	Punctated & Incised	Stamped & Incised	Punctate	Totals
Location											
Village	218	23	4	1	86	26	1	1	0	0	359
Mound N	119	0	10	10	0	45	0	0	2	0	187
Mound P	335	0	24	18	1	162	1	1	0	0	542
Mound U	418	0	59	21	0	307	0	11	2	2	820
Totals	1090	23	97	50	87	540	2	13	4	2	1,908

Table 6. Rim Sherds, Main Excavation Units

	Village	Mound N	Mound P	Mound U	Totals
Simple, Plain	4	3	8	17	32
Simple, Incised	1	11	14	36	62
Simple, Incised & Punctated	0	0	1	2	3
Simple, Punctated	0	0	0	3	3
Simple, Stamped	0	0	0	2	2
Simple, Simple Stamped	1	0	0	0	1
Folded Pinched, Plain	1	0	13	15	29
Folded Pinched, Stamped	0	0	1	6	7
Folded Punctated, Plain	0	0	13	4	17
Folded Punctated, Stamped	0	0	9	3	12
Folded Punctated, Incised	0	1	0	0	1
Folded Notched, Plain	0	1	0	0	1
Folded Notched, Stamped	0	0	1	0	1
Notched Strip	0	0	1	0	1
Flared, Incised	0	0	0	1	1
Totals	7	16	61	89	173

The rim sherds are direct indicators of the vessel shapes. These are reclassified for the mounds and presented in Table 7. Mounds P and U have almost the same ratio of bowls to jars--almost exactly 1 to 1. Mound N, however, is quite different since there are five times as many bowls as jars! It is possible with these relatively low numbers that this difference is due to sampling error, but we do not believe this is the case. Jars are usually believed to be cooking vessels, while bowls are more apt to be used for serving or reheating. This implies that the vessel functions of Mound N, the largest mound at the site, are more associated with food serving than original food preparation. We believe this supports the special social functions of this mound within the overall context of the village--either as the chief's home or a council house.

Table 8 presents information on the widths of the folded rims found in the major excavation units at the site. It is known that folded rims became wider throughout the Lamar period from 1350 to 1650 A.D. (Williams and Shapiro 1990). We find it very interesting that the mean for the three mounds are so remarkably close to one another--within .5 millimeter! In fact the mean of the majority of the sherds from Mound P and U are within .09 millimeter of each other. The folded rim-width data from this site form a tight benchmark for future attempts to refine the ceramic chronology from the Ocmulgee Valley data. In comparison with the Oconee Valley sites, these rim widths would indicate an occupation in the sixteenth century.

Table 9 presents data on the 20 pottery disks recovered from the Bullard Landing site. These items are common occurrences on all Lamar sites, have been studied a number of times, and their function is still uncertain. The best guess, however, is that they are game pieces of some sort. Williams (1975) has studied those from the nearby Stubbs Mound site, an early Lamar occupation on the west side of the Ocmulgee River 1 mile up Tobesofkee Creek. In that publication he compared the 119 disks found at Stubbs with the 355 found at the Lamar site near Macon. The mean diameter for the Stubbs disks was 30.37 millimeters, while that from Lamar was 35.49 millimeters. The mean from the Bullard Landing site was 36.90 (standard deviation = 8.32), much closer to that from the Lamar site. Since the Bullard Landing site is quite late based upon other measures, it appears that this data support the possibility that the disks became somewhat larger throughout the Lamar period.

There is variation in pottery disks between those with smoothed, rounded edges and those with rough, unrounded edges. At both Stubbs and Lamar, the smoothed disks were slightly smaller in diameter, implying that the rough ones were just unfinished ones. At Bullard Landing, however, the smoothed ones are actually larger than the rough ones! The smoothed ones have a mean diameter of 40.05 millimeters (standard deviation = 8.26), while the rough-edged ones have a mean diameter of 33.06 millimeters (standard deviation = 7.00). The relatively low numbers of these items recovered from Bullard Landing thus far, however, make all comparisons with other sites somewhat suspect at this time.

Table 7. Ceramic Vessel Forms Based Upon Rim Sherds

	Mound N	Mound P	Mound U	Totals
Plain Bowl	1	3	2	6
Incised Bowl	9	24	19	52
Punctated & Incised Bowl	0	2	5	7
Total Bowls	10	29	26	65
Pinched Folded Rim Jar	1	12	16	29
Cane Punctated Folded Rim Jar	1	16	10	27
Unmodified Folded Rim Jar	0	0	2	2
Other Jar	0	2	0	2
Total Jars	2	30	28	60
GRAND TOTALS	12	59	54	125

Table 8. Folded Rim Widths, Main Excavation Units

	Number	Mean (mm)	Standard Deviation
Village	1	21.00	-----
Mound N	2	18.50	2.68
Mound P	34	18.91	2.68
Mound U	19	19.00	3.32
Overall	56	18.96	2.84

(RAW DATA: Village Excavation Unit - 21; Mound N- 17, 20; Mound P - 24, 22, 22, 19, 20, 18, 22, 20, 18, 18, 18, 20, 18, 21, 25, 22, 17, 18, 18, 21, 14, 14, 16, 21, 18, 16, 21, 20, 18, 17, 16, 16, 20, 15; Mound U - 17, 20, 21, 18, 19, 20, 17, 18, 19, 21, 20, 20, 25, 20, 12, 17, 12, 25, 20)

Table 9. Ceramic Disks, All Excavations

Provenience	Lot Number	Diameter (mm)	Decoration	Smoothed?
2	12	31	Stamped	Yes
2	16	43	Plain	Yes
3	2	36.5	Plain	Yes
3	3	20	Stamped	No
3	10	60	Plain	Yes
3	14	33.5	Incised	No
3	27	36	Stamped	No
3	35	36	Stamped	No
3	43	29	Stamped	No
4	3	44	Stamped	Yes
4	3	35	Plain	Yes
4	9	38	Plain	Yes
4	15	39	Incised	No
4	19	41	Plain	Yes
4	27	45	Plain	Yes
4	43	37	Stamped	Yes
4	43	30	Plain	Yes
5	15	26	Plain	No
6	15	35	Stamped	No
6	15	43	Plain	No

CHAPTER 10

LITHICS

The flaked stone material from the Bullard Landing site is moderately abundant, but is of limited interpretive potential. This is because of two things. First, the site was occupied for a very long period of time beginning in the Early Archaic period, and two, because, with the exception of the few projectile points recovered, it is virtually impossible to date any of the lithic tools and debris. To complicate matters further, the fill of the Lamar period mounds and house floors include flakes that were already present in the soil, so it is not possible to determine which flakes in the mounds were from the builders and users of the mounds and which were from earlier occupations of the site.

Table 10 lists all the lithic items recovered from the village excavation unit by lot number and exact description. The total number of items recovered was a fairly large 3441. The table divides the artifacts by lithic material type, and, in the case of the Coastal Plain chert, whether the items were thermally altered or not. Thermal altering makes this chert easier to work and is common on this material. Flake tools were remarkably rare in this material, with only three examples being found. Formal tools were limited to projectile point/knives. The vast majority of these consisted of 17 small triangular arrow points associated in Excavation Unit 1 with the Late Woodland Vinings component. Most of these were broken into fragments. Given this rate, there must be literally thousands of these in the soil at the site. This is both surprising and unexpected. It maybe that excavation between the mounds to expose some of the Late Woodland village would be an important goal for the future. There were several Late Archaic projectile points found at lower levels and this occupation also appears to be a moderately rich one.

Table 11 list the debitage from the same unit arranged by excavation level from top to bottom. The first three levels were formed from the recent red clay alluvium and contained very few lithic artifacts. From there down lithic debris was very common. Level 4 and Level 7 in particular contained a great deal of debitage, but all the others contained large quantities.

The proportion of primary (flakes with cortex over one entire surface), secondary (flakes with smaller amounts of cortex), and tertiary (flakes with no cortex) flakes provide important clues to the kinds of lithic reduction activities being pursued at a site. Primary flakes account for 1.1 percent of the collection from the village, Secondary flakes account for 8.7 percent, and tertiary flakes account for 83.1 percent. Shatter accounts for 6.8 percent and potlids (fragments burned in a fire) accounted for only 0.3 percent. This pattern implies that relatively little initial stage lithic reduction associated with quarrying activities was being undertaken at Bullard Landing. This is even more apparent when it is seen that 24 of 38 primary flakes were from a single layer, Level 7. The primary lithic behavior at the site apparently was late stage reduction of tools and maintenance activities.

Table 10. Village Excavation Unit, Lithic Material

Note: T.A=Thermally Altered; PPK=Projectile Point / Knife; R&V=Ridge & Valley Province

LOT		CP T.A.	CP NO T.A.	RV	Quartz	Other	Totals
1	Tertiary Debitage	0	4	0	0	0	4
2	Tertiary Debitage	1	0	0	0	0	1
3	Secondary Debitage	0	2	0	0	0	2
3	Tertiary Debitage	5	5	1	0	0	11
3	Shatter	3	5	0	0	0	8
4	Primary Debitage	4	0	0	0	0	4
4	Secondary Debitage	0	71	0	0	0	71
4	Tertiary Debitage	266	482	0	0	0	748
4	Shatter	42	48	0	0	0	90
4	Potlids	2	0	0	0	0	2
4	PPK Whole	1	1	0	0	0	2
4	PPK Tip	1	6	0	1	0	8
4	PPK Base	1	6	0	0	0	7
5	Secondary Debitage	5	9	0	0	0	14
5	Tertiary Debitage	124	222	0	0	0	346
5	Shatter	14	25	0	0	0	39
5	PPK Whole	0	3	0	0	0	3
6	Primary Debitage	4	2	0	0	0	6
6	Secondary Debitage	47	25	0	0	0	72
6	Tertiary Debitage	116	256	0	0	0	372
6	Shatter	4	6	0	0	0	10
6	Potlids	3	0	0	0	0	3
6	PPK Whole	5	0	0	0	0	5
6	Tert. Biface Flake Tool	1	0	0	0	0	1
6	Core	0	1	0	0	0	1
7	Primary Debitage	4	20	0	0	0	24
7	Secondary Debitage	12	53	0	0	0	65
7	Tertiary Debitage	155	456	0	0	0	611

LOT		CP T.A.	CP NO T.A.	RV			Totals
					Quartz	Other	
7	Shatter	21	0	0	0	0	21
7	Potlids	5	0	0	0	0	5
7	Tert. Uniface Flake Tool	1	0	0	0	0	1
7	PPK Whole	2	4	0	0	0	6
7	Core	0	2	0	0	0	2
8	Primary Debitage	0	3	0	0	0	3
8	Secondary Debitage	0	12	0	0	0	12
8	Tertiary Debitage	107	293	0	0	0	400
8	Shatter	0	32	0	0	4	36
9	Primary Debitage	0	1	0	0	0	1
9	Secondary Debitage	11	46	0	0	0	57
9	Tertiary Debitage	79	230	0	1	0	310
9	Shatter	19	7	0	0	0	26
10	Secondary Debitage	0	3	0	0	0	3
10	Tertiary Debitage	4	0	0	0	1	5
10	Shatter	3	0	0	0	0	3
10	Potlids	1	0	0	0	0	1
11	Secondary Debitage	1	1	0	0	0	2
11	Tertiary Debitage	7	6	0	0	1	14
11	*Shatter	0	2	0	0	0	2
11	Tert. Biface Flake Tool	0	1	0	0	0	1
	TOTALS	1081	2351	1	2	6	3441

Table 11. Village Excavation Unit, Debitage by Levels

Level	Primary	Secondary	Tertiary	Shatter	Potlids	Totals
1	0	0	4	0	0	4
2	0	0	1	0	0	1
3	0	2	11	8	0	21
4	4	71	748	90	2	915
5	0	14	346	39	0	399
6	6	72	372	10	3	463
7	24	65	611	21	5	726
8	3	12	400	36	0	451
9	1	57	310	26	0	394
Totals	38	293	2803	230	10	3374

Table 12 on the following page shows the lithic material from the Mound N excavations. As stated earlier, it is not possible to tell which, if any, of these items were used by the builders of the mound, and which were accidental inclusions in the fill. The overall proportions are similar to that from the Village Excavation Unit, so we believe that most of the mound N material is simply accidental fill.

Table 13 shows the lithic material from Mound U. The amount of lithic material from this mound is quite low, simply because we screened very little material from this bulldozed mound. Most of the material recovered probably is not associated with the builders of the mound.

Table 14 documents the lithic material from Mound P. As with the other mounds, there is no way to know if the material is associated with the builders of the mound or with earlier peoples. All of the lithic material from this mound was debitage of one sort or another.

Table 12. Mound N, Lithic Material

LOT		Coastal Plain Chert			Other	Totals
		T.A.	NO T.A.	Quartz		
2	Tertiary Debitage	2	3	0	0	5
2	Shatter	1	0	0	0	1
2	Biface	0	1	0	0	1
3	Secondary Debitage	1	0	0	0	1
3	Tertiary Debitage	0	1	0	0	1
3	Sec. Biface Flake Tool	1	1	0	0	2
4	Primary Debitage	0	1	0	0	1
4	Secondary Debitage	0	2	0	0	2
4	Tertiary Debitage	2	0	0	0	2
5	Primary Debitage	0	3	0	0	3
5	Secondary Debitage	34	27	0	0	61
5	Tertiary Debitage	107	139	0	0	246
5	Shatter	23	26	0	0	49
6	Secondary Debitage	4	2	0	0	6
6	Tertiary Debitage	8	13	0	1	22
6	Shatter	1	3	0	0	4
7	PPK	1	0	0	0	1
7	Scraper	1	0	0	0	1
7	Sec. Uniface Flake Tool	1	0	0	0	1
8	PPK	1	0	0	0	1
9	Secondary Debitage	1	5	0	0	6
9	Tertiary Debitage	11	20	0	0	31
9	Shatter	17	6	0	0	23
9	Core	1	0	0	0	1
10	Primary Debitage	1	0	0	0	1
10	Secondary Debitage	2	0	0	0	2
10	Tertiary debitage	3	4	0	0	7
11	Secondary Debitage	10	3	0	0	13
11	Tertiary Debitage	20	21	0	1	42

LOT		Coastal Plain Chert		Quartz	Other	Totals
		T.A.	NO T.A.			
11	Shatter	2	2	0	0	4
11	Ter. Uniface Flake Tool	0	2	0	0	2
12	Secondary Debitage	1	4	0	0	5
12	Tertiary Debitage	1	2	0	0	3
14	Secondary Debitage	5	0	0	0	5
14	Tertiary Debitage	3	13	0	0	16
14	Shatter	1	0	0	0	1
16	Primary Debitage	0	3	0	0	3
16	Secondary Debitage	12	38	0	0	50
16	Tertiary debitage	46	141	0	0	187
16	Shatter	20	30	0	0	50
16	Ter. Biface Flake Tool	1	0	0	0	1
16	Core	0	0	1	0	1
16	Potlids	5	1	0	0	6
	TOTALS	351	517	1	2	871

Table 13. Mound U, Lithic Material

LOT		Coastal Plain Chert		Quartz	Totals
		T.A.	NO T.A.		
3	Tertiary Debitage	2	0	0	2
5	PPK	0	1	0	1
6	Secondary debitage	0	1	0	1
7	Tertiary debitage	6	1	0	7
8	Secondary Debitage	3	3	0	6
8	Tertiary Debitage	15	13	0	28
8	Shatter	0	3	0	3
9	Secondary Debitage	0	2	2	4
9	Tertiary Debitage	3	3	4	10
9	Shatter	1	0	0	1
9	Potlids	1	0	0	1
9	Ter. Bif. Flake Tool	1	0	0	1
10	Tertiary Debitage	1	0	0	1
12	Tertiary Debitage	1	0	0	1
15	Secondary Debitage	3	2	0	5
15	Tertiary Debitage	2	4	0	6
15	Shatter	2	0	0	2
15	Potlids	1	0	0	1
15	Scraper	0	1	0	1
15	Ter. Uni. Flake Tool	0	1	0	1
22	Tertiary Debitage	1	1	0	2
23	Secondary Debitage	0	1	0	1
24	Secondary Debitage	0	1	0	1
24	Tertiary Debitage	3	1	0	4
25	Tertiary Debitage	0	1	0	1
26	Secondary Debitage	1	0	0	1
27	Tertiary Debitage	1	0	0	1
27	Shatter	1	0	0	1
27	Ter. Uni. Flake Tool	0	1	0	1

LOT		Coastal Plain Chert		Quartz	Totals
		T.A.	NO T.A.		
27	Ter. Bif. Flake Tool	1	0	0	1
29	Tertiary Debitage	1	0	0	1
30	Tertiary Debitage	1	0	0	1
31	Shatter	0	0	1	1
32	Secondary debitage	0	1	0	1
32	Tertiary debitage	2	1	0	3
32	Biface	0	1	0	1
33	Secondary Debitage	1	1	0	2
33	Tertiary Debitage	1	1	0	2
33	Ter. Uni. Flake Tool	0	1	0	1
34	Tertiary Debitage	1	0	0	1
36	Secondary Debitage	2	0	0	2
36	Tertiary Debitage	0	1	0	1
	TOTALS	46	40	6	92

Table 14. Mound P, Lithic Material

LOT		Coastal Plain Chert		R&V Chert	Totals
		T.A.	NO T.A.		
1	Primary Debitage	2	2	0	4
1	Secondary Debitage	21	1	0	22
1	Tertiary Debitage	39	59	0	98
1	Shatter	7	11	0	18
1	Potlids	6	0	0	6
2	Secondary Debitage	2	3	0	5
2	Tertiary Debitage	7	19	0	26
2	Shatter	6	9	1	16
2	Potlids	2	0	0	2
2	Core	0	1	0	1
3	Primary Debitage	2	0	0	2
3	Secondary Debitage	0	9	0	9
3	Tertiary Debitage	9	3	0	12
3	Shatter	1	0	0	1
4	Secondary Debitage	9	0	0	9
4	Tertiary Debitage	12	8	1	21
4	Shatter	0	1	0	1
5	Primary Debitage	1	0	0	1
5	Secondary Debitage	4	3	0	7
5	Tertiary Debitage	8	4	0	12
5	Shatter	0	1	0	1
5	Potlids	0	3	0	3
6	Primary Debitage	0	1	0	1
6	Secondary Debitage	3	1	0	4
6	Tertiary Debitage	6	10	0	16
6	Shatter	0	2	0	2
	TOTALS	147	151	2	300

The final lithic table, Table 15, presents a summary for the lithics by material from all of the main excavation units on the site. The Coastal Plain chert, probably from the uplands east of the site, accounts for 99.6 percent of the lithic material from the site. Of this material, 34.7 percent was thermally altered or heat treated and 65.3 percent was not so treated. There were three flakes of northwestern Georgia Ridge and Valley chert of the grey to black color. These obviously were brought here by someone, or, more likely, were created when someone resharpened a tool that had been obtained from that region. There were only 9 quartz flakes at the site. While these presumably came from the Piedmont, there are small amounts of quartz in area of the upper Coastal Plain. In either event the proportion of quartz seems low. Whether this is due to resource or social reasons is unknown.

Table 15. Lithic Material Summary for Site.

	Coastal Plain Chert		Ridge / Valley Chert	Quartz	Metavolcanic	Totals
	Therm. Alt.	No T.A.				
Village	1081	2351	1	2	6	3441
Mound N	351	517	0	1	2	871
Mound P	147	151	2	0	0	300
Mound U	46	40	0	6	0	92
Totals	1625	3059	3	9	8	4704

CHAPTER 11

EARTH LODGES

Introduction

In this section of the report we wish to summarize briefly the data, direct and circumstantial, bearing on the question of the existence of earth lodges in the prehistoric Southeast. The traditional position of archaeologists has been that such structures were a part of the architectural assemblage of at least some Mississippian societies. In recent years, however, some researchers have begun to question this conclusion. The most detailed critique of this traditional view is by Lewis Larson (Larson 1986). In a recent paper, he demonstrates that most earlier researchers took an uncritical approach to labeling certain house remains as earth lodges. His objections to past earthlodge interpretations revolve about three issues: first, the general lack of references to such structures in the historic period; second, alternate ways to interpret existing archaeological structure data; and third, limitations imposed by the climate of the southeastern United States. We should add here that he explicitly states that he does "...not deny the possibility of earth lodges in the Southeast..." but points out that "...we must be very cautious in developing interpretations that conclude the existence of such structures."

In the spirit of academic interchange we wish to take the position here that earth-covered structures *were* an integral part of South Appalachian Mississippian life. Whether we are adequately cautious remains, perhaps, to be seen. We will begin by admitting that it *is* very difficult to determine from archaeological remains if a structure had been covered with an earth layer. It is not impossible, however. In our conversations Larson has told one of us (Williams) that another reason he found belief in prehistoric southeastern earth lodges difficult was because he saw no reasonable projected *need* for such structures by Mississippian peoples. We have thought seriously about Larson's comment and hope to show that Mississippian people *did* have a very real need for such structures.

Ethnohistorical Data

Before discussing that however, a brief review of the ethnohistoric information is in order. It is certain that earth lodges were present in many areas of the United States during nineteenth century. All of us are familiar with the earth lodges of the Mandan and Arikara recorded by Catlin, Bodmer, and others. The form and history of these have often been described and comparisons have been made to other structures in the eastern United States by Ralph Linton in his classic 1924 paper (Linton 1924). He points out that such structures in the Plains were primarily summer houses, not winter ones as is commonly thought. Linton further states that "it is hard to find any sound economic reason for the expenditure of so much labor on a summer house" (Linton 1924:251). By comparison of structure form and association with agricultural societies, he concluded that earth lodges probably originated in the lower Mississippi Valley.

Simply by way of further analogy we would point out that earth lodges were also common on the Pacific Coast from central California northward during the nineteenth century (Heizer 1978). Many of these earth lodges survived into the early twentieth century and have been

photographed. Almost all these were semi-subterranean structures, with substantial internal support posts. Most were ceremonial structures, but some were standard habitations.

In the Southeast, Larson is correct that there is little evidence for the use for such earth lodges in the standard seventeenth through nineteenth century ethnohistoric accounts. Bartram does mention that the tiny winter hot house of the eighteenth-century Cherokee was "a little conical house, covered with dirt..." (Van Doren 1955:296-297), but there are few other references. Earlier, however, during the period of first Spanish contact, there *are* several intriguing references. When the De Soto expedition left Apalachee and came into southwestern Georgia during the spring of 1540, Biedma tells us that "...there was a change in the habitations, which were now in the earth, like caves" (Smith 1968:236). Most previous researchers have assumed that Biedma was referring to wattle and daub structures. It seems just as plausible to us that he was referring to semi-subterranean earth lodges. In the accounts of the de Luna expedition of 1560, Domingo de la Anunciacion reports that the houses of the Indians of Coosa were "all covered with earth, and they sow whatever they like over them" (Priestley 1928 (1):239). This startling and important reference strongly supports the existence of mid-sixteenth-century earth lodges. An important third reference from this period not only further supports the existence of earth-covered buildings, but provides a valuable clue about their practical function. In 1567 Martinez wrote, concerning a battle between the Spanish under Sergeant Moyano and the Chisca Indians, that the Spanish "...drove the Indians into underground huts from which they made sorties to skirmishes with the Spanish" (Ketcham 1954:76). Martinez then adds that "...after killing a great number of them, the latter won entrance to the huts and set fire to them..." One obvious implication of this intriguing account is that the "underground huts" was apparently fire proof from the outside, and could only be burned from the inside.

Most previous discussions of the virtues of earth-covered buildings have begun by discussing the value of earth as a thermal insulating material of some unknown R value. An earth-covered house, as we know, would be cooler in summer and warmer in winter. Further, because of the increased insulation, such houses require less firewood for fuel during the winter. While all these virtues are true, we believe, like Larson, that these virtues alone provided insufficient reasons for southeastern Indians to have adopted such structures. We do believe, however, that the resistance of structures to fires on their outside *was* an adequate and important reason for them to adopt a new architectural model. To understand this better, a discussion of the nature and goals of Mississippian warfare is necessary.

The attack of palisaded towns by fire arrows, while not often mentioned in eighteenth century accounts, was certainly common during the sixteenth century and earlier. There is no better account of this than the famous engraving by DeBry of one of Le Moyne's Florida paintings. Le Moyne states that "...the points of their arrows are already trimmed with dry moss, which they set alight and then shoot at the roofs of the houses..." (Alexander 1976:48). He further adds that "The loss is not very great, though, because the construction of new houses merely requires some extra work." While this might be true for the houses of the common people, we doubt seriously if this cavalier attitude would be taken about the destruction of a chief's house or temple located within a large chiefdom-based Mississippian town or compound.

To understand this statement, the special nature of the chief and his house or temple must be remembered. As Hudson (1976), Knight (1981), DePratter (1983), and others have amply documented, the chief, his house or temple, and the mound on which they were located were sacred. As Hudson has stated (personal communication 1987), this location was quite literally the center of the universe for Mississippian chiefdoms. On the other hand, the ultimate goal of any attacking enemy was to profane and to destroy this sacred center. As mounds were built larger and higher through time, the sacred center, even if it were surrounded by a palisade for protection, would increasingly become an easy target for fire-arrow branding enemy archers. The war goals of an enemy could be completely accomplished by one well-placed fire arrow in the thatched roof of the chief's house. We argue that under such conditions, the need to protect the chief's house and the sacred temple from such attacks would have produced tremendous pressure for a technological advance or, in the parlance of the day, a strategic defense initiative to offset the problem. The defenders could have made the defensive perimeter much larger and significantly increased the diameter of their palisade. The latter would have had tremendous costs, however, and would have still not provided total security for their temple.

We believe that some bright individual realized that the easiest way to offset this problem was to place a thin layer of earth over the roof of the structure. It would not have had to be thick to form a fire-proof surface. Given that warfare was an accepted common part of Mississippian life, it would be astounding if earth coverings were never employed in such circumstances. The relationship between war and fire is clear for the Southeast. As one example, the Choctaw word for war, *itoti*, is derived from one of their words for fire, and the compound form *itota"ya* means "to march or travel, as an army; to burn; to ravage by fire" (Byington 1916:216). Hudson tells us that the Cherokee took with them to war "...some live coals from a war fire built especially for the occasion and carried in a rectangular clay container with a lid..." (Hudson 1976:244). We can think of no better way to ignite fire arrows in the field than from such a portable fire pot. The symbolism of the destruction of one sacred fire presumably held within a temple on a mound, by enemy sacred fire sent via arrow would have been lost on no one.

Incidentally, although the other houses within a chiefly compound would not require the protective earth covering on grounds of, if you will, sacro-security, the owners might well have copied the innovation on more practical grounds. Further, the origins of the common pattern of placing houses near the perimeter of a palisaded village, while leaving an open plaza in its center, may have less to do with a socio-religious need for such a plaza and more to do with simply moving the houses out of the area most apt to be subject to an artillery barrage of fire arrows.

Archaeological Data

If all this seems to provide a logical if circumstantial reason for the adoption of earth covered houses, then why is there controversy about the identification of such structures in the archaeological record? Most of the problem revolves about whether certain archaeological features, usually associated with sunken-floor houses, are the remains of what are called banked-earth walls or the remains of a collapsed earthlodge. These features are frequently seen in the profiles of mounds in the South Appalachian Mississippian area. In Georgia, for example, such sites include Scull Shoals Mound B, the Beaverdam Creek mound (Rudolph and Hally 1985),

Shinholser Mound B (Williams 1988), and Wilbanks (Sears 1958) among many others. Jim Rudolph has argued that these mounds usually have these structures in their early stages, with later stages more apt to be constructed as standard flat-topped platforms (Rudolph 1984). This is not strictly true, however. Scull Shoals Mound B begins with a platform mound, changes to an earthlodge or banked earth structure, and then changes again back to a standard flat-topped platform construction (Williams 1988).

We argue that these structures were fully earth covered, rather than simply structures with soil banked against the outside walls. We have found no obvious references to earth-banked structures at any period in the historic Southeast, and can think of few reasons for constructing them in the first place. Larson argues that such an earth bank would provide a seal between the sunken house floor and the outside, but this leaves unexplained why the floor was dug out in the first place. We believe the floors were excavated to obtain the earth used to cover the roof. The bulk of the earth would be placed on the outside edge of the structure and little would be needed closer to the center. The earth covering thus would taper to the center smoke hole. In order to build such a structure, the outside walls would presumably have had to have been quite short. The collapse of such a structure would leave a feature with a depressed center and a raised bank on the perimeter, since most of the roof earth was near the outside of the structure. If a new structure was built upon the remains of such a collapsed structure, some earth fill would likely have had to be brought in to level the center of the floor. Further, if the natural soil at the site was of poor quality for roofing, proper soil would have to be brought in for roof coverings in the first place. In this case, the structure need not have been semi-subterranean at all, and the floor level could be at normal ground level.

Any earth-covered structure would have a critical roof angle. If it was too steep, the earth would slide off the roof. If it were too shallow, the roof would surely leak during heavy rains. The earth fill probably would have to be formed of soil with a moderate amount of clay in order to stay in place and not leak. Larson argues that it rains too much in the Southeast for earth coverings to stay in place (Larson 1986). The earth has not slipped off the reconstructed Macon earthlodge in 50 years, however. Further, the fact that many small semi-subterranean earth-covered structures were popularly used for storm cellars and coolers during the nineteenth and early twentieth centuries in this area makes us strongly doubt that this was much of a problem.

While an earth covering would have made an earthlodge fire proof on the outside, it would not have done so to the inside. It is common on excavated semi-subterranean structures to find piles of clay near the center of the collapsed houses. This clay was presumably placed inside the roof near the smoke hole to help prevent interior roof fires. Larson has informed one of us (Williams) of his discovery at Etowah of a bottomless Lamar Complicated Stamped jar, apparently used as a chimney on one house (Personal Communication). Such a vessel would help keep sparks and heat away from the roof on the inside and thus act as a heat insulator.

Many burned Mississippian period semi-subterranean houses have been discovered in the Southeast during the last 60 years. One of the more interesting things about such structures is that most of them have well-preserved charred beams and posts lying on their floors. If such structures had thatched roofs, we believe that most of them would have been completely reduced to ashes. We argue that the incomplete combustion so commonly represented by charred beams

and posts is most apt to occur in the reducing atmosphere of a fire burning under an earth mantle, that is, a collapsed earth covering. Indeed, this is the same technique used during the nineteenth century for producing industrial charcoal in so-called charcoal kilns.

The vast majority of excavated semi-subterranean houses are from sites that have been plowed for well over 100 years. Any above-ground evidence of a collapsed roof would have been long ago plowed away on such sites, leaving behind only the below-ground portions. This is where the unplowed Bullard Landing site comes into the story. It, of course, has 24 low mounds, which range in height from 1 to 4 feet. Twenty-one of the mounds have raised rims and depressed centers. If the site had been plowed for 100 years it is certain that little or nothing would remain above ground of these structures. Excavations to date on three of the mounds strongly support the interpretation of them as multi-stage collapsed earth lodges. This is particularly clear in the profiles of the final stage of two of the mounds.

We believe that sites such as Bullard Landing were common in the South Appalachian area before the advent of nineteenth century farming and plowing. For example, while traveling through an area near the lower Flint River in Georgia in 1818, Captain Hugh Young wrote that "On the south side are the remains of an ancient and very large town, [*with*] large trees growing on innumerable little mounds disposed with some degree of regularity, on which houses were probably built" (Boyd 1958:292). It is worth considering that most excavated semi-subterranean house remains from sites such as the King site and Little Egypt for example, once contained above ground evidence of earth covers, which have long since been plowed away.

Implications and Conclusions

While it may be interesting on the descriptive level that earth lodges might have been common during the Mississippian period, there are important social implications for such a conclusion. If we are right that earth-covered structures—earth lodges--were an adaptation to Mississippian warfare, then it follows that the presence of such structures is a relatively good indicator of the existence of social unrest at a given place and time. Conversely, the absence of such structures might indicate relative peace in an area for a period of time. Further, it seems logical that such structures are more apt to be located near the boundaries of provinces than at their centers.

As discussed before, initial inspection of the mound profile data in the South Appalachian region by Rudolph (Rudolph 1984) and others has revealed that some mounds had earth lodges early in their sequence, some late in their sequence, and some in the middle of their sequence. Hally and others have put together a growing list of the periods of settlement and abandonment of many mound centers in this region. Coupling this data with the data on earthlodge construction periods within the mounds of these sites may permit us to reconstruct which periods in the history of specific chiefdoms were ones of relative tranquility and which periods were ones of relative anxiety. In this way we can better understand Mississippian warfare on the general level by reference to the war and peace cycles of specific polities.

On the historical level, it is noteworthy that, following the European-induced demise of the Mississippian chiefdoms in the mid to late sixteenth century, such earth-covered structures presumably were less necessary, and their construction was curtailed. This probably explains

why such structures are missing from the ethnohistorical documents recorded in the eighteenth and nineteenth centuries.

On a philosophical note, we believe that more may be learned by assuming, at least for the moment, that such structures did exist, than by assuming that they did not. Additionally, we would further suggest that it is more difficult to demonstrate archaeologically that semi-subterranean structures were *not* earth covered than that they were.

CHAPTER 12 SUMMARY AND THE FUTURE

The Bullard Landing site is unique in several respects. First, and perhaps most important, it is unplowed--It may be the only such site left in Georgia. This leads to a large number of special opportunities for interpretation of this De Soto period archaeological site. The twenty four mounds here are mostly collapsed earth-covered rectangular structures. They may all be of this form, but this is not certain. Four of the mounds don't seem to have the raised rims, and may be of different forms, perhaps burial mounds.

The fact that the site has not been plowed implies that most of the artifacts, particularly the sherds, are lying right where they were left by the Indians. These can be used to examine inter-house mound differences that may be indicative of social or family differences and connections. For example, did the women in each house make all the pottery associated with it or were vessels swapped and shared by people from separate houses? Thus far we have found no common trash dump for the site and assume that all the trash from each household was deposited at on beside each house.

Was the Bullard Landing site a chiefly compound? That is, were the inhabitants all related to a chief who lived there, with the unrelated common people living in farms for miles around? We see this as a distinct possibility considering the relatively small size of the site (ca. 2.5 hectares). Is this related to the presence of the plaza group of mounds in the southern part of the site? Was the area to the north a later expansion of the site? We think the site was occupied for only a short period of time--perhaps about 30 years maximum. This is supported by the small size of the mounds and the fact that most have only two stages. It also appears possible that the site was abandoned in a very short period of time--pots were left in place on the floor of at least one mound, Mound P.

What does the apparent pairing of mounds in the northern part of the site mean? Does it imply some sort of social pairing off of two related families based upon moiety division perhaps? Or does it mean that each family used two adjacent structures for their living space?

There does not appear to have been a palisade around the site. This seems unusual for such a site, but it may be the site was on an island in the Ocmulgee floodplain and did not require additional protection. Given that the site appears to have been abandoned virtually suddenly, however, they may have been wrong. There may be no way to support this speculation, unfortunately.

The preservation of animal bone (and presumably human bone) is virtually nil at the site, unfortunately. Thus studies of diet at the site will not be feasible in the future. This is probably due to the frequent flooding of the site, particularly in the last 150 years.

With all this in mind, what should be the form should future work at the site? Clearly one fruitful area of inquiry would be to examine the edges of each mound to see if garbage dumps comparable to that on the northern edge of Mound P can be located. This would permit a variety of comparisons with important social implications, and would be relatively easy to accomplish. More work on individual mound needs to be accomplished to understand their nature better.

Mound P probably should be completely excavated. Mound R, which sits off by itself, should be examined in detail to see if we may determine its unique character.

The large low mound on the northern edge of the site, Mound A, should be tested or perhaps completely excavated. Is it merely a single stage mound similar in form to the others? The dome-shaped Mound J should be examined to see if it a house mound, or if it is a burial mound or other special use mound. It may be that it is the same as the rest, but its shape implies otherwise.

More testing should be conducted between the mounds to see if sections of walls can be defined within the village. These screen walls must have been present, but might be difficult to locate. Careful excavations between the mounds should be able to define them however. Additionally, are there any structures between the mounds? We doubt this, but admit that it is not proven.

Finally, surveys need to be undertaken in the surrounding miles to locate the small farmsteads associated with this magnificent Lamar period site. Only in this way can we finally begin to reconstruct the Indian society that was centered at Bullard Landing. All of this work must await the future.

REFERENCES CITED

Alexander, Michael

1976 *Discovering the New World*. Harper and Row, Publishers, New York.

Boyd, Mark F.

1958 Historic Sites in and Adjacent to the Jim Woodruff Reservoir, Florida-Georgia. *Smithsonian Institution Bureau of American Ethnology Bulletin* 169:195-314.

Byington, Cyrus

1916 A Dictionary of the Choctaw Language. *Smithsonian Institution Bureau of American Ethnology Bulletin* 46.

Elliott, Daniel, and Jack T. Wynn

1988 The Vining Revival. Paper Presented at the Annual Meeting of the Southeastern Archaeological Conference, New Orleans, Louisiana.

DePratter, Chester B.

1983 *Late Prehistoric and Early Historic Chiefdoms in the Southeastern United States*. Ph.D. Dissertation, Department of Anthropology, University of Georgia, Athens. University Microfilms, Ann Arbor, Michigan.

Hally, David J.

1975 Introduction to the Symposium: The King Site and Its Investigation. *Southeastern Archaeological Conference Bulletin* 18:48-54.

Heizer, Robert F.

1978 California. *Handbook of North American Indians, Volume 8*. Smithsonian Institution, Washington, D. C.

Hudson, Charles M.

1976 *The Southeastern Indians*. University of Tennessee Press, Knoxville.

Hudson, Charles M., Marvin T. Smith, and Chester B. DePratter

1984 The Route of the De Soto Expedition from Apalachee to Chiaha. *Southeastern Archaeology* 3:65-77.

Ketcham, Herbert E.

1954 Three Sixteenth Century Spanish Chronicles Relating to Georgia. *Georgia Historical Quarterly* 38(1):66-82.

Knight, Vernon J., Jr.

1981 *Mississippian Ritual*. Ph.D. Dissertation, Department of Anthropology, University of Florida, Gainesville. University Microfilm, Ann Arbor, Michigan.

Larson, Lewis

1986 The Case for Earthlodges in the Southeast. Paper Presented at the 50th Anniversary Celebration of Ocmulgee National Monument, Macon, Georgia.

Lewis, Thomas N., and Madeline Kneberg

1946 *Hiwassee Island: An Archaeological Account of Four Tennessee Peoples*. University of Tennessee Press, Knoxville.

Linton, Ralph

1924 The Origins of the Plains Earth Lodge. *American Anthropologist* 26(2):247-257.

Polhemus, Richard

1985 *The Toqua Site, 40MR6: A Late Mississippian, Dallas Phase Town*. Tennessee Valley Authority, Knoxville.

Priestley, Herbert Ingram

1928 *The Luna Papers*. The Florida State Historical Society, Deland, Florida.

Ranjel, Rodrigo

1904 A Narrative of De Soto's Expedition Based on the Diary of Rodrigo Ranjel. In *Narratives of the Career of Hernando de Soto*, translated by Buckingham Smith, edited by E.G. Bourne. A.S. Barnes and Company, New York.

Rudolph, James L.

1984 Earthlodges and Platform Mounds: Changing Public Architecture in the Southeastern U. S. *Southeastern Archaeology* 3(1):33-45.

Rudolph, James L., and David J. Hally

1985 *Archaeological Investigations at the Beaverdam Creek Site (9EB85), Elbert County, Georgia*. Archaeological Services, National Park Service, Atlanta, Georgia.

Sears, William H.

1958 The Wilbanks Site (9CK-5), Georgia. *Smithsonian Institution Bureau of American Ethnology Bulletin* 169:129-194.

Smith, Buckingham

1968 *Narratives of De Soto in the Conquest of Florida*. Palmetto Books, Gainesville, Florida.

Smith, Hale G.

1973 *Analysis of the Lamar Site Materials at the Southeastern Archeological Center, Tallahassee*. Southeastern Archeological Center, Tallahassee, Florida.

Smith, Marvin T.

1981 Archaeological Investigations at the Dyar Site, 9GE5. *Wallace Reservoir Project Contribution 11*. University of Georgia, Department of Anthropology, Athens.

Swanton, John R.

1939 *Final Report of the United States De Soto Expedition Commission*. U.S. House of Representatives Document 71, 76th Congress, 1st Session, Washington, D.C.

Trimble, Stanley W.

1974 *Man-Induced Soil Erosion on the Southern Piedmont, 1700-1970*. Soil Conservation Society of America.

Tripp, Mary Ellen

1983 *Longleaf Pine Lumber Manufacturing in the Altamaha River Basin, 1865-1918*. Ph.D. Dissertation, Department of History, Florida State University. University Microfilms, Ann Arbor Michigan.

Williams, Mark

1975 *Stubbs Mounds in Central Georgia Prehistory*. Master's Thesis. Department of Anthropology, Florida State University, Tallahassee.

1983 *The Joe Bell Site: Seventeenth Century Lifeways on the Oconee River*. Ph.D. Dissertation, Department of Anthropology, University of Georgia. University Microfilms, Ann Arbor, Michigan.

1988 *Scull Shoals Revisited: 1985 Archaeological Excavations at 9GE4*. U.S. Forest Service *Cultural Resources Report 1*.

1990a *Archaeological Excavations at Shoulderbone Mounds and Village (9HK1)*. LAMAR Institute, Watkinsville, Georgia.

1990b *Archaeological Excavations at Shinholser (9BL1): 1985 & 1987*. LAMAR Institute, Watkinsville, Georgia.

Williams, Mark, and Gary Shapiro

1990 *Lamar Archaeology: Mississippian Chiefdoms in the Deep South*. University of Alabama Press, Tuscaloosa.

Williams, Mark, Don Evans, and Bruce Dod

1988 The Bullard Site: Twenty Four Mounds in the Georgia Swamp. Paper Presented at the Annual Meeting of the Southeastern Archaeological Conference, New Orleans, Louisiana.

Williams, Marshall, and Liz Branch

1978 *Tugalo*. *Early Georgia* 6:32-37.

Worth, John E.

1988 *Mississippian Occupation on the Middle Flint River*. Master's Thesis, Department of Anthropology, University of Georgia, Athens.

Van Doren, Mark

1955 *Travels of William Bartram*. Dover Books, New York.

APPENDIX ARTIFACT CATALOG

PROV	LOT	DESCRIPTION	DATE
1	1	Excavation Unit 1, 0-10 Centimeters	9/22/88
1	2	Excavation Unit 1, 10-20 Centimeters	9/22/88
1	3	Excavation Unit 1, 20-30 Centimeters	9/23/88
1	4	Excavation Unit 1, 30-40 Centimeters	9/28/88
1	5	Excavation Unit 1, 40-50 Centimeters	9/28/88
1	6	Excavation Unit 1, 50-60 Centimeters	9/28/88
1	7	Excavation Unit 1, 60-70 Centimeters	9/29/88
1	8	Excavation Unit 1, 70-80 Centimeters	10/26/88
1	9	Excavation Unit 1, 80-90 Centimeters	10/27/88
1	10	Excavation Unit 1, Profile Cleanup at 60 Centimeters	9/28/88
1	11	Excavation Unit 1, Profile Cleanup at 70 Centimeters	9/29/88
2	1	Mound N, Cleanup of Looter's Trench	9/29/88
2	2	Mound N Trench, 0-10 Centimeters	10/05/88
2	3	Mound N Trench, Outer End	10/05/88
2	4	Mound N Trench, Raised Rim	10/05/88
2	5	Mound N Trench, Premound Humus	10/06/88
2	6	Mound N Trench, General to 50 Centimeters	10/06/88
2	7	Mound N Trench, Near Base of Raised Rim	10/06/88
2	8	Mound N Trench, Under Raised Rim, Outer Part	10/06/88
2	9	Mound N Trench, Under Raised Rim, Outer Part	10/12/88
2	10	Mound N Trench, Troweling House Floor	10/12/88
2	11	Mound N Trench, General Excavation	10/12/88
2	12	Mound N Trench, House Floor	10/13/88
2	13	Mound N Trench, House Floor Sherd Cluster	10/13/88
2	14	Mound N Trench, House Floor Cleanup	10/13/88
2	15	Mound N Trench, Blue Clay Samples	10/13/88
2	16	Mound N Trench, Bottom	10/26/88
2	17	Mound N Trench, First Level Profile	11/10/88
2	18	Mound N Trench, Outer Raised Rim Profile	11/10/88
3	1	Mound P Trench, 0-30 Centimeters	10/06/88
3	2	Mound P Trench, 30-40 Centimeters	10/06/88
3	3	Mound P Trench, Northern Extension of Trench	10/12/88
3	4	Mound P Trench, Pottery Cluster	10/13/88
3	5	Mound P Trench, Deepening Northern Extension	10/13/88
3	6	Mound P Trench, General Cleanup	11/03/88
3	7	Mound P Trench, Midden Under Raised Rim	11/09/88
3	8	Mound P Trench, Profile Cleanup	11/09/88
3	9	Mound P Trench, Midden Under Raised Rim	11/10/88
3	11	Mound P, Near Raised Rim Edge	10/17/90
3	12	Mound P, Pottery Cluster A, Top House Floor	10/18/90
3	13	Mound P, Pottery Cluster A, Top House Floor	10/18/90
3	14	Mound P, Black Midden, Southern End, 1988 Test Trench	10/18/90
3	15	Mound P, Pottery Cluster B	10/18/90

PROV	LOT	DESCRIPTION	DATE
3	16	Mound P, Hearth Area, Top House	10/18/90
3	17	Mound P, General Cleanup	10/18/90
3	18	Mound P, Cleanup of Outer End of Trench	10/24/90
3	19	Mound P, Pottery Cluster B	10/24/90
3	20	Mound P, Screening Deeper Northern End of 1988 Test Trench	10/25/90
3	21	Mound P, 1988 Trench, Junction of Tan Sand and Black Layer	10/25/90
3	22	Mound P, Cleanup of Trench	10/25/90
3	23	Mound P, Vessel Fragment at Bottom of 1988 Test Trench	10/25/90
3	24	Mound P, Soil Sample under Cluster A Vessel	10/25/90
3	25	Mound P, Just Outside Black Deposit, Southern End 1988 Trench	10/31/90
3	26	Mound P, Back Dirt Pile	10/31/90
3	27	Mound P, Screening Trench Floor, First Level of Day	10/31/90
3	28	Mound P, Pottery Cluster C	10/31/90
3	29	Mound P, Trench Floor, Second Level	10/31/90
3	30	Mound P, Trench Floor, Second Level	10/31/90
3	31	Mound P, Beginning New Deeper Level in Trench Floor	11/01/90
3	32	Mound P, Coming Down on Burned Area, Outer 2/3 of Trench	11/01/90
3	33	Mound P, Additional Sherds from Edge of Pottery Cluster A	11/01/90
3	34	Mound P, Outer End of Trench at 60 Centimeters	11/14/90
3	35	Mound P, Outer End of Trench at 60 Centimeters	11/14/90
3	36	Mound P, 10 to 20 Centimeters in 75 Centimeter Square in Trench	11/15/90
3	37	Mound P, Hearth of Burned House	11/15/90
3	38	Mound P, 0 to 10 Centimeters in 75 Centimeter Square in Trench	11/15/90
3	39	Mound P, Limestone Grinding Stone, Above Burned Floor	11/15/90
3	40	Mound P, Just Above Burned House Floor	11/15/90
3	41	Mound P, Leveling Outside Berm of Burned House	11/28/90
3	42	Mound P, Charcoal from Hearth Area of Burned House	11/28/90
3	43	Mound P, Charcoal Pile Around Hearth	11/28/90
3	44	Mound P, Floor Deposits, Outer Half, Burned House	11/29/90
3	45	Mound P, Floor of Burned House	11/29/90
3	46	Mound P, Window Screen Sample, Charcoal Area East of Hearth	11/15/90
3	47	Mound P, Large Limestone Grindstone Base, Below Top Floor	10/31/90
4	1	Mound U, Top Floor Next to Hearth	10/11/88
4	2	Mound U, Lower Floor	10/11/88
4	3	Mound U, Western Profile Cleanup	10/11/88
4	4	Mound U, General Excavation	10/26/88
4	5	Mound U, Pottery and PPK, Surface?	10/27/88
4	6	Mound U, Floor Cleanup, Southeastern Corner	10/27/88
4	7	Mound U, Floor Deposits	11/03/88
4	8	Mound U, Screened Floor Deposits	11/03/88
4	9	Mound U, First Floor Level	11/03/88
4	10	Mound U, Second Floor Level	11/03/88
4	11	Mound U, Pottery Cluster A	11/03/88
4	12	Mound U, Pottery Cluster B	11/03/88
4	13	Mound U, Pottery Cluster C	11/03/88
4	14	Mound U, Pottery Cluster D	11/03/88
4	15	Mound U, Screened Floor Deposits	11/09/88
4	16	Mound U, Soil Sample Near Hearth	11/09/88
4	17	Mound U, Pottery Cluster E	11/10/88

PROV	LOT	DESCRIPTION	DATE
4	18	Mound U, Pottery Cluster F	11/10/88
4	19	Mound U, Pottery Cluster G	11/10/88
4	20	Mound U, Pottery Cluster H	11/10/88
4	21	Mound U, Bottom Floor Near Hearth	11/10/88
4	22	Mound U, Cleanup of Hearth	4/27/89
4	23	Mound U, General Cleanup	4/26/89
4	24	Mound U, Southern Side Cleanup	5/17/89
4	25	Mound U, Northern Extension Cleanup	5/11/89
4	26	Mound U, Southern Extension, Floor?	5/11/89
4	27	Mound U, General Cleanup	5/24/89
4	28	Mound U, Pottery Cluster I	5/25/89
4	29	Mound U, Pottery Cluster J	5/25/89
4	30	Mound U, Cleanup of Hearth Area	5/25/89
4	31	Mound U, General Cleanup	5/25/89
4	32	Mound U, General Cleanup	5/31/89
4	33	Mound U, General Cleanup	6/01/89
4	34	Mound U, Cleanup of Hearth	6/01/89
4	35	Mound U, Cleanup of Northern Side	5/17/89
4	36	Mound U, Southern Extension, Top Floor?	5/03/89
4	37	Mound U, General Cleanup	4/27/89
4	38	Mound U, General Cleanup	5/03/89
4	39	Mound U, General Cleanup	10/31/90
4	40	Mound U, General Cleanup	11/01/90
4	41	Mound U, General Cleanup	11/15/90
4	42	Mound U, General Cleanup	11/28/90
4	43	Mound U, General Cleanup	11/29/90
5	1	Post Hole Test 1	9/14/88
5	2	Post Hole Test 2	9/14/88
5	3	Post Hole Test 3 (No Artifacts)	9/14/88
5	4	Post Hole Test 4	9/14/88
5	5	Post Hole Test 5	9/14/88
5	6	Post Hole Test 6	9/14/88
5	7	Post Hole Test 7 (No Artifacts)	9/14/88
5	8	Post Hole Test 8	9/14/88
5	9	Post Hole Test 9 (No Artifacts)	9/14/88
5	10	Post Hole Test 10	9/14/88
5	11	Post Hole Test 11	9/14/88
5	12	Post Hole Test 12	9/14/88
5	13	Post Hole Test 13	9/14/88
5	14	Post Hole Test 15 (No Artifacts)	9/14/88
5	15	Post Hole Test 16	9/14/88
5	16	Post Hole Test 18 (No Artifacts)	9/14/88
5	17	Post Hole Test 19 (No Artifacts)	9/14/88
5	18	Post Hole Test 20	9/14/88
5	19	Post Hole Test 21	9/14/88
5	20	Post Hole Test 22	9/15/88
5	21	Post Hole Test 24	9/15/88
5	22	Post Hole Test 25 (No Artifacts)	9/15/88
5	23	Post Hole Test 26	9/15/88

PROV	LOT	DESCRIPTION	DATE
5	24	Post Hole Test 27	9/15/88
5	25	Post Hole Test 28	9/15/88
5	26	Post Hole Test 29	9/15/88
5	27	Post Hole Test 31	9/15/88
5	28	Post Hole Test 32	9/15/88
5	29	Post Hole Test 33	9/15/88
5	30	Post Hole Test 34	9/15/88
5	31	Post Hole Test 35	9/15/88
5	32	Post Hole Test 36	9/15/88
5	33	Post Hole Test 37	9/15/88
5	34	Post Hole Test 38	9/15/88
5	35	Post Hole Test 39	9/15/88
5	36	Post Hole Test 40	9/15/88
5	37	Post Hole Test 41	9/15/88
5	38	Post Hole Test 42	9/15/88
5	39	Post Hole Test 43	9/15/88
5	41	Mound A, Post Hole Test A	9/21/88
5	42	Mound A, Post Hole Test B	9/21/88
5	43	Mound B, Post Hole Test A	9/21/88
5	44	Mound B, Post Hole Test B	9/21/88
5	45	Mound C, Post Hole Test A	9/21/88
5	46	Mound C, Post Hole Test B	9/21/88
5	47	Mound F, Post Hole Test A	9/21/88
5	48	Mound F, Post Hole Test B	9/21/88
5	49	Mound G, Post Hole Test A	9/21/88
5	50	Mound G, Post Hole Test B	9/21/88
5	51	Mound G, Post Hole Test C	9/21/88
5	52	Mound H, Post Hole Test A	9/21/88
5	53	Mound H, Post Hole Test B	9/21/88
5	54	Mound I, Post Hole Test A	9/21/88
5	55	Mound I, Post Hole Test B	9/21/88
5	56	Mound J, Post Hole Test A	9/21/88
5	57	Mound J, Post Hole Test B	9/21/88
5	58	Mound K, Post Hole Test A	9/21/88
5	59	Mound K, Post Hole Test B	9/21/88
5	60	Mound L, Post Hole Test A	9/21/88
5	61	Mound L, Post Hole Test B	9/21/88
5	62	Mound M, Post Hole Test A	9/21/88
5	63	Mound M, Post Hole Test B	9/21/88
5	64	Mound M, Post Hole Test C	9/21/88
5	65	Mound M, Post Hole Test D	9/21/88
5	66	Mound N, Post Hole Test A	9/21/88
5	67	Mound N, Post Hole Test B	9/21/88
5	68	Mound N, Post Hole Test C	9/21/88
5	69	Mound N, Post Hole Test D	9/21/88
5	70	Mound N, Post Hole Test E	9/21/88
5	71	Mound P, Post Hole Test A	9/21/88
5	72	Mound P, Post Hole Test B	9/21/88
5	73	Mound Q, Post Hole Test A	9/21/88
5	74	Mound Q, Post Hole Test B	9/21/88

PROV	LOT	DESCRIPTION	DATE
5	75	Mound R, Post Hole Test A	9/21/88
5	76	Mound R, Post Hole Test B	9/21/88
5	77	Mound S, Post Hole Test A	9/21/88
5	78	Mound S, Post Hole Test B	9/21/88
5	79	Mound T, Post Hole Test A	9/21/88
5	80	Mound T, Post Hole Test B	9/21/88
5	81	Mound U, Post Hole Test A	9/21/88
5	82	Mound U, Post Hole Test B	9/21/88
5	83	Mound V, Post Hole Test A	9/21/88
5	84	Mound V, Post Hole Test B	9/21/88
5	85	Mound W, Post Hole Test A	9/21/88
5	86	Mound W, Post Hole Test B	9/21/88
5	87	Mound E, Post Hole, 10 degrees West of North	4/24/90
5	88	Mound E, Post Hole, 40 degrees West of North	4/24/90
5	89	Mound R, Post Hole 2	4/24/90
5	90	Mound R, Post Hole 1	4/24/90
5	91	Mound G, Post Hole, Northwest	4/24/90
5	92	Mound G, Post Hole, Northeast	4/24/90
5	93	Mound F, Post Hole	4/24/90
6	1	Surface, Mound E	Fall/88
6	2	Surface, Mound K	Fall/88
6	3	Surface, 50 meters West of Mound S	Fall/88
6	4	Surface, 240 North, 142 East	Fall/88
6	5	Surface, 283 North, 129 East	11/09/88
6	6	Surface, Mound H	Fall/88
6	7	Surface, Between Mounds S and P on Road	Fall/88
6	8	Surface, Mound U	Fall/88
6	9	Surface, 30 meters East of Mound T on Road	Fall/88
6	10	Surface, Tree Tip, 5 Meters North of Mound G	Fall/88
6	11	Surface, Tree Tip, North of Mound A	10/27/88
6	12	Surface, North of Mounds P and L	Fall/88
6	13	Surface, Mound M	9/22/88
6	14	Surface, Sam Lawson Collection (Chert)	April/87
6	15	Surface, Sam Lawson Collection (Pottery)	April/87
6	16	Surface, Sam Lawson, Stump Just West of Excavation Unit 1	April/87
6	17	Surface, Sam Lawson, Stump Northwest of Mound F	April/87
6	18	Surface, West of Mounds A and B (Russell Davidson)	Fall/88
6	19	Surface, Brady Andrews' Collection	1960s?
6	20	Surface, West of Mounds A and B (Russell Davidson)	Fall/88
6	21	Surface, North of Mound A (John Worth)	Spring/88?
6	22	Surface, Washed Out Bridge Area, Royston Creek	Fall/90
6	23	Surface, Just West of Royston Creek on Road to Site	10/01/90
7	1	'Palisade' Test Trench 1, 1.22 Meters from Eastern End	5/17/90
7	2	'Palisade' Test Trench 1, 3.66 Meters from Eastern End	5/17/90
7	3	'Palisade' Test Trench 1, 0.09 Meters from Eastern End	5/17/90
7	4	'Palisade' Test Trench 1, 1.22 Meters from Eastern End	5/17/90
7	5	'Palisade' Test Trench 1, 1.83 Meters from Eastern End	5/17/90
7	6	'Palisade' Test Trench 1, 7.62 Meters from Eastern End	5/17/90

PROV	LOT	DESCRIPTION	DATE
7	7	'Palisade' Test Trench 1, 2.44 Meters from Eastern End	5/17/90
7	8	'Palisade' Test Trench 1, 0.30 Meters from Eastern End	5/17/90
7	9	'Palisade' Test Trench 1, 7.32 Meters from Eastern End	5/17/90
7	10	'Palisade' Test Trench 2, General Excavation	10/18/90
7	11	'Palisade' Test Trench 2, General Excavation	10/18/90