Archaeological Report No. 22

MIDDLE WOODLAND SETTLEMENT AND CEREMONIALISM IN THE MID-SOUTH AND LOWER MISSISSIPPI VALLEY

Proceedings of the 1984 Mid-South Archaeological Conference

Pinson Mounds, Tennessee - June, 1984

Edited by

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MIDDLE WOODLAND SETTLEMENT AND CEREMONIALISM IN THE MID-SOUTH AND LOWER MISSISSIPPI VALLEY

Introduction

Robert C. Mainfort, Jr.

Although Middle Woodland earthworks have been a subject of intensive inquiry since the days of the early nineteenth-century antiquarians, the societies that produced these structures remain poorly understood. Most of the largest mound centers of this period were explored over 50 years ago, using excavation and recording techniques that were crude by today's standards and, consequently, an enormous amount of data was overlooked and/or destroyed. Hence, modern interpretations must often rely on inadequate data from poorly-controlled contexts. Further, identification and excavation of habitation sites associated with the prominent ceremonial sites has lagged far behind mound exploration.

What is known is that between approximately 100 B.C. and A.D. 400 there was an apparent florescence of ceremonialism among societies throughout eastern North America that is manifested archaeologically in numerous burial mounds. Occasionally interred with the dead were raw materials and finely crafted artifacts of non-local origin, suggesting extensive interaction and trade networks among widely separated groups. This phenomenon finds what is arguably its greatest expression in the large mounds and elaborate geometric embankments of southern Ohio. Indeed, it is the richness of the major Ohio sites (particularly the Hopewell site itself) that has caused many of the interpretive problems faced by students of the Middle Woodland period today, since these centers are essentially without parallel in other areas. That the funerary mounds are not products of a unified "Hopewell culture" (cf. Deuel 1952) is made abundantly clear by the diversity in mound construction and burial modes among the numerous excavated sites. In fact, throughout most of the area involved in the "Hopewell Interaction Sphere," the characteristic elements of mortuary ritual (i.e., mound construction and certain non-local artifacts) seem to represent an integration of these traits into existing regional cultures without pronounced effects on other aspects of culture (Brose and Greber 1979). Further, it is becoming clear that the construction of large earthworks, some of which obviously required the participation of more than a single village or social group, was not accompanied by a revolution in subsistence. No convincing case can be made for maize cultivation in the eastern United States until approximately A.D. 600. The harvesting and cultivation of starchy annuals, however, seems to have become intensified during the Middle Woodland period (Stafford and Sant 1985; Faulkner, this volume), a factor that undoubtedly contributed to the ability of prehistoric societies to invest substantial labor in the construction of monuments for the dead.

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In the southeastern United States the mound building cultures of the later Mississippian period have drawn the greatest attention from archaeologists. There are several apparent reasons for this, including the fact that Middle Woodland burial mounds occur somewhat less frequently in the Mid-South and Lower Mississippi Valley. Further, these earthworks are typically smaller than their Ohio counterparts, and "exotic" mortuary accompaniments are relatively uncommon (Seeman 1977), causing southeastern Middle Woodland cultures to be viewed as "poorly developed" compared to the midwestern sites (cf. Jenkins 1979). In contrast, many Mississippian mound sites are very large and have yielded an impressive array of finely-crafted ceramic, shell, and lithic artifacts. Additionally, southeastern archaeologists have been able to incorporate an impressive body of ethnohistorical data into their interpretations of Mississippian cultures; comparable data simply does not exist for the earlier Woodland cultures. Hence, Middle Woodland studies in the southeast have traditionally been pursued somewhat less intensively than in the Illinois-Ohio area, but as indicated by this volume, the situation is changing.

Until fairly recently, the bulk of our information about the Middle Woodland period in the Mid-South and Lower Mississippi Valley was derived primarily from a small sample of excavated mortuary sites (Collins 1926; Ford and Willey 1940; Wimberly and Tourtelot 1941; Cotter and Corbett 1951; Ford 1963; Koehler 1966; Bohannon 1972; Walthall 1973; Brookes 1976). Surface collections from habitation sites were employed in defining taxonomic units and relative chronologies had been established, but few reliable radiocarbon determinations were available and subsistence/settlement data was virtually nonexistent (Phillips 1970; Toth 1977, 1979). As reflected by this volume, the database has been expanded considerably during the last ten years. Large survey and mitigation projects, many of which were conducted in conjunction with the Tennessee–Tombigbee Waterway (Alabama and Mississippi) and the Normandy Reservoir (Tennessee), have produced a significant corpus of Middle Woodland subsistence and settlement data that is without equal in most areas of eastern North America. Regional chronologies have been significantly refined, both in relative and absolute dating. Additionally, research has been undertaken at several important Middle Woodland ceremonial sites, including Big Oak Island (Shenkel 1984), Ingomar Mounds (Rafferty 1983), and particularly Pinson Mounds (Mainfort 1986).

Although the site was scarcely mentioned at the Chillicothe Hopewell Conference (Brose and Greber 1979:172), it was the recent excavations at Pinson Mounds that provided the impetus for the Fifth Mid-South Archaeological Conference. Several factors make the site of paramount importance, the first being its sheer magnitude. Pinson Mounds encompasses over 150 ha, and at least 100,000 m^3 of fill are represented in the 12 mounds at the site, making it larger than most, if not all, of the major Ohio centers. Additionally, Pinson Mounds has provided the first unequivocal evidence of large platform mounds being constructed and used during the Middle Woodland period. Platform mounds are closely associated with the later ranked societies of the Mississippian period, and their functions at a handful of Middle Woodland sites, including several in the Mid-South area, is as yet unclear. Extensive interaction between Pinson Mounds and other contemporary southeastern cultures is suggested by the occurrence of a variety of non-local pottery types at the site, particularly from mortuary contexts. The site has also produced evidence of structurally complex funerary mounds and geometric embankments reminiscent of the Ohio earthworks. Finally, the excavations have generated a battery of over two dozen radiocarbon dates that provide a rather unique perspective on site construction and use over a 500 year period (Mainfort 1986). The Pinson Mounds data raise numerous intriguing questions: Why was such a large site constructed on a relatively minor waterway, with no major historic trails in the immediate vicinity? What were the social, political, and ideological mechanisms that produced a site of such magnitude in an area where Mid dle

Woodland mounds are typically small? How was the site integrated into the settlement pattern of western Tennessee and what was its function?

The new data from Pinson Mounds and other localities in the Mid-South suggested the need for a regional Middle Woodland colloquium, and on June 2 and 3, 1984, Pinson Mounds State Archaeological Area hosted the Fifth Mid-South Archaeological Conference, which was appropriately devoted to the Middle Woodland period. Approximately 100 individuals attended the conference and two dozen formal presentations were delivered. This volume presents eleven of the conference papers, which have been slightly revised for publication; the information presented by several participants, notably Bruce Smith, Gary Crites, Ned Jenkins, Janet Rafferty, Mary Kwas, and Jerald Milanich, has now appeared in other publications. A comprehensive bibliography has been compiled by the editor, although individual authors are responsible for the accuracy of citations contained in their papers.

The papers address three general topics, beginning with two contributions that examine earthwork construction by pre-Marksville cultures. Although the age of the extraordinary Poverty Point site has long been known, archaeologists have been reluctant to accept other evidence of early earthwork construction in eastern North America. Here, Gibson and Shenkel present a substantial body of data, including numerous radiocarbon determinations, which demonstrate that mound construction was undertaken for several millennia prior to the "Hopewell climax" in the Mid-South and Lower Mississippi Valley. Clay's paper discusses excavations at an Adena enclosure in Kentucky, providing some important insights into the age and function of this "ceremonial" geometric embankment site. His findings should inspire additional, much-needed work on Hopewell antecedents in this area.

The papers by Futato, Johnson, Ford, Morse, and Faulkner provide new information about Middle Woodland settlement across a large area of the Mid-South. Futato has integrated the data from a number of related "stone mound" sites in the Bear Creek Watershed (northwest Alabama) to formulate a new Middle Woodland archaeological phase and discuss its relationship to earlier and later cultures of the area. Johnson examines settlement patterns in northern Mississippi and notes some interesting patterns of change and continuity in site frequency and location over time. His observation that maximum diversity in site location occurs during Miller II times (i.e., roughly A.D. 1-500) seems clearly related to the construction of major mound groups, such as Ingomar, Bynum, and Pinson, in areas of ecological diversity. Morse uses data obtained from salvage excavations at a small habitation site as a springboard for examining late Marksville in northeast Arkansas; as in many other regions, there appears to be a strong continuity with earlier cultures. In her discussion of Middle Woodland sites and ceramics in northwestern Mississippi, Ford points out the problems inherent in defining archaeological "phases" on the basis of surface collections and demonstrates that the long-accepted Twin Lakes phase lacks taxonomic validity. The paper by Faulkner summarizes many years of extensive research in the Duck and Elk River drainages and provides a remarkable record of subsistence and community patterns for the societies believed to be responsible for the Old Stone Fort, near Manchester, Tennessee (Faulkner 1968a). The appearance of corn during the Owl Hollow phase is of particular note and an apparent change in house form and settlement patterns *circa* A.D. 200-300 is paralleled by developments along the Tombigbee River (Jenkins 1982).

No Middle Woodland volume could ignore the characteristic ceremonialism, and this topic is well-represented here. The section is introduced by Thunen's innovative discussion of geometric enclosures in the Mid-South, which are few in number and which have generally been neglected in the literature. Site architecture has only recently received serious attention by North American prehistorians,

and Thunen's analysis suggests some useful avenues for investigations. Marshall presents data from a burial mound at the Hoecake site, which provides important documentation of a continuity in mortuary practices between Middle and Late Woodland in Missouri. Mainfort's contribution on Pinson Mounds particularly stresses radiocarbon dates for the site and the implications of these for Middle Woodland chronology in the Mid-South. Although the large platform mounds at Pinson Mounds, Ingomar, and other Middle Woodland sites readily call to mind social inequality, there is no convincing evidence of ranking to be seen in the mortuary data from the study area, nor evidence of multi-village political authority. Yet a substantial labor force was required to construct these large earthworks. What social or political mechanisms provided the necessary organization? The volume concludes with Brose's regional overview of Middle Woodland cultures in the Mid-South and Southeast, which emphasizes the diversity of mortuary forms and grave furnishings through the area.

Several individuals warrant special mention for their contributions to the Fifth Mid-South Archaeological Conference. After a lengthy dormant period, the Mid-South Archaeological Conference was successfully revived in 1982 through the efforts of David Dye and Ron Brister, and the Middle Woodland meeting owes much to them. Credit for proposing a meeting at Pinson Mounds belongs to Stephen Williams, who also hosted an evening reception for conference participants. The staff of Pinson Mounds State Archaeological Area performed yeomanly service during the two-day event, and their help was instrumental in the success of the conference. The Tennessee Division of Archaeology also provided support for the meeting, as well as the preparation of this volume. Patricia Galloway generously offered to publish the conference papers and offered useful editorial comments. Elbert Hilliard, Director, Mississippi Department of Archives and History, and the Board of Trustees of the Department warrant special recognition for their support of this publication. The volume has also benefitted from editorial comments offered by Richard Krause and James Brown. Finally, a special note of gratitude to Mary L. Kwas, former Area Supervisor of Pinson Mounds, whose contributions to the conference, as well as to the research and interpretive programs at the site, could not be overstated.

1

Louisiana Earthworks: Middle Woodland and Predecessors

Jon L. Gibson and J. Richard Shenkel

Earthwork construction has a long history in Louisiana, with several mounds dating to the Late Archaic and increasing numbers of sites dating to the subsequent Poverty Point, Early Woodland Tchefuncte, and Middle Woodland Marksville periods. Earthwork construction is examined with an emphasis on what is known about Marksville period mounds viewed from both local evolutionary and diffusionary vantages.

INTRODUCTION

Middle Woodland earthworks in Louisiana appear to be the midpoint of a long tradition. Louisiana Indians began making mounds and other earthworks as early as the Archaic period and continued to do so until historic times. As elsewhere in the east, the intensity of earthwork construction oscillated through time but the practice never seems to have ceased completely.

Current reconstructions of Lower Mississippi Valley prehistory hold that this tradition climaxed during the Middle Woodland period, when domed mounds functioned as repositories for elaborate mortuaries. Inspiration for this climax supposedly emanated from Havana or Hopewell in the northern Mississippi valley. In the lower valley, this period is called Marksville (Ford 1936; Ford and Willey 1940; Jennings 1952). Phillips (1970) has divided Marksville into early and late subperiods, with the earlier span referred to as Early Marksville, or just Marksville, and the later being designated Late Marksville or sometimes Issaquena (Greengo 1964; Phillips 1970). In our view, Issaquena is a Late Woodland manifestation postdating the oft-times elaborate mortuary programs of the Marksville/Hopewell time period. Therefore, Issaquena falls outside the purview of this paper.

The apparent Marksville climax may well be a product of biased archaeological sampling and not a true cultural efflorescence. This bias results from research concentration on burial mounds and an historical conception that rich midwestern Hopewell centers were the diffusionary sources for virtually all Middle Woodland manifestations. Marksville assemblages present an austere contrast to northern contemporaries.

Current data suggest no significant increase in numbers or sizes of Marksville mounds over preceding periods in the Lower Mississippi Valley. Toth (1979) lists 98 sites with conical mounds in the valley south

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PERIOD	SITE	LIBBY HALF-LIFE DATE (5568 ± 30)	LAB NUMBER	CALIBRATED RANGE	CALIBRATED MEDIAN
MARKSVILLE	CROOKS	1158 ± 250 BP	(C-143)	AD 488 - AD 1270	AD 880
	CORAL SNAKE				
	(Upper mantle)	210 ± 90 BP	(TX-244)	AD 1480 - AD 1950	AD 1720
	(Upper mantle)	1650 ± 90 BP	(TX-205)	AD 75 - AD 590	AD 330
	(Primary mantle)	1770 ± 80 BP	(TX-433)	AD 20 - AD 445	AD 230
	(Primary mantle)	1970 ± 100 BP	(TX-442)	180 BC - AD 230	AD 20
	(Mound base)	3210 ± 210 BP	(TX-444)	1900 BC - 1095 BC	1500 BC
	BIG OAK ISLAND				
	(Upper component)	2005 ± 105 BP	(UGa-4600)	370 BC - AD 220	80 BC
	(Upper component)	2040 ± 105 BP	(UGa-641b)	380 BC - AD 210	80 BC
	(Upper component)	2160 ± 115 BP	(UGa-641a)	410 BC - AD 15	200 BC
	MCKINNEY MOUND	2190 ± 120 BP	(TX-480)	415 BC - 1 BC/AD 1	210 BC
TCHEFUNCTE (NON-MOUND SITE)	LITTLE OAK ISLAND	2140 ± 80 BP	(UGa-4687)	405 BC - AD 30	190 BC
		2165 ± 70 BP	(UGa-881)	395 BC - 20 BC	210 BC
	TCHEFUNCTE SITE	2220 ± 110 BP	(O-30)	545 BC - 20 BC	280 BC
	BIG OAK ISLAND				
	(Middle component)	2185 ± 70 BP	(UGa-642)	400 BC - 30 BC	220 BC
	(Middle component)	2220 ± 200 BP	(M-243)	775 BC - AD 200	290 BC
	(Middle component)	2325 ± 60 BP	(UGa-4591)	585 BC - 195 BC	390 BC
	(Basal component)	2470 ± 65 BP	(UGa-640)	790 BC - 410 BC	600 BC
	CROSS BAYOU	2680 ± 105 BP	(UGa-3873)	1095 BC - 615 BC	860 BC
POVERTY POINT	POVERTY POINT				
	(Base Mound B)	2339 ± 200 BP	(Schatzmann)	815 BC - 5 BC	410 BC
	(Base Mound B)	2685 ± 210 BP	(Schatzmann)	1275 BC - 410 BC	840 BC
	(Base Mound B)	2700 ± 100 BP	(L-272)	1105 BC - 620 BC	860 BC
	(Base Mound B)	2850 ± 250 BP	(M-430)	1602 BC - 518 BC	1060 BC
	(Base Mound B)	3150 ± 120 BP	(O-66)	1680 BC - 1130 BC	1400 BC
	(Midden)	2860 ± 100 BP	(L-195)	1350 BC - 810 BC	1080 BC
	CLAIBORNE SITE				
	(Midden)	3100 ± 110 BP	(I-3705)	1655 BC - 1110 BC	1380 BC
	(Midden)	3470 ± 160 BP	(TX-1404)	2170 BC - 1540 BC	1860 BC
	(Midden)	3990 ± 80 BP	(TX-1403)	2875 BC - 2210 BC	2540 BC
ARCHAIC	HORNSBY				
	(In mound)	2455 ± 150 BP	(UGa-5336)	840 BC - 200 BC	520 BC
	(In mound)	2930 ± 180 BP	(RL-1270)	1630 BC - 785 BC	1210 BC
	(Mound base hearth)	4464 ± 210 BP	(RL-1029)	3650 BC - 2665 BC	3150 BC
	BANANA BAYOU	4650 ± 260 BP	(O-1846)	3900 BC - 2855 BC	3380 BC
	LSU	4510 ± 185 BP	(GX-8776)	3750 BC - 2865 BC	3310 BC
		4840 ± 180 BP	(GX-8778)	3920 BC - 3170 BC	3450 BC
		5345 ± 235 BP	(GX-8777)	4545 BC - 3780 BC	4160 BC
	MONTE SANO	6220 ± 140 BP	(GX-1011)	5455 BC - 4905 BC	5180 BC

These dates are calibrated to a 95% confidence level based on the consensus dendrochronological data presented by Klein *et al.* (1982). Calibrated median dates are rounded to the nearest 10 years.

Table 1.1. Radiocarbon dates for Louisiana mounds, Middle Woodland and earlier.

of Helena, Arkansas. Of these, only 13 are confidently attributed to the Marksville period. Despite protestations that the preceding Tchefuncte peoples did not build mounds (Griffin 1979:270), it is a virtual certainty that mounds were not only constructed but were made in numbers that rivaled and perhaps exceeded later Marksville structures. Substantial numbers of mounds were raised by Poverty Point populations in the preceding millennium. And there are growing indications of even earlier mounds in Archaic contexts. The possibility of mound construction prior to Marksville has been contentious due primarily to the limited number of excavations and the salvage nature of others. We submit, however, that the growing number of mound sites with early radiocarbon dates and early cultural associations strongly argues that earthworks were constructed in Louisiana well in advance of the Middle Woodland period. This paper summarizes data and arguments relevant to this thesis. Radiocarbon dates with their references are tabulated in Table 1 and the sites mentioned are located in Figure 1.1.

MIDDLE AND LATE ARCHAIC

Monte Sano

This site, consisting of two conical earth mounds, was located on the left bank of the Mississippi River in Baton Rouge, Louisiana. The mounds had basal diameters in excess of 30 m and reached 4 m and 2 m in height. They were destroyed in 1967. Salvage operations were conducted by William G. Haag, James Ford, and Sherwood Gagliano.

Both mounds contained primary platforms which may have served as cremation areas, judging from evidences of burning and charred bone (Webb 1968:300; Coastal Environments, Inc. 1977:243). Secondary mantles capped these interior structures. Underneath one of the mounds was an outline of postmolds forming a 6 meter square. The postmolds averaged about 40 cm in diameter and were spaced between 75 cm and 90 cm apart. The small collection of artifacts recovered from the taller mound contained diagnostic Late Archaic notched projectile point types, a large bifacial foliate of exotic gray flint, microlith tools, and ground and polished stone objects including, most notably, two tubular beads and a "locust" bead of red jasper (Webb 1971:106). A single radiocarbon date from the cremation platform in one of the mounds is 6220 B.P. ± 140 (GX-1011: Coastal Environments, Inc. 1977:243). Although this date may seem unreasonably early, it is consistent with the dates form the Denton site in Mississippi, where similar artifacts, including animal effigy beads, were found (Connaway 1977:96, 137-138).

LSU

Two conical earth mounds are located on the Louisiana State University campus in Baton Rouge about 6 km south of the Monte Sano mounds. These twin structures are about 5 m high and 40 m in diameter. There are no artifacts to determine their cultural affiliation, but three radiocarbon assays on organic material taken from solid cores suggest a possible Archaic period assignment. These three ages, which pertain to the northernmost structure, are: 4510 ± 185 B.P. (GX-8776), 4840 ± 180 B.P. (GX-8778), and 5345 ± 235 B.P. (GX-8777). The organic material was extracted from a one meter section which apparently extended across the mound-submound interface (Neuman 1984:27). Robert Neuman cautions (personal communication, May 1984):

> These dates will require more archaeological confirmation before their true historical significance can be evaluated. As the subject stands right now, these dates and others from

> several sites in Louisiana are indications of an early [mound building] archaeological manifestation that warrants a great deal of serious attention (see also Neuman 1984:28-33).

Banana Bayou

This small conical mound, 2 m high and 30 m in diameter, is located on the flank of Avery Island, a salt dome near the Gulf of Mexico in south central Louisiana. Excavations by Gagliano (1967) and Brown and Lambert-Brown (1978) disclosed two mound mantles and chipped bifacial and flake tools of an Archaic character. Amorphous baked clay objects were also found in substantial numbers. Bone and other organic materials were recovered from the primary building stage but no human remains were identified. Charcoal from the top of the primary mounds yielded a radiocarbon determination of 4560 ± 260 B.P. (0-1846). Due to an initial arithmetical error, this date was erroneously published as 2490 B.C. (Gagliano 1967:18-19).

Hornsby

This site consists of a low conical earth mound 37 m in diameter and 1.2 m high. It is located near Franklinton, Louisiana, north of Lake Pontchartrain. A wide variety of bifacial and flake tools, debris, and debitage was associated. Projectile points were typical of Middle and Late Archaic contexts (Manuel 1981:9-22). A radiocarbon date of 4464 ± 210 B.P. (RL-1029) was obtained on charcoal from a fire pit at the base of the mound (Manuel 1979:18-19). A second charcoal sample from a clay platform within the mound produced an age of 2930 ± 180 B.P. (RL-1270) (Joseph Manuel, personal communication 1983). A third sample consisting of charcoal bits scattered throughout the 100 centimeter depth was dated to 2455 ± 150 B.P. (UGa-5336). This last sample is somewhat suspect because it was minimal in size and was assayed about six years after collection, exposing it to potential contamination during the period of storage (Dan Shipman, personal communication 1985).

Amite River Phase

Gagliano (1963) defined the Amite River phase as a widespread Late Archaic occupation in the upland terraces to the north and west of lake Pontchartrain. Low conical earth mounds from 1 to 2 m in height and from 30 to 50 m in diameter occur singly or in groups of 2 or 3. The function of these mounds has not been determined. At present there are no radiocarbon determinations, but the artifact assemblage is uniformly Late Archaic in character.

Kieffer

These mounds, superficially similar to the Amite River phase mounds, occur in the hill country west of the Mississippi alluvial valley and north of the Red River valley in the northern third of Louisiana. Some of these mounds undoubtedly date to later times, but others seem, on the basis of cultural associations, to fall within the Archaic period. One such mound site, Kieffer, is located on Saline Bayou approximately 30 km east of Natchitoches, Louisiana. Land leveling of one of the three small mounds, which were all less than 1.5 m high and 20 m in diameter, exposed several oval pits which had been dug into the mound surface. These pits had fired puddled clay walls and contained calcined human remains. The only artifacts recovered from these pits were barrel shaped and tubular stone beads. Projectile points scattered around the mounds included typical Archaic varieties (Gibson 1968a:14-15).

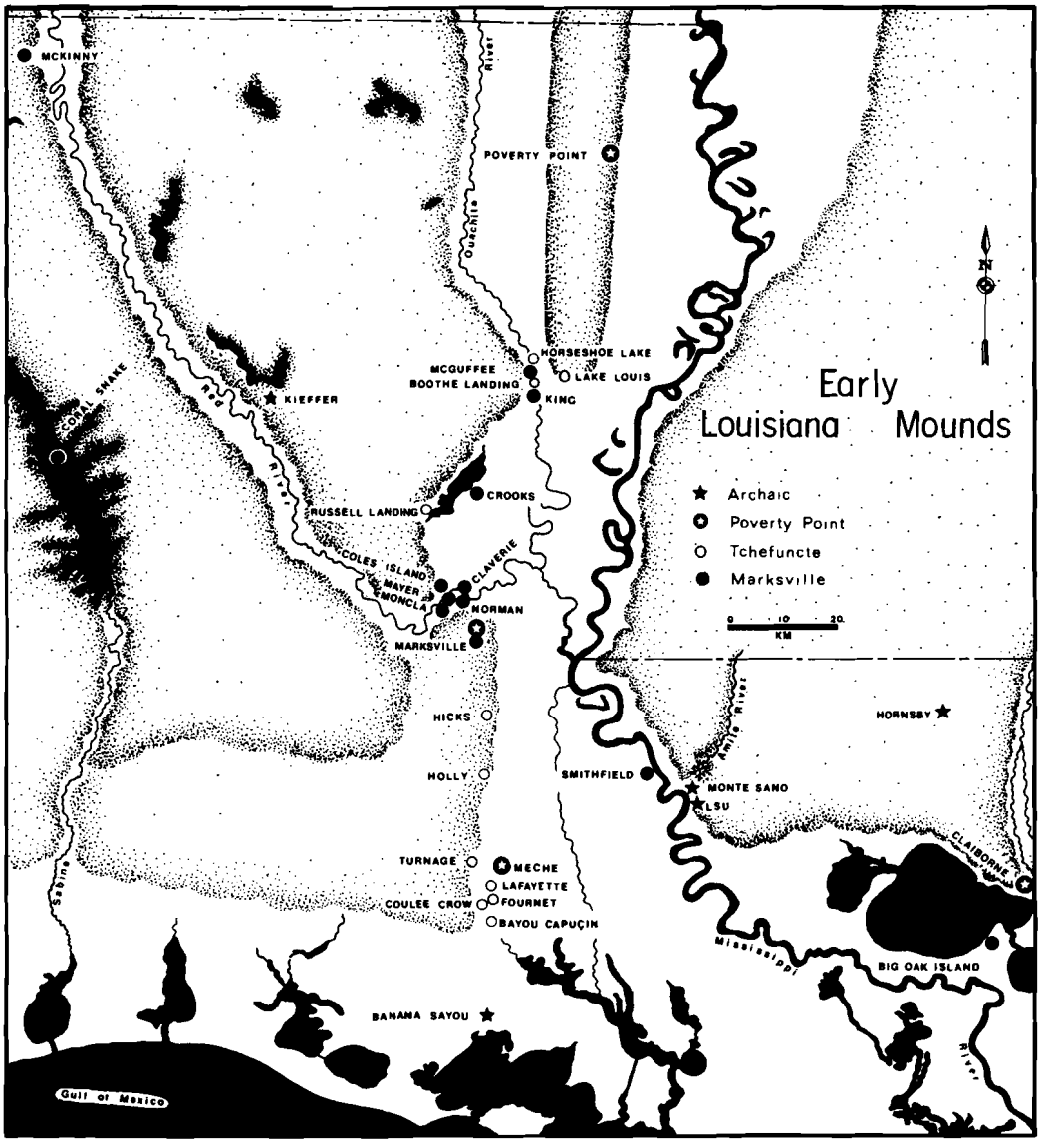

Figure 1.1. Early Louisiana mounds.

Comment

The present radiocarbon series reveals conical mound construction transpired between 6220 and 2930 B.P. Cultural associations, where they exist, are definitely Archaic, but none of the ages themselves are beyond question. Problems with sampling, contamination, and the dating process itself recommend caution in accepting this early span at face value. But by the same token, we feel that the possibility of Archaic mound construction cannot be ignored or simply dismissed because it does not agree with traditional ideas.

POVERTY POINT

Poverty Point

There can be little doubt that by Poverty Point times, mound building was extensively practiced and in certain localities had reached massive proportions. The gigantic Poverty Point site in extreme northeastern Louisiana is the most outstanding example with its huge mounds, one of which reaches more than 21 m in height, over 11 kilometers of artificial ridges, and massive land filling and leveling that may have involved as much fill as the standing earthworks (Gibson 1984). The earliest ages on earth moving fall between 3340 ± 60 B.P. (TX-4983) and 3130 ± 210 B.P. (TX-4984). These dates were obtained from land fill underneath the ridged enclosure. Five radiocarbon assays on a crematorium at the base of a conical mound ranged from 2339 ± 200 B.P. to 3150 ± 120 B.P. (Ford and Webb 1956). Another mound, not yet dated but excavated during the 1983 field season, was a 2-tiered platform composed of a series of superimposed mantles with hard packed floors, on top of which wooden structures had been built. This conforms, at least superficially, to textbook definitions of temple mounds which are presumably Mississippian in origin, but this mound contains only Poverty Point materials (Gibson 1984).

Claiborne

The only other dated Poverty Point earthworks are found at the Claiborne site, near the mouth of the East Pearl River on the Gulf of Mexico on the Mississippi side of the Louisiana border. This site consisted of a semicircular midden on top of a loaded earth fill which covered a lower midden. The outside diameter of the midden arc was 214 m. A small conical sand mound 1.3 high and 24 m in diameter lay 344 m east of the midden. Three radiocarbon assays from the upper midden are: 3100 ± 110 B.P. (I-3705), 3470 ± 160 B.P. (TX-1404), and 3990 ± 80 (TX-1403).

Around a dozen other probable but undated Poverty Point mound sites are scattered along the edges of the Mississippi alluvial valley from southern Arkansas to near the Gulf of Mexico. One of these, the Teche Mounds located near Bayou Teche in south central Louisiana, was tested by Frank Servello in 1976-1977 and was found to contain molded baked clay objects, fibrous core and other Tchefuncte-like pottery, and imported lithic materials. This assemblage appears to be a local version of the one from the Poverty Point type site.

Another probable Poverty Point mound (Marksville Mound 10) along the bluff north of the Marksville site enclosure (see below) was pitted by Fowke (1928). Fowke provides no information about internal stratigraphy, and the cultural affiliation is based on only five artifacts (cf. Toth 1974:20). These are illustrated in Setzler (1933: Plate 6a-c) and include two cylindrical grooved baked clay objects, a perforated hematite plummet, and two common Poverty Point projectile point types.

Comment

The first real expansive and extensive earth architecture in the Lower Mississippi Valley began in the Poverty Point period possibly as early as 4000 years ago. During this period, earth-moving occurred in some localities on a massive scale which would not be approached again until the final phases of prehistory. Like their Archaic predecessors, the functions of these mounds are unclear, although some did contain cremated human remains and others supported wooden buildings. Artificial ridges at a few sites may have served totally secular purposes.

TCHEFUNCTE

One of the most intensive scenes of Tchefuncte mound building was along the Vermilion River in south central Louisiana. At least 4 major mound groups—Lafayette Mounds, Coulee Crow, Fournet, and Bayou Capucin—are found along a 20 km stretch of the river above Lafayette. Two of these sites have been tested.

Lafayette Mounds

The Lafayette Mounds were excavated in 1941 by Robert Neitzel (Ford and Quimby 1945:21-24). One of these structures was found to be a 2-stage structure covering a semi-circular postmold pattern and containing flexed and bundled burials in the primary mantle. Of the 21,365 total sherds, 268, or 1.3%, were Plaquemine varieties; the remainder were Tchefuncte types. This has led to the suggestion that these mounds were constructed during the Plaquemine period. However, the confinement of these later sherds to the uppermost mantle and the absence of any associated Plaquemine midden deposits in the vicinity does not make a strong case for Plaquemine construction. Further, the burial program in the primary mantle duplicates Tchefuncte mortuaries in the Pontchartrain Basin (Shenkel 1980, 1984) and at Lake Louis and Boothe Landing on the Ouachita River (Moore 1909:21; Ford and Quimby 1945:20-21, 24).

Coulee Crow

Between 1976 and 1978, Gibson tested the Coulee Crow site, located about 5 km downstream from the Lafayette Mounds. The site originally consisted of 5 small conical mounds and a village area. Excavations were confined to midden deposits from which only Tchefuncte materials were recovered. However, human bones occurred in the scree from the single remaining badly mutilated mound. This suggests that the mound was used for Tchefuncte burials.

The Fournet Mound and Bayou Capucin have not been excavated, but surface collections indicate pure Tchefuncte occupations.

Ouachita River Mounds

Two Tchefuncte burial mounds on the Ouachita River in north central Louisiana have been excavated. Lake Louis, a conical structure 3.7 m high and 30 m in diameter, was trenched by James Ford in 1937. He recovered 12 flexed burials without grave furniture (Ford and Quimby 1945:20-21). Artifacts in the mound fill consisted wholly of Tchefuncte manufactures.

The other Ouachita Tchefuncte burial mound was Boothe Landing, a truncated dome 4 m high and 22 m in diameter. Burials without associated grave furniture were recovered at 5 different levels in the

mound (Moore 1909:21). A surface collection amassed from the eroded mound sides consisted of typical Tchefuncte ceramic wares and lithic artifacts (Gibson 1983).

Other unexcavated but probable Tchefuncte mounds include the Horseshoe Lake mound on the Ouachita River north of Boothe Landing (Gibson 1983), the Russell Landing (or Frazier) mound on Little River near Catahoula Lake in central Louisiana (Moore 1909:103; Gibson 1968b), the Hick's Mound on Bayou Petite Prairie at the head of the Atchafalaya Basin, the Holly Mounds on Big Darbonne Bayou on the western edge of the Atchafalaya Basin, and the Turnage Mound on Bayou Carencro south of Opelousas, Louisiana.

Comment

No Tchefuncte mound has been radiocarbon dated. Radiometric determinations do exist for several non-mound Tchefuncte components. These ages range from 2680 ± 105 B.P. (UGa-3873) (William S. Baker, Jr., personal communication 1983) to the latest believable date in unquestioned Tchefuncte contexts of 2140 ± 80 B.P. (UGa-4687). Every excavated Tchefuncte mound is a burial repository containing groups of flexed or bundled interments, lacking burial furniture. This is a marked departure from earlier mounds which had either no burials or only cremations. This apparently exclusive mortuary function anticipates later Middle Woodland emphases.

MARKSVILLE

Marksville contains certain elements that resemble Midwestern Hopewellian cultural manifestations (Ford and Willey 1940; Setzler 1933; Toth 1977, 1979). These include ceramic motifs, platform pipes, and certain objects made of copper and galena. Incorporation of these items in mound burials or mortuaries is also a trait shared with northern Hopewell. Several Marksville mounds have been excavated. The wide range of mortuary variation indicates that there was not a single uniform burial program.

Marksville

This important site located on the eastern edge of the Marksville Prairie overlooking the Mississippi valley in central Louisiana has lent its name to this segment of prehistory. The site has been extensively investigated but no comprehensive report has ever been published. Several descriptive reports dealing with various field seasons and ceramic analyses constitute the primary sources of information (Fowke 1928; Setzler 1933; Ford and Willey 1940; Toth 1974; Ryan 1975).

The central section of the Marksville site consists of five mounds enclosed by a C-shaped earthen embankment about 500 m in diameter. Three of the mounds within the enclosure are conical; the other two appear to be rectangular flat topped structures. To the south of the main enclosure is a small circular embankment about 100 m in diameter. To the north another semicircular earthen wall encloses a promontory along the bluff. Inside this latter enclosure is a truncated pyramidal mound. Several additional mounds occur along the bluff edge above the northernmost enclosure, only one of which can be confidently identified as a Marksville construction (Fowke 1928:423). Surrounding the central enclosure are numerous earthen rings which are believed to be house locations.

Excavations have been conducted at various times by several individuals in all of the mounds in the central precinct and in several mounds scattered along the bluff to the north (Toth 1974:13-42). One's attention is immediately drawn to the superficial resemblances between Marksville and northern

Hopewell centers with their conical and "loaf" shaped mounds and geometric earthen enclosures, but before being overly influenced by these similarities, we would like to mention some of the differences.

The largest conical mound in the central enclosure and one of the bluff edge mounds were burial structures. The enclosure mound had a central clay platform upon which burials had been heaped and a superior mantle containing additional burials made in pits. Post molds in the primary platform indicate that a structure had been present prior to the addition of the cap. A few grave goods consisting of pottery vessels and platform pipes were associated. Of the burials recovered from this mound, both sexes and various age groups were represented, but, interestingly, from 30 to perhaps 60 percent were infants and children (Fowke 1928).

The bluff mound revealed no internal structure. Burials were made in cane lined pits dug into the original ground surface and the single stage mound built over them. There were four Marksville vessels associated with this construction (Fowke 1928).

Few details are available on the other excavated mounds in the central enclosure. Fowke (1928) speculates that one of the small mounds may have been a primary platform for an unfinished burial mound. The large flat-topped mound in the northernmost section of the enclosure may have supported a small conical earth structure (Toth 1974:28-31). The other large mound had a succession of building strata but little else is known (Toth 1974:38-41).

As a cautionary note, we should mention that there is a small but significant number of Tchefuncte ceramic types in the Marksville site collections, and Toth (1974) acknowledges the Tchefuncte-like character of the Marksville ceramic fabric. While we find this ceramic association quite compatible with Marksville period construction, there is a possibility that some building may have started at an earlier time.

Crooks

This important site consisted of 2 mounds on an old land surface near the confluence of Cypress Bayou and French Fork in east central Louisiana about 35 km north of the Marksville site. The larger mound was conical, 28 m in diameter and 5.5 m in height. The smaller mound was a low platform measuring 15 m on a side and 9.6 m high. The site was excavated by William Malloy and Arden King in 1938-1939 as part of Ford's massive WPA campaign (Ford and Willey 1970).

The stratigraphy in the larger mound revealed a succession of building episodes beginning with a flat topped rectangular platform and concluding with an enveloping upper mantle. The primary platform was built over a solitary pit burial. One hundred sixty-eight interments were placed on top of the platform and covered with dirt. Subsequently, a mounded deposit of fill dirt containing an additional 214 burials was added over the approximate center of the platform. Later, another increment was applied, completely enveloping the earlier structures and burials; this layer formed a small conical mound about 3 m high and 14 m in diameter and contained another 270 burials. At this stage, a large post was erected on the summit and a smaller one downslope. A line of log steps ran up the eastern side. The last stage of construction produced another envelope which brought the mound to its final configuration. Its composite nature suggests that it may not have been the result of a single building effort. This state incorporated 503 more interments, bringing the total for the entire mound to 1159 (Ford and Willey 1940).

Burial offerings were placed with 169 interments (Ford and Willey 1940:44). These goods consisted primarily of plain and decorated pots, projectile points, boatstones, stone beads, pendants, "locust"

effigies, effigy and plain platform pipes, bone awls and fish hooks, pearl and shell beads, copper ear spools, a copper bracelet, copper and galena beads, masses of red ochre, and quartz crystals.

The smaller mound, which resembles the burial platform within the larger one, was a repository for 13 burials scattered throughout the soil during the process of building (Ford and Willey 1940:31). This mound had no burial furniture.

A single radiocarbon determination on charcoal from the last construction stage in the large mound provided an age of 1158 ± 250 B.P. (C-143; Ford and Webb 1956:120). This certainly does not pertain to the Middle Woodland activity at the site but may represent a much later utilization of the mounds by Plaquemine period high water refugees; or, as Griffin suggests, this date may indicate a Plaquemine period construction for the final mound stage (James B. Griffin, personal communication 1984).

Coral Snake Mound

Located in far western Louisiana and now submerged by the waters of Toledo Bend reservoir, Coral Snake Mound was a domed structure standing 3 m high and 30 m in diameter and housing three construction stages. The initial activity involved the excavation of a basin-shaped depression over a meter deep and 6 m in diameter. Cremations were placed in this hole. The second activity witnessed the construction of a low conical structure, 90 cm high and 12 to 15 m in diameter, over the depression. The mound was completed by covering the central structure with sand. Cremations, other burials, hearths, and caches were included in this final increment (Jensen 1968).

Grave goods included Marksville vessels, a copper pendant, copper beads, and projectile points, including three very large foliates of Duck River (?) flint. A bicymbal copper ear spool was found in the mound fill (Jensen 1968: Tables 9-10).

A series of radiocarbon dates ranges from 3210 ± 210 B.P. (TX-444) to 290 ± 90 B.P. (TX-244). These extremes do not pertain to Marksville. Three intervening dates may more closely represent the actual period of construction. These are 1650 ± 90 B.P. (TX-265), 1770 ± 80 B.P. (TX-433), and 1970 ± 100 B.P. (TX-442). All of these dates are in stratigraphic order; the two earlier ones, with nearly overlapping sigmas, pertain to the primary mound stage and the later one to the final cap.

McKinney Mound

The general area of northwestern Louisiana and southwestern Arkansas harbors a number of small domed mounds that have been variously ascribed to the Bellevue and Lowland Fourche Maline phases. One of these, the McKinney Mound, located on Black Lake Bayou near Shreveport, Louisiana, is a two stage structure, some 15 m in diameter and 1.2 m high (Webb 1982:260-262). Near the center of the basal stage was a fire-hardened, charcoal-impregnated oval area containing calcined human remains. Copper and stone beads were found in association, as was a small number of decorated Marksville sherds. Charcoal from the cremation area yielded a radiocarbon age of 2190 ± 120 B.P. (TX-480; Webb 1982:262).

Big Oak Island

One other dated Marksville burial component is Big Oak Island, located near the south shore of Lake Pontchartrain in southeastern Louisiana. It is an ossuary with more than 50 individuals packed on top of a shell midden within a mounded earth and shell dome measuring 60 cm in thickness and 6 m in diameter.

Contained within the bone mass were Tchefuncte ceramics, Marksville ceramics, Busycon cups, a copper bead, a large tubular pipe, and other artifacts (Shenkel 1984). Three radiocarbon dates from the burial area are 2160 ± 115 B.P. (UGa-641a), 2040 ± 105 B.P. (UGa-641b), and 2005 ± 105 B.P. (UGa-4600).

Other Marksville Period Mounds

Mounds with relatively certain Marksville association but without radiocarbon dates include: Norman, Claverie, Mayer Coles Island, and Moncla Ferry, all located in the area around Marksville (Moore 1912; Phillips 1970); the King Mounds and McGuffee Mounds on the Ouachita River (Gibson 1983); and the Smithfield Mound on the right bank of the Mississippi River above Baton Rouge (Toth 1977). All of these sites have been tested, but excavations at King and Smithfield were limited to village area. The other mounds, tested by Moore and others, produced Marksville artifacts but little or no reported evidence of internal structure.

Comment

Marksville earthworks included domed, flat topped pyramidal, and multitiered mounds and, at the Marksville site, earthen embankments forming geometric figures. All known domed Marksville mounds are burial structures, and those that have reasonable radiocarbon determinations date between 200 B.C. and A.D. 100.

CONCLUSIONS

Marksville burial mounds in the lower Mississippi alluvial valley and the adjoining hill country to the west exhibit considerable variation in content, architecture, and interment program. While incorporating some elements suggestive of Hopewellian interaction, there can be no mistaking the distinctive and entirely localized character of the mortuaries. Where data are available, Marksville, or Middle Woodland, burial programs seem to be continuations of previous patterns onto which were grafted a few elaborations of Hopewellian flavor. There is little doubt that copper, galena, and some stone were imported from the north, perhaps even from the heartland of Hopewell itself. However these, as well as other exotic materials such as quartz crystals, *Busycon* artifacts, cannel coal, etc. were being circulated as early as Late Archaic times and by themselves constitute no significant or novel alteration in pan-eastern trade systems. As a matter of note, if it were possible to measure the quantities of these imports into Louisiana, one would no doubt find a diminution during Middle Woodland times, a lessening which began with the decline of the Poverty Point trade system. The one thing which is new is the incorporation of these exotics into funerary practices.

Much emphasis has been placed on the stylistic similarities between early Marksville ceramics and those of Illinois Hopewell (Ford and Willey 1940:141; Toth 1979:194). Most of this concern has focused on historical connections, temporal priorities, and directions of assumed diffusion. While interesting, stylistic diffusion is not germane to this discussion. Rather, our concern here is with the behavioral rearrangement of indigenous patterns during Middle Woodland times, patterns which, in our opinion, reflect mutual stimulation among many geographically separated groups throughout the midcontinent.

It is becoming increasingly apparent that Louisiana earthworks were being erected during Archaic times, perhaps as early 6000 B.P., initiating a lengthy tradition which lasted until the historic era. Middle Woodland mounds represent a brief portion of this tradition. During this period, varied local mortuaries

within mounds became typical. Added to the burial complexes were grave goods rendered in extra-regional style and foreign, presumably trade, materials. From our perspective in the lower Mississippi valley, the regional variants of northern Hopewell seem to represent syntheses of varied Archaic and Early Woodland forerunners (e.g., Old Copper, Red Ochre, Black Sand, Glacial Kame, Adena, Green River, and others). Likewise, lower valley Marksville phases appear to be syntheses of their predecessors (e.g., Poverty Point, Tchefuncte, Aceramic Bellevue, and others). The same can be said of other Middle Woodland manifestations throughout eastern North America. The nearly simultaneous appearance of these reconstituted cultures during the Middle Woodland period provided a fertile ground for diffusionary interaction. As a final observation, traits with long developmental histories in the north, such as burials with offerings, became commonplace in southern Middle Woodland mounds. Likewise, flamboyant southern pottery styles, including raptorial bird motifs, were adopted into northern contexts.

Marksville, Hopewell, Havana, Porter, Crystal River, Santa Rosa/Swift Creek, Miller, Copena, and the other Middle Woodland manifestations are archaeological abstractions of localized conditions, of traditional states of mind and familiar happenings, embellished by ideas and things from other places. That these cultures are, more or less, contemporary is only proof that culture is capable of being shared and that individual cultures give and take in selective ways compatible with ethnically and socially based perceptions of reality.

Acknowledgements

We would like to express our thanks to Richard A. Weinstein, who furnished the unpublished laboratory numbers for the Monte Sano and Banana Bayou radiocarbon dates and for discovering that the originally published Banana Bayou date was arithmetically incorrect.

2

Peter Village: An Adena Enclosure

R. Berle Clay

Excavation at Peter Village (15-Fa-166) in Fayette County, Kentucky, a site mapped by Rafinesque in 1820 and published by Squier and Davis in 1848, has revealed the nature and construction of its embankment and a suggestion of activities inside the enclosure. A series of C-14 dates now suggests that the site was built, used, and abandoned during the period ca. 31 B.C. to 190 B.C. During this time period both construction changes and changes in artifact styles occurred. It is argued that the site is appropriately considered middle Woodland, despite the fact that Adena is generally relegated to Early Woodland.

Peter raises the question of the interpretation of the function of earthwork enclosures in general. Several possibilities are considered. It is concluded that the Peter Village enclosure surrounded a precinct for the manufacture of certain classes of artifacts involved in inter-regional trade. The enclosure may have been defensive in intent and may have had, as well, ritual/ceremonial significance.

The archaeological site known as Peter Village was mapped by Constantine Rafinesque in 1820 (Figure 2.1). Due to a series of historical circumstances, he never published his description and map, and it was only with Squier and Davis' *Ancient Monuments* (1848: Plate XIV, No. 3) (Figure 2.2) that the plan of the earthwork actually appeared. However, while the map was accurately reproduced, the description was not included. They presented it as located "on Elkhorn Creek" in Fayette County, Kentucky, and attributed the plan to Rafinesque as "delineator." Rafinesque's unpublished description of the site is as follows:

> The town is a large icosogonal monument of an oval shape, with twenty unequal sides, all straight except one. It lays nearly half a mile east of Major Meredith's farm & nearly as far south from the Creek, on a beautiful level. Its whole circumference is 3767 feet. It is surrounded by a ditch about 15 feet wide and 4 to 8 feet deep. It has no parapet; but the Area appears to be somewhat higher than the outward ground. There are no mounds or remains inside. It has only one visible gateway on the south side. There must have been formerly a spring inside of it towards the west, there being a hollow in that direction emptying into a run. The direction of the oval is from S.W. to N.E. the narrow end being N.E. The longest side is S.E. being 500 feet long, it has south an arched, concave side. The smallest sides are 100 feet long, and there are many of that length.
>
> This must have been the site of a ditched town . . .

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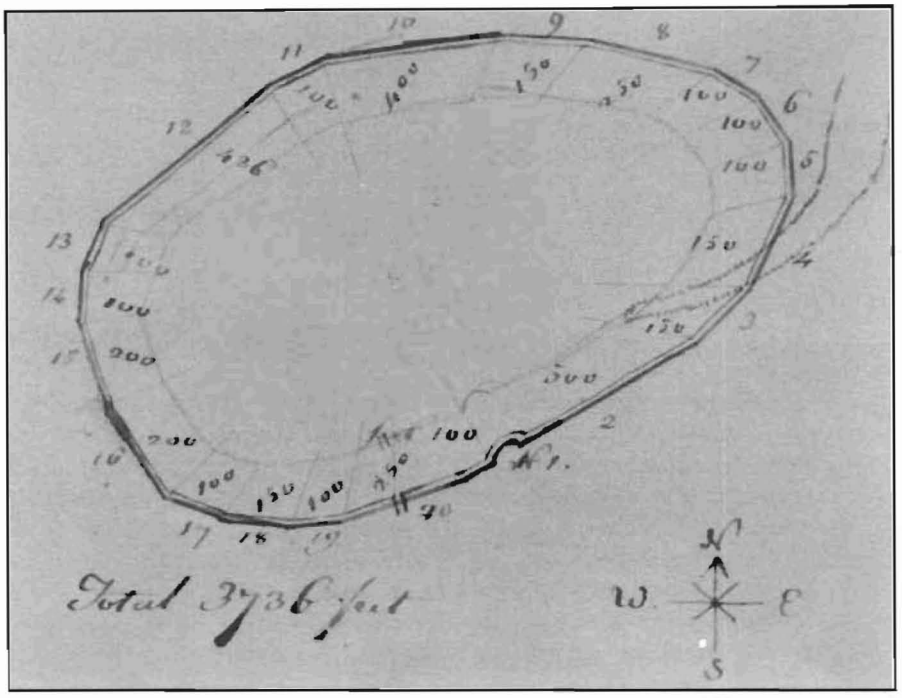

Figure 2.1. Plan of Peter Village as drawn by Constantine Rafinesque, ca. *1820 (original in the collections of M.I. King Library, the University of Kentucky, Lexington, Kentucky).*

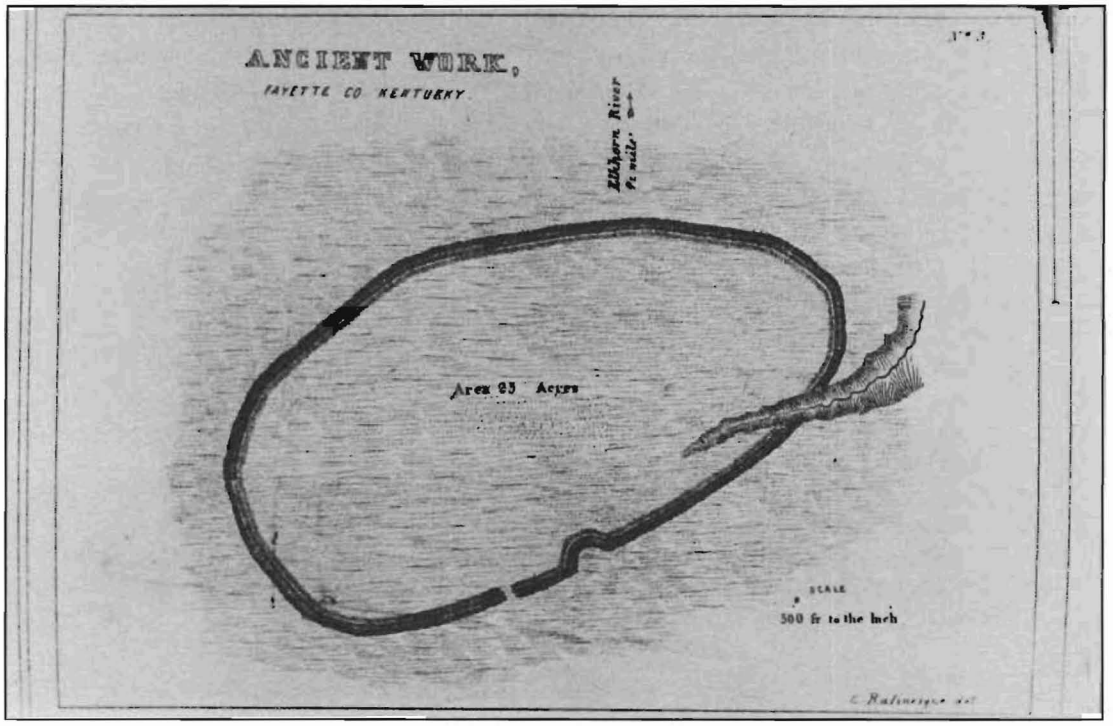

Figure 2.2. Plan of Peter Village as interpreted by Squier and Davis 1848: Plate XIV, No. 3.

In the mid-19th century the earthwork was noted by Robert Peter, a Lexington doctor, chemist for the Kentucky Geological Survey, and correspondent of the Smithsonian Institution, who also excavated nearby in the Tarleton (15-Fa-15) and Fisher (15-Fa-1c) mounds (Webb and Haag 1947). However, Peter did not excavate in the fortification. Largely because Rafinesque's sketchy survey map of the total Mt. Horeb vicinity (Figure 2.3) was never completed or published, there was confusion over just how many earthworks were located in this restricted area. Peter's mid-century comments did not clarify the matter. Ignored by others, Peter Village did not enter into Webb and Funkhouser's first publication of the state-wide survey in the early 20th Century (Webb and Funkhouser 1932), although the nearby "Mt. Horeb" earthwork was mapped by them and given a site number, 15-Fa-1.

Only in the 1930s, with WPA work in Fayette County at the Mt. Horeb earthwork, did Webb apparently come to realize the existence of the much larger earthwork nearby (Webb 1941). During that decade he and his associates made surface collections at Peter Village. In the Mt. Horeb report he first published Peter materials, perhaps to supplement the very meager collection of artifacts recovered from the Mt. Horeb excavation (1941:158-160).

Based on the common occurrence at Peter of a projectile point type since called Adena Stemmed (Bell 1958; Dragoo 1963, 1964:7), Webb argued for the Adena affiliation of Mt. Horeb, noting that this point type also occurred at the original Adena mound (Mills 1902). Unstated was Webb's assumption that there was an Adena cultural-temporal unity to all earthworks in the Mt. Horeb vicinity, an interpretation which has survived (cf. Dragoo 1964:6-7). Shortly thereafter, Webb published surface collections from Peter Village (1943). These highlighted for the first time a non-mound Adena context in central Kentucky.

James B. Griffin defined the ceramic type Fayette Thick (1943, 1945) from these collections and his work essentially established the significance of the site in eastern archaeology for the next 35 years, such as it was. He saw the pottery type as significantly representing two things. First, it was a local example of widespread, early ceramic production in the Ohio Valley and northeast (represented elsewhere by Marion Thick, Schultz Thick, Leimbach Thick, Half-Moon Cord-Marked, and others). Secondly, the surface decoration of pinching on some sherds made it an attenuated stylistic relative of Alexander Pinched of the middle Tennessee valley and the lower Mississippi valley.

By 1960 and the close of Webb's Adena work in Kentucky (marked by a final descriptive mound report, Webb and Snow 1959), Peter Village had assumed the role of the archetype Adena domestic site, although never excavated. This interpretation never took into account the size of the enclosure and the nature of its ditch, which make it: 1) one of the largest prehistoric sites anywhere in Kentucky, and 2) one of the largest earthworks in the state. These data should have indicated that it was not a mundane, domestic context, but an extraordinary site. At that time Peter and nearby Grimes were the only two such sites known.

My excavation in the summer of 1983 was designed to establish the nature of the site perimeter—the embankment and features associated with it—and to date its construction and period or periods of use. In both these ventures I have been successful. I have not, however, been able to say much about the interior of the enclosure and to date only 80 m^2 of the 25 acre site have been excavated.

The ditch was first located with a combination of aerial photos, resistivity survey, and soil coring. The photos clearly indicate, following Rafinesque, that the ditch enclosed about 25 acres. Furthermore, Rafinesque's plan proves to have been quite accurate without the benefit of Squier and Davis' "smoothing" and in spite of their deprecating comments on his abilities (Squier and Davis 1848:xxxvi).

A trench, excavated across the probable ditch and expanded inside the enclosure, has produced the following dated sequence. The earliest structure is a stockade composed of closely spaced posts within the ditched area (Figure 2.4). In two cases, these were set two to a single post hole. Posts were set vertically and some were later burned while others decayed in place or were possibly removed. Two uncorrected dates have been obtained from them, 610 ± 90 B.C. (Beta 7758) from posts 3 and 4, and 310 ± 60 B.C. (Beta 7755) from post 12. Charcoal adjacent to and outside the stockade, interpreted as the result of stockade burning, has been dated at 270 ± 100 B.C. (Beta 7757). Two of these dates suggest that the stockade was built around 300 B.C., perhaps somewhat earlier, and the third and oldest date I am treating as aberrant.

The charcoal in front of the stockade was covered by clay from deep in the excavated ditch, suggesting that parts of the burned stockade were covered by the fill of the ditch thrown inside the enclosure as it was dug. Thus, the ditch is the later of the two perimeter features and its construction was begun when the stockade was burned, perhaps coordinated with the event. Because some stockade posts decayed in place, it is probable that the remains of the stockade were burned by its builders after it had become decrepit. Thus, excavation of the ditch may represent an expedient effort to reestablish an enclosing structure with a different structural form, ditch as opposed to stockade.

There is no evidence from the limited excavation that the area of the enclosure changed during this structure sequence. As I interpret it, Peter Village was built as a 25 acre enclosure and, through two stages of construction, remained the same size.

The change from stockade to ditch—and I stress that it is my interpretation that the two did not coexist but followed in sequence—was possibly dictated by the availability of building materials. Over 4000 posts must have been used in stockade construction. Faced with its reconstruction, its builders may have replaced the stockade with a ditch simply due to the lack of available trees nearby.

The ditch had a maximum depth of approximately 2 m. This filled gradually and, with two exceptions, was devoid of cultural materials (Figure 2.5). On the floor of the ditch, deposited shortly after its completion, was a single sherd of Fayette Thick. About 70 cm above the floor was a lens of charcoal containing sherds of Adena Plain pottery (probably a single vessel). A sample of this charcoal was dated 190 ± 110 B.C. (Beta 7756). There were no other cultural materials in the fill above this point. It is possible that this late date represents the terminal use of the structure and, implicitly, the enclosure. I suggest as a working hypothesis that the enclosure was built shortly before 300 B.C. and that it was used for a little over 100 years.

Excavation within the enclosure adjacent to its perimeter defined three hearths and two large pits (Figure 2.4). Associated with these, and in the general midden, were potsherds, flint and ground stone tools and objects, and minimal amounts of animal bone.

All features represent limited use episodes. The hearth areas may have been used for single events, for there was little charcoal associated with them and firing of the surrounding soil was minimal. The two pits appear to represent similar activities. Based on their amorphous shapes, the paucity of associated cultural midden, and because they appear to have filled gradually, I interpret both, not as facilities for specific activities, but as pits for the extraction of materials, probably clay for making pottery. This is supported by thin section analysis of Fayette Thick sherds from the site and comparison with fired briquettes of clay from the normal Maury silt loam soil profile (O'Malley *et al.* 1983). The source of clays used, at least in the production of this type, appears to have been local, conceivably from inside the enclosure.

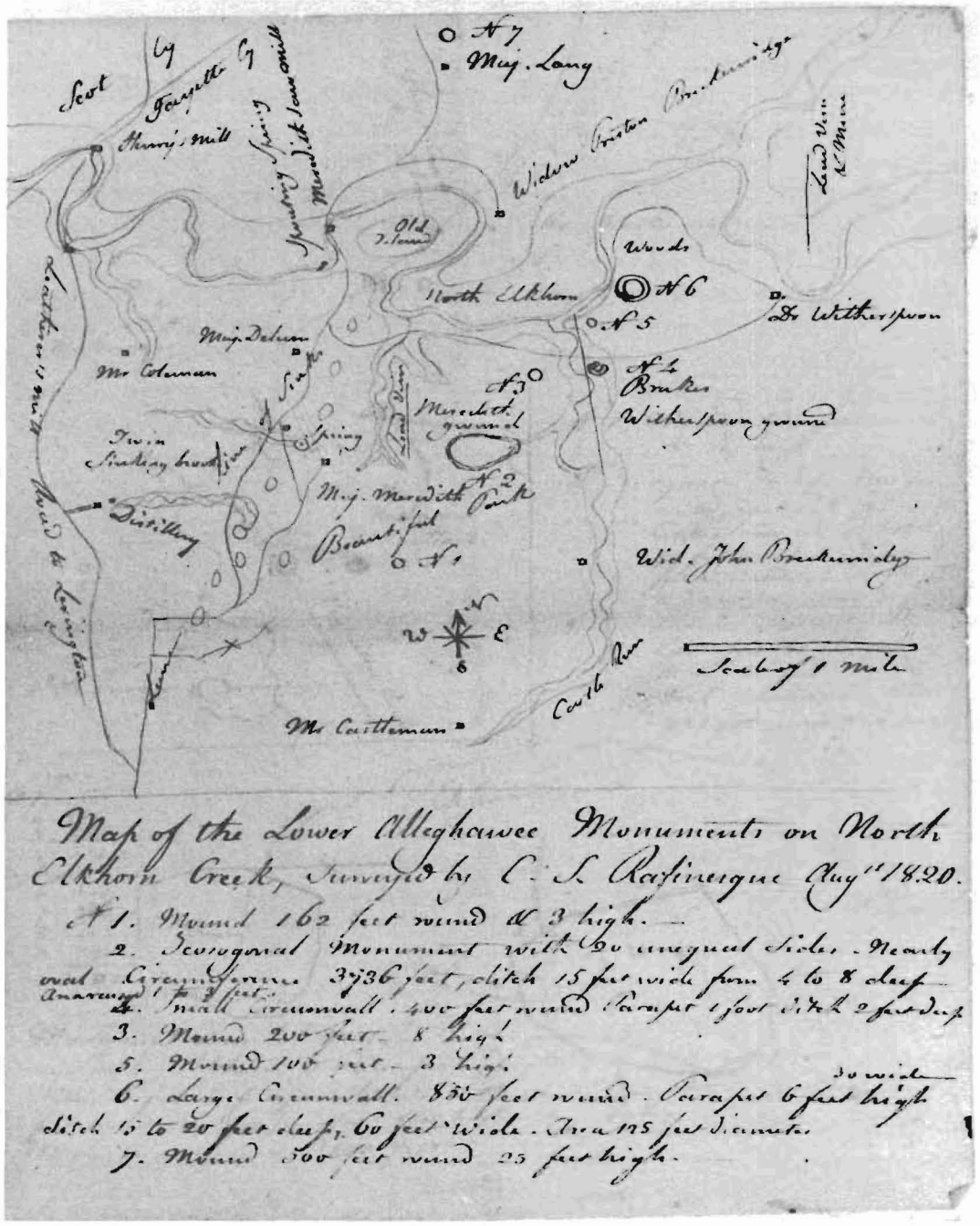

Figure 2.3. Sketch map of archaeological sittes in the Mt. Horeb vicinity drawn by Constantine Rafinesque and dated August 12, 1820 (original in the collections of the M.I. King Library, the University of Kentucky, Lexington, Kentucky).

The lack of cultural material in the ditch, the ephemeral nature of hearth use, and the extractive nature of the pits suggest that this area of Peter Village was not intensively used. In addition, the area suggests specialized activities and not generalized domestic usage. Finally, although three fragments of human cranium (interpreted as parts of a skull cap cup) were recovered from general midden, there is currently no evidence, either from this portion of the perimeter or from past surface collections, that burials were made within the enclosure. Peter Village was apparently not a mortuary site.

The excavated artifacts include two quite different pottery types, Fayette Thick (Griffin 1943) and Adena Plain (Haag 1940). The first of these, as described by Griffin, includes thick pottery (up to approximately 17 mm in thickness), cord or fabric marked, sometimes smoothed around the vessel neck, and rarely decorated with a pinched zone below the rim. The second includes plain surfaced, deep jars with exterior rim folds. The ditch sequence suggests that the two form a temporal series. Fayette Thick was associated with stockade erection, early use of the site, and with ditch construction. Adena Plain was associated with its use as a ditched enclosure. This is supported by sherds from the two pits. Fayette Thick is largely associated with Feature 2 near the stockade, Adena Plain with Feature 4 away from it. Assuming that this contrast does not indicate different uses for the features, it must indicate that there is a time difference between them, with Feature 2 the earlier of the two.

The collections are remarkable for the general absence of chert debitage; very little chert working for tool manufacture was done in this area of the enclosure. The chipped stone tools consist overwhelmingly of complete points and broken bases of the type Adena Stemmed. Many of these were made of Boyle chert, common in central Kentucky although not found near the site. However, local, poor quality chert was systematically crushed in the vicinity to produce tempering for Fayette Thick pottery, which is often chert tempered. This chert was not used for edged artifacts.

Important components of the lithic assemblage are fragments of granitic, ground stone axes. These, I suggest, are a by-product of land clearance and stockade construction. Other ground stone artifacts include fine- and coarse-grained sandstone palettes and worked, banded slate. The latter includes a fragment of a horned slate gorget very similar to examples recovered by Mills from the Tremper Mound in Ohio (Mills 1916: Figures 100, 102, 105).

Finally, the 1983 excavations document the fact, already demonstrated by surface collections yet never emphasized, that there is a high concentration of barite/galena artifacts and waste from their production at this site. This fact sets Peter apart from 11 other known sites in the area, with the possible exception of nearby Grimes Village. Rough-outs of barite/galena and broken artifacts were recovered, although no definite barite working area was identified. The type of artifact being produced at Peter Village was apparently a small, keel shaped, drilled or grooved weight in several styles which has been interpreted as a possible atlatl weight (Webb and Snow 1945:89-90). Barite/galena veins are very close to Peter Village (Anderson *et al.* 1982) and in fact were noted on Rafinesque's unpublished map of the locality (Figure 2.3). To date there is no indication that any mining was actually carried on in the enclosure.

While some *uses* of the Peter Village enclosure are evident from the excavated data (pottery production, manufacture of barite/galena artifacts, cooking), the *function* of the site complex is not now clear. In major part further excavations are clearly called for. More basic questions concerning the structure of inference involved in the interpretation of earthwork enclosures can, however, be raised.

In discussing English Neolithic causewayed camps, remarkably similar in some aspects to Peter Village, Peter Drewett has reviewed six possible functions for earthwork enclosures (Drewett 1977:222-

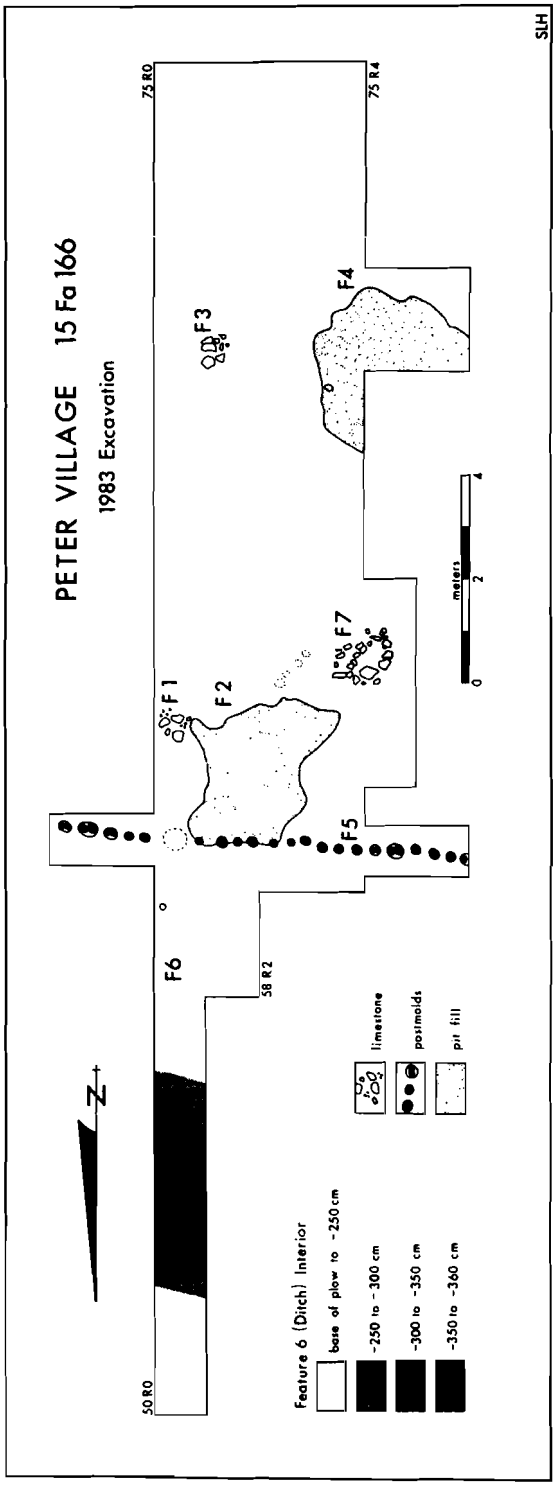

Figure 2.4. Ground plan of excavated features, 1983, excavation of Peter Village.

226) (a seventh—cattle enclosures—is not relevant to the New World). These are settlement, defense, trade center, communal meeting place, cult/ritual center, and burial site.

If by "settlement" one means that Peter Village was a more-or-less run of the mill domestic Adena site, there is little evidence to support such a functional interpretation. Most importantly, as noted, by size and perimeter structures Peter is set sharply apart from most archaeological sites from all periods in Kentucky. The concentration of specific artifact classes (barite/galena) and general lack of a full range of chert debitage also argue against such an interpretation. Finally, although this is the weakest argument because of the limited area which has been excavated, the features excavated to date suggest temporary site uses.

It is less easy to reject the interpretation that Peter Village was basically a defensive structure, a fortified strong point. As Drewett eloquently points out, archaeologists tend to judge the defensive nature of a prehistoric site by their own ethnocentric views of warfare (1977:223-224). Both the stockade and the ditch with an interior bank would seem to be suitable defensive works given our own "siege" mentality. Whether such a mindset was involved in Adena warfare is another matter. Perhaps the most telling argument against the site as a fort is involved with our assessment of how many Indians it would take to "man the walls." Standards of World War I trench warfare would require a considerable population for over 3,700 feet of walls. Currently we would have a hard time establishing where these people lived in the vicinity. Still, regardless of how many it took to defend the enclosure, obviously a large force was needed to construct it. We have no idea where the builders lived either, a realization which may blunt those critics who cannot accept Peter as a fortified enclosure because they cannot find evidence of the Adena army at hand.

An argument that Peter was a trade center should be weighed against Isobel Smith's original arguments for the Windmill Hill enclosure as a trade center (1965). Because ceramic styles and other raw materials from a number of different areas occurred at that site, she saw it as potentially a prehistoric version of the English country fair.

Ceramic variability has been identified at Peter: the shift from Fayette Thick to Adena Plain. However, this has been interpreted as a sequential development in Adena ceramics, not evidence of regional variability. The sort of variability which Smith noted should be sought in larger samples of ceramics than are currently available from Peter. If variability in the type Adena Plain does, for example, exist at the enclosure, greater than the variability existing at other Adena sites in the central Ohio Valley, then an important argument for a trade center function would exist following Smith's reasoning. Future excavation combined with extensive comparative work with the existing collections from other sites should address the question.

The clays and tempering materials used in pottery production at Peter were probably obtained locally. In addition, most of the chert used for tools is of the Boyle variety, not available "on-site" but fairly common in central Kentucky. Only the stone celts, sandstone palettes, and fragments of worked slate represent raw materials which come from outside the Bluegrass.

Barite/galena artifact production *was* conducted in the Peter enclosure, probably with raw materials obtained in the site vicinity. A superficial consideration of the distribution of artifacts of this material in the central Ohio valley suggests that the types of artifacts, including both the bar-shaped weights and cones, were distributed widely. Peter therefore may have been involved in a larger trading cycle, not so much as a meeting place for traders, but as one center providing the artifacts themselves for trade

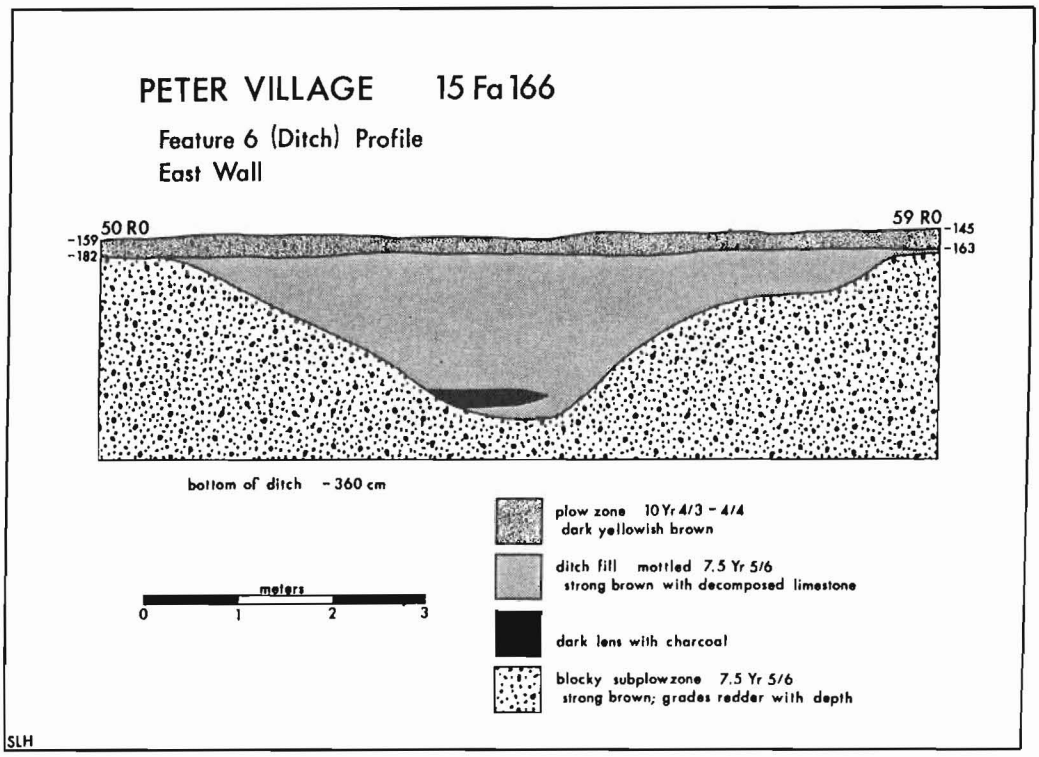

Figure 2.5. Cross section of ditch as excavated in 1983.

elsewhere. Thus, while not a trading "center" itself, Peter may have functioned importantly in a larger, extra-regional trading network.

The final three functions, communal places, cult/ritual centers, and burial sites, have to do with areas of function which are difficult to interpret archaeologically. I have indicated that the enclosure was probably not involved with the local mortuary system. Despite the evidence from mound sites such as C and O (Webb 1940), Dover (Webb and Snow 1959), and Wright (Webb 1940) that there were stages in burial preparation which were not conducted in or on mounds, there is no evidence of these stages in burial preparation at Peter, although there are burial mounds nearby (I assume that they might involve cremation, perhaps exposure of the corpse and preparation of fleshed bones).

I am perfectly prepared to accept a ritual/ceremonial function in part for the Peter Village enclosure, not, as Ashbee might do, "for want of a better term" (1960:95), but to emphasize that there are areas of human culture which simply cannot be reconstructed from archaeological data. Still, activities at Peter involved pot making and artifact production—there is a level to technological activity at the site which may be of less abstract significance.

As a ritual/ceremonial center, Peter reveals a dichotomy in Adena earthworks which has not been noted in the past. Peter is one of a very few non-geometric, oval or egg shaped enclosures (nearby Grimes Village [15-Fa-14] is another). Contrasting with these are the "perfect circle" enclosures represented by nearby Mt. Horeb (15-Fa-1a: Webb 1941), Biggs in Greenup County (15-Gp-8: Hardesty 1964), Dominion Land Company in Ohio (33-Fr-12: Otto 1979), the Newcastle and Anderson enclosures in

Indiana (12-Hn-1 and 12-M-2: Vickery 1979), and many, many others. As a rule these have interior ditches and, in the case of Mt. Horeb, an interior stockade.

Elsewhere I have suggested that Mt. Horeb type enclosures represent moments in evolving use of Adena ritual spaces (Clay 1982) which could be converted to burial mounds simply by starting a mound within (as for example at Biggs [15-Gp-8]). Because they are more regular in outline, and because they could be used later for mound loci, I suggest that the "perfect circle" enclosures may have been *more* ritual/ceremonial than was Peter. Such a hypothesis is, however, built on little excavated data.

Summarizing the function of Peter Village, it is probable that the site was involved in interregional trade as a source for certain items, near where raw materials were mined and as a precinct where they were finished into trade articles. This factor may most importantly explain why the site was located at this spot, in effect mapped on to a strategic materials resource (as defined by trade preferences). As such a strategic settlement, it may well have been "defensive" in posture, although the nature of intergroup warfare at this prehistoric time remains a real question. Finally it is probable that the site had ritual/ceremonial functions, although perhaps less so than the geometric earthworks which also occur in Adena. These, also, are difficult to comprehend from our present vantage point.

At this point in the analysis of Peter Village several points of significance emerge. Let me stress that these are hypotheses structuring my own work, but not yet fully supported by documentation.

First, the size and early dating of Peter Village are, whatever the site function, highly significant considered together. It is, I believe, the earliest such enclosure known in the Ohio Valley. Still, I do not believe that Peter is unique, for there are other, similar sites such as the adjacent Grimes Village, less than a half a mile away (Griffin 1943a; Webb 1943; Clay 1980). These sites point to a settlement type that has not yet figured in Adena cultural reconstruction. I am hesitant to characterize that type, yet am forced to the description "defensive resource exploitation center." The resource being exploited may have been barite/galena.

Second, there is a world of difference between Peter Village and the type of earthwork generally associated with Adena culture, what I have called the "perfect circle," others the "sacred circle." The perfect circles, with their exterior banks, interior ditches, and rigid geometry are, I have suggested, more "ritual" than Peter. Thus in Adena there varieties of earthwork enclosure, with differing uses and functions.

Third, Peter Village apparently spans the shift from Fayette Thick to Adena Plain pottery in the Bluegrass. As I have reconstructed it, the former was in use when the stockade was first laid out, while the latter was in use by the time it was abandoned. That shift, therefore, occurred sometime between *ca.* 310 B.C. and *ca.* 190 B.C.

The pinching on some Fayette Thick vessel necks has always served to set the type apart from the other thick, cord-marked, Early Woodland types of the Ohio valley and the midwest. This appears to be limited to Peter and Grimes Villages, and the poorly known Zorn Avenue site in Louisville. I suggest that this decorative attribute may appear in the Ohio valley, *ca.* 400-300 B.C., added to an existing midwestern tradition of thick, cord-marked ceramics. Thus pinching occurs briefly, just before Fayette Thick was replaced by Adena Plain and, importantly, as a modification of an existing ceramic style.

Interestingly, pinching roughly synchronizes at Peter, and by extension perhaps in the Bluegrass as a whole, with its occurrence at the Florence Street site in East St. Louis and at the Peisker site in the Lower Illinois Valley. There is, however, a difference between central Kentucky and the American

Bottoms in its appearance. At the latter Florence Zoned ceramics represent a sharp stylistic break with previous Marion ceramics (Fortier *et al.* 1984:72), while in Kentucky that break is not evident.

The similarity between these far-flung sites is not limited to pinched ceramics. In addition, Adena Stemmed Points are almost exclusive at Peter while the highly similar Waubesa-Dickson Points are almost exclusive at Florence Street (Fortier *et al.* 1984:67). The culture historical significance of these similarities is a fascinating question, drawing in, as it does, stylistic similarities with archaeological manifestations to the south which were noted by Griffin in his first discussion of Fayette Thick (Griffin 1943a).

Fourth, a review of C-14 dates from Adena mounds in the Ohio valley indicates that Peter Village is contemporary with the beginnings of accretional burial mounds as they are presently known. The Peter Village dates provide a rationale for reflecting once and for all some early dates which have plagued chronology. With few exceptions, Adena mounds cannot be reliably dated much before 300 B.C.

Finally, I suggest that Peter Village and sites like it at this time period indicate a cultural threshold. Prior to about 400 B.C., there existed a non-earthwork building, Early Woodland culture in the Ohio valley. In central Kentucky it is poorly represented in survey collections. Presumably it is marked by Fayette Thick ceramics and Adena Stemmed points. After this time, it was replaced by, or developed into, Middle Woodland culture, with a complexity of earthworks representing different site types.

In 1980 I questioned if Fayette Thick ceramics were associated with the earthwork at Peter Village, pointing out that if they were, the earthwork, by dating alone, may have been unrelated to the burial mounds which followed in time (Clay 1980). The 1983 excavations have clarified matters. Fayette Thick is associated with the Peter Village earthwork, as is Adena Plain, and the earthwork appears to span the transition between the two.

It has been the practice to relegate Adena to Early Woodland and Hopewell to Middle Woodland. Lately, Adena has crept into Late-Early Woodland, subtly modifying Dragoo's (1963) position that Early Adena was unknown although it existed. I suggest that both are most effectively considered Middle Woodland. The six hundred years following the establishment of Peter witness in the Ohio valley the intertwined developments of Adena and Hopewell. Peter demonstrates the complexity of some of the elements (earthworks) of this development at the *beginning* of the developmental sequence, rather than well into it.

Such a statement does not argue either that there is no difference between Adena and Hopewell, or that there is or is not a developmental relationship between them. Clearly, there are differences between the two cultural phenomena, and developmental relationships, if they exist, have yet to be ascertained. Rather, this point of view asserts that Adena and Hopewell are products of the same set of factors. These are involved with the substantial modification of existing Early Woodland social and political structures and are expressed in enhanced inter-regional trade and resource exploitation, the construction of both "defensive" and "ceremonial" earthworks, and the elaboration of burial ritual far beyond Early Woodland beginnings, such as they may have been.

I believe that Peter Village, and the cultural events it reflects, symbolically punctuates Early Woodland development in this portion of the Ohio valley. Whether it does so with a comma, a semicolon, or with a period and a new paragraph, represents a challenging culture historical question.

Acknowledgements

The 1983 excavation at Peter Village was made possible by a grant from the Kentucky Heritage Council and the support of the University of Kentucky and the Office of State Archaeology. The support of these institutions is gratefully acknowledged. Mr. Frank Lyle, owner of the major portion of the site, graciously permitted excavations on his land.

3

Continuity and Change in the Middle Woodland Occupation of the Northwest Alabama Uplands

Eugene M. Futato

Excavations in the uplands of the Bear Creek watershed have resulted in the recognition of four successive Middle Woodland phases from ca. 300 B.C. to A.D. 700. Ceramic and lithic assemblages indicate a cultural continuum. Changes in material culture and mortuary practices are related to shifting patterns of interaction with adjacent Tennessee valley and Tombigbee valley cultures.

INTRODUCTION

This paper is drawn from the results of TVA sponsored excavations in the Little Bear Creek (Oakley and Futato 1975) and Cedar Creek reservoirs (Futato 1983), which are located in the uplands of the Bear Creek watershed, northwest Alabama (Figure 3.1). The Bear Creek watershed is an environmentally diverse area and includes portions of several physiographic districts (Johnston 1930). The headwaters lie in the Warrior Basin and Moulton Valley districts of the Cumberland Plateau, but most of the watershed, including the reservoir areas under discussion, lies within the Fall Line Hills district of the East Gulf Coastal Plain. The lower reaches of the watershed are within the Tennessee Valley district of the Highland Rim. Elevations range from approximately 330 m AMSL at the headwaters to approximately 120 m AMSL where Bear Creek joins the Tennessee River. Elevations in the reservoir areas vary from about 240 m AMSL on the ridge tops to 150 m AMSL along the streams. The Tuscaloosa group, which defines the Fall Line Hills, is approximately 15 m thick on the ridges and has been eroded away in the major stream valleys.

The Fall Line Hills district is included in Harper's (1943) Central Short Leaf Pine Belt. Common tree species here include species of pine, three species of oak, bay, gum, poplar, maple, and beech. A compilation of 264 plant species of known or probable occurrence in the area included 89 species known to have been used ethnographically (Oakley 1975a). A wide variety of fish, reptiles, birds, and mammals is found in the watershed, but it should be noted that mussels do not occur as far upstream as the reservoir projects (Isom and Yokley 1968).

COLBERT

The first probable Middle Woodland occupation in the Bear Creek watershed is assignable to the Colbert culture as described by Walthall (1980). This occupation is only considered probable because no

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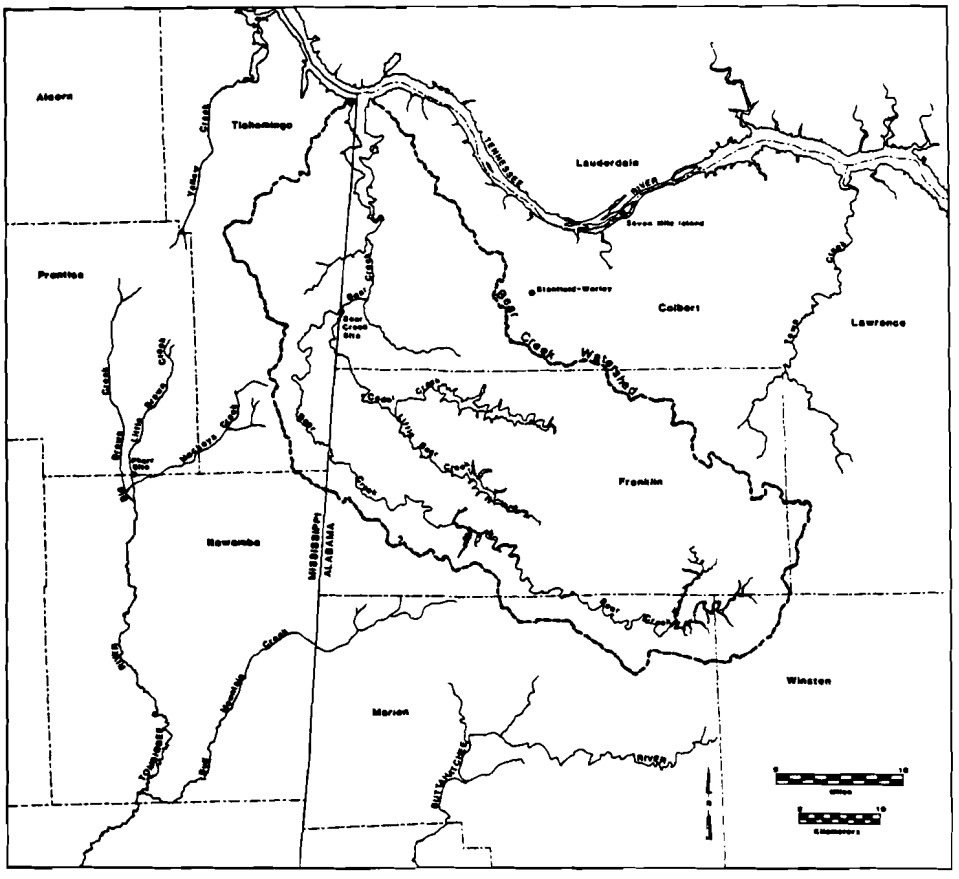

Figure 3.1. The Bear Creek Watershed.

good Colbert components have yet been identified. The Colbert culture is characterized by a ceramic assemblage including Long Branch Fabric Marked and Mulberry Creek Plain in the form of large conodial jars. Sherds of these types are common in the area, but the lack of isolable Colbert components prohibits recognition of a local Colbert phase.

A large portion of a Long Branch Fabric Marked jar along with sherds of Mulberry Creek Plain and a Little Bear Creek PP/K were found in Feature 27 at the Dam Axis site (1-Fr-524) in Little Bear Creek Reservoir. A radiocarbon date of A.D 100 ± 125 (Futato 1975a:86) for this feature, however, is too late for a Colbert occupation.

Since the Colbert ceramic types continue into later Middle Woodland phases, it is possible that there is no Colbert occupation in the Bear Creek Watershed. This is considered unlikely, though, and a Colbert occupation for the area is inferred to have taken place from about 300 B.C. to A.D. 1.

THE LICK CREEK PHASE

The Lick Creek phase represents an early Middle Woodland occupation of the Bear Creek watershed and appears to be restricted to this area. Little is known about the areas to the south, but comparable assemblages have not yet been reported from adjacent watersheds to the east and west, or from the Pickwick Basin to the north. There are two radiocarbon dates for the phase: A.D. 140 ± 90 and A.D. 280 ± 50, both from the Massey mound, 1-Fr-520 (Oakley 1975b:223-224). The Lick Creek phase is estimated to date from approximately A.D. 1 to A.D. 300, between the Colbert and Copena occupations.

Data on the Lick Creek phase comes mainly from the excavation of four mortuary mounds, sites 1-Fr-520, 1-Fr-528, and 1-Fr-594 in the Little Bear Creek Reservoir (Oakley 1975b), and 1-Fr-571 in the Cedar Creek Reservoir (Futato 1983). Features assignable to the phase were also excavated at 1-Fr-310, the Ricker site on Cedar Creek (Futato 1983), and at 1-Fr-524, the Dam Axis site (1-Fr-524) on Little Bear Creek (Futato 1975), but as seems to be the case with Middle Woodland in general, the Lick Creek phase is known primarily from mortuary practices.

Ceramics And Lithics

The Lick Creek ceramic assemblage consists primarily of Flint River Cord Marked and Mulberry Creek Plain. Most of the Lick Creek features from 1-Fr-310 also contained Wright Check Stamped, Pickwick Complicated Stamped, Bluff Creek Simple Stamped, or Long Branch Fabric Marked, but these types have not been found in mortuary contexts. At site 1-Fr-524, features that contained cord marked pottery and features that contained stamped pottery were mutually exclusive, with three and seven examples, respectively. This suggests that the majority of the site 1-Fr-310 features, which contained both surface treatments, are seriationally intermediate in a sequence that proceeds from cord marking to stamping. At present, the cord marked assemblage is considered earlier Lick Creek; the mixed assemblages, later Lick Creek; and the stamped assemblage, Copena. However, the absence of stamped ceramics in mounds makes the assignment of mixed assemblages to late Lick Creek somewhat equivocal.

The cord marked, stamped, and plain vessels from habitation sites are of similar form, the most common being a flared rimmed tetrapodal jar. Straight and incurvate rims also occur. Handles are not known to occur until the late Middle Woodland. Stamping or cord marking usually extends from the lip to the base, but a few sherds exhibit smoothed bands 20-25 mm wide below the lip, and some body sherds suggest the presence of smoothed bases. Rim folds occur occasionally. Narrow folds, measuring less than 8 mm, are plain. When the fold is wide, 13-25 mm wide, it is tamped or cord marked like the rest of the vessel. Broken portions of several wide rim folds indicate that vessels were paddled to the lip, the rim was folded down, and the fold repaddled.

Vessel shapes found in mortuary association are usually miniatures. Tetrapodal jars similar to those on habitation sites occur, but these are usually only approximately 15 cm high. Small globular jars are also found, and two open bowls, 10-15 cm in diameter, have been recovered as well. Nonminiature vessels are ordinarily represented only by large sherds, most often rim sherds.

Minority ceramic types associated with the Lick Creek phase include types associated with Late Miller I to Early Miller II (Jenkins 1982). Furrs Cord Marked has been found in mortuary contexts and at site 1-Fr-310, while a miniature Basin Bayou Incised vessel was found at the Johnson Mound (1-Fr-571). A limestone tempered copy of Basin Bayou Incised was found at the Massey Mound (1-Fr-520) on Little Bear Creek. Saltillo Fabric Impressed *vars. China Bluff* and *Tombigbee* has been recovered from

habitation sites. Reciprocal evidence of Lick Creek-Miller interaction includes the presence of Lick Creek ceramic assemblages in mortuary and habitation site assemblages at sites such as Miller (Jennings 1941), Pharr (Bohannon 1972; Karwedsky 1980), 22-It-581 (Bense 1983), and others.

Cormorant Cord Impressed may be another significant associated minority type. Excavations at site 1-Fr-310 recovered 18 sherds of this type representing at least six and possibly nine vessels, all but one of the sherds from general midden contexts. A single Cormorant Cord Impressed sherd was recovered from Feature 48, containing 32 sherds of Wright Check Stamped and no cord marked sherds, suggesting that the Cormorant Cord Impressed is at least in part associated with Copena.

Other ceramic types from 1-Fr-310 that may date to the Lick Creek phase include a few limestone tempered cord marked sherds with hollow cane punctations and a few sherds with fingernail punctations, rocker stamping, or incising. Single examples of Twin Lakes Punctated and Indian Bay Stamped were also found in the midden at 1-Fr-310. Ceramic artifacts other than pottery include two fragmentary elbow pipes and two platform pipes; all of these are limestone tempered and all were recovered from mortuary contexts.

The projectile point/knife (PP/K) assemblage associated with the Lick Creek phase includes types of the Greeneville cluster, particularly Copena Triangular and Greeneville, as well as smaller numbers of types of the Lanceolate Expanded Stemmed cluster, mostly Swan Lake and Mud Creek (Futato 1983).

Other lithic materials from Lick Creek phase features at 1-Fr-310 and 1-Fr-524 include trianguloid biface blades, hammerstones, preforms, cores, and scrapers on flakes. A broken biface, one small blade, two microlith perforators, and a celt fragment were also recovered. Several additional blades of local and nonlocal materials were found in the midden at 1-Fr-310, at least one of which is made of Flint Ridge chert.

Lithic materials from the mounds include two stemmed PP/Ks, preforms, biface blades, a graver, a flake knife, and a rectangular two hole limestone gorget from 1-Fr-520. A bar gorget of shale and two preforms were found at the Carpenter Mound (1-Fr-594), while a hammerstone and a preform were found at 1-Fr-571.

Other Artifacts

A variety of other artifacts has been found in mortuary association. Bone artifacts include a bowl made from the carapace of a turtle (*Terrapene carolina*) at 1-Fr-520 and a possible bird long bone bead from 1-Fr-571. The only metal artifact found to date is a copper awl from 1-Fr-520.

Shell artifacts are relatively more common and more variable in the mounds. Site 1-Fr-571 on Cedar Creek produced a variety of bead forms, including *Marginella* and *Olivella*. Cylindrical, disc, square disc, and barrel shaped beads were made from shell walls and columellae. Four collar or crescent-type gorgets and one perforated gorget were also found.

Two columella beads, two marine shell bowls or dippers, two gorget fragments, and a possible mussel shell spoon were found in the Massey Mound (1-Fr-520) on Little Bear Creek. Excavations at site 1-Fr-594 produced a triangular shell gorget, two *Marginella* beads, and a mussel shell spoon.

Subsistence

Data on Lick Creek phase floral and faunal remains are very limited. Among the botanical remains from six features at 1-Fr-310, hickory nut shell comprised 85 percent of the sample, and wood charcoal

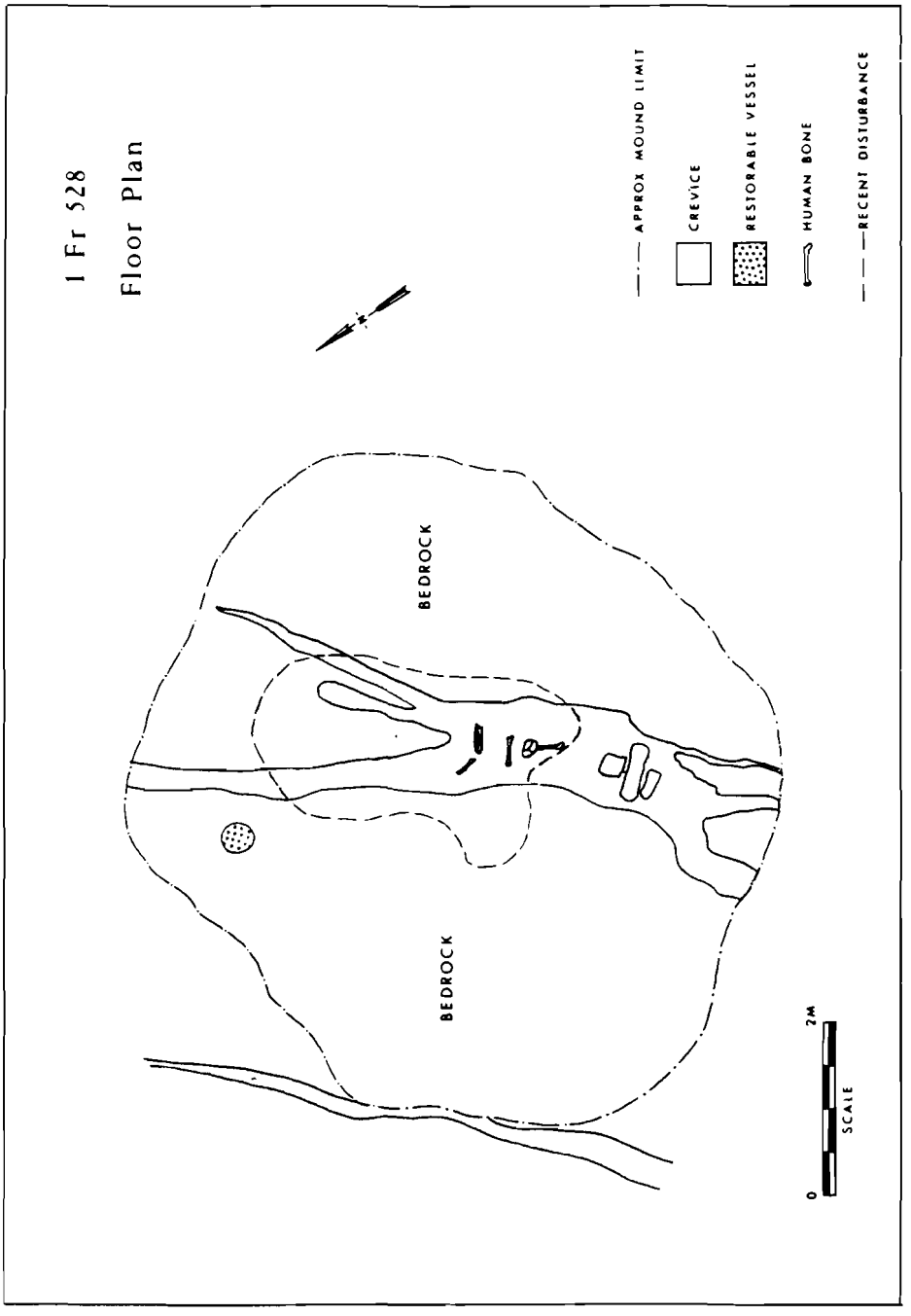

Figure 3.2. Floor plan, 1-Fr-528.

another 13 percent. The total nut remains includes 98.2 percent hickory, 1.1 percent acorn, and 0.7 percent black walnut. Identified seeds included five maypop, four maygrass, and one each of grape, bedstraw, knotweed, and bindweed (Caddell 1983). Hickory nut shells, persimmon seeds, and possible cane fragments were found at 1-Fr-524. Cultigens have not yet been identified in the Lick Creek phase.

Vertebrate remains from four Lick Creek features at 1-Fr-310 included 97 percent deer and 2 percent eastern box turtle by weight (Hale 1983). The remaining one percent included soft-shelled turtle, non-venomous snake, fish, opossum, rabbit, eastern grey squirrel, grey fox, and raccoon. However, each of the ten identified species is represented by only a single minimal individual. Faunal remains identified from 1-Fr-524 include deer, non-venomous snake, and unidentified turtle.

Mortuary Practices

The mortuary practices of the Lick Creek Phase are known from the excavation of four stone mounds, since no village burials have been discovered. Although each of the excavated mounds has distinctive features, factors common among all the mounds are the presence of disarticulated and/or cremated multiple burials, the movement of materials within the loose rock fill, and extensive previous disturbance.

The Venus Mound (1-Fr-528)

Located on the crest of a ridge overlooking a tributary valley at the confluence of Hughes Branch and Guinn Branch, the Venus Mound (Oakley 1975b) is the least complex mound excavated and was little more than a large cairn built over a natural crevice in a bedrock outcrop (Figure 3.2). The original size of the mound is estimated to have been 8 m in diameter and approximately 50 cm high.

A total of 209 bone fragments representing at least three subadults and two adults (Scharff and Bass 1975) was found scattered through the mound, but skeletal elements were concentrated over and within the crevices. Some suggestion of articulated remains was noted in the main crevice. Three bone fragments showed indications of burning. The sole artifact from the mound was a miniature Flint River Cord Marked tetrapodal jar lying crushed onto the bedrock near the crevice.

The Carpenter Mound (1-Fr-594)

The Carpenter Mound (Oakley 1975b) was located on the slope of a ridge spur overlooking the confluence of Carpenter Branch and Little Bear Creek. The mound was approximately 11 m in diameter and 125 cm high and was built over tabular slabs of exposed bedrock (Figure 3.3). Interpretation of 1-Fr-594 was made more difficult by the presence of at least one, and possibly two or three, intrusive Mississippian burials. Vessels 1 and 2 from the site were a Warrior Plain bowl and jar, respectively; these were found in possible association with Burials 2, 3, and 4. The only other significant bone concentration noted was Burial 1, a concentration of cranial fragments.

It was observed throughout the site that bone fragments were found lying directly on the bedrock, often in association with small deposits of brown sandy soil distinct from that in the immediate area. Excavation of several centimeters of subsoil throughout the mound area produced no indications of submound burials. Approximately 8 percent of the bone fragments showed indications of burning.

Artifacts from the mound included two broken PP/Ks, two preforms, a Flint River Cord Marked bowl, a bar gorget of shale, two *Marginella* beads, a shell spoon, and a triangular shell gorget. A fossil coral was also found. None of the artifacts could be determined to be in definite burial association.

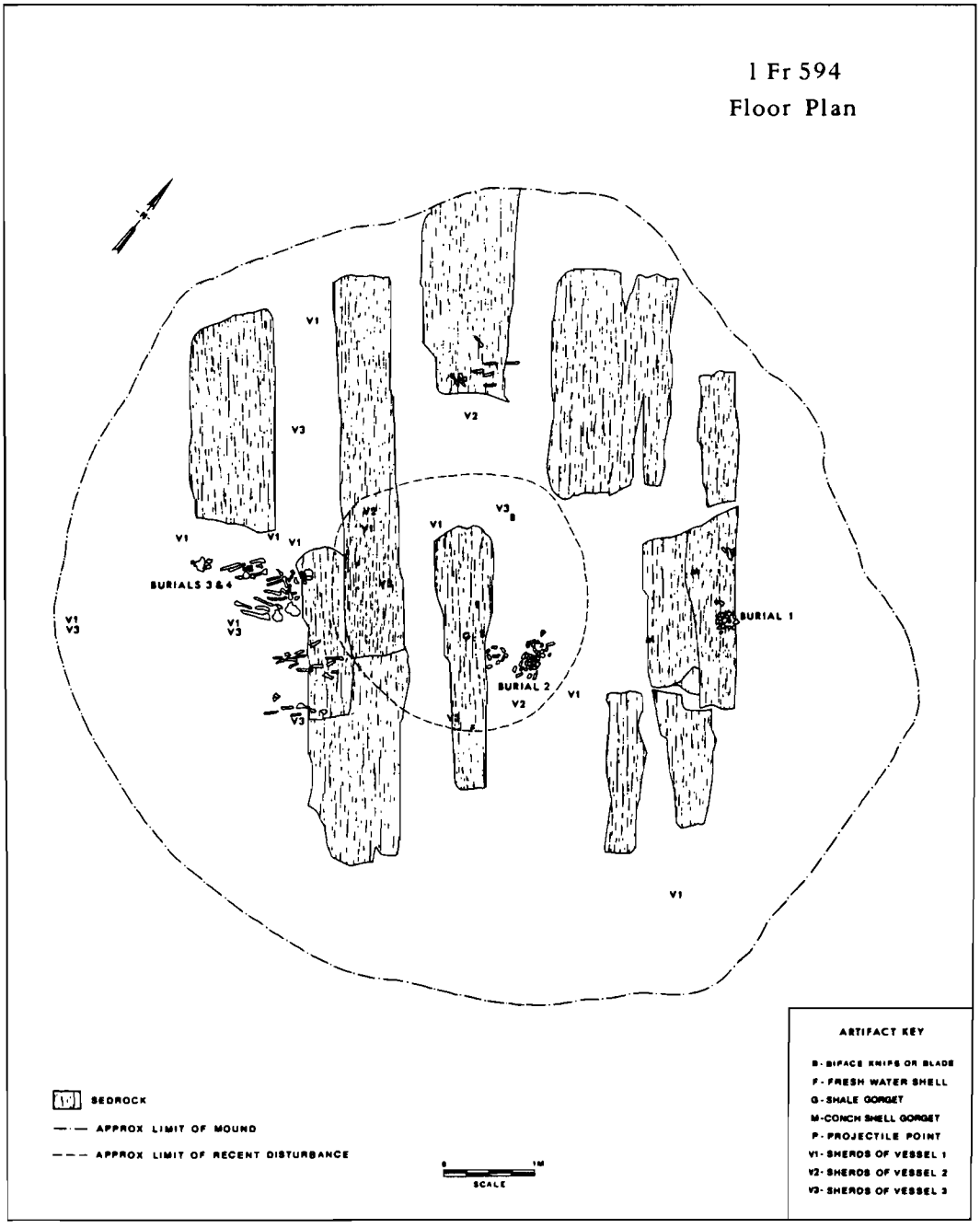

Figure 3.3. Floor plan, 1-Fr-594.

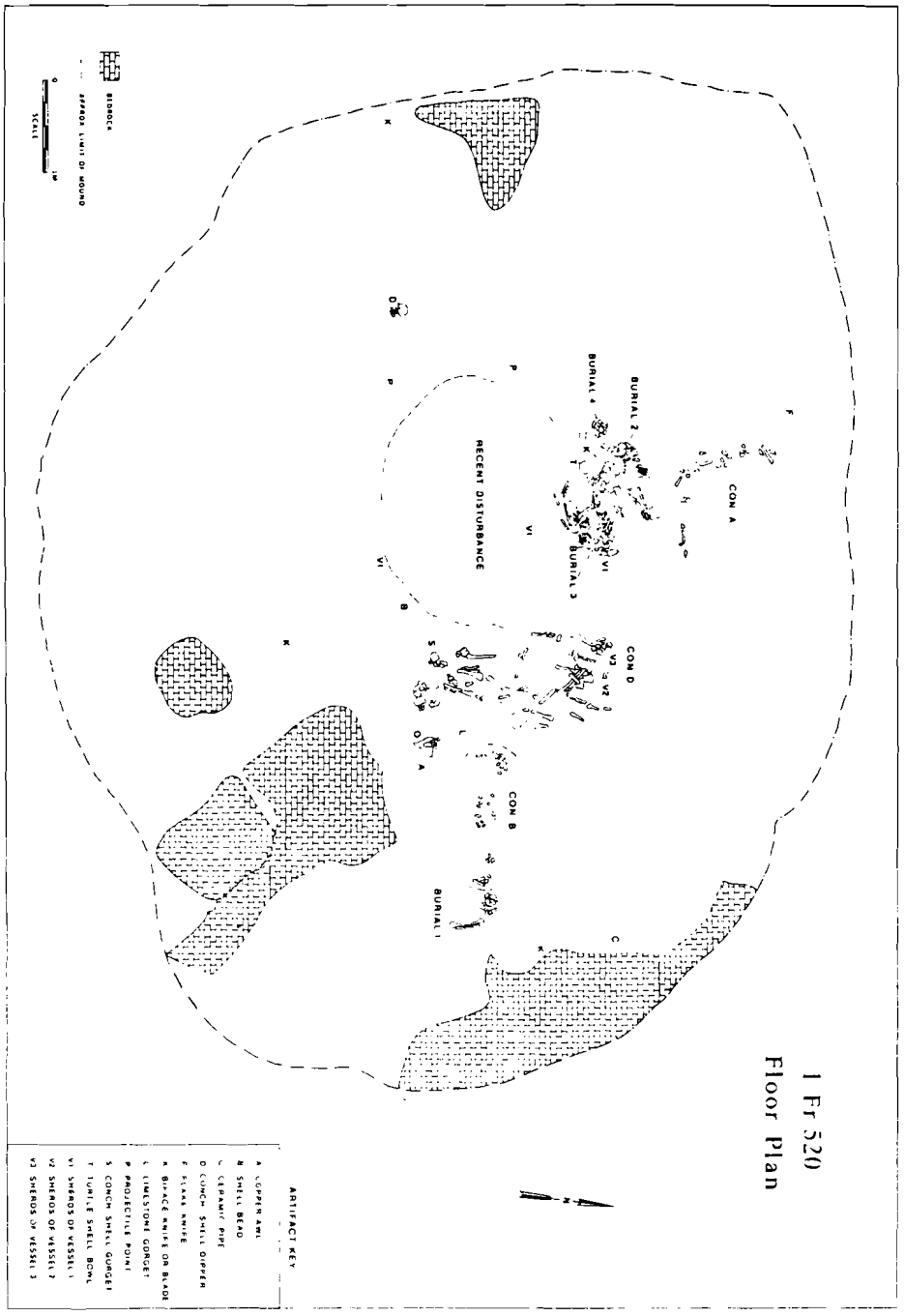

Figure 3.4. Floor plan, 1-Fr-520.

Thus, the Venus and Carpenter mounds are similar in that they appear to have been simple mounds containing a relatively small amount of articulated and/or secondarily deposited remains. Evidence for cremation was minor and there were relatively few artifacts in the mounds.

The Massey Mound (1-Fr-520)

The Massey Mound (Oakley 1975b) was located just below the crest of a large hill overlooking the confluence of Little Bear Creek and Trace Branch. This mound was approximately 10 m in diameter and 75 cm high. Upon excavation, the mound proved to contain a larger quantity of skeletal material than the other two Little Bear Creek mounds, as well as more frequent and varied artifact associations.

A submound feature containing three individuals, considered to have been a single mortuary event, was located just north of the apparent mound center (Figure 3.4). Burial 3 was a flexed adult female at the base of this feature; near the feet were the skull and cervical vertebrae of a subadult aged 5-7 years. Adjacent to the pelvis and femurs of Burial 3 was a turtle shell bowl containing a bird long bone fragment and a mussel shell (possibly a spoon). A biface blade or preform lay on the femur. Most of Vessel 1, a limestone tempered copy of Basin Bayou Incised, was found near the skull of Burial 3. Burial 2 was a flexed adult male, overlying but slightly offset from Burial 3, separated by about 10 cm of dirt and rock.

The only other possible primary interment in the mound was Burial 1. This burial comprised major portions of a cranium, scapula, humerus, ulna, and radius in a roughly articulated position. The cranial fragments were lying on a basal sherd of a Flint River Cord Marked tetrapodal vessel.

In all, 65 percent of the bone fragments from the site were burned and three large deposits of cremated remains were recorded (Figure 3.4). One deposit, representing at least two individuals, was an arc shaped array of fragments covering an area approximately 250 cm by 30 cm; the second was a linear deposit some 120 cm long and 40 cm wide. No artifacts were found in association with these remains. The final concentration measured approximately 1 m by 2 m and contained the remains of at least four individuals. The bone material was blackened but not calcined. Dark soil containing charcoal fragments surrounded the bones, but some articulation was observed. Two Flint River Cord Marked globular jars were found at the north end of this deposit. Near the southeast corner were a conch shell bowl or dipper, a copper awl, and a limestone gorget; fragments of two shell gorgets were found nearby.

The Johnson Mound (1-Fr-571)

Site 1-Fr-571 (Futato 1983) is the only stone mound excavated along Cedar Creek and, in many ways, is structurally the most complex mound of those investigated (Figures 3.5, 3.6, 3.7). The mound was located on the edge of a high bluff overlooking the Cedar Creek valley, and at the time of excavation measured some 10 m by 13 m in diameter. Like the others, this mound had been subjected to extensive prior disturbances.

The mound included two strata of fill with one layer of large slabs separating the fills and another forming a floor for the mound. A cache of 94 shell beads was found between slabs separating the fills, while a platform pipe and two pottery vessels had been placed between slabs at the mound floor. The mound floor was encircled by a wall of limestone slabs, set vertically in a shallow trench or stacked flat in one area where bedrock was very close to the surface. Two shallow pits had been excavated beneath the floor of the mound, and the small amount of associated bone as well as some shell artifacts suggest that these pits contained burials, but with no particular elaboration.

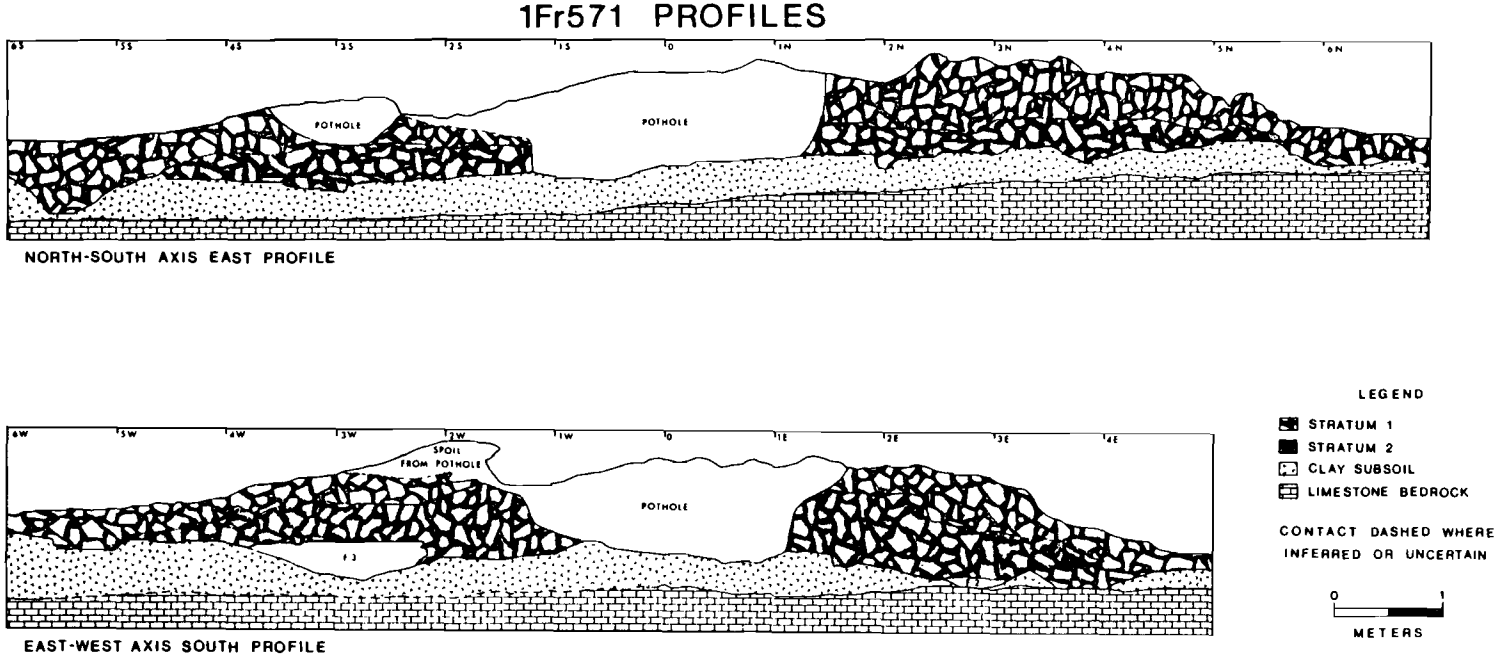

Figure 3.5. 1-Fr-571 profiles.

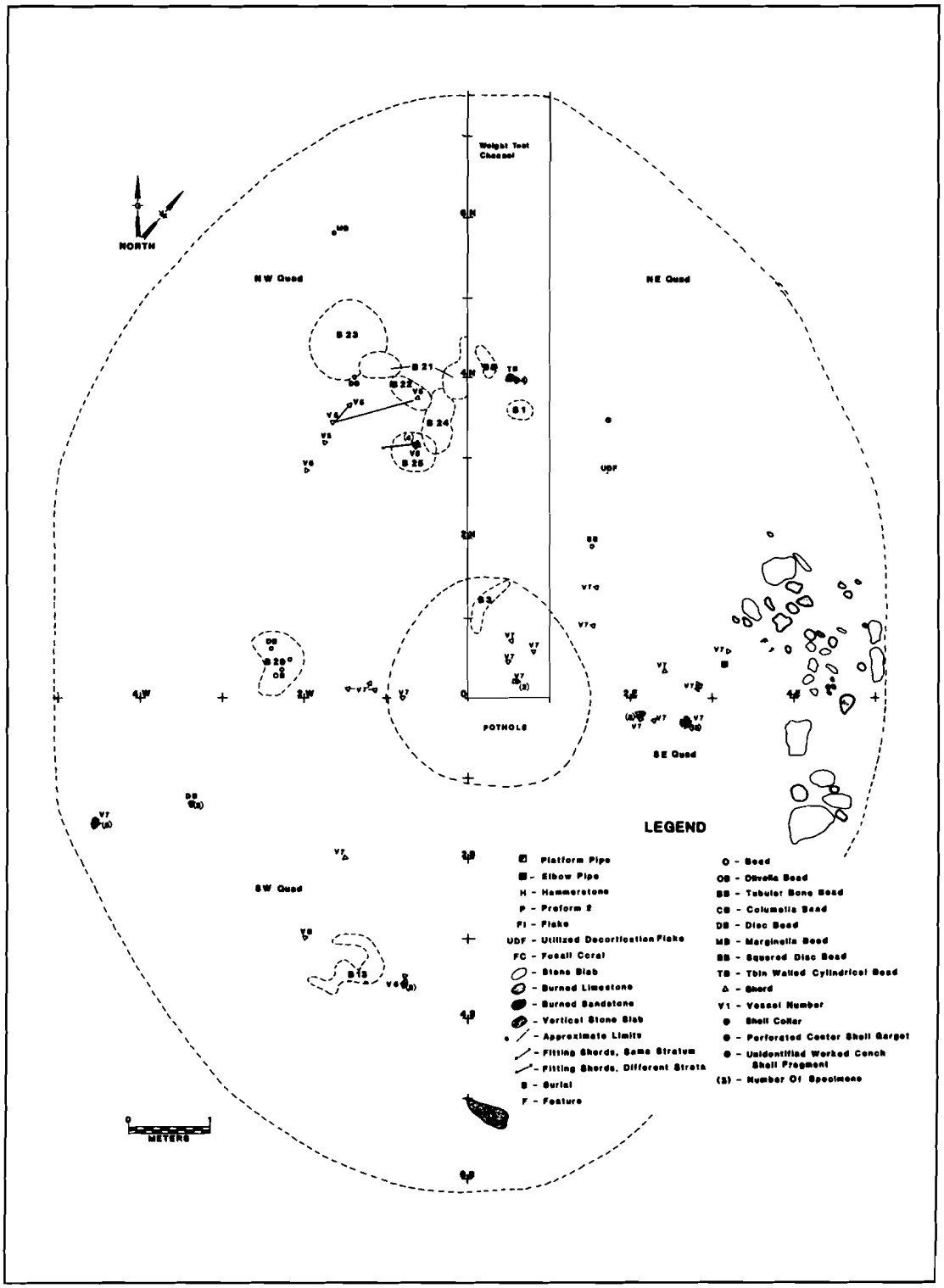

Figure 3.6. 1-Fr-571. Stratum 1 plan.

Most of the skeletal material was recovered from 42 mapped concentrations of disarticulated fragmentary remains. Most contained multiple individuals, and remains of single individuals were spread across several concentrations. Less than 0.1 percent of the bone fragments were burned. Associated with the bone concentrations were nine shell beads and three shell gorgets spread among five concentrations; a fossil coral was also found with one concentration. The remainder of the artifacts was located throughout the mound fill, including a shell collar, a limestone tempered elbow pipe, and shell beads from the upper fill. The lower fill produced a limestone tempered platform pipe, shell beads, large rim sherds from two Flint River Cord Marked jars, a Furrs Cord Marked bowl, and a Basin Bayou Incised jar.

The skeletal material from 1-Fr-571 includes the remains of at least 12 adults and 7 subadults (Turner 1983). Male and female adults are represented in approximately equal numbers, while the ages of the subadults range from prenatal through late teens. The indications are, therefore, that neither age nor sex was a criterion for burial in the mound. Every sufficiently preserved cranium exhibits marked occipital and parietal flattening and three also show bifrontal flattening. By comparison, four of six sufficiently preserved crania from the Copena mounds at 1-Fr-311, approximately 1.5 km away, showed symmetrical frontal-occipital deformation. A seventh cranium had similar occipital deformation but the frontal region was not preserved.

COPENA

The Lick Creek phase is followed by an unnamed Copena phase. The presence of a Copena related phase in the Bear Creek watershed is demonstrated by the presence of at least one, and very possibly three, Copena mounds at the Hester site, 1-Fr-311. Furthermore, Lafferty and Solis (1980) report an additional mound group in the Cedar Creek area. These mounds have not been excavated, but local reports of "large green axes" being found here suggest a Copena affiliation.

No phase name has been assigned to this local Copena manifestation because it is known almost exclusively as a mortuary complex. A single feature at 1-Fr-310 and seven features at 1-Fr-524 are the only other archaeological contexts in the watershed which have been assigned to Copena. A number of Middle Woodland features from 1-Fr-310 containing both stamped and cord marked sherds have been considered Lick Creek rather than Copena. This admittedly rather arbitrary assignment obscures an important point in the local chronology: "Which is earlier in the area, Copena mounds or Copena ceramics?" The present assignment was based on an assumption that mortuary ceremonialism will be more conservative than surface treatment of ceramics, but that assumption needs to be tested by additional radiocarbon dates.

The only radiocarbon dates for Copena in the Bear Creek watershed are A.D. 380 $\pm$ 50 and A.D. 380 $\pm$ 75 for burials at the Hester site (Futato 1983:82). These dates agree with dates of A.D. 320 $\pm$ 65 for the Ross mound, 1-Ms-134, and A.D. 375 $\pm$ 75 for the Leeman mound, 1-Mg-62, reported by Walthall (1972). Based on these dates and cross dating with other sites the Copena occupation of the Bear Creek watershed is estimated to date from A.D. 300 to A.D. 500.

Ceramics And Lithics

The local Copena ceramic assemblage differs little from that of the Lick Creek phase and by all appearances develops directly from it. Virtually the only difference in the assemblage is a change in the form of the paddle used in manufacture: carved paddles are substituted for cord wrapped paddles.

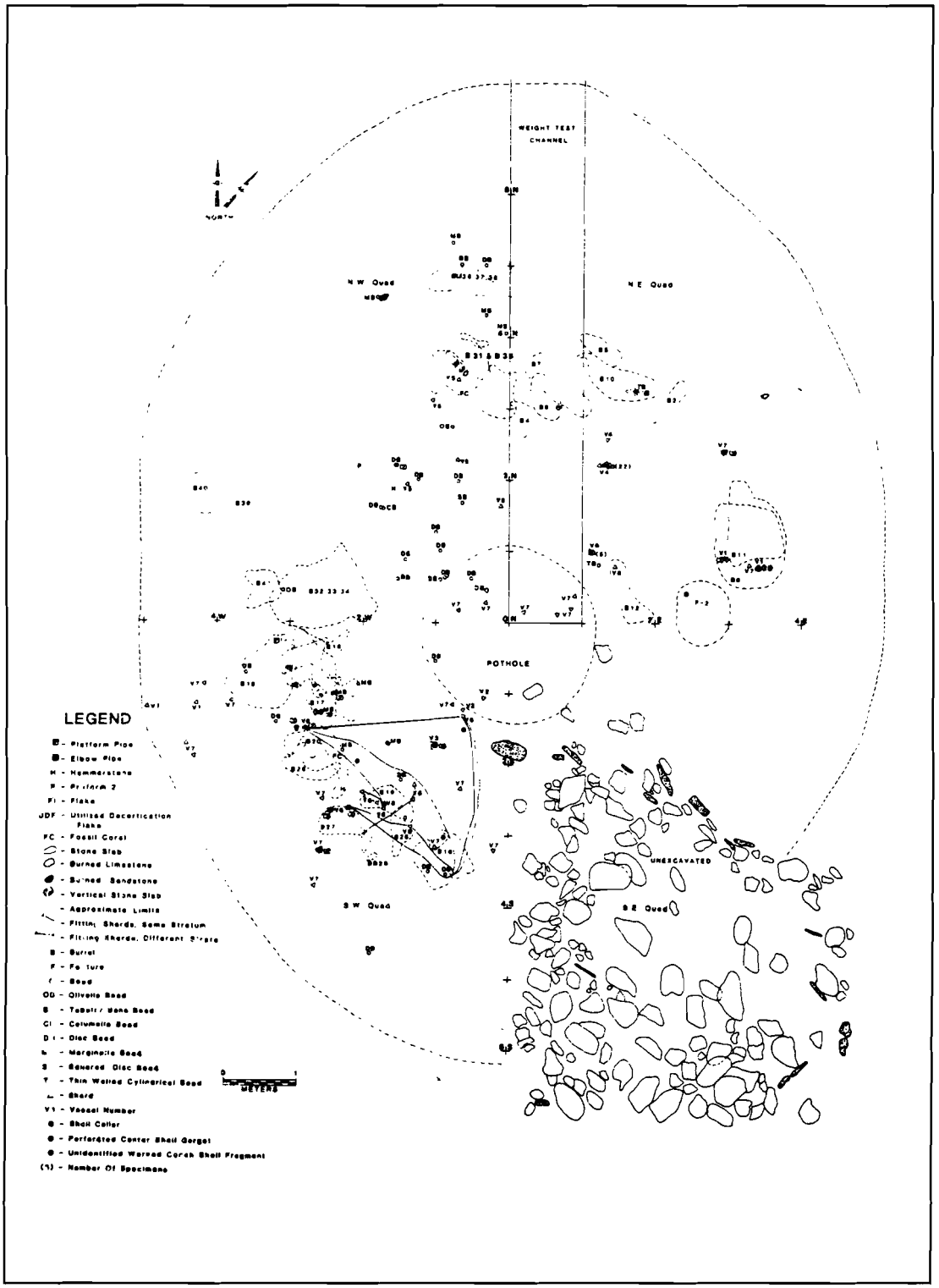

Figure 3.7. 1-Fr-571. Stratum 2 plan.

The vessel shapes are the same, large flared rimmed semiglobular jars. Some have podal supports, none have handles. The details of rim form and stamping are likewise similar. Some rims are folded; narrow folds are left plain, wide folds are overstamped. The stamping appears to a have extended from rim to base. Only one sherd of Wright Check Stamped showed a boundary between stamped and plain areas of the vessel.

The Copena ceramic types are, of course, Mulberry Creek Plain, Wright Check Stamped, Bluff Creek Simple Stamped, and Pickwick Complicated Stamped. Mulberry Creek Plain appears to have been the majority type. Flint River Cord Marked and Long Branch Fabric Marked may have continued into the earlier part of the assemblage. It is also possible that some of the minority types noted under the Lick Creek ceramic discussion are associated with the Copena ceramic assemblage.

No clear evidence of interaction with Miller peoples can be seen in the Bear Creek Copena ceramics. This is largely because of the small sample size: few Copena features have been excavated and ceramics are seldom included in Copena mounds. Also, the contemporary Miller II assemblages are essentially marked by the same types as are found with the Lick Creek phase, but in differing percentages, so it is necessary to find these types in good context to determine their association in Bear Creek.

Copena ceramics are common in the Late Miller II Turkey Paw subphase of the central Tombigbee Valley. Mulberry Creek Plain, Wright Check Stamped, and Pickwick Complicated Stamped make up nearly 20 percent of this assemblage at 1-Pi-61 (Jenkins 1982:150). These ceramics are approximately 75 percent plain, 20 percent check stamped, and 5 percent complicated stamped. A similar but much smaller assemblage is reported from the Bynum Mounds by Cotter and Corbett (1951:20-21). Thus, evidence of a Copena related ceramic assemblage in Miller II sites is clear. However, in the absence of a reciprocal assemblage in the Bear Creek watershed we cannot state whether this represents contact with this watershed or with other areas such as Pickwick Basin. We can note at this point, however, that the distribution of limestone tempered ceramic complexes at Miller sites is essentially dichotomous. Sites exhibit either a Lick Creek-like assemblage or a Copena-like assemblage. This distinction probably relates mainly to time, Lick Creek being earlier than Copena. But Lick Creek in the Bear Creek watershed may be contemporaneous with Copena elsewhere, so the distinction may also reflect interaction with different areas.

The Copena PP/K assemblage includes the same types as Lick Creek: Greeneville cluster types, particularly Copena Triangular and Greeneville; and Lanceolate Expanded Stemmed cluster types, particularly Swan Lake and Mud Creek. We do not have sufficient data to evaluate any changes in specific PP/K types from Lick Creek to Copena. Feature 48 at site 1-Fr-310 contained an expanding triangular biface, a microlith, and ground hematite fragments. Two Archaic PP/Ks in the fill, however, indicate that all of this material may not be Copena. Copena features at 1-Fr-524 (Futato 1975a) produced a trianguloid biface, drills, spokeshaves, and scrapers on flakes. The pecked and ground stone from these features included mullers, a pitted anvilstone, and a hammerstone. Excavations of the mounds at the Hester site, 1-Fr-311, recovered greenstone celts and spades, copper beads, a copper earspool, ground galena nodules, and flecks of mica. Nielsen and Stowe (1971:77) also list fragments of copper reel-shaped gorgets reported to have come from this site.

Other Artifacts

The only other artifacts assignable to the Copena occupation of the watershed are from burials at Hester site, 1-Fr-311. Burial 5 at this site had among its associations two conch shell bowls and a conch shell spoon. Copper beads at this site had preserved fragments of cordage. Analysis of this cordage (Gyllenhaal-Davis 1983) indicated that most of the cordage was 2-ply, one example was 4-ply, and one was re-plied. The cordage included S and Z twists, but individual elements were all S-spun. Analysis of the fibers showed them to be bast fibers from one of the Urticaceae, probably *Urtica* or *Bohmeria*.

Subsistence

Analysis of a flotation sample from Feature 48 at 1-Fr-310 recovered only hickory nut shell and small fragments of acorn shell (Caddell 1983). Hickory nut shell and large mammal bone, probably deer, were recovered from Copena features at the Dam Axis site, 1-Fr-524 (Futato 1975a).

Mortuary Practices

Information on Copena mortuary practices in the Bear Creek watershed comes from the excavation of the Hester site, 1-Fr-311. An earlier excavation at the site (Nielsen and Stowe 1971) had encountered one apparent Copena burial pit, and a local informant stated that three conical mounds had been present there when the land was cleared. Later excavation then concentrated on the location and excavation of these mounds (Futato 1983).

These excavations located the remnants of one mound termed Mound A. A second cluster of Copena burials was termed Mound B, but no evidence of mound fill was preserved here. The burial pits at Mound B were found intruding into subsoil directly below the plowzone.

Twenty-four burials were located at Mound A. Twenty-two of these formed a rough oval and the other two were just to the south or southeast (Figure 3.8). Remnants of two layers of mound fill were identified. Stratigraphic relationships of the burial pits indicate that the mound was accretional. Burials were placed in the subsoil and at some point covered with a layer of fill, perhaps with inclusive burials. Burial pits were then dug into this fill. Later a second fill was added, again perhaps with inclusive burials. Finally, additional burial pits were dug into the second fill. Cultivation and erosion have completely removed traces of any subsequent fill.

The general pattern of artifact associations with the burials follows what may be expected of Copena: most burials had no associated artifacts and most burials with artifacts had only one or two. Burial 5, the most elaborate, had five associated artifacts: 2 shell bowls, a shell spoon, a necklace of 15 copper beads, and 42 g of galena. Cole (1981) noted a central/peripheral distribution for copper and greenstone at 1-Ms-300, the Murphy Hill site. A similar pattern is observable at 1-Fr-311 (Figure 3.8). Except for traces of copper with Burial 15, copper and greenstone have dichotomous distributions at 1-Fr-311. Greenstone is found in the peripheral burials only, and the beads with Burial 5 and the copper fragments with burial 15 are the only copper evidences not found with central burials.

Age does not seem to have been a factor in determination of burial practices. Burial 3 represents an individual 3-9 months old. Burial 3 occupies a central position and had associated copper and galena. Three child burials in the periphery, Burials 2, 7, and 9, contained no artifacts, like most peripheral burials. Two extremely old individuals, Burial 22, a female aged 65-95 years, and Burial 23, a male aged 80-100 years (Turner 1983), were buried with no apparent elaboration in the Mound B area.

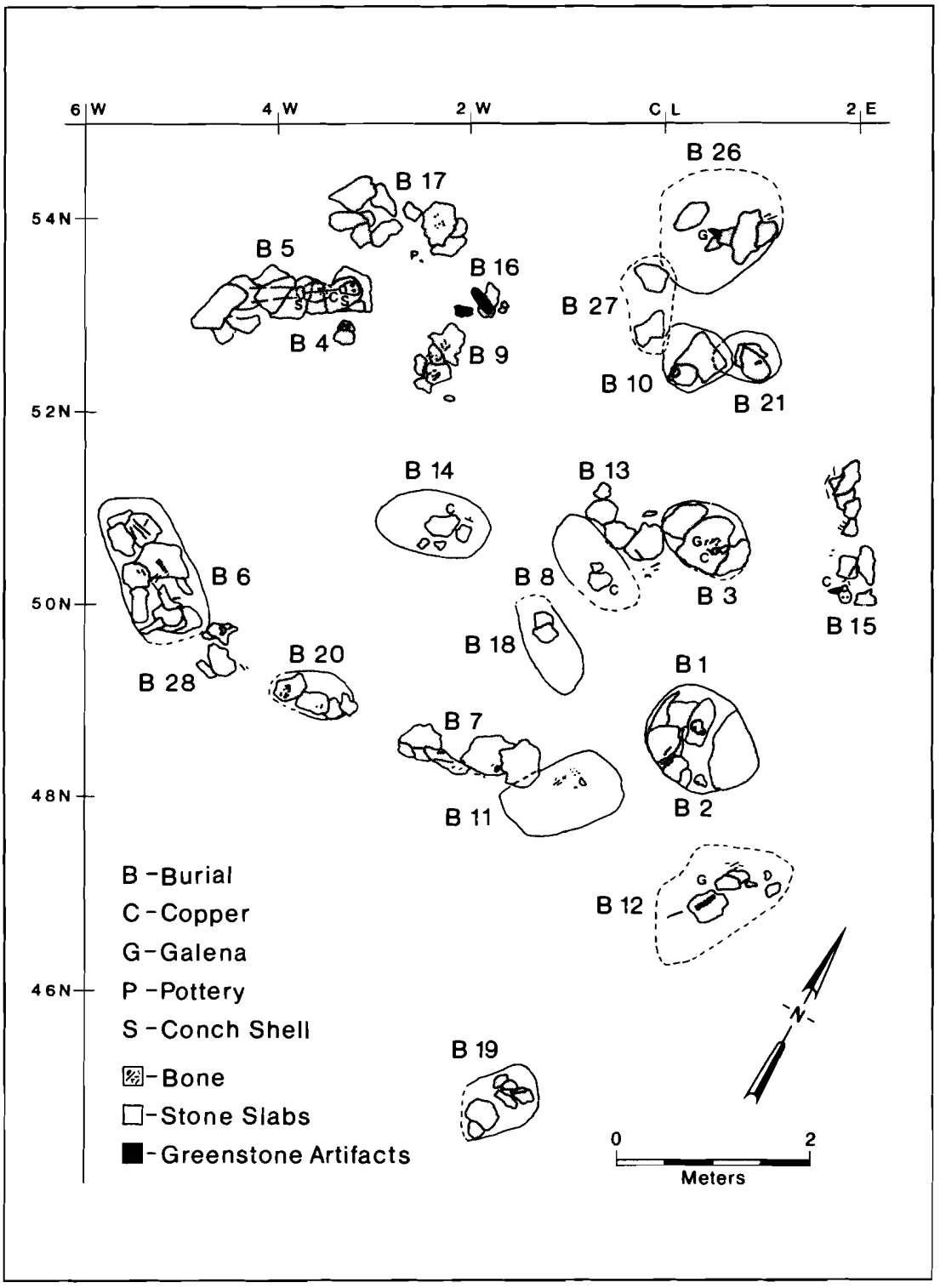

Figure 3.8. 1-Fr-311. Mound A burials.

Most of the burials from the site could not be assessed as male or female. Three of four male burials and the one probable male had artifacts in association. Two females and a probable female had no associations. This suggests a greater association of artifacts with males, but six of the ten burials with artifacts had no determination of sex.

Cremation may have played a significant role in the mortuary practices at 1-Fr-311. Turner (1983) describes a substantial concentration of calcined human bone fragments between Mounds A and B, with smaller concentrations in the mound areas. He suggests that a crematory facility may have been present between the mounds, with cremated remains being placed in the mounds.

One final aspect of the Copena mortuary practices at 1-Fr-311 will be noted, the substitution of limestone and sandstone slabs for puddled clay. Puddled clay was not used in grave preparation. Instead, stone slabs were used as grave floors and covers and as head, pelvis, and foot rests. Because Copena so closely follows a period of stone mortuary mound construction in this region, it may be possible to explain this substitution of stone for clay as a sycretistic device. Stone slabs, however, occasionally occur in Copena mounds throughout the Tennessee valley, so the phenomenon needs more thorough study to support such a suggestion.

LOST CREEK PHASE

The latest Middle Woodland occupation in the Bear Creek watershed is termed the Lost Creek phase. Radiocarbon dates for this phase are A.D. 695 ± 190 from site 1-Fr-507 (Futato 1975b) and A.D. 550 ± 110 from site 1-Fr-590 (Futato 1983). A date of A.D. 83 ± 90 from site 1-Fr-524 may be a little too late (Futato 1983). Overall, the phase is estimated to date from about A.D. 500 to A.D. 700.

The ceramic complex marking this phase consists almost entirely of Mulberry Creek Plain. The only frequently recognized vessel form is a deep bowl with straight to slightly incurvate rims. Small podal supports, usually less than 2 cm high, occur during this phase. No podal supports appear after this time. Large loop handles are found, similar to those on contemporary late Miller II assemblages described by Jenkins (1981). It is difficult to judge whether there is a comparable assemblage in the Pickwick Basin or Wheeler Basin areas. Haag (1942) and Griffin (1939) present pottery totals by site only. Dunlevy (1948a, 1948b, 1948c, 1948d) gives pottery counts by level for two sites in the Pickwick Basin and two in the Wheeler Basin. Only the Flint River site (Dunlevy 1948a) contained large amounts of Mulberry Creek Plain, but this component more closely resembles the late Woodland Flint River phase occupation of the Guntersville Basin.

The Lanceolate Expanded Stemmed PP/K cluster comprised most of the PP/K types of the phase: Mud Creek, Swan Lake, and a small Flint Creek variant. A few Greeneville cluster specimens were included in Lost Creek features from 1-Fr-590. Other chipped stone from these features included triangular and expanding triangular bifaces, preforms, cores, a microlith, and hammerstones (Futato 1983). Bifaces, a spokeshave, scrapers on flakes, hammerstones, a cobble chopper, and a fragment of a small bar gorget were included in features from sites 1-Fr-524 and 1-Fr-507 on Little Bear Creek (Futato 1975a, 1975b).

Caddell (1983) analyzed the plant remains from three small Lost Creek phase pits at 1-Fr-590 and a large earth oven at 1-Fr-524. Most of the identified materials, other than wood, were nut shell: 90.9 percent hickory, 9.0 percent acorn, and 0.1 percent black walnut. Three sunflower seeds from the earth oven are the earliest identified cultigens from the watershed. Two corn cupules from a feature at 1-Fr-590 may

have been intrusive from a Mississippian component at the site. Other seeds in the sample included two persimmon and one bedstraw (*Galium* sp.). Hickory nut shell, acorn meats, and a large mammal bone were the only subsistence remains identified for this phase in the Little Bear Creek area (Futato 1975a).

No Lost Creek phase burials have been identified, so nothing is known of the mortuary practices. There is no evidence of mound building during this time, however.

DISCUSSION

The research conducted in the Bear Creek watershed has permitted the identification of four successive Middle Woodland phases spanning a time from approximately 300 B.C. to A.D. 700. Although much remains to be learned about each phase, this is nevertheless the most detailed Middle Woodland sequence defined for the middle Tennessee River drainage. Enough is known to permit some initial, tentative synthesis and interpretation of the sequence.

The cultural sequence appears to represent a single resident population. There is no indication that the watershed sites represent seasonal aspects of a broader settlement system, for there are no recognized sites in adjacent areas which may be posited as the complementary sites in such a system. Also, there is no determinable discontinuity within the sequence and no population replacements are indicated. Thus the Bear Creek sequence appears to represent some 1000 years or so of continual cultural evolution. How then do we account for the broad, and sometimes rapid, changes which occurred?

The best explanation appears to lie in the geographic and cultural relationships of the area. The culture sequence indicates that the watershed is a relatively small, discrete area. Geographically the watershed is an upland area located on the divide between the western middle Tennessee valley and the upper Tombigbee valley. Given the cultural differences between these two areas, Bear Creek may be said to occupy a cultural divide as well. Changes in Middle Woodland culture in the Bear Creek area can be related to changing patterns of interaction with these neighboring groups.

The pattern of cultural relationships is one of alternating similarity. The initial Middle Woodland occupation of Bear Creek is part of the Colbert culture, found over much of the Tennessee valley. The Lick Creek phase has its greatest similarities with the middle to late Miller I phase of the Tombigbee valley. There is no similar phase known for Pickwick Basin. The succeeding Copena occupation of Bear Creek has no direct Miller analog. Finally, the Lost Creek phase ceramic assemblage resembles the late Miller II assemblage: almost all plain ceramics, with small podal supports and large loop handles. No similar assemblage can yet be recognized in the Pickwick Basin area.

This pattern of shifting relationships appears to be based on cultural vitality. For this comparison, we will take as indicators of cultural vigor: (1) the areal extent of the culture, (2) the extent and range of extra-regional contact, and (3) elaboration of mortuary ceremonialism. While there is some evidence to indicate that there was always interaction among these three archaeological localities, and no reason to assume otherwise, it does seem that the Bear Creek peoples, who occupied a marginal, intermediate area, were constantly being drawn to the most vigorous neighboring cultural expression.

4

Woodland Settlement in Northeast Mississippi: The Miller Tradition

Jay K. Johnson

This paper has two goals. First, the western boundary of the Miller tradition will be defined using recent survey data from northern Mississippi. Secondly, the pattern of settlement within a portion of the Miller area will be examined in some detail. Miller ceramics are found as far west as the edge of the North Central Hills in Mississippi. This coincides with the location for the two major Middle Woodland flat topped mound groups in the region. The implications for settlement strategy are explored.

The Miller sequence encompasses most of the Woodland period ceramics from northeast Mississippi, northwest Alabama, and portions of south central Tennessee. It was defined by Jennings (1941) on the basis of survey and excavation done around Tupelo, Mississippi in the late 1930s and early 1940s in preparation for the construction of the Natchez Trace Parkway. Jennings' phases were refined by Cotter and Corbett (1951) using data from the excavation of the Bynum Mounds in Chickasaw County, Mississippi and were later reexamined by Bohannon (1972) using materials form the Pharr Mounds in Prentiss County, Mississippi.

Most of the intensive archaeological work on the Tennessee-Tombigbee Waterway falls within the area where the Miller sequence is applicable. This provided the opportunity for additional work on phase definition. Rucker (1974), in one of the early reports on Tenn-Tom archaeology, subdivided Jennings' Miller III to create a Miller IV phase. This proposal was not accepted by subsequent workers in the area (Blakeman, Atkinson, and Berry 1977). Jenkins (1981), in the latest and most comprehensive evaluation of the Miller typology, retained the original three phases, but subdivided the phases into a total of ten subphases.

The Miller sequence, as defined by Jennings more than 40 years ago, has remained unchanged in broad outline because it is true. It is true in the sense that Jennings correctly determined the major developments in the ceramic continuum for the area. The sequence begins with sand tempered, fabric impressed wares, develops into sand tempered, cord marked pottery, and ends with grog tempered, cord marked ceramics. It is simple, therefore, to determine if the Miller typology is applicable. If the shift from fabric impressing to cord marking precedes a shift from sand tempering to grog tempering, then the Miller I, II, III sequence is useful. Otherwise, it is not. For example, in the Yazoo Basin of western Mississippi grog tempering occurs much earlier in the sequence, preceding the shift from fabric impressing to cord marking (Phillips, Ford, and Griffin 1951; Phillips 1970).

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THE MILLER DISTRIBUTION

Actually, the major difficulty in delineating the western boundary of the Miller tradition is the relative lack of data from the North Central Hills of Mississippi. We know a good deal about eastern Mississippi, due primarily to work done in preparation for the Natchez Trace Parkway and the Tenn-Tom. Likewise, the Mississippi alluvial valley has received a good deal of attention from the Lower Mississippi Survey, and in recent years several cultural resource management projects sponsored by the Corps of Engineers have contributed to our knowledge of this area. However, archaeological research in the intervening area is limited. Recently, several small surveys have begun to fill the gap (Figure 4.1). Most of the data derived from these surveys deals with surface collections, and this, of course, places restrictions on the kinds of inferences that can be drawn.

Beginning in the west, the upper Yocona River was surveyed by the Center for Archaeological Research in the spring of 1983 (Johnson and Sparks 1984). Thirteen small sites yielded ceramics. All contained a mixture of grog tempered and sand tempered sherds, and the predominant surface treatment was cord marking. Sardis Reservoir is located on the next drainage to the north of the Yocona, and the Little Tallahatchie River bottom in the Sardis impoundment contains numerous sites. A student project conducted during the spring term of 1984 resulted in ten large surface collections from sites on the south side of the reservoir, all of which contained a mixture of sand tempered and grog tempered ceramics.

In the winter of 1982, the Center for Archaeological Research conducted a survey of the middle and upper Line Creek drainage under SCS contract (Johnson *et al.* 1984). Several small sites were located, including 35 primarily Woodland period sites. Eight of these produced ceramic assemblages containing both sand and grog tempered sherds, four were exclusively grog tempered assemblages, and twenty-three contained only sand tempered sherds. Cord marking is the primary surface treatment on these ceramics.

In the summer of 1983, the Center for Archaeological Research conducted a small survey in the upper and middle drainage of Chuquatonchee Creek, just to the north of Line Creek (Johnson and Curry 1984), and ten of the sites discovered contained ceramics. None of the ceramic assemblages included grog tempered materials. Five sites yielded mixed assemblages of sand and shell tempered ceramics, four assemblages were exclusively sand tempered, and one exclusively shell.

Penman (1977) conducted several surveys throughout Mississippi for the SCS while working for the Mississippi Department of Archives and History during the mid 1970s. One focused on a section of Chuquatonchee Creek, where he recovered two ceramic assemblages, one containing only sand tempered material, the other a mixture of sand tempered and grog tempered sherds. Penman also surveyed a portion of the Town Creek drainage near Tupelo, where all but one of six sites produced mixed sand and grog tempered assemblages; the exception yielded only sand tempered sherds. Continuing to the north and west, Penman surveyed the Tuscumbia River drainage, locating 15 sites that produced ceramics. Twelve contained mixed assemblages, one was exclusively grog tempered, and two yielded only sand tempered sherds.

Moores Creek, one of the sites reported by Penman in the Tuscumbia watershed, was later excavated by Coastal Environments, Inc. (Weinstein 1981). In addition to a substantial Middle Archaic component, the excavations revealed a sand tempered, fabric impressed component (Miller I) in stratigraphic position below sand and grog tempered, cord marked sherds (Miller II and III).

The Office of Archaeological Research at the University of Alabama conducted additional surveys in the Tuscumbia drainage during the summer of 1983 (Alexander 1983). They recorded 15 ceramic

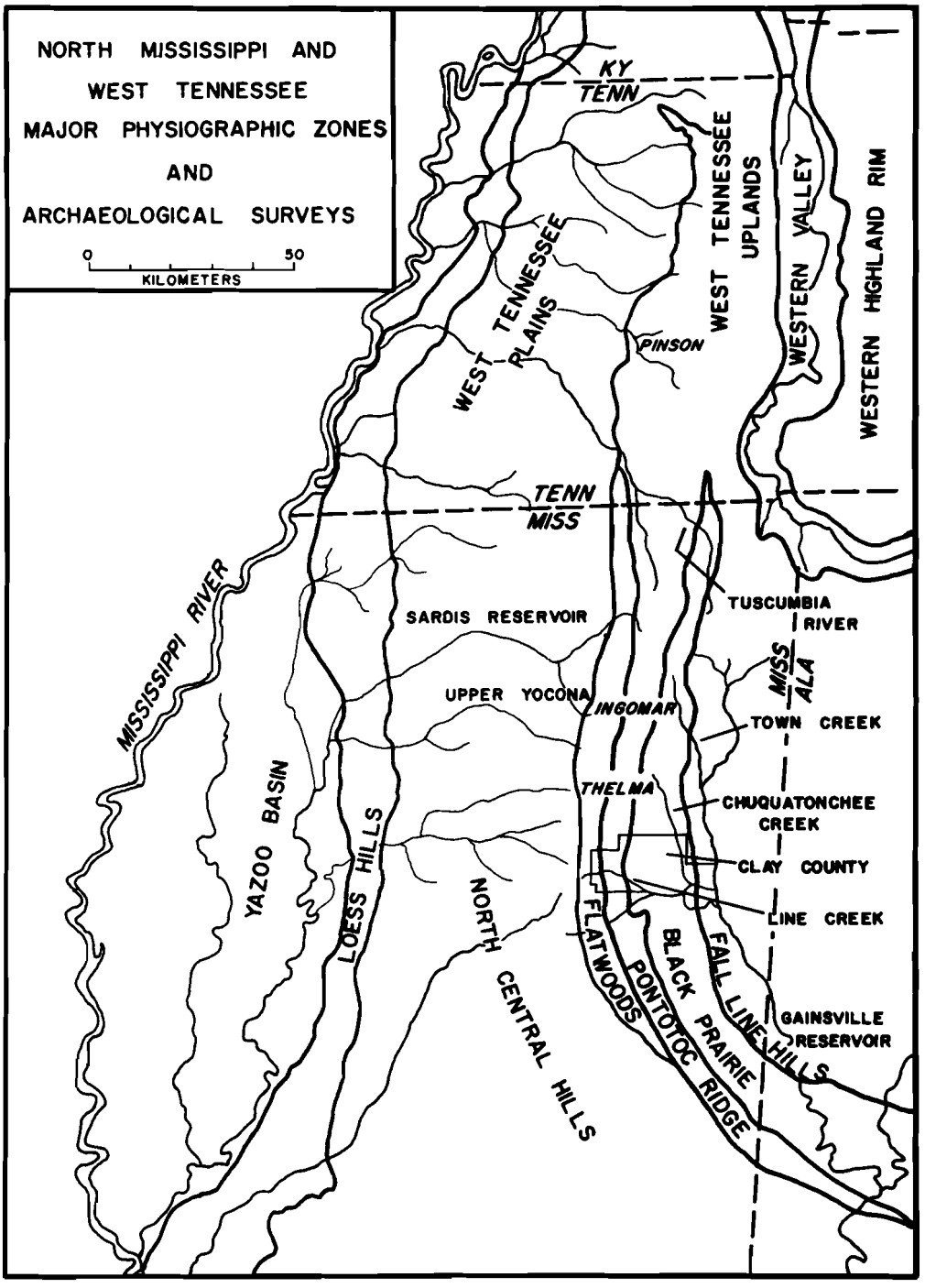

Figure 4.1. Physiography of northeastern Mississippi, showing survey area.

assemblages, of which eight are mixed sand and grog and seven contain exclusively sand tempered sherds; fabric impressing is the majority decoration.

As emphasized at the beginning of this review, most of the data is derived from surface collections made at relatively small sites. The size of the sites is, in fact, an advantage in this study. Since the sites are small, there is a greater likelihood that they represent single component occupations. The exclusively sand tempered or exclusively grog tempered assemblages reported in the eastern surveys support this argument. Surveys in the central section, particularly the upper Yocona, dealt with sites which are similar in size to those from eastern Mississippi. However, none of the assemblages were unmixed in terms of the grog and sand temper distinction. There are three possible explanations; these may all be multi-component sites, they may all be transitional Miller II-Miller III occupations, or grog tempering may come in earlier to the North Central Hills than it does to the east and overlap with sand for a longer period of time.

These questions could be resolved easily by reference to stratigraphy, but unfortunately the bulk of the data on cultural stratigraphy in the North Central Hills comes from only two sites. Both were excavated by field schools from the University of Mississippi. The Womack Mound is located on the Skuna River (Koehler 1966; Ford 1980), and the Slaughter site is situated to the north, on the Yocona River (Ford 1977). Neither site produced a clear picture of the ceramic sequence in the area. However, Ford (1981) has marshalled the available evidence to suggest that while the shift from fabric impressing to cord marking can be substantiated, there is no indication of a chronologically significant change in temper. Grog is the predominant tempering agent from top to bottom at both sites. The stratigraphic evidence supports the third interpretation of the surface data; there may be some single component sites in the Yocona and Sardis samples, but this cannot be determined on the basis of temper, since tempering is not a time marker for the Woodland period in the area. That leaves the Line Creek and Tuscumbia River samples to mark the western limit of the Miller tradition. That is, in both survey areas there are strong indications that sand tempering preceded grog tempering. It appears that the western boundary of the Miller tradition corresponds rather closely with the western edge of the Flatwoods, which corresponds with the limit of Paleocene and older sediments in eastern Mississippi as well as the eastern edge of the watershed for the Yazoo Basin (Stephenson and Monroe 1970). Most of the Miller area is drained by the Tombigbee River. However, the Tuscumbia River flows to the north to join the Hatchie River and ultimately the Mississippi (Figure 4.1).

SETTLEMENT PATTERNS

Beyond the importance of the physiography of northern Mississippi in marking the boundary of the Miller tradition, it plays an important role in the interpretation of settlement patterns for the area. Settlement patterns within the Tenn-Tom corridor have been reviewed elsewhere (Blakeman 1975; Rafferty 1980; Johnson 1981a). There is an apparent Miller III peak in populations for all of the upper reaches of the Tombigbee until the broad terraces of the Gainesville Reservoir are reached, where there is a Mississippi population peak.

However, like most cultural resource management samples, the Tenn-Tom sample is biased toward stream bottoms. The largest site sample within the Miller area outside the Tenn-Tom corridor is the Clay County survey sample collected by Sam Brookes and John Connaway for the Mississippi Department of Archives and History in 1979. At that time, 233 sites, located throughout the county, were recorded. John

Sparks (1984) used the surface collections from these sites in his master's thesis research. When these data are combined with the Line Creek survey data (Johnson *et al.* 1984), a total site sample of 318 results. All but seven of these sites are in Clay County and most are in the Tibbee Creek watershed. This provides a rare opportunity to look at Miller period site distribution outside of the Tombigbee River valley.

Since the data set is made up almost exclusively of surface collections, there are some limitations. While many of the Line Creek survey sites are small, single component sites, most of the Clay County sites are multicomponent. Chronological trends can only be approached using components defined on the basis of the presence or absence of diagnostic artifacts at each site. For the Archaic this is fairly easy, but later phases are somewhat more difficult to define. The Gulf Formational is delineated by Wheeler or Alexander series sherds. A Miller I component is recorded whenever Saltillo Fabric Impressed sherds are found. Miller II is plotted on the basis of the distribution of Furrs Cord Marked. Grog temper is used to define the presence of a Miller III component. Mississippian components are marked by the occurrence of shell tempered ceramics. Late Mississippian components are differentiated on the basis of a specific set of rim modes (Johnson and Sparks 1983); this is necessary since the shift from live shell temper to fossil shell temper which marks the boundary for Late Mississippian ceramics to the north around Tupelo (Stubbs 1983) does not occur in the Tibbee Creek drainage with any regularity. Using these criteria, 552 components can be identified in the combined Clay County sample.

Clay County is a good place to study settlement distribution, because the county cuts across five of the eight major physiographic zones of northern Mississippi (Lowe 1911) running from the Tombigbee Bottoms in the east to the Flatwoods on the west. The Line Creek sample extends a bit further west to include part of the North Central Hills (Figure 4.1). The distribution of components across these zones is informative. The Pontotoc Ridge at the latitude of Clay County is underlain by two distinct geological strata which differ in their forest cover (Johnson *et al.* 1984: Table 2-1). Therefore the zone was divided in the settlement pattern analyses (Table 4.1).

The first and most obvious point brought out in Table 4.1 is the importance of the Black Prairie through time. It is the major zone of occupation for all periods. The dramatic peak in the total number of components for Miller II and the equally dramatic dropoff during the Mississippian and Late Mississippian times are also interesting, but it is the drop in the proportion of components in the Black Prairie during Miller II that is ultimately most informative. This is the culmination of a trend that begins during the Gulf Formational. At that time, there are the first indications that a move into other zones, primarily the Pontotoc Ridge, occurs during Miller II-III times.

These trends are also evident when component location is evaluated in terms of stream order (Table 4.2). Sites are more commonly located near sixth order streams regardless of the time period. Sixth order streams in Clay County include Tibbee Creek and Chuquatonchee Creek below its junction with Houlka Creek. These flow year round through the broadest bottoms outside of the Tombigbee River in the county. The largest of the high, Pleistocene terraces in the county are located on the north side of Tibbee Creek (Stephenson and Monroe 1940: Plate 1B). Chuquatonchee and Tibbee creeks are located almost entirely within the Black Prairie, explaining, in part, the preponderance of sites in this zone (Table 4.1).The highest proportion (0.57) of sites situated on sixth order streams occurred during the Mississippian period, apparently reflecting an emphasis on agriculture in large stream bottoms. The lowest proportion of sixth order stream locations occurred during the Late Mississippian, suggesting a reorientation of the subsistence systems (Johnson and Sparks 1983). There is a drop in the proportion of sixth order stream locations

during Miller II with a corresponding increase in the importance of locations high in the drainage on second order streams; the latter are the Pontotoc Ridge sites (Table 4.1).

	EA	MA	LA	GF	MI	MII	MIII	M	LM
North Central Hills		1	1				2		
Flatwoods	1		1	3	2	3	6		
W. Pontotoc Ridge	4	1	1	5	3	4	6	2	1
E. Pontotoc Ridge	1			3	2	7	8	1	
Black Prairie	71	38	57	43	25	56	108	50	27
Tombigbee Bluffs			1	1		1	1	3	
Tombigbee Bottoms						1			
TOTAL	77	40	61	55	32	72	131	56	28

Abbreviations used in table

EA - Early Archaic
MA - Middle Archaic
LA - Late Archaic
GF - Gulf Formational
MI - Miller I
MII - Miller II
MIII - Miller III
M - Mississippian
LM - Late Mississippian

Table 4.1. Physiographic distribution of components.

In fact, the Miller II components are relatively evenly distributed across the stream orders (Table 4.2) and physiographic zones (Table 4.1). The amount of dispersion across the zones can be measured in terms of diversity, with maximum dispersion (an equal number of sites in each zone) representing maximum diversity. Minimum dispersion, or homogeneity, would occur when all the sites are found in the same zone. This can be measured using a diversity index borrowed from ecology and information theory, the Shannon-Wiener index (Shannon 1949), which is computed as follows:

$$H = -\Sigma\, p_i \, \mathrm{Log}_e \, P_i$$

In the present application, p_i is the proportion of the entire sample present in the i^{th} zone. There have been several archaeological applications of the statistic in recent years (Justenson 1973; Johnson 1981b, 1984; Conaty 1981; Amick 1984).

Maximum diversity, as measured by the statistic, is dependent on the number of categories present (Table 4.3). It is interesting to note that the largest diversity value for physiographic zones and stream order occurred during Miller II times, confirming the impression from Tables 4.1 and 4.2. In fact, stream order diversity approaches the maximum possible value for the index. The diversity index was also used

to examine chronological trends in the distribution of sites within the physiographic zones by subdividing each zone based on soil association. A total of 22 combinations is possible. Once again, maximum diversity occurs during Miller II times (Table 4.3). No matter how it is measured, Miller II components are found in a broader range of settings than at any time before or after in Clay County.

	EA	MA	LA	GF	MI	MII	MIII	M	LM
1st Order				1					
2nd Order	2	2	3	3	3	15	13	2	21
3rd Order	14	8	18	12	7	9	25	11	
4th Order	4	3	3	2	2	4	9	7	
5th Order	10	10	8	8	2	13	18	3	6
6th Order	47	17	28	28	18	31	66	32	1
Total	77	40	61	55	32	72	131	56	28

Abbreviations used in table

EA - Early Archaic
MA - Middle Archaic
LA - Late Archaic
GF - Gulf Formational
MI - Miller I
MII - Miller II
MIII - Miller III
M - Mississippian
LM - Late Mississippian

Table 4.2. Stream order distribution of components.

This dispersion is reflected, in part, by the number of single component Miller II sites in the sample (Table 4.4). Single component Miller II sites represent 27.8 percent of the total number of Miller II components in the sample. This is exceeded only by the 85.7 percent single component, Late Mississippian sites. In both cases, the observed values, 20 and 24 respectively, are greater than the expected values, 12.00 and 4.66. The expected values are those that would occur if there was no relationship between the occurrence of single components and phases. The Miller II and Late Mississippian phases are the only ones for which there is a positive relationship between observed and expected values. All of the rest show negative loading for single components (Table 4.5), i.e., there are fewer single components than would be expected by chance alone. The appropriate statistic for measuring the difference between observed and expected value is X^2. This statistic is usually used to make probability statements about the likelihood of a specific difference. Although it is included in Table 4.5 solely as a measure of the difference, most of the X^2 values in Table 4.5 exceeded what would be likely at a 95 percent confidence level.

Most of the off-diagonal entries in Table 4.5 are positive, indicating that the different components coincide more often than likely by chance alone. This is another way of saying that most of the sites are multicomponent. The highest positive X^2 value in each row is usually the last entry on the right, indicating

that the highest correspondence in components is usually between succeeding phases. There is, then, continuity in site location.

	Physiography 7 Classes	Stream Order 6 Classes	Physiography and Soil Association 22 Classes
Maximum Diversity	1.9459	1.7918	3.0910
Early Archaic	0.3413	1.1248	1.5274
Middle Archaic	0.2332	1.3762	1.3730
Late Archaic	0.3329	1.3477	1.5027
Gulf Formational	0.8006	1.3056	1.7742
Miller I	0.7614	1.2246	1.9241
Miller II	0.8339	1.4192	2.0399
Miller III	0.7134	1.3474	1.8771
Mississippian	0.4489	1.2130	1.6811
Late Mississippian	0.1541	0.6649	0.9058

Table 4.3. Site setting diversity in Clay County by time period.

There are two exceptions to the pattern of continuity evident in Table 4.5. One occurs between Mississippian and Late Mississippian and reflects the fact that most Late Mississippian sites are single component sites, located in places that earlier people had not used. The second exception occurs in the co-occurrence of Late Archaic and Gulf Formational components. The difference between observed and expected values is slightly less than it is for the co-occurrence of Middle Archaic and Gulf Formational components as measured by X^2. In fact, there is a relatively weak positive relationship between Gulf Formational components and the Archaic in general. The X^2 value of 19.61 for the positive difference between observed and expected values for Late Archaic and Gulf Formational is the lowest for any pair of adjacent phases. The next lowest is the Miller 1–Miller II value of 28.01.

Taking all of the above into account, there appear to be three shifts in settlement strategy evident in the Clay County sample. The first occurs at the boundary between Archaic and Woodland. The Woodland pattern is characterized by diversity, with an expansion into the greatest number of environmental settings. Miller II seems to mark the culmination of the Woodland strategy with its maximum diversity indices and maximum number of single component sites. Although Miller III sites are actually found in more different settings than Miller II sites, there is the beginning of a concentration of settlement on the terraces of the sixth order streams which flow through the Black Prairie. This marks the second major shift in settlement patterns, a shift that leads to the Mississippian where there is a radical decrease in the number

of components and a concentration of these components on the major terraces of the Black Prairie streams. The final pattern is that of the Late Mississippian sites, which represents a complete reorientation of settlement away from the major streams to the upper reaches of the Black Prairie drainages.

	Single	EA	MA	LA	GF	MI	MII	MIII	M	LM
EA	12	77								
	12.83									
MA	1	20	40							
	6.67	5.58								
LA	3	27	21	61						
	10.17	8.51	4.42							
GF	4	15	13	17	55					
	9.17	7.67	3.98	6.08						
MI	3	8	6	5	17	32				
	5.33	4.46	2.32	3.53	3.19					
MII	20	16	13	16	20	15	72			
	12.00	10.04	5.22	7.95	7.18	4.18				
MIII	20	44	27	32	35	24	49	131		
	21.83	18.27	9.49	14.48	13.05	7.59	17.09			
M	5	21	11	17	17	10	20	38	56	
	9.33	7.81	4.06	6.19	5.58	3.25	7.30	13.29		
LM	24	1	1	1	1	1	0	1	1	28
	4.66	3.91	2.03	3.09	2.79	1.62	3.65	6.64	2.84	

Abbreviations used in table

EA - Early Archaic
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Table 4.4. Multicomponent breakdown, observed and expected values.

SUMMARY AND CONCLUSIONS

The Miller II pattern suggests a settlement strategy that takes maximum advantage of all of the resources available. This corresponds to Cleland's (1976) Late Diffuse Subsistence pattern, which also

culminates in the Middle Woodland. Using different terms but similar concepts, R. Ford (1977:178) would extend the pattern into the Late Woodland, where he sees a maximum redundancy in the subsistence system. Since all available resources, including plants of the eastern agricultural complex (Struever and Vickery 1973) and especially mast crops, are thought to have been used in an adaptive system that maximizes harvest through complex scheduling, an optimal security has been hypothesized. In fact, the picture which emerges is one which is very close to Caldwell's primary forest efficiency model, a subsistence system which, Caldwell argued (1958:22), achieved its greatest success during the Woodland period (see Dye 1980 for a critical review of Caldwell's model).

	Single	EA	MA	LA	GF	MI	MII	MIII	M	LM
EA	- 0.05									
MA	- 2.65	+ 37.26								
LA	- 5.05	+ 40.17	+ 62.19							
GF	- 2.91	+ 7.01	+ 20.44	+ 19.61						
MI	- 1.02	+ 2.81	+ 5.84	+ 0.61	+ 59.79					
MII	+ 5.33	+ 3.54	+ 11.60	+ 8.15	+ 22.89	+ 28.01				
MIII	- 0.15	+ 36.24	+ 32.31	+ 21.21	+ 36.92	+ 35.48	+ 59.58			
M	- 2.01	+ 22.27	+ 11.86	+ 18.87	+ 23.37	+ 14.02	+ 22.09	+ 45.94		
LM	+ 80.27	- 2.17	- 0.52	- 1.41	- 1.15	- 0.24	- 3.65	- 4.79	- 1.19	

Abbreviations used in table

EA - Early Archaic
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LM - Late Mississippian

Table 4.5. Multicomponent breakdown, Chi-square values.

In light of the apparent emphasis on diversity in the Miller II settlement pattern, it is important to point out that the peak occupation of the Pontotoc Ridge occurred during the Miller II and Miller III phases (Table 4.1). This is the zone of maximum diversity in Clay County, which can be related directly to the nature of the underlying geological deposits (Stephenson and Monroe 1940). The Ripley Sands and the Prairie Bluff Chalk are the most permeable of the strata that make up the county and, therefore, the greatest topographic relief in the area occurs on the ridge. It is bounded on the west by the Flatwoods and on the east by the Black Prairie, two areas of relatively flat terrain. The well drained, calcarious deposits which make up the Pontotoc Ridge appear, on the basis of the 1832 land survey notes (Johnson *et al.* 1984), to have supported a mixed oak and hickory forest. The chalk underlying the Black Prairie produces open grassland and cedar groves. The clays of the Flatwoods supported scrub oak and pine, while the acidic sands of the North Central Hills were covered primarily in pine. The Pontotoc Ridge is the narrowest of these zones. A location on the ridge would be strategic to all other resources, including the large floodplains of the streams which flow across the ridge.

The Pontotoc Ridge extends north from Clay County to the Mississippi-Tennessee state line where the Ripley Sands grade into the McNairy Sands (Russell *et al.* 1975). At this point the eastern edge of the Pontotoc Ridge becomes indistinct as the chalk which formed the Black Prairie is replaced by Cretaceous sands. Although the Paleocene clays of the Porters Creek Formation which underlie the Flatwoods continue north into Tennessee, they no longer produce the strong contrast in topography that marks their exposure in Mississippi. To the north, the Porters Creek and McNairy Formations combine with other Cretaceous sands to form the West Tennessee Uplands. Eocene sands nearer the Mississippi River form the West Tennessee Plain (Miller 1974). The Pinson Mounds site is underlain by Porters Creek Clay situated a short distance from the boundary of these two major physiographic zones (Figure 4.1). This important Middle Woodland ceremonial center is made up of both covered and flat topped mounds (Mainfort 1980, 1986). The Ingomar Mounds (Rafferty 1983), another apparent Middle Woodland platform mound group, are located to the south of Pinson near the boundary between the Pontotoc Ridge and the Flatwoods (Figure 4.1). A third flat topped mound group that may date to the Woodland, the Thelma Mounds (Chambers 1935), is located south of Ingomar on the western edge of the Pontotoc Ridge (Figure 4.1). However, recent work at that site (Johnson and Atkinson 1985) suggests a later Miller III assignment.

Remembering that the Flatwoods in Mississippi appears to mark the western limit of the Miller tradition, there seems to be an arc of Woodland flat topped mounds extending south from Pinson Mounds and located at the edge of the distribution of Miller ceramics. Surely it is not a coincidence that these mounds, located at points of maximum environmental contrast, were built during a period whose settlement strategy emphasized diversity.

5

An Examination of the Twin Lakes Phase

Janet Ford

Originally a provisional phase proposed to deny the chronological significance of sandy textured pottery, Twin Lakes has evolved through the literature into a valid early Marksville manifestation exhibiting a defined ceramic complex. In the process, sandy texture has come to be regarded as sand tempering and has again assumed chronological importance. When reviewed, however, the evidence supporting assignment of the phase to early Marksville is unconvincing. Additionally, analysis of the raw data available in the literature raises questions about the existence of a true ceramic complex. Data from the adjacent North Central Hills region of Mississippi further impugn both the distinctive features of the Twin Lakes phase and the assumption of restricted chronological association for sand textured pottery in this portion of the lower Mississippi alluvial valley.

In his review of *Archaeological Survey in the Lower Yazoo Basin, Mississippi 1949-1955*, Griffin (1973:379) expressed concern that Phillips' framework of Yazoo Basin phases might be misused. He noted that "it is inevitable that his alignments will be accepted as defined archaeological units into which new data will be forced" instead of being viewed as "a framework for each area which should be revised and revised and revised" (Griffin 1973:379). Griffin feared, in other words, that the proposed framework might be considered a final product, rather than a hypothesis to be tested and revised.

Unfortunately, Griffin's fears have been realized. Under pressure to meet deadlines on reports of investigations, archaeologists have sometimes accepted uncritically the phases outlined for the area in which they were working and forced their material to fit into the existing interpretation. Such manipulation of data has highlighted the danger inherent in accepting regional chronologies based on surface collections of potsherds without recognizing that ceramic attributes are not transmitted genetically, but instead are the products of learned human behavior. In other words, sherds studied without regard to their environmental and cultural context may speak, but perhaps in a language that invites faulty translation. As a result, a false sense of security evolves, and chronologies begin to control interpretation even though they may be based on some rather unconvincing evidence.

The case in point is the Twin Lakes phase. Prior to a detailed examination of this particular phase, however, it will be helpful to review exactly what is implied by the concept of "phase." Kidder suggested that "phase" be used specifically for the purpose of preliminary archaeological classification (Kidder, Jennings, and Shook 1946:9). This purpose was de-emphasized in the definition later proposed by Willey and Phillips:

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> an archaeological unit possessing traits sufficiently characteristic to distinguish it from all other units similarly conceived, whether of the same or other cultures or civilizations, spatially limited to the order of magnitude of a locality or region and chronologically limited to a relatively brief interval of time (Willey and Phillips 1958:22).

Phillips, in fact, later still presented the concept of a phase as a viable entity, rather than an analytical tool:

> a geographically coherent group of site locations . . . occupied simultaneously or nearly so by local units of a specific socio-political group . . . an alleged demographic reality (Phillips 1970:524).

There are two aspects of a phase that are consistent in these definitions: 1) it represents a contemporaneous population, and 2) it produces a distinctive, uniform set of artifacts.

The alleged demographic reality which has been labeled the Twin Lakes phase was proposed by Phillips (1970:891) as the solution to a problem arising from the 1951 Lower Mississippi Valley survey report. The sandy textured pottery found in the vicinity of the Tallahatchie drainage had been interpreted in Phillips, Ford, and Griffin (1951) as chronologically significant (i.e., early), despite the fact that this was the minority opinion of the authors. Creation of the Twin Lakes phase was intended to rectify that mistake, substituting a local complex exhibiting a high proportion of sandy sherds (Phillips 1970:891).

This solution, however, was less than successful. Although the Twin Lakes phase is defined as an early Marksville phase, there is no local late Marksville phase with a high proportion of sandy textured ceramics. Therefore the Twin Lakes phase, which was supposed to eliminate the chronological significance of said ceramics, has instead firmly entrenched the notion that sandy texture occurs only early within the Marksville period. Further, the evidence upon which the entire Twin Lakes complex is inferred to be early is suspect.

The Womack site in Yalobusha County, Mississippi, furnished Phillips with data which he saw as suggesting that the Twin Lakes sites were outliers of a "center farther east in the 'hills'" and as supporting his early dating of the phase. Specifically, at Womack, the earliest ceramic "family" (Group III) contained the sand textured "Thomas" types, consisting of what would now be classified as Baytown Plain, *var. Thomas*, Mulberry Creek Cord Marked, *var. Blue Lake*, and Withers Fabric Marked, *var. Twin Lakes*.

> Radiocarbon dates from Womack range from A.D. 70 ± 100 to A.D. 670 ± 80. Koehler's Group III pottery related to our Twin Lakes material may be attributed to the earlier part of this range, a very neat correspondence to the dates from Helena Crossing and welcome confirmation of my placement of the Twin Lakes phase in the early Marksville period (Phillips 1970:891-892).

If, however, the data are more closely scrutinized, Phillips' interpretation is less convincing. The earlier of the two Womack dates mentioned was obtained from beneath a broken ochre floor 25 cm above the bottom of a pit located in the village area. Ceramics were found only above the floor. The ceramic content of the pit is not reported separately, but it contained the majority of pottery recovered from excavations in the village area (Koehler 1966:20, 22). The total ceramic sample recovered from the village excavations numbered only 57 sherds. In this sample were two Thomas Plain sherds, two Twin Lakes Fabric Impressed, and one crosshatched rim. The remaining 52 sherds were not classified within the

Thomas or Group III category, but instead more closely fit Miller type descriptions than any Lower Mississippi Valley varieties (Koehler 1966:36). This situation occurs frequently in the North Central Hills, primarily because the Lower Mississippi Survey descriptions usually allow only one sandy variety per type, while there is considerable variation in sandy pottery in the hills. Nevertheless, using the Miller scheme, the village sample included 24 Furrs Cord Marked, 3 Tishomingo Cord Marked, 10 Tishomingo Plain, and 9 Baldwin Plain. The remaining sherds were either fiber tempered (N=2) or Baytown Plain (N=4) (Koehler 1966:36). Realizing that this distribution represents neither a total nor a random sample, the ratio of Miller types falls within the late Miller II to early MIller III range, according to the framework produced by Jenkins (1980:71-72). The majority of the village sample therefore apparently postdates the Marksville period. That the radiocarbon date is much too early for such a ceramic inventory should not be surprising, since the ceramics came from above the ochre floor, while the date came from beneath it.

The majority of Thomas group (Group III) ceramics, which Koehler describes as the earliest of his three groups, occurs in the ceramic sample recovered not from the Womack village, but from the mound, some 200 m (600 ft) distant. The earliest radiocarbon date from the mound comes from just beneath the surface of the central burial platform: A.D. 250 ± 80 (OX 122) (Koehler 1966:7, 34). Phillips (1970:960), it should be noted, favors an A.D. 300 date for termination of the Marksville phase.

Hence, the Womack evidence which Phillips (1970:891-892) cites in support of an early Marksville period placement of Twin Lakes consists of a radiocarbon sample taken from below the floor of a pit which contained ceramics only in the fill above the floor. The majority of the ceramics above the floor postdates the radiocarbon date by some 230 years, if their assignment to the Miller sequence is valid. The only five Womack sherds which relate to the Twin Lakes complex may or may not have come from this pit; it is unclear. The majority of the alleged Twin Lakes sherds were recovered from the mound. The basal feature of the Womack mound yielded a radiocarbon date with a median only 50 years before the assumed end of the Marksville period. Therefore, Womack provides a poor case for assigning Twin Lakes to the early Marksville period.

The other dated site which Phillips (1970:891-892) uses to support the placement of the Twin Lakes phase is Helena Crossing. Dates on samples from that site yielded a range from 140 B.C. ± 150 to A.D. 335 ± 150 (M-1197-1199) (Ford 1963:46; apparently corrected either to A.D. 150 ± 75 to A.D. 325 ± 75 [Phillips 1970:889] or 150 B.C. ± 150 to A.D. 325 ± 150 [Toth 1979:190]). This seems sufficient range to allow for a variety of crossdating correspondences.

The other evidence claimed to support an early date for the Twin Lakes complex rests on the co-occurrence of sandy textured pottery with sherds that exhibit definitive early decorations. Analysis of the stylistic elements of the ceramic complex follows, but it should be sufficient here to point out that all of the sites proposed for the Twin Lakes phase show strong evidence of being multicomponent sites. None has been extensively excavated. In other words, surface collections from multicomponent sites have been analyzed and co-occurrence assumed. Toth, who inherited Twin Lakes and retained it as a valid, if "poorly understood" early Marksville phase, notes:

> Not all of the pottery from Twin Lakes is sand-tempered. Some sherds, including early Marksville diagnostics are made of the standard soft, chalky early Marksville paste. The two wares, sand-tempered, and clay-tempered, are found with all decorations present and with red filming. Thus there is no indication of a temporal difference between the two wares, a conclusion that coincides with the position of Phillips and Ford that sand tempering was a local specialization without chronological significance (Toth 1977:302).

The paradox of sandy pottery's having no chronological significance except that it is early has already been addressed, but the rest of Toth's statement needs examination. In the absence of evidence that sandy textured and clay tempered wares are not coeval, we are to assume that they occurred totally contemporaneously. It hardly seems necessary to point out that there is no evidence that they were confined to the same time range, except in the case of those bearing diagnostic early Marksville decorative elements. The weakness of this point will soon become apparent.

Evidence from the North Central Hills region of Mississippi suggests that in this area, purported home of the center for Twin Lakes distribution, there is truly no correlation between time and temper. Two excavated sites, Slaughter (Ford 1977) and Womack (Koehler 1966), exhibit conflicting ceramic sequences when viewed from the perspective of tempering material. A complex explanation of the temporal relationship between the two sites can be constructed, but it requires selective interpretation and manipulation of the dates (see Ford 1981).

The chronological significance of sandy pottery in the Twin Lakes region has not been established and, in fact, sand inclusions in pottery paste have not been proven to represent intentional, volitional steps in the trajectory of pottery manufacture in this area. It was for this reason that Phillips (1970:54) chose to refer to Twin Lakes ceramics as sandy textured (a distinction that has since been ignored). On the other hand, application of surface finish is undeniably a volitional decision in the trajectory.

When relative proportions of fabric marked and cord marked wares from Slaughter and Womack are compared stratigraphically, both sites exhibit the expected decline of the former and the increase of the later. This provides a parsimonious explanation for the temporal relationship between the two sites that is neatly supported by the dates obtained from both (Ford 1981). Sandy textured pottery persists throughout the occupation of each site and both produced dates much later than would be expected for early Marksville. The inescapable conclusion is that sand "tempering" is not confined to the early Marksville time period in the upstream areas of the rivers that drain into the Twin Lakes region.

Recent surveys throughout the North Central Hills support the premise that sand and clay co-occur over an extended time span. No sites have been found that yielded pure complexes of either sand or clay tempered ware (Johnson, this volume).

Noting the peril inherent in comparisons without proper sampling techniques, it is still interesting to compare the sites proposed for inclusion in the Twin Lakes phase on the basis of ratio of surface finish treatments. Using sherd frequencies obtained from Phillips, Ford, and Griffin (1951: Figure 19) and Toth (1977:308), rough estimates are calculable for five sites: Twin Lakes (58 percent fabric marked, 42 percent cord marked); Denton (25 percent fabric marked, 75 percent cord marked); White (20 percent fabric marked, 80 percent cord marked); Thomas (6 percent fabric marked, 94 percent cord marked); and Blue Lake (2 percent fabric marked, 98 percent cord marked). This range of variation suggests an extended occupation span. This analysis, however, should not be given too much credence, especially since fabric marking seems to occur with much less frequency in the Lower Mississippi Valley than in either the North Central Hills or the Miller sequence. The major point is that use of an alternate, but at least equally reliable criterion for chronological interpretation of the sample results in a vastly different conclusion.

When the chronological significance of sandy texture is actually removed, there is little left to suggest the presence of a true demographic reality in the Twin Lakes region. The occurrence of Marksville diagnostics has been used to support the placement, i.e., Twin Lakes = sand temper + early Marksville diagnostics = an early Marksville phase. The frequency and distribution of the diagnostics, however, does

	Twin Lakes 16-P-3 N=3666	White 16-P-4 N=3330	Blue Lake 16-P-8 N=972	Thomas 15-P-1 N=377	Denton 16-O-13 N=175	Beaver Dam 15-P-5 N=1	Total N=8144
PREVAILING							
Crosshatched Rims	17	4	1		1	1	24
Mulberry Creek Cord Marked	733*	1332*	661*	234*			2960*
var. Blue Lake					6		6
var. Porter Bayou					16		16
Withers Fabric Marked	1025*	333*	10*	15*			1383*
var. Withers					9		9
var. Twin Lakes					1		1
IMPORTANT							
Mulberry Creek Cord Marked, *var. Sevier*		41			8		49
Twin Lakes Punctated, *var. Twin Lakes*	30#	5#		2			37#
var. Crowder	5#	5#					
MINORITY							
Indian Bay Stamped, *var. Indian Bay*					1		1
Mabin Stamped, *var. Cassidy Bayou*		?	?				
Marksville Incised, *var. Sunflower*					2		2
Marksville Stamped, *var. Marksville*							
var. Old River						1	1
TRACE							
Churupa Punctated, *var. Boyd*							
MISSING							
Evansville Punctated, *var. Evansville*		3*					3*
Indian Bay Stamped, *var. Cypress Bayou*							
Mabin Stamped, *var. Mabin*							
var. Deadwater							
var. Point Lake							

*frequency estimated, variety indeterminable
#frequency estimated
?conflicting information

Table 5.1. Actual Distribution of Twin Lakes Diagnostics.

not present a strong case for such an assumption. For example, Toth (1977:298-310) notes that "the minority decorations, with the exception of the crosshatched rim, appear to be present in extremely low frequencies." This is an understatement; in fact, even including the crosshatched rim, the frequencies are extremely low.

The presence of crosshatched rims was one of the first reasons for formulation of an early Marksville phase at Twin Lakes. Phillips (1970:891), however, noted a peculiar quality in these sherds. At the Twin Lakes site, a sample of 3663 sherds contained only 14 crosshatched rims, while no Marksville Stamped or Marksville Incised decorations occurred at all. Phillips suggests that in the Twin Lakes complex, crosshatching was a rim decoration on plain pottery. Toth (1977:302) recorded three additional crosshatched rims from the Twin Lakes site, found in the L.B. Jones collection. At the White site there were four, and Blue Lake, Denton, and Beaver Dam each yielded a single crosshatched rim. None was reported from Thomas. The only crosshatched rim associated with a decoration was a Marksville Stamped, *var. Old River* sherd from Beaver Dam. It should be noted that this site appears in the records of the Mississippi Archaeological Survey as an Early to Middle Archaic site. Sam Brookes, however, did retrieve the sherd in question and Toth (1977:307) included Beaver Dam in the Twin Lakes phase "with no real conviction on the basis of geography alone."

The Avery Island Conference phase form lists six sites with Twin Lakes components, including Beaver Dam. Table 5.1 summarizes the significant ceramic elements for the Twin Lakes complex (from Toth 1979: Table 25.3), including estimates of their distribution at each of the sites. (I have not included sites like Slaughter [Ford 1977] and Lightline Lake [Morgan 1979] that were assigned to the phase on the basis of presence of sandy textured pottery.) Frequencies were obtained from Phillips, Ford, and Griffin (1951: Fig. 19) and Toth's (1977) reanalysis of portions of these and additional samples.

The total available sherd sample for the Twin Lakes phase numbers 8144. Among these are 24 crosshatched rims, at least one from each site with the exception of Thomas. The majority of the rims (17), however, was recovered from the type site of Twin Lakes.

Crosshatched rims are the only diagnostic to occur at a majority of the sites. Most of the "prevailing" and "important" elements are varieties of cord and fabric marked ware. *Blue Lake* and *Twin Lakes* are the sandy textured varieties that have already been discussed. *Porter Bayou* is not a significant diagnostic without supporting evidence, since

> the evidence at Porter Bayou and nearby sites suggests that the variety lasts through the entire Marksville period. Except when found in excavated contexts, then, *Porter Bayou*, cannot be considered a reliable early Marksville ceramic marker (Toth 1977:515).

Sevier is considered a good early Marksville diagnostic, but is not easily discernible "without the support of other diagnostics, since it intergrades with *Porter Bayou*" (Toth 1977:515-556).

The other ceramic type labeled as important is Twin Lakes Punctated, present in two varieties. Again, it is difficult to extrapolate from the chart in Phillips, Ford, and Griffin, but rough estimates can be made based on approximate percentages and totals. Punctated sherds were recovered from only three of the six sites. At Twin Lakes, less than 1 percent (i.e., no more than 30) of the original sample of 3663 sherds were so decorated. Approximately 10 occurred in the 3330 sherd White sample and two are listed in the Denton sample of 175 sherds.

Thus, the Twin Lakes phase definition depends heavily upon wares that Toth lists in his "minority" and "trace" categories. *Indian Bay* is represented by a single sherd from Denton and *Sunflower* by two sherds from the same site. Toth (1977:305) reports that "a few" *Cassidy Bayou* sherds occur in the White sample. However, the graph in Phillips, Ford, and Griffin (1951: Figure 19) does not indicate the presence of what would have then been classified Marksville Stamped at White, although a trace of the type is shown to occur at Blue Lake. The literature fails to reveal any record of *Marksville* on any of the sites. In addition, the *Old River* sherd from Beaver Dam, as reported above, is the only sherd referred to on a site that is basically Archaic.

If cord marking and fabric marking are eliminated, the Twin Lakes phase is left with a total ceramic inventory of some 69 sherds; 24 are crosshatched rims and 42 are Twin Lakes Punctated. None of the other diagnostic varieties occur at more than one site and at only one site do as many as two of the significant varieties co-occur. While the presence of these varieties and of crosshatched rims may be evidence enough to suggest early Marksville components on multicomponent sites, it is hardly enough on which to base the existence of a demographic reality.

Perhaps of equal significance in evaluation of the Twin Lakes phase are the varieties listed as "missing." For example, the absence of Evansville Punctated and at least two varieties of Mabin Stamped, *Mabin* and *Deadwater*, is considered important in distinguishing Twin Lakes from the Dorr phase, located to the east (Toth 1977:310). It is therefore interesting to note that Phillips, Ford, and Griffin (1951: Figure 19) indicate the presence of Evansville Punctated at the White site. In addition, sherds closely resembling *Mabin* and *Deadwater* are found at Clear Creek (Thorne and McGahey 1968) and Slaughter (Ford 1977), both to the west of the Twin Lakes area. (Incidentally, the presence of Mabin Stamped at these two sites is a fact that would not emerge from a review of the literature. In both reports these sherds were misidentified as Cormorant Cord Impressed. I was the guilty party in the case of Slaughter.)

In conclusion, upon close examination of the data available in the literature, evidence for the existence of a Twin Lakes phase represented by the suggested ceramic complex is insubstantial and unconvincing. Twin Lakes, as currently defined, fails to exhibit either of the consensus aspects of the definition of a phase as presented earlier in this paper: 1) there is no evidence that it represents a contemporaneous population—that notion is primarily based on the presence of sand tempering which is not demonstrably early in this area; 2) there is no distinctive, uniform complex of artifacts of sufficient size and distribution to justify the phase definition. Therefore, ceramic criteria for both early and late Marksville phases in the area of confluence of the rivers draining the North Central Hills of Mississippi with the lower Yazoo River system are yet to be established.

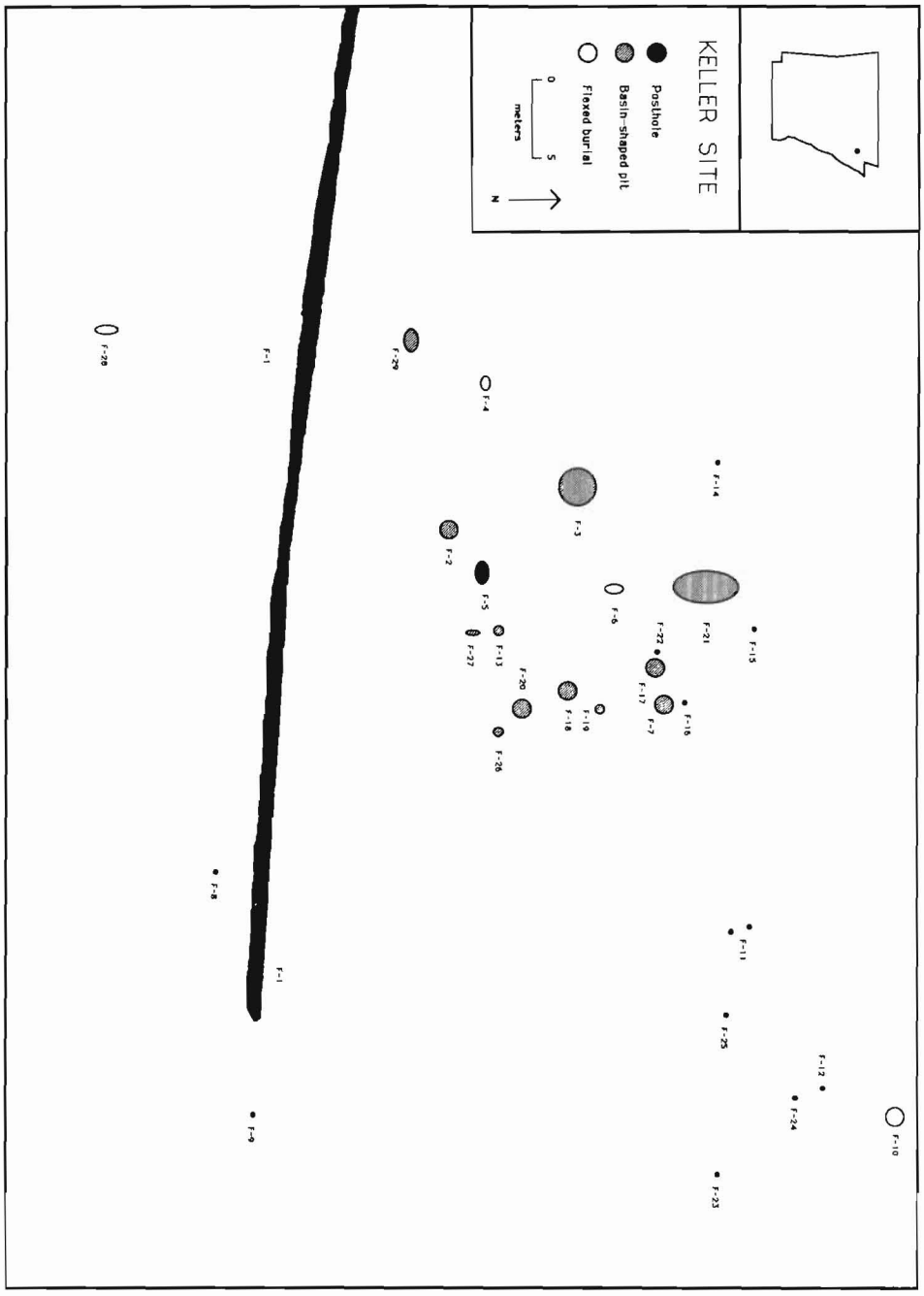

Figure 6.1. The Keller Site.

6

The Keller Site: Its Implications for Interpreting the Late Marksville Period Occupation in Northeast Arkansas

Dan F. Morse

Very little is known about the Marksville period in northeast Arkansas, primarily due to our inability to definitely identify Marksville period sites. The Keller site is an example of why such identification is so difficult.

THE KELLER SITE

The Keller site (3-Po-159) is located in Poinsett County, just south of the border with Craighead County, in the Western Lowlands, approximately 23 km southwest of Jonesboro, Arkansas. It is situated within a relict braided stream terrace, on a sandy ridge about 9 km east of the headwaters of Bayou de View and 11 km west of Crowley's Ridge.

Salvage excavation of the Keller site was accomplished in a single day, utilizing the field crew of the Brand site project (Goodyear 1974), after it was learned that the field within which the site was located was in the process of being precision leveled for the cultivation of irrigated rice. This is the fate of much of the braided stream surfaces in northeast Arkansas and southeast Missouri (Medford 1972). By monitoring the leveling, we were able to recover a modest artifact collection and to record and excavate approximately two dozen prehistoric features. The Keller site salvage is one of many similar investigations in the area and the accumulative experience gained aided our work considerably.

Approximately 2000 m^2 of the site was salvaged. Ten sherds from Feature 10 indicate a Mississippian component had been present, but this component had been effectively removed by the dirt buggies before our arrival at the site (Morse and Morse 1983: Fig. 2.6a). The 27 Woodland features recorded (Figure 6.1) included three burials, 12 basin-shaped storage (?) pits, 10 postholes (probably indicative of shelters), a hearth, and an earth oven. All three burials were probably flexed, although one was described as a "bundle" in the field notes. The Keller site was probably a minimal residential site consisting of one or two structures during a relatively brief time period (i.e., generation or less).

The artifact assemblage is of modest size. With the exception of one plain and one red filmed Mississippian sherd found in a contemporary feature at the edge of the site, all artifacts appear to be of Woodland age. No feature produced a significant sample, so the recovered artifacts are discussed below by class.

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Ceramics

A total of 126 sherds was recovered at the Keller site. The friable paste is basically what Phillips (1970:49) has classified as Baytown Plain, *var. Bowie* and consists primarily of grog, with varying amounts of sand inclusions. Simple, fragile, conical jars and numerous repair holes (seen on five sherds) indicate problems experienced with pottery manufacture by the inhabitants of the Keller site. The ceramics from the Keller site have been classified as follows: Baytown Plain, *var. Bowie* (9 rims, 105 body); Mulberry Creek Cordmarked, *var. unspecified* (3 body), unidentified punctated (1 rim, 5 body); cord impressed (1 body); unidentified incised or stamped (1 rim); other (1 sherd).

Five of the plain rims have notched lips; three are from Feature 20 (a basin-shaped pit), and one was found nearby. A very large sherd from a simple conical vessel was found in another pit (Feature 27). It is brushed over its exterior surface, with marks basically perpendicular to the lip; interior brushing marks are parallel with the lip. Brushing is also evident on several additional sherds.

Punctation was the most common decorative technique. Recovered from Feature 20, one large rim sherd, also from a conical vessel, is reminiscent of the type Steuben Punctated in the Illinois late Hopewell tradition (cf. Morse and Morse 1983: Fig. 8.8, and Morse 1963: Pl. 111). There are four rows of punctation parallel to and just beneath the lip.

Four small sherds exhibiting a row of punctations near a broken edge may be from similar vessels; these were found in Features 3, 5, 7, and 27. Another small body sherd with punctations across the entire surface was found on the surface. All punctated sherds are probably one or more varieties within the inclusive type Evansville Punctated (Phillips 1970:78-81).

A sherd found in Feature 2 exhibits a thickened (not appliqued) collar, which probably indicates that it is a rim with the lip missing. A cord impression crosses almost the entire collar, with a 90° turn paralleling the base. Presumably this sherd is distantly related to Phillips' (1970:159-160) type Shellwood Cord Impressed.

A small notched rim sherd from Feature 3 exhibits what at first glance appears to be crude rocker stamping immediately beneath the lip, but closer examination indicates that the design remnants are almost certainly composed of incised, rather than rocker, elements. This is a traditional Marksville decoration, but it is poorly executed on this specimen.

In Feature 5 a fragment of a tetrapod was found. The actual pod itself is missing and only the expanded corner of the vessel base to accommodate the support is present. Tetrapods constitute good evidence of a pre-Baytown date in the Central Mississippi Valley. No other indication of basal shape was recovered from the Keller site.

Earth oven elements

Feature 5 was almost certainly an earth oven. While only a basal remnant remained for us to salvage, the contents provide good evidence for interpreting the feature as a late Marksville earth oven. The earth oven elements, or pottery objects, are badly fragmented. Over a dozen are represented, the most complete of which is illustrated by Morse and Morse (1983: Fig. 8.7f). This specimen probably measured about 45 cm by 55 cm, and the fragments indicate a very crude, somewhat spherical shape. These Middle Woodland pottery objects look nothing like their predecessors, the elegant Poverty Point varieties, or even the Tchula period biconical style. The Arkansas State Museum recovered contemporaneous pottery objects from the nearby Walnut Mounds site (3-Po-57) that are as crude, but are somewhat larger in size.

Additional material from Feature 5 includes three sherds of Baytown Plain, *var. Bowie*, 15.9 g of fire cracked debitage, 25.9 g of fire cracked rock, and a quantity of bone and charcoal fragments. Other possible earth oven elements from the Keller site were found in Features 3 and 7, both basin-shaped pits.

Lithics

The relatively high frequency of lithics at the Keller site (e.g., compared to Zebree [Morse and Morse 1980]) is due to the proximity of the site to Crowley's Ridge. With only a very few exceptions, the Keller lithics were clearly derived from that upland, in particular, the Lafayette gravels.

The points cluster around an expanded stemmed (similar to Morse and Morse 1983: Fig. 8.7b) and corner notched (Morse and Morse 1983: Fig. 8.7c) theme. Many look more Weems-like than Steuben and could be classified as either stemmed or corner notched. There are five expanded stemmed points (one each from Features 3 and 20), two corner notched points, one basal notched point (Feature 7), and two crudely worked stemmed points. With the exception of the basal notched point, all are somewhat similar as a group to those recovered from a Dunklin phase context at the Zebree site, although the latter points date three to four centuries later in time (Morse and Morse 1980).

For the most part, the other 23 bifaces appear to be fragments of aborted preforms. One exception is an apparent transverse edged specimen found on the surface, that may have been a triangular chisel or celt (Morse and Morse 1983: Fig. 8.7d).

Debitage numbers 441 specimens, and includes four blades (Morse and Morse 1983: Fig. 8.7a) and 40 probable utilized flakes. The rarity of Hopewell blades in northeast Arkansas presents a real problem. Only two specimens found at the Keller site can be classified as "true" blades; the illustrated example exhibits extensive lateral retouching. Only four of the "utilized" flakes exhibit noticeable retouch and all 40 flakes are of local Crowley's Ridge chert.

The chert artifacts classified as "choppers" (N=30) range from aborted cores to bifacially retouched cobble tools exhibiting battering, suggesting use as choppers. The seven chert hammers are similarly nondescript, and most are unsuccessful tools exhibiting shattering but little actual battering. A sandstone specimen exhibits more use before shattering. If there were any good hammers at the Keller site, we either missed them or they were removed by the inhabitants when they moved. A sandstone mortar and two chert anvils were also recovered; the stone for the mortar probably originated in the Ozark Highlands. Two badly eroded ironstone abraders were also collected; ironstone is a cemented sandstone with hematite contained in the bonding cement and is common in the streams of Crowley's Ridge. An unmodified Crowley's Ridge chert cobble was also found. A total of 3500 g of firecracked rock was recovered from the site.

Bone

In addition to the three fragmented human skeletons and 1300 g of unworked animal bone (and two mussel shells), four worked bone artifacts were found. Two are broken deer ulna awls, found in Features 3 and 7; a deer long bone splinter awl was also recovered from Feature 7. In Feature 3, a small section of a turtle carapace vessel was found.

IMPLICATIONS FOR INTERPRETING THE LATE MARKSVILLE PERIOD

The main component at the Keller site is clearly Woodland, and a late Marksville period identification is based primarily on one decorated sherd. A precise assignment of Woodland components in northeast Arkansas has long been a problem and, as a result, our understanding of Woodland behavior has been based primarily on interpretations made outside of this Central Mississippi Valley region. This dependence is even reflected in one of the period names adopted for the Central Valley: Marksville. Whatever one thinks of the period names, the important point made here is that precise temporal assignment of Woodland assemblages is extremely difficult in northeast Arkansas, for reasons that are only now becoming apparent. These include ceramic monotony, sample size, dispersed populations, strong cultural continuity, and masked deposits.

Ceramic monotony

In northeast Arkansas, Woodland kitchen pottery made of backswamp clay and tempered with sand tends to look the same, no matter when it was made. This is also essentially true of grog tempered pottery in the Woodland tradition. Such pottery constitutes the major artifact class in most Woodland assemblages and is often the only kind of pottery present at a site.

The technological aspects of Woodland pottery are only just beginning to be understood. Evidently, the subconical and flat bases of typical Woodland jars reflect the necessity of distributing the weight of a vessel made up of a very heavy paste during the process of coil construction. Typical Woodland ceramic paste is as much as two and a half times heavier than typical Mississippian paste. However, weight can be diffused during manufacture by angling the vessel or by broadening and flattening the base (Morse and Morse 1983:138-142). Otherwise, the vessel might simply collapse or warp if its weight was concentrated on a small, rounded point.

Smaller vessels, particularly those being molded with either a calcareous based paste (e.g., shell, bone, or limestone), or even with a very fine grog tempered paste, were evidently exempt from these general rules of physics. Better paste preparation and a longer period of vessel preparation, as indicated by considerable burnishing of the surfaces, may have contributed to the superiority of rarer "ceremonial" ware of the Woodland ceramic tradition. These aspects of Woodland ceramic technology clearly need to be investigated experimentally.

Sample size

A collection of potsherds from a Central Valley Woodland site will cause the site to be classified as Baytown if no decorated sherds, other than punctated or net impressed, are present. Zoned stamped sherds are characteristic of the Marksville period, while Cormorant Cord Impressed is evidence of the Tchula period. Decorated sherds may represent primarily ceremonial wares, and an absence of such sherds will be dependent on the nature and size of the sample from a site.

A Marksville period village assemblage of ceramics does not necessarily contain a large percentage of the decorated Marksville types. For example, the late Illinois Hopewell period Steuben site produced only two percent Hopewell ware (56 of 2356 sherds) in four excavation units (Morse 1963). However, the Marksville site itself has produced an extraordinarily high percentage (over 90 percent) of decorated Marksville types (Toth 1974), far in excess of the one percent recorded during several seasons of excavations at the major ceremonial center of Pinson Mounds (Mainfort 1986b). Given a representative

assemblage of ceramics from a Marksville period site in northeastern Arkansas, we can expect an average of one diagnostic (i.e., decorated) sherd per 50-100 potsherds collected.

Zoned stamping is viewed here primarily as a rare horizon style for the Marksville period. Another possible horizon marker, at least for early Marksville (A.D. 1-200), is Withers Fabric Marked (Phillips 1970:175, 188; Toth 1977; Walthall 1980:112; Broster, Adair, and Mainfort 1980:42-44). The only well-documented Tchula assemblage known from northeast Arkansas is distinctive in the very low frequency of fabric marked sherds (Morse and Morse 1983). Similarly, Baytown sites are characterized by an almost complete absence of fabric marked surface treatment. Yet a pit feature near the St. Francis River in St. Francis County, Arkansas produced an assemblage consisting of Withers Fabric Marked, Tchefuncte Stamped, and Baytown Plain, as well as a rocker stamped sherd and a single rim sherd with a notched lip (Rush Harris, personal communication). At the Helena Crossing mounds, both Tchefuncte Stamped and Withers Fabric Marked vessels were represented, notably the vessels in Pottery Deposit 1 from Mound C (Ford 1963:31-32). Withers Fabric Marked occurs in Mississippi County, Arkansas, but unfortunately at multi-component sites, thus allowing a wide latitude in temporal association. Fabric marked sherds are also present in the Cairo Lowland and the Western Lowlands of Arkansas in relatively large amounts; the latter are sand tempered (Price 1981:473). To the east, fabric marking is the dominant surface treatment at Bynum (Cotter and Corbett 1951) and Pharr (Bohannon 1972). If fabric marked pottery can be used as a horizon marker for early Marksville in the Central Mississippi Valley, then the possibility of accurately dating Woodland site collections will be greatly enhanced.

Dispersed populations

Most Woodland sites in the eastern United States have obvious middens representative of villages and/or associated mound groups. In northeast Arkansas, mound groups dating to this period are extremely rare. Midden sites do occur in relatively high frequencies, but are almost invariably classified as Late Woodland or Baytown period. No recorded Woodland site is significantly larger than the largest known pre-ceramic sites in northeast Arkansas and most are much smaller. Even where relatively large samples of ceramics are present, many researchers feel that the magnitude of such assemblages is as much a reflection of the fragile nature of Woodland pottery as the length or intensity of site occupation (Morse and Morse 1983:186).

The remains left by mobile, dispersed small groups have always been difficult to discern through traditional archaeological recovery techniques. In northeastern Arkansas, this is compounded by the evident uniformity of archaeological remains throughout all of the Woodland subperiods. Hence, most ceramic sites are classified as Baytown or Late Woodland period occupations, reinforcing such a classification for all similar sites. It is only after several years of investigation that we have realized that many of these sites must date to the Tchula and Marksville periods, despite our inability to discern such occupations (Price 1981:472-496).

The difficulty of correctly assigning ceramic sites to their proper temporal periods is greatly increased when working with non-ceramic Woodland sites. An unfortunate tendency to identify corner notched points as related to the rare Illinois Snyders point, and hence diagnostic of Marksville (Price and Price 1981: Figs. 10-16; Dunnell 1984), has ignored the longevity of corner notched points through time. Some corner notched types are Archaic, some are Woodland, and others are Marksville. Independent verification through the presence of other diagnostic artifacts is necessary to identify corner notched

points as Marksville at such sites. Unfortunately, we know little about the Marksville lithic industry in the Central Mississippi Valley.

Strong cultural continuity

Just as it is recognized that the transition from Archaic into Woodland was evolutionary rather than revolutionary, we know that the Woodland trilogy is not indicative of major changes in prehistoric behavior. Although there does appear to be a rather drastic change as Marksville winds down and Baytown begins, this is not nearly as pronounced as the beginning of Mississippian. The shift to Baytown is marked more by a lack of dynamism (a loss of exotic artifacts actually) inland from the Gulf Coastal Plain.

A strong cultural continuity exists in both lithics and ceramics throughout the Woodland period in northeast Arkansas; it is so strong that one Woodland assemblage looks much like any other. It is truly unfortunate that the older concepts of a Hopewell ruling class establishing its authority through conquest or conversion (Deuel 1952:255-256) are not valid, since such a situation would have been readily apparent archaeologically.

Masked deposits

The Helena Crossing site was a group of five Hopewell-type burial mounds: "The five almost conical mounds, varying little in size, were approximately 100 feet in diameter and 15 to 20 feet high" (Ford 1963:5). Yet despite the obvious importance of the site as a ceremonial center, only one Marksville period village site was located during the 1940 survey of the area (Phillips 1979:888). Not only were no other Marksville period sites found near Helena Crossing during the 1960 excavations of the mounds, but the previously recorded Bowie site could not be relocated. Obviously, there should have been several contemporary sites in the vicinity of Helena, but for some reason these sites were masked from archaeological sight.

One possible source of masking might be changes in the alluvial meander belt of the Mississippi River (Saucier 1981). Reworking of deposits during the last 2000 years could account for the destruction of a number of sites, particularly older ones, but we cannot at the present time accurately validate such an occurrence on a significant level. Another kind of masking is the multiple habitation components present at many Woodland sites. During the Woodland period there was little shift in the basic techniques of obtaining food and, more importantly, the relative importance of particular classes of foods apparently did not change significantly until after the end of the Baytown period. Thus, an attractive location for settlement was likely to be reoccupied throughout the Woodland period.

CONCLUDING REMARKS

The Keller site is an example of a minimal residential habitation that is typical of the Woodland dispersed settlement pattern in northeast Arkansas. In fact, sites like Keller can be typical of a variety of socio-economic behavior (Eder 1984) and are not necessarily restricted to the Woodland period. In attempting a proper period identification of Keller, it is to our advantage that we were able to monitor the final destruction of the site and, hence, gather data not available from a surface search or limited test investigation.

A Woodland identification of the site is easy. While the predominance of plain surfaced ceramics at Keller suggests a Marksville period occupation, this is not a foregone conclusion, because in the southern

portion of northeast Arkansas, plain ceramics are also characteristic of the Baytown period. None of the diagnostic decorated Marksville ceramic types were recovered at Keller, perhaps due to small sample size or the expected rarity of ceremonial ware at minimal residential sites. The crudity of the recovered pottery indicates poor control by this particular population over Woodland ceramic technology, and "ceremonial ware" may not be as elegant at Keller as in the Meander Belt region of Arkansas. A lack of obvious ceremonial ware is also typical of the Baytown period.

Punctated decoration is common throughout the Woodland time span. However, limited rows of punctations immediately below and parallel to the lip are prominent (at least in Illinois) around A.D. 400. Tetrapods are characteristic of a slightly earlier time period and the Keller ceramic paste (*var. Bowie*) is typical of the whole Marksville period.

The Keller site lithic assemblage is typical of all Woodland sites. The points are similar to those associated with the Dunklin phase at Zebree, dating to about the seventh and eighth centuries A.D. The earth oven feature with its crudely spherical clay objects constitute an important bit of evidence for a Marksville, and most probably late Marksville, dating for the Keller site.

If we are ever going to properly gauge behavioral changes from Woodland into Mississippian, we must be able to date Woodland phases accurately. In particular, we must be able to identify Baytown components in order to interpret changes in socio-political behavior and population size. There is no reason to believe that northeast Arkansas was abandoned from 500 B.C. to A.D. 400, and the apparent paucity of identifiable Tchula and Marksville period sites can be attributed to the fact that many sites from these periods are currently classified as Baytown.

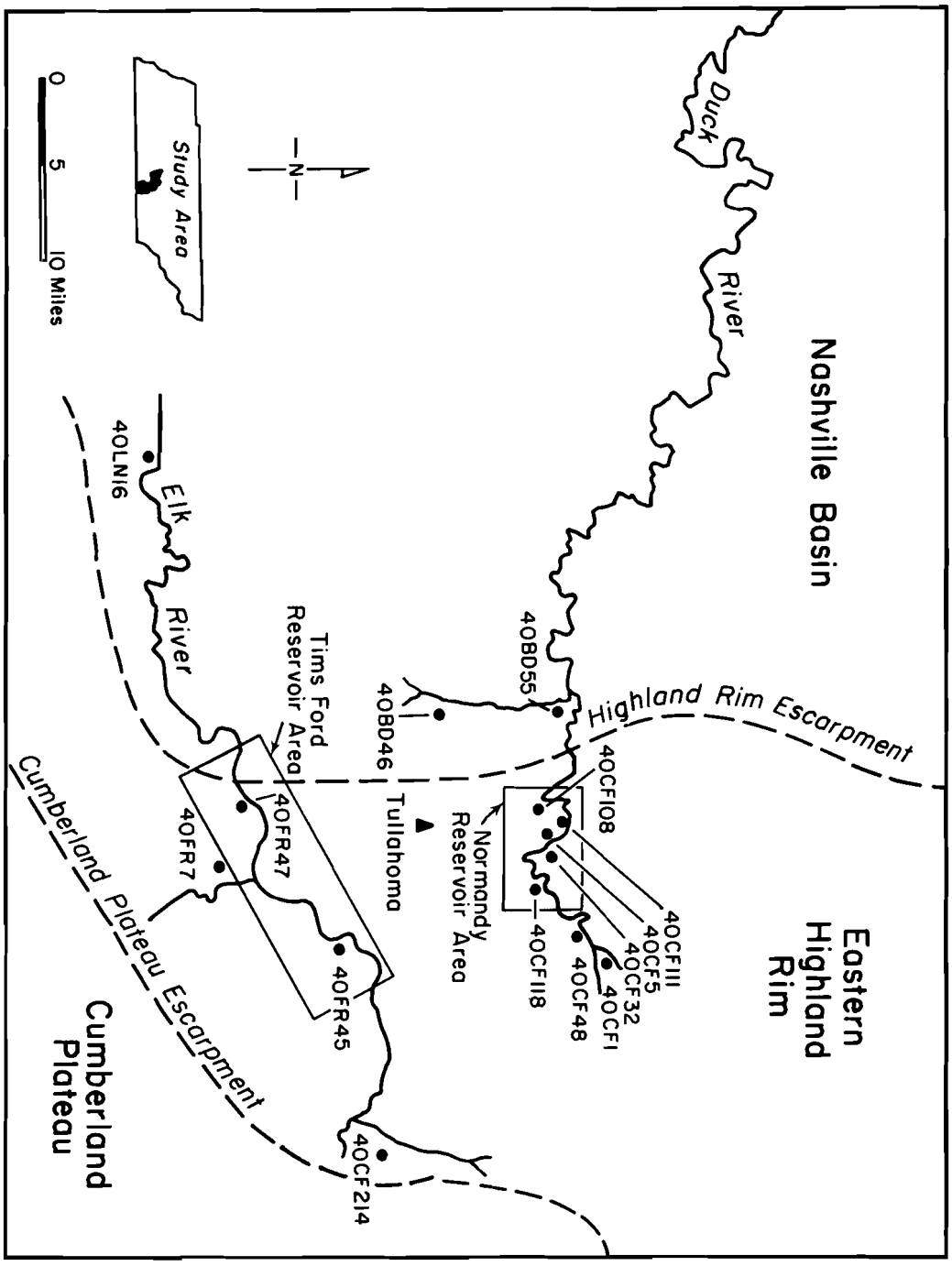

Figure 7.1 Location of key McFarland and Owl Hollow sites in the Eastern Highland Rim and Nashville Basin.

7

Middle Woodland Community and Settlement Patterns on the Eastern Highland Rim, Tennessee

Charles H. Faulkner

Excavation of Middle Woodland sites in the Eastern Highland Rim of Tennessee for the past two decades has provided detailed information on the community and settlement patterns of the early Middle Woodland McFarland (200 B.C.-A.D. 200) and the late Middle Woodland Owl Hollow (A.D. 200-A.D. 600) cultures. The McFarland communities were small villages of circular houses and windbreaks occupied for only a limited number of years. Owl Hollow villages, characterized by dual winter and summer houses, were utilized for a much longer period of time. Changes in community and settlement patterns over the 800 years of Middle Woodland occupation can be attributed to Hopewellian influences, intensification of gardening with the introduction of maize, and adaptation to the forest-prairie edge environment of the southern outliers of the Prairie Peninsula.

INTRODUCTION

Current knowledge of Middle Woodland community and settlement patterns in the Eastern Highland Rim physiographic section of Tennessee is based on extensive excavation of key archaeological sites in this area by the Department of Anthropology, University of Tennessee, Knoxville. The study of these sites in the Eastern Highland Rim was first undertaken in 1966 in the upper Duck River valley at the Old Stone Fort, a large Middle Woodland ceremonial enclosure (Faulkner 1968a). During the same year, Middle Woodland components were excavated in the TVA Tims Ford Reservoir on the Elk River (Faulkner 1968; Butler 1968). With the beginning of archaeological mitigation in the TVA Normandy Reservoir on the Duck River in 1972, two Middle Woodland cultures were defined by the excavation of 10 large habitation sites in a 16 mile stretch of the upper Duck valley during the next four years (Faulkner and McCollough 1974, 1977, 1978, 1982a, 1982b; McCollough and Faulkner 1976, 1978) (Figure 7.1). These manifestations are the early Middle Woodland McFarland and late Middle Woodland Owl Hollow cultures. This reservoir mitigation project generated working hypotheses about the historical relationship between these cultures and the dynamics of the subsistence and settlement patterns. To test these hypotheses, two NSF funded projects were focused toward the testing and excavation of Middle Woodland sites outside the TVA reservoir precincts. In 1976-1978, the Owl Hollow type site in the Elk River valley was extensively excavated and four additional Owl Hollow culture sites in the Elk and Duck river valleys were tested in the NSF Owl Hollow Archaeological Project (Cobb and Faulkner 1978). The McFarland type site in the upper Duck River valley was excavated in the NSF McFarland Archaeological Project in 1979 (Kline *et al.* 1982).

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ENVIRONMENTAL SETTING

The upper Duck and Elk river valleys are in the transition zone between the Nashville or Central Basin and Eastern Highland Rim physiographic sections of the Interior Low Plateaus physiographic province in Tennessee (Fenneman 1938). The valley floors are an extension of the Nashville Basin and the surrounding ridges are part of the Highland Rim. The Eastern Highland Rim is a hilly to deeply dissected low plateau on Mississippian geological strata with an average elevation of 1050 feet AMSL in Coffee County (Love *et al.* 1959). The eastern boundary of the Highland Rim is the pronounced escarpment of the Cumberland Plateau, the limestone and sandstone cliffs of this scarp rising 800 to 1000 feet above the plateau surface of the Rim. Two distinct areas mark the surface of the Rim: the moderately flat to rolling area between the dissected western escarpment of the Rim and the Cumberland Plateau called the flat Rim or "Barrens," and the dissected Rim adjacent to the escarpment separating this physiographic section from the Nashville Basin. The sources of both the Duck and Elk rivers drain the eastern portion of the flat Rim. The Duck River in the upper Normandy Reservoir zone has cut through resistant cherty limestones, causing the stream to be deeply entrenched in the flat Rim with steep walled valleys and narrow floodplains. In the lower Normandy Reservoir zone, where the Duck River flows into the Nashville Basin, the valley is wider and bordered by the rugged dissected Rim. These wide floodplains contain rich arable soils that would have been ideal for aboriginal farming.

The climate of middle Tennessee is salubrious, with a mean annual temperature of 50.6° F. and an annual normal mean rainfall of 50.67 inches (Strand *et al.* 1973:6). Summers are hot, with unusually warm days occurring early in the spring and late in the fall. Winters are mild with the average temperature about 42°. Summer and fall are the driest seasons of the year, with rainfall being most heavy in the winter and spring. Winter precipitation usually comes in the form of slow drizzles, sleet, or snow, with single snowfalls seldom exceeding 3-4 inches in depth.

The general surface of the Eastern Highland Rim formerly supported an oak forest (Braun 1950:152-154). Shelford has characterized the climax forest of the Nashville Basin as tulip-oak (1963:35). Braun (1950) believes the transition between the Western and Mixed Mesophytic forests occurs between the dissected Highland Rim and the Nashville Basin, making the upper Duck and Elk valleys an ecotone between these two forest regions. A unique floristic association in this area is the so-called "Barrens" that extends into central Kentucky. Named because of the erroneous conclusion of the early settlers that the treelessness of this area was due to the infertility of the soil (see Owen 1857:30; Sauer 1927:123), the original extent of these grassy openings in the Eastern Highland Rim is unclear. That some kind of prairie openings existed here is indicated by the presence of several species of prairie plants (Shanks 1958:209). An oak forest may have dominated this area, since an early botanist referred to it as the "Oak Barrens" (Gattinger 1901:23). This open upland forest with its attendant forest-prairie edge associations and dominance of nut-bearing oaks and hickories would have had a high carrying capacity for aboriginal hunters and gatherers. In addition, the floodplains would have been an ideal environment for seed-rich annuals such as goosefoot, knotweed, maygrass, and pigweed.

The Duck River and its environs would have produced abundant game species and collectable animal food. Recent studies of this river have produced 48 species of freshwater mussels and at least nine species of pleurocerid snails (van der Schalie 1973), 122 species of fish (Robison 1977), and 14 species of turtles (TVA 1972). While the majority of the 213 species of recorded birds are small passerines (TVA 1972), such large game birds as the wild turkey would have been attracted to the mast in the oak-hickory forests.

Large game mammals such as deer, elk, and bear were reported in these forests in the early historic period. At Knob Lick in Lincoln County, through which the Elk River flows, Long Hunters reported in 1770 that "they beheld largely over a thousand animals, including buffalo, elk, bear, and deer, with many wild turkies [*sic*] scattered among them; all quite restless, some playing, and others busily employing in licking the earth . . . The Buffaloe and other animals had so eaten away the soil, that they could, in places, go entirely underground" (Henderson 1920:126-127).

The mosaic of local environments in the Eastern Highland Rim provided the major basis for the testing of hypotheses within a research design focused on an understanding of changing community and settlement patterns during the Middle Woodland period. The central hypothesis was that the Middle Woodland cultures in this area would be adapted to the forest-prairie edge environment of the Eastern Highland Rim. It was also hypothesized that the settlement pattern would differ in the narrow valley of the upper Normandy Reservoir zone and the broad valley with extensive floodplains in the lower reservoir zone. Corollary hypotheses were that settlement dynamics would be affected by proximity to and influence of the Old Stone Fort ceremonial center, and from an increasing reliance on domesticated plants during the Middle Woodland period.

MCFARLAND CULTURE

The McFarland culture takes its name from the type site, 40-CF-48, located on property formerly owned by the late Claude McFarland on a low river bluff overlooking the Duck River at river mile 266. McFarland territory is known to have included both the upper Duck and Elk river valleys in the Eastern Highland Rim. Pottery and projectile points similar to those characterizing the McFarland culture have also been found in the upper Caney Fork drainage of the Highland Rim (Jolley 1979), along the middle Cumberland River in the Central Basin (Dillehay *et al.* 1982; McNutt and Weaver 1983), and in the proposed Columbia Reservoir in the middle Duck River valley (Dickson 1976), but lack of extensive excavation data in these areas prevents any meaningful comparisons at this time. Although McFarland components have been identified in surface collections from a number of sites in the upper Duck and Elk valleys, our knowledge of McFarland lifeways is derived primarily from the extensive excavation of six sites: Eoff I (40-CF-32), Ewell III (40-CF-118), McFarland (40-CF-48) and Parks (40-CF-5) in the Duck Valley, and site 40-FR-47 in the Elk Valley.

The McFarland culture is characterized by a high frequency of medium-sized triangular projectile points and limestone tempered fabric marked, check stamped, and simple stamped ceramics, a majority of these vessels having tetrapodal bases. The ceramics and projectile points are very similar to those found in the Copena culture of northern Alabama. Other artifacts include greenstone celts, sandstone elbow pipes, and expanded center and insect effigy gorgets. Formal features on McFarland habitation sites include earth ovens, cylindrical storage pits, windbreak shelters, and oval to round tensioned pole structures containing formal interior facilities such as storage pits and shallow basins. Fleshed inhumations and cremations are found on some sites.

The McFarland culture can be divided into early, middle, and late phases based on changes in artifact assemblages on radiocarbon-dated habitation sites. Marked changes are evident in community patterning and settlement location between the early McFarland phase dating *ca.* 200-100 B.C. and the late McFarland phase dating between A.D. 100-200. Typical early McFarland habitation sites include the Aaron Shelton (40-CF-69) and Jernigan II (40-CF-37) sites in the lower Normandy Reservoir (Wagner

1982; Faulkner and McCollough 1982a). Excavation of these two sites revealed domestic components in which the fabric-marked ceramics, triangular and stemmed projectile points, and community and subsistence patterns are virtually indistinguishable from the preceding Early Woodland Long Branch culture. The Aaron Shelton and Jernigan II sites have dispersed clusters of storage pits, shallow food processing basins, and occasional flesh burials. Structures have not been defined and are only represented by scattered postholes, indicating some sort of temporary, seasonal shelter. There is considerable evidence that the McFarland culture as represented on these two sites developed indigenously from the Long Branch culture, the latter an Early Woodland manifestation closely related to the Colbert culture in the Tennessee Valley of northern Alabama (Walthall 1980:112-116).

A clear definition of an early McFarland phase is hampered, however, by the presence of components in the upper Elk and Duck river valleys that are approximately the same age as the Aaron Shelton and Jernigan II sites and yet exhibit a different artifact assemblage and architectural pattern. The Yearwood site (40-LN-16) was located on a high terrace above the Elk River in Lincoln County, Tennessee (Butler 1977, 1979). Pan stripping of this site by the Tennessee Division of Archaeology in 1975 revealed 11 Middle Woodland structures arranged in an unusual spatial configuration and representing a variety of structural types. A cluster of three circular to square single post structures was present in the south and east areas of the site. Within each cluster, the structure closest to the center of the site was larger, more regular in outline, and more substantially constructed than the other two. Five open-sided rectangular structures were located in the center of the site.

The locally manufactured ceramics on the Yearwood site are limestone-tempered, but differ from the assemblages found on early McFarland sites in the Duck valley in that over 50 percent have cord marked surfaces. Projectile points are typical McFarland triangulars. The outstanding characteristic of the artifact inventory, however, is the presence of a variety of non-local, exotic materials usually associated with Hopewellian trade networks and mortuary ceremonialism. These occurred in both mortuary and non-mortuary contexts and include copper and ceramic earspools, mica, galena, serpentine, Flint Ridge chert blades, quartz crystals, and ceramics of non-local origin and/or inspiration. The latter includes rocker stamped, oval rocker-dentate stamped, and diamond-and-dot check stamped sherds. Yearwood has been interpreted as a site where small groups gathered for social intensification including redistribution of exotic goods and disposal of the dead by cremation (Butler 1979:153).

A similar site, Parks (40-CF-5), was excavated in the Normandy Reservoir. The University of Tennessee excavation of this large multicomponent site in 1974 revealed a middle McFarland phase community pattern and clusters of Middle Woodland cremations (Brown 1982). A later excavation by avocational archaeologist Willard Bacon exposed seven square to rectangular structures on another area of the site that are similar to the open-sided rectangular structures at the Yearwood site (Bacon 1982). Six of the structures in this cluster contained features including hearths, earth ovens, and cache pits which were usually located in the corners of the structure. The most typical and completely excavated structure is number 6, measuring about 9 m square, with earth ovens/roasting pits located in three corners. One oven contained what could be called "exotic" artifacts, including a rectangular elbow pipe made of fine-grained siltstone and an antler atlatl handle. Atypical fragmentary McFarland pottery vessels in the pit fill included a cord marked jar and a limestone tempered red filmed bowl, the latter being a trade vessel. Charcoal from this feature dated 220 B.C. ± 185 years. A mortuary area of four cremations and two flesh burials was found to the northwest of the structure cluster, with a nearby feature tentatively identified as a crematory basin (Bacon 1982:177-180). Bacon has identified this as a Neel phase

component, named after an assemblage found in 1973 excavations at the Eoff I site on the Neel farm in the Normandy Reservoir.

The Neel phase component at Eoff I consisted of a round structure approximately 4.8 m in diameter, with adjacent earth ovens and storage pits (Faulkner 1977a:163-169). A radiocarbon date of 115 B.C. ± 60 years was obtained from one of the earth ovens. Ceramics included a majority of limestone tempered plain and cord marked pottery, as well as sand tempered trade pottery that resembles Connestee ware of the Appalachian Summit area (Keel 1976:247-255). Projectile points include both triangular and expanded stemmed forms. Based on the distinctive artifact assemblage and the early radiocarbon date, the Neel phase was tentatively defined to distinguish it from the McFarland component on this site. A close relationship to the Yearwood component was also suggested (Faulkner 1976:167-169).

The problem is whether the differences in the artifact assemblages at Yearwood, Parks, and Eoff I and those found on the "typical" early McFarland sites are due to geographical separation, temporal separation, or functional variation within the early McFarland settlement system. Butler (1979:156) believes the designation of a separate "Neel phase" was premature and that the major difference between this manifestation and early McFarland is in the preference for cord marked pottery in the former and check stamped pottery in the latter. If these sites are all part of the same regional settlement system during the early McFarland phase, Yearwood and Parks could have functioned as special mortuary camps within this system. However, based on evidence from the Bear Creek watershed in Alabama, it has been recently suggested that the Neel phase is a valid temporal unit, distinct from, and predating the early McFarland phase (Futato 1982). That the Neel phase sites represent an intrusive early Middle Woodland culture in the Eastern Highland Rim also cannot be discounted at this time. While insufficient data exist to establish the origins of such a phase, relationships with the Lick Creek phase of the Bear Creek drainage (Oakley and Futato 1975; Futato, this volume) and the Walling I village (Walthall 1973) near the confluence of the Flint and Tennessee rivers are evident.

The middle McFarland phase is characterized by two types of community pattern. One is the small single family base camp exemplified by site 40-FR-47, the Parks site, and possibly the Eoff I site. Site 40-FR-47, located on the east bank of the Elk River approximately one mile upstream from the Tims Ford Dam, was discovered and excavated by avocational archaeologists from the Tullahoma-Manchester area when TVA construction crews bulldozed the area during reservoir construction in 1970. The site consisted of a series of discrete outdoor activity areas situated immediately adjacent to an oval structure (estimated size from scattered postholes 10.3 x 7.3 m) containing a hearth and three storage pits at one end (Bacon and Merryman 1973). The site occupied a small knoll on an upper terrace remnant, and exposure of almost the entire level surface indicates the entire living area is represented. Activity areas around the structure include a "daily food preparation zone" consisting of an earth oven immediately in front of the dwelling; a "food processing zone" several feet west of the dwelling including a cluster of earth ovens and basin-shaped facilities around a hearth; a "chert knapping zone" at the northwest corner of the living area; and a flesh burial at the southeast corner (Bacon and Merryman 1973). Charcoal from one of the earth ovens produced a date of A.D. 55 ± 95 years (Bacon 1975).

Two structures excavated on the Parks site by UTK field crews in 1974 have been attributed to the middle McFarland phase based on structure form and associated ceramics. One was a circular tensioned pole dwelling, 6 m in diameter, with two storage pits along one wall. An open air food preparation area consisting of shallow basins, an earth oven, and a possible storage pit was found about 9 m to the east. The other structure was 61 m west and 49 m north of the round dwelling and was identified as a

Plate 7.1 . McFarland culture Structure II, Eoff I site.

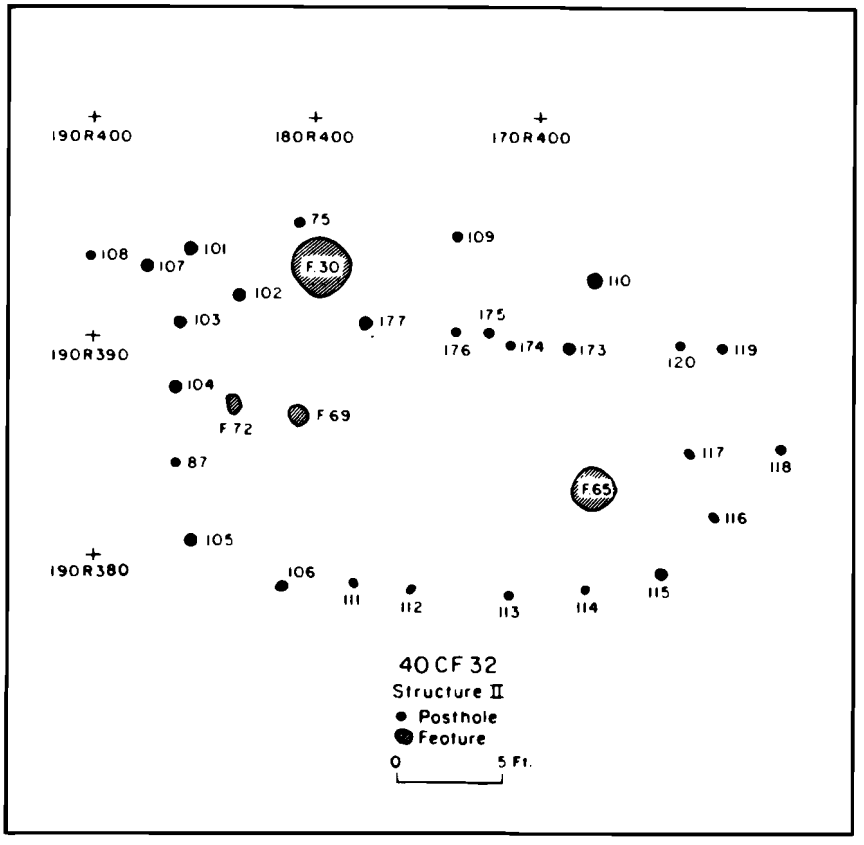

Figure 7.2. Plan of Structure II, Eoff I site.

sub-rectangular to oval pole dwelling measuring 7.3 x 5.2 m. Two storage pits, one enclosed by an interior partition at the south end of the structure, were inside the walls. A number of McFarland phase features were found within several meters of this structure, but a contemporaneous food preparation area could not be positively identified.

Extensive pan stripping of a major portion of the Eoff I site revealed four discrete McFarland habitation areas (Faulkner 1982). The focus of prehistoric activities in three of these areas was a single dwelling with a tensioned pole wall-roof framework. Structure I was a round dwelling 7.6 m in diameter with two storage pits on the east side of the structure. Structure II was located approximately 73 m south of the former at the same terrace elevation. This was an oval structure measuring 8.2 x 5.0 m with a cylindrical storage pit in the northeast corner and a shallow basin in the southwest corner (Plate 7.1, Figure 7.2). Located 128 m east of Structure II, Structure IV was similar in configuration to Structure I although smaller, being 6.4 m in diameter. It also had two storage pits along the northeast wall.

The fourth McFarland activity area on the Eoff I site was a cluster of storage pits, earth ovens, and shallow basins, presumably an open food preparation and storage zone associated with one or more of the previously described dwelling sites, but located at some distance from them to protect the inhabitants from noxious smoke/fumes/odor. This would be similar to the community patterning found at the

Hatchery West site in Illinois (Binford *et al.* 1970). Situated about 103 m east of Structure IV, this activity area contained three groups of storage pits and shallow basins plus a deep earth oven somewhat separated from the storage facilities and basins. No structural evidence was found in this area. Based on the similarity of pottery and lithic artifacts in the pit fill and only one instance of slightly overlapping features, this probably represents a corporate work area utilized by two or more families living contemporaneously on the site.

The temporal relationship between the three structures and the open activity zone at the Eoff I site is a major interpretive problem. Ceramics from associated features indicate all four areas were occupied during the middle McFarland phase, but it cannot be determined if they constituted dispersed houses in a "village". The radiocarbon dates are of no help; two of the dates fall within one standard deviation of the middle McFarland phase (Structure IV—A.D. 95 ± 145 years; Feature 85 in the open activity area—A.D. 200 ± 155 years), while dates for features within Structures I and II are 100-200 years too late. While the evidence that the open activity area at the east end of the site was used by more than one family supports the contemporaneity of the dwelling areas, the variation in house size and shape and the distance between them suggest single family occupancy at this site at different points in time. The latter interpretation is strengthened by a comparison to the community pattern found at the Ewell III site, which differs from the pattern witnessed at Eoff I.

Pan stripping of the Ewell III site in the upper reservoir zone revealed at least 50 features and as many as seven structures attributable to the McFarland culture (DuVall 1977, 1982). Nine clusters of storage pits, basins, and a single earth oven were found at the west end of the site in an area 15 to 46 m from the main structural area. This pattern bears a striking resemblance to the open and isolated food preparation zone at the Eoff I site. Five semicircular windbreak or cabana-like structures were located in the central portion of the terrace. The open nature of two of these affairs and the absence of hearths around at least two of them suggest that they represent warm season shelters. Storage facilities also seem to have been infrequently placed near these structures. Partially rebuilt wall alignments and two interior storage pits mark the location of at least one oval tensioned pole structure measuring roughly 7.9 x 6.4 m at the east end of the site. This has been interpreted as an enclosed cold season dwelling (Faulkner and McCollough 1982b:555). Between the windbreaks and the enclosed oval house was a cemetery area consisting of four cremations and one infant inhumation. Unlike the small single family base camp, the Ewell III site is believed to represent an emerging village pattern with a formal and planned arrangement of seasonally occupied dwellings and function-specific activity areas. The four radiocarbon assays from the McFarland component at the Ewell III site have a mean date of A.D. 80.

The middle McFarland phase sites mark the emergence of distinctive community and settlement patterns that were to characterize this culture for at least 200 years. communities now consisted of discrete dwelling and food processing zones, with the former characterized by irregular or oval pole structures that evolved into a more symmetrical circular form, both with cylindrical storage pits along one wall and sometimes a shallow basin or hearth along the opposite wall. Floor space of these dwellings ranges from 36 m^2 to 76.2 m^2. Larger sites, such as Ewell III, contain both enclosed structures and open windbreaks, probably representing seasonally occupied dwellings. The mode of burial shifts from flesh inhumations and cremations interspersed through the living area (40-FR-47 and Parks) to cremation cemeteries in special areas of the habitation site (Ewell III).

While the settlement pattern continues to reflect a somewhat random distribution of habitation sites throughout the upper Duck valley, larger sites such as Ewell III are now located in the narrow floodplains

of the flat Rim. This settlement shift toward the upper valley supports the hypothesis that the Middle Woodland settlement pattern was effected by the establishment of the Old Stone Fort ceremonial center (40-CF-1). Construction of the stone and earth walled enclosure site called the Old Stone Fort began about A.D. 30 with the digging of a ditch across the narrow neck of land between the forks of the Duck River in the flat Rim (Faulkner 1968a). Absence of habitation debris within the enclosure indicates the builders assembled at periodic intervals to construct this earthwork and conduct ceremonies within it, but lived elsewhere. While the precise function of this enclosure has not been determined, it might represent a shift from a short-term local habitation/ceremonial center like Yearwood and Parks, where rites of transition and trade occurred, to a regionally maintained enclosure where seasonal rites of intensification were performed.

By late McFarland times, communities were larger and, in the upper Duck River valley, the population appears to have concentrated in the narrow valley of the flat Rim. The attraction continued to be the Old Stone Fort, which witnessed its most extensive building phase during the third century A.D. The McFarland type site, located *ca.* 1.6 km from the Old Stone Fort, is the largest known habitation site of this culture. Located on a low bluff above the left bank of the Duck River, this site covers an area of about 2.5 ha.

The McFarland site was excavated in the summer of 1979 by a combination of backhoe strip trenches and 10 x 10 m blocks (Kline *et al.* 1982). Five structures and 92 features were excavated in the transects and blocks. The structures were very formal and substantially built round to slightly oval pole dwellings that were rather uniform in size, ranging from 6.3 x 6.3 m (Structure 5) to 6.8 x 7.1 m (Structure 4) with an average of 6.6 x 6.5 m. This makes them somewhat smaller than the middle McFarland phase structures. All had deeply set postholes with interior storage pits and shallow basins placed along one wall. Three of these structures (2-4) had contiguous walls, and the close proximity yet lack of overlap of these wall posts indicates these dwellings were contemporaneous (Plate 7.2, Figure 7.3). At least three families, perhaps 15-20 persons, were living at this site at one point in time.

As at 40-FR-47 and the Ewell III site, the structural zones at the McFarland site were separated from the food processing and preparation zones. One cluster of earth ovens and shallow basins was found about 25 m south of Structure 1 on the west side of the site, another being found several meters east of juxtaposed structures 2-4. No flesh inhumations or cremations were encountered anywhere in the excavated areas. This indicates the utilization of special restricted burial areas on habitation sites or burial at special function mortuary sites. Five C-14 dates from the McFarland site have a weighted average of A.D. 140 (Kline *et al.* 1982:68).

The more substantial architecture and clustered dwellings at the McFarland site suggest a more permanent occupation than that in earlier phases of this culture. One factor could be an increasing reliance on cultivated and domesticated plants. Large quantities of goosefoot, maygrass, and knotweed seeds, and the remains of two native domesticated plants (sunflower and sumpweed), plus two exotics (squash and maize) were recovered by an intensive flotation program at the McFarland site (Kline *et al.* 1982:53-64). However, in spite of the evidence for more permanent occupation, the dwellings continue to show little evidence of rebuilding, there was virtually no superposition of house patterns and pits, and there was no heavy midden accumulation. The occupation was intensive, but short-term.

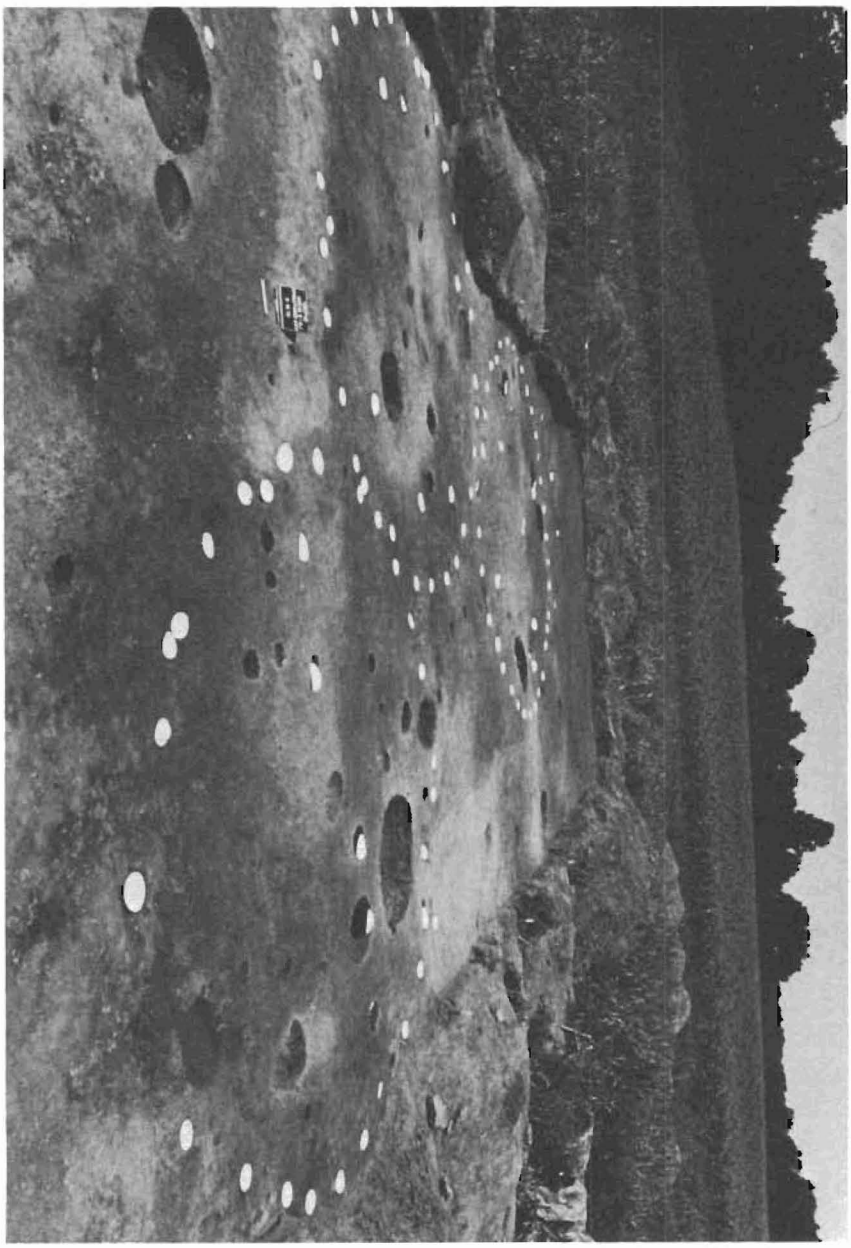

Plate 7.2. McFarland site, Structures 2 (right foreground), 3 (center background), and 4 (left corner). View west.

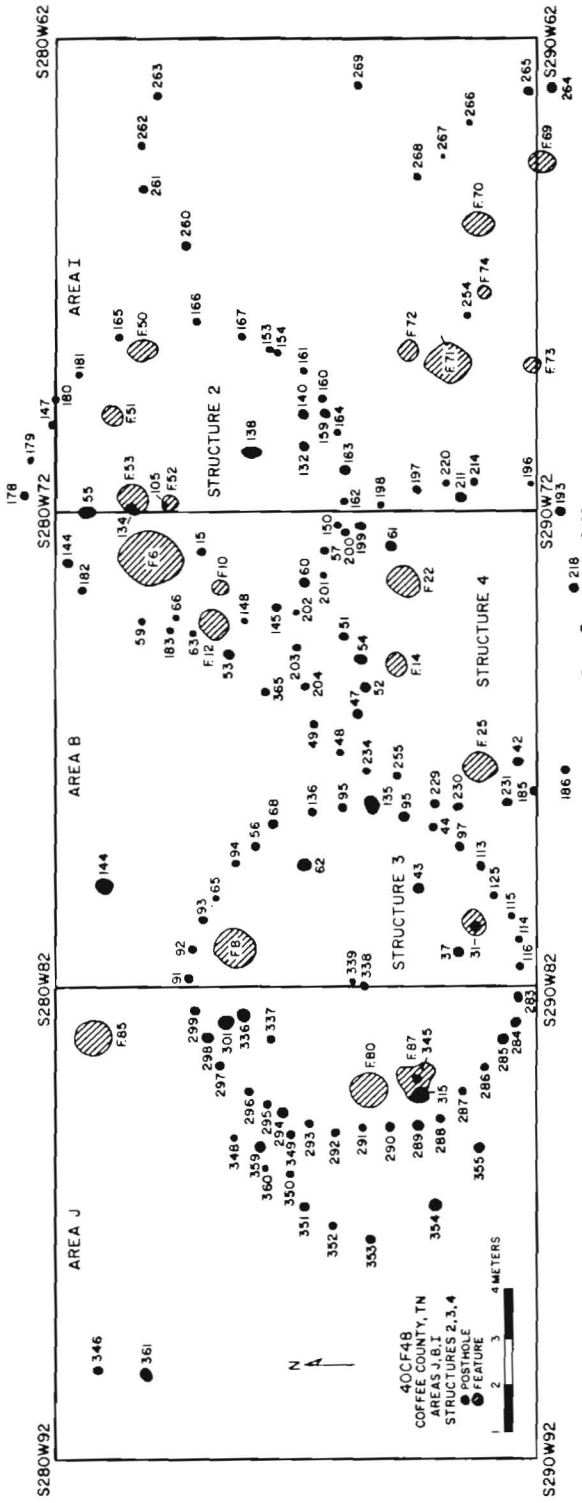

Figure 7.3. Plan of Structures 2, 3, and 4, McFarland site.

OWL HOLLOW CULTURE

Based on similarities in the material culture of the McFarland and Owl Hollow cultures, it had been postulated that the latter phase developed directly out of the former through a process of indigenous culture change in the Eastern Highland Rim. Prior to the 1979 field season, it was hypothesized that the McFarland site was occupied during the transitional phase between the late McFarland and early Owl Hollow cultures. This hypothesis was not supported by the archaeological remains found in the 1979 excavation. It is now believed that either the transitional components between these two manifestations are found outside the upper Duck River valley in the eastern Highland Rim, or the late Middle Woodland Owl Hollow culture is intrusive into this area *ca.* A.D. 200-300.

The Owl Hollow community pattern is characterized by large permanent villages with deep and extensive middens that sometimes occur in a circular pattern around a debris-free central area or "plaza." A dual structure pattern occurs on these settlements, with a permanent oval double-oven winter lodge being the main structure type (see Faulkner and McCollough 1974:274-289). These have been called "double-oven houses" or "earth oven houses" due to the unique arrangement of two limestone-filled earth ovens on the floor. The massive superstructure of these dwellings consisted of four large and deeply set interior posts installed at each side of the centrally placed earth ovens, with a crib of horizontal timbers placed atop the support posts that probably held rafters forming a conical roof. The exterior walls were usually oval in plan and were constructed of vertical posts set into shallow postholes, the tops of these posts supporting the lower end of pole rafters. The walls and roof were probably covered with bark and perhaps earth, but no evidence of these coverings has been found. Discharge from the large limestone-filled heating and cooking ovens constitutes a significant portion of the midden fill on most Owl Hollow sites. Based on the construction and form of these ovens and the faunal and floral remains found in them, these dwellings are believed to be winter houses and forerunners of the later hot houses of the historic tribes of the Southeast (Faulkner 1977b).

The companion structure to the double oven house is the lighter constructed pole house. These range from round to oval structures with a tensioned wall-roof framework to a more formal rectangular building with wall posts and a gabled roof. These are believed to be warm season or summer dwellings due to the lighter built framework and the absence of interior heating facilities. They are comparable to the square or rectangular summer house of the Central Algonkians (Faulkner 1977b).

Food processing and storage occurred around both the winter and summer houses. Large storage pits have produced abundant plant food remains including arboreal and herbaceous seed crops and domesticated sunflower, squash, gourd, and maize, the last domesticate apparently becoming more important in the middle Owl Hollow phase. The Owl Hollow settlement and subsistence patterns seem to reflect an increasing sedentism and dependence on agriculture during the late Middle Woodland period.

Diagnostic artifacts of the Owl Hollow culture include lanceolate "spike," expanded stemmed, and shallow side notched projectile points; two-holed stone gorgets; and polished bone needles. The ceramic assemblage is composed principally of limestone tempered subconoidal jars with simple stamped and plain surfaces; notched rims are common. Unlike the McFarland artifactual inventory, which appears to have close ties to the south in the middle Tennessee River valley (Copena culture) and exhibits Hopewellian influences in an early phase, the Owl Hollow cultural inventory has its closest parallels to the north in the La Motte culture of the lower Wabash valley (Winters 1963) and shows virtually no Hopewellian contact.

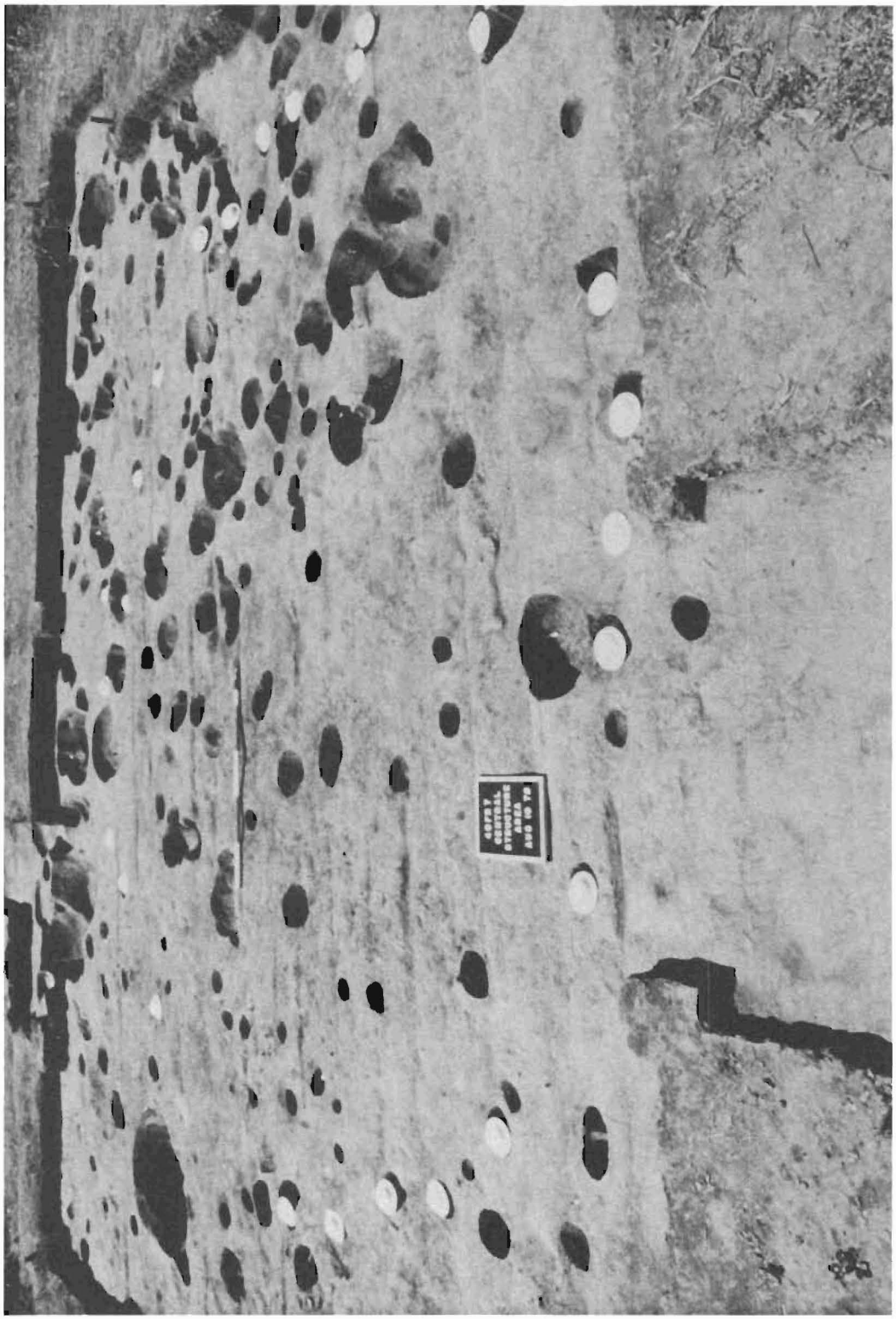

Plate 7.3. Rebuilt summer house on the Owl Hollow site.

Data obtained from the University of Tennessee Owl Hollow Project in 1976-1978 have distinguished three phases of Owl Hollow cultural development. Two types of habitation sites characterize the early Owl Hollow phase (A.D. 200-400). One variation is a large village site that appears to be restricted to the upper Elk River valley. The Owl Hollow type site (40-FR-7) is located on Town Creek, 2.2 km upstream from its confluence with the Elk River in Franklin County. The site was extensively excavated in the summer of 1976 by transecting the habitation area with a series of 2 x 2 m test pits and large block excavations in structural areas (Cobb and Faulkner 1978; Cobb 1985). The site boundaries are delineated by a large circular midden ring covering 3.2 ha.

Based on the excavation of structure patterns in the west, central and east sides of the midden ring, it appears that this village was concentrically structured, with large earth oven winter lodges situated around the periphery of the midden ring and the summer lodges forming an interior circle of structures around an open plaza area. Unfortunately, only one double oven lodge was partially excavated. The largest oven in this building was over two meters in diameter and one meter deep. This feature produced a radiocarbon date of A.D. 275 $\pm$ 60 years, and an assay of A.D. 95 $\pm$ 100 years was obtained from the smaller companion oven. A projected extension of the exposed wall arc of postholes indicates this structure was at least 10-12 m in diameter, assuming a circular wall configuration. Numerous postholes in the exposed southeast quadrant indicate this structure had been rebuilt several times. This is also indicated by an intrusive oven at one end of the house. Two large basin-shaped storage pits were found outside the west wall of this structure, one of which has been dated to A.D. 310 $\pm$ 65 years (Cobb and Faulkner 1978:60-66).

Several superimposed circular to oval structures averaging about 6 m in diameter were excavated in a block in the west central area of the site (Plate 7.3). All the rebuilding phases represent a light-framed, warm weather house type. Storage pits were found in and around these structures, but no hearths or earth ovens were encountered. Faunal remains from the pits, postholes, and an extensive midden-filled gully just north of these structures suggest warm season exploitation of snails, mussels, and large fish species (Cobb and Faulkner 1978:63).

The other type of early Owl Hollow habitation site may be characteristic of the upper Duck River valley. This is a smaller and less intensively occupied site consisting of a single double-oven house and companion summer structure. The single, but well-documented, example is the Banks II site in the broad alluvial floodplain of the lower Normandy Reservoir zone (Faulkner and McCollough 1974). The absence of early (and later) Owl Hollow sites in the upper reservoir zone (flat Rim) is noteworthy, particularly since radiocarbon dates indicate the Old Stone Fort continued to be maintained until the fifth century A.D. (Faulkner 1968a).

Completely excavated Owl Hollow structures on the Banks III site include double earth oven Structures II and III and a summer dwelling, Structure I (Figure 7.4). Structures I and II have been assigned to the early Owl Hollow phase (Faulkner and McCollough 1974:272-280) based on the artifactual content of the earth ovens and postholes as well as radiocarbon dates, although it should be noted that the large standard deviation of the latter (Structure I—A.D. 360 $\pm$ 315 years; Structure II—145 B.C. $\pm$ 430 years and A.D. 190 $\pm$ 400 years) makes their reliability dubious at best.

Structure II was a nicely defined double-oven lodge with ragged oval walls measuring 9.1 x 7.9 m (Plate 7.4). This structure had been enlarged at least once on the south and a dense sheet midden extended riverward from the west side, resulting from earth oven cleaning and maintenance. No storage pits or food processing features were found in the immediate vicinity of this structure.

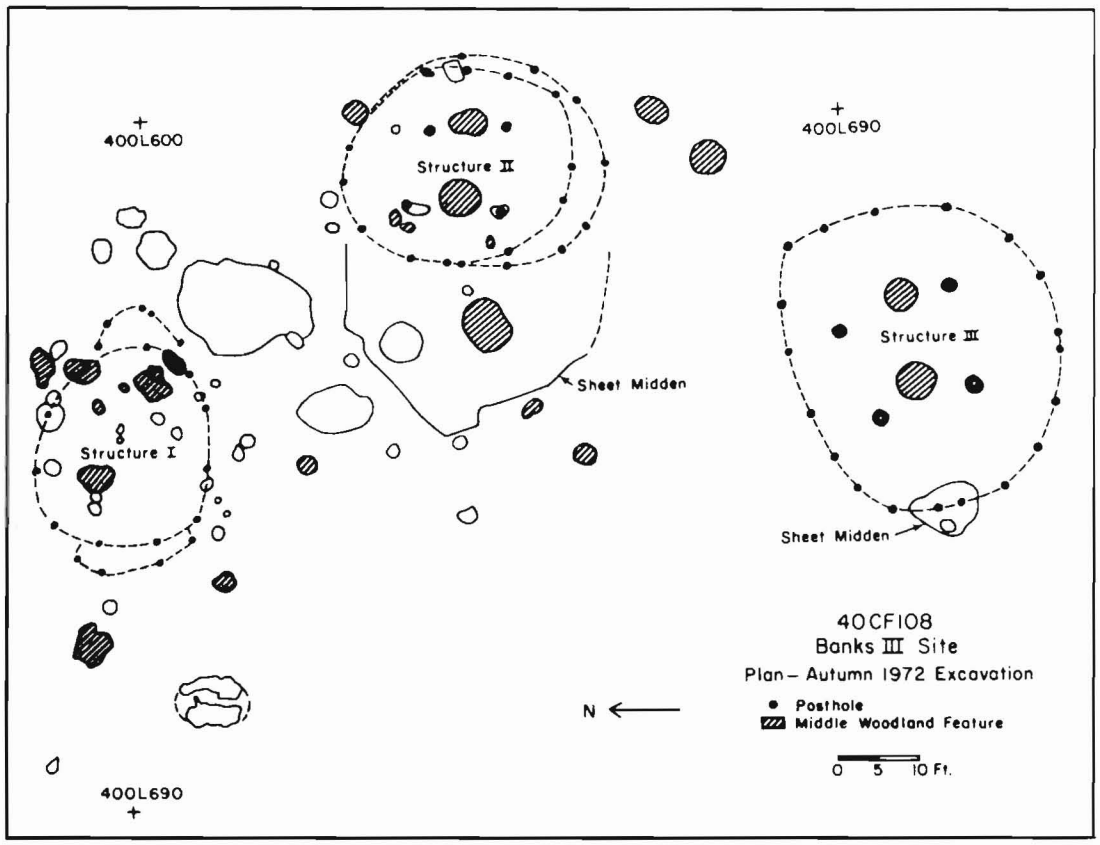

Figure 7.4. Middle Woodland structures on the Banks III site.

Structure I has been paired with the above winter lodge primarily because the associated ceramics indicate it is a Middle Woodland dwelling and it is located only 9 m northwest of Structure II. This was an oval pole structure measuring 7.6 x 6.7 m with a center support post, portico, and antechamber. It is not unlike the McFarland structures in general plan, except for the appurtenances, and does not contain storage pits.

No human remains were found at the Owl Hollow site, although only the central portion was excavated; special mortuary areas could exist in other areas of the site. Two cremation clusters and four flesh burials were attributed to the middle Owl Hollow phase at the Banks III site (Brown 1982:138-139), but considering the dating difficulties with the structures and the fact that most of these remains were several meters from the structures, they could be associated with either the early (Structures I and II) or middle (Structure III) Owl Hollow occupation there. One exception is the remains of a stillborn infant which were deposited in the sheet midden in front of Structure II.

When the early Owl Hollow phase community patterns in the Elk and Duck river valleys are compared, several differences are evident. No large circular middens with concentric rings of structures are found in the latter area, and the dwellings there do not exhibit the extensive rebuilding noted at the

Owl Hollow type site. Further, there is a notable absence of storage pits at the Banks III site, a trait which continues into the middle Owl Hollow phase in the upper Duck valley on all excavated sites with the exception of one. There is certainly a suggestion that the population size was smaller and sites were more temporarily occupied in the upper Duck valley during this time. If this is the case, it could be due to the Owl Hollow people's favoring the upper Elk valley for permanent settlement, with sites such as Banks III being short-term pioneer settlements on the fringes of new territory. Alternatively, Banks III was a permanent special activity site that was occupied for a year or two while social and religious functions were conducted in the Duck valley. Since the Old Stone Fort was still functioning at this time, the latter interpretation is favored.

The most striking cultural change witnessed during the middle Owl Hollow phase (A.D. 400-600) was a concentration of population on floodplain sites in the broad bottom lands of the Eastern Highland Rim-Nashville Basin transition zone. There are virtually no middle Owl Hollow phase dates from the type site and the population may have moved from this upland tributary location to the Peters site (40-FR-45) on the alluvial floodplain of the Elk River. This site contains a dense midden which, in aerial photographs, has an arc or semicircular shape. No structures were defined in the limited testing conducted here in 1976, but 15 features were found, among them two large storage pits. The fill of one of these pits, dated at A.D. 480 $\pm$ 60 years, was significant in that it contained maize kernels (Cobb and Crites 1977). It is interesting to note that despite an intensive flotation program at the Owl Hollow site, no maize was recovered (Crites 1978).

The best evidence of middle Owl Hollow phase community patterning comes from sites in the upper Duck valley. Habitation sites continue to be restricted to the wide floodplains of the lower reservoir zone and consist of a paired winter and summer house. One change, however, is that the double-oven houses are now larger than the early Owl Hollow structures at the type site and Banks III. At the latter site, Structure III measured 12.1 x 10.4 m. A small discharge midden at the west entrance and absence of rebuilding indicates it was occupied for only a short period of time. An estimated date of occupation based on three radiocarbon assays from the earth ovens and support postholes is A.D. 500 (Faulkner and McCollough 1974:283-288).

Two additional sites in the Normandy Reservoir produced the structural remains of a large middle Owl Hollow double-oven house. The double-oven house (Structure III) on the Eoff I site measured 13.7 x 11.3 m and showed no evidence of rebuilding and little midden accumulation (Cobb 1982:159-165). A radiocarbon date of A.D. 465 $\pm$ 60 years and an archaeomagnetic date of A.D. 300 for one of the interior earth ovens indicate a possible transitional early-middle Owl Hollow phase attribution for this structure. Maize was recovered in this feature (Crites 1978:82). About 18 m southwest of Structure III was an area of superimposed walls representing at least four pole structures. This area is similar to the summer dwelling locality at the Owl Hollow site, except for the rarity of associated pits. These structures would have ranged from about 5-6 m in diameter. A radiocarbon date of A.D. 395 $\pm$ 75 years from an associated feature suggests contemporaneity with winter lodge Structure III (Cobb 1982:165-171).

A large double-oven house (Structure I) on the Banks V site is similar to the other middle Owl Hollow phase winter houses in size (13.7 x 10.6 m), shape, and internal features, but seems to have been occupied for a more extended period of time (Cobb 1978:105-170). This is indicated by the deep midden on the north (river side) of this structure and the large and intensely fired paired ovens with an additional one at the southwest end of the floor. A mean radiocarbon date of A.D. 425 was obtained from charcoal from the two earth ovens. A cluster of postholes, possibly marking rebuilt oval to circular summer houses, was

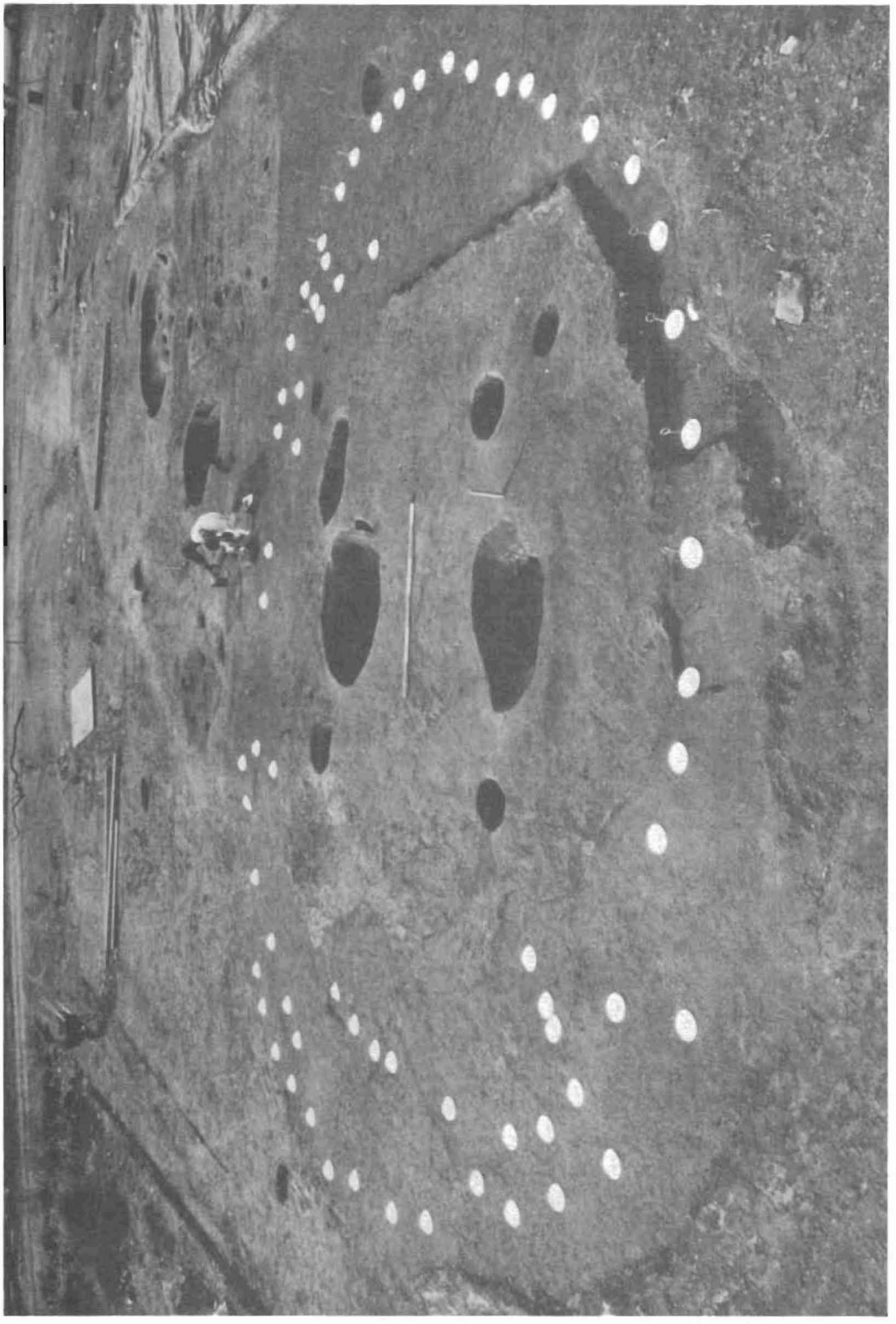

Plate 7.4. Structure II, double-oven winter house on Banks III site.

located about 27 m south of Structure I. The size of this structure(s), designated Structure III (Kleinhans 1978:343), cannot be determined due to the multiplicity of superimposed posthole patterns.

A middle Owl Hollow phase site that did not produce any structural evidence but yielded maize kernels is the Shofner site (40-BD-55) in Bedford County. This large village site in the broad floodplain of the confluence of Thompson Creek and the Duck River was tested in the winter of 1975 (Cobb and Faulkner 1978). Test trenching revealed a large refuse-filled storage pit which produced maize and radiocarbon dates that average about A.D. 500 (Crites 1978:83-87).

The appearance of maize on three middle Owl Hollow phase sites and an apparent shift in the settlement pattern to a preference for establishing sites on the broad floodplains of the Duck and Elk rivers indicates that gardening, especially of maize, becomes more important in the subsistence pattern of these people after A.D. 400. Crites (1978) also suggests a greater emphasis on lowland herbaceous annuals, particularly maygrass and goosefoot. While population may have simply shifted from the Owl Hollow type site to such floodplain sites as Peters in the Elk River valley, the larger winter structures in the Duck River valley suggest a population increase at this time in that particular drainage of the Eastern Highland Rim. Regarding the Duck River valley, it is also interesting to note that the Old Stone Fort was probably abandoned during the middle Owl Hollow phase (latest date *ca.* A.D. 420), thus removing what was a major attraction for settlement in the flat Rim area of this drainage during earlier Middle Woodland phases.

The introduction of more intensive gardening could also explain the shift to more permanent and formal dual summer-winter house types in the Owl Hollow community plan. During McFarland times, villages may have been moved on a fairly frequent basis since small garden plots of squash and herbaceous annuals did not have to be as intensively maintained, and wild plant and animal foods constituted a more important part of the diet. With the introduction of more intensive herbaceous seed and eventual maize farming, villages were occupied for a longer period of time to insure a successful planting and harvest and possibly to protect areas of arable soil from encroachment. Although men still left the village on hunting forays, women, children, and the elderly would remain at these villages where they would be secure in the substantially built double-oven house. This winter house can possibly be interpreted as a transitional dwelling between the portable structure of earlier Archaic and Woodland peoples and the permanent houses in late prehistoric Mississippian villages (Faulkner 1977b:149).

Unfortunately, very little is known about the late Owl Hollow phase (post-A.D. 600) since only four sites have produced features of this phase. The Raus site (40-BD-46) on Thompson Creek *ca.* 16 km south of the Duck River and the Hamby site (40-CF-214) on Betsy Willis Creek *ca.* 2 km north of the Elk River were tested during the Owl Hollow Project (Cobb and Faulkner 1978). No complete structural remains were found at either site. The dense and deep midden at the Raus site was trenched, producing at least one alignment of postholes, but the most significant discoveries at this site were two redeposited cremations and a possible crematory basin associated with some type of structure. The single radiocarbon date from the Raus site is A.D. 615 $\pm$ 60 years.

The Hamby site was situated around an old sinkhole with concentrations of artifacts and areas of midden soil probably representing discrete activity. The plow zone was removed from 18 test pits, exposing several features. The most significant were two large cylindrical storage pits. One radiocarbon assay in the early ninth century A.D. could date a terminal Owl Hollow occupation.

At least two sixth century A.D. features at the Owl Hollow site suggest that the type site was re-occupied in late Owl Hollow times. That the late Owl Hollow people continued to occupy the upper

Duck River valley into the next two centuries is indicated by several earth ovens at the Eoff I site dating from *ca.* A.D. 550-650. These ovens were internal features in a small double-oven house that was rebuilt several times in the same area and indicates a continued presence in the main river valley (Cobb 1982:171-172). However, the late occupation at the Raus, Hamby, and Owl Hollow sites suggests settlement shift out of the alluvial valleys and back into the uplands after A.D. 600. If these limited archaeological remains truly signal such a shift, it could be due to population pressure, decreased emphasis on maize agriculture, threat from intrusive Late Woodland peoples, or a combination of these and other unknown cultural and environmental factors.

In culture history summaries of the prehistoric Eastern Highland Rim it has been generally assumed that the Owl Hollow culture developed into the Late Woodland Mason culture (Faulkner 1968b) through the acquisition of new culture traits. However, the late radiocarbon date of A.D. 810 for the Hamby site suggests that the Mason culture may not have replaced Owl Hollow, but rather that the two cultures may have been contemporaneous for at least part of their existence during the seventh and eighth centuries A.D. In fact, there are now known to be several discontinuities between the Owl Hollow and Mason cultures, including projectile point types, temper and surface treatment of ceramics, dwelling construction, and mode of burial. Based on what little knowledge we have about late Owl Hollow, there appear to be as many continuities between the late Owl Hollow phase and the earliest Mississippian phase in the Eastern Highland rim as there are between the former and the Mason culture. The relationship of the Owl Hollow culture to succeeding cultural manifestations is one of the most pressing problems for future Middle Woodland research in the Eastern Highland Rim.

MCFARLAND-OWL HOLLOW COMMUNITY AND SETTLEMENT PATTERNS IN REGIONAL PERSPECTIVE

Changes in settlement and community patterns in the Middle Woodland cultures of the Eastern Highland Rim are believed to be largely attributable to 1) the influence of the Hopewell Interaction Sphere; 2) the intensification of the collecting and ultimate cultivation of herbaceous seed crops; 3) the introduction of maize agriculture; and 4) a continuing readaptation within the forest-prairie edge environment as new social and economic patterns were integrated into these cultures. During the development of the McFarland culture, there was an increase in the size and permanency of habitation sites and an appearance of centers that functioned primarily for social integration, including the Old Stone Fort and mortuary sites such as Yearwood and Parks. The closest relationship of McFarland to cultures outside the Eastern Highland Rim of Tennessee appears to be with the Copena culture of northern Alabama (Walthall 1973), the Candy Creek-Connestee cultures of the eastern Tennessee valley (Lewis and Kneberg 1946; Chapman 1973), and the Cartersville culture of northern Georgia (Caldwell n.d.; Fairbanks 1954). Unlike the Owl Hollow culture, which had strong ties to the north in the Wabash valley of Indiana and Illinois, the McFarland culture appears to have a definite southern orientation.

It is believed that the increase in size and permanency of the McFarland habitation sites can be, in part, attributed to an intensification of gardening, particularly the cultivation of herbaceous seed crops. By late McFarland times, these habitation sites were small but permanently occupied villages, but they were not occupied for long periods of time, indicating that frequent shifting of settlement to new hunting and gathering locales was still important.

While changing subsistence strategies affected the McFarland community pattern, a new or intensified socio-religious pattern also had a strong influence on the settlement pattern of this culture. This new pattern was the ceremonialism encompassed within the Hopewell Interaction Sphere, which is evidenced not only in the presence of "exotic" artifacts in the Neel phase, but also in the type and location of sites in the settlement pattern. The Old Stone Fort, a ceremonial enclosure, was built, and special function sites like Yearwood and Parks were apparently utilized for mortuary ceremonialism and social intensification. There is also a suggestion that McFarland settlement in the upper Duck valley was influenced by the presence of the Old Stone Fort, the habitation sites of the middle and late phases of the McFarland culture being concentrated in the narrow valley of the flat Highland Rim near this enclosure site.

Community and settlement patterns of the Owl Hollow culture are considerably different from those of the McFarland culture. Communities are permanent villages with deep, dense middens that indicate many years of continuous occupation. Dwellings were substantially built winter lodges with dual earth ovens and more lightly constructed summer houses. By middle Owl Hollow times, villages were located on broad floodplains of the Elk and Duck rivers. This shift in settlement appears to be due in part to the introduction of maize agriculture. While the Old Stone Fort continued to be utilized in the early Owl Hollow phase, Owl Hollow settlements are not found in the flat Highland Rim area near this enclosure. No Owl Hollow mortuary sites are known to exist and there appears to have been little or no contact with Hopewellian cultures.

It has already been noted that the Owl Hollow culture appears to be closely related to the La Motte culture of the lower Wabash valley. Howard Winters (1963:70) recognized a strong Southeastern influence on the La Motte culture when he stated that "The complex of simple and check stamped pottery, rectanguloid elbow pipes, and the plaza complex, all point to the Tennessee Valley and adjacent loci for the derivation of the La Motte Culture." It is suggested here that the "adjacent loci" are the upper Duck and Elk valleys in the Eastern Highland Rim of south-central Tennessee.

An even closer relationship between Owl Hollow and the La Motte culture is seen in community patterning. The most striking feature of the respective community patterns is the presence of circular middens around a debris-free "plaza." Structure patterns including round structures with extensive wall rebuilding and rectangular structures are found at such La Motte sites as Daughtery-Monroe in Indiana (Pace 1973:46-50), and there is evidence of dual summer and winter houses at the Hatchery West site in Illinois (Binford *et al.* 1970:16-28). One is tempted to see a strong interaction of cultures along a northwest-southeast axis through certain regions of the Interior Low Plateaus and Wabash lowlands in the late Middle Woodland period. If this is the case, closely related cultures should be present in other physiographic sections of the Interior Low Plateaus in the Cumberland valley of north-central Tennessee and the Mississippi Plateaus of west-central Kentucky.

Two recently excavated Middle Woodland sites along the Cumberland River in the former area show varying degrees of similarity to the McFarland and Owl Hollow cultures. The Hurricane Branch site in Jackson County, excavated by the University of Kentucky in 1981, contained a Middle Woodland component with an artifact inventory including limestone tempered, simple stamped ceramics, some with notched rims and lanceolate stemmed and side notched projectile points. Most of the features, however, were more generalized food processing pits, and the single defined structure was a small semi-rectangular dwelling containing a fire hearth and infant burials (Gatus *et al.* 1982:402-413).

Further downstream in Trousdale County is the Duncan Tract site, excavated by Memphis State University in 1980-81 (McNutt and Weaver 1983). Two Middle Woodland components were defined here. Middle Woodland component A, with a McFarland-like ceramic and lithic inventory, had a community plan of several large (9-12 m) circular houses and possibly oval structure measuring about 11-12 x 7-8 m. The only definite internal features associated with these structures were hearths. Component A dates between 200 B.C. -A.D. 75/150. Middle Woodland component B, dating between A.D. 75/150 -400, was characterized by McFarland triangular projectile points and simple stamped pottery. No architectural features were associated with this component, although a large storage pit could be assigned to this occupation. While the Middle Woodland components at the Hurricane Branch and Duncan Tract sites appear to be related to the McFarland and Owl Hollow cultures, the dwelling construction and community patterning, if truly reflected in the excavated areas of these sites, is quite different from patterns found in the upper Duck and Elk river valleys.

The Owl Hollow community pattern also appears to be unique for the Middle Woodland period in the Duck River valley proper. A late Middle Woodland component has been excavated recently in the Columbia Reservoir in the middle reaches of this stream valley. The Edmondson Bridge site, located on a tributary creek of the Duck, produced Owl Hollow-like ceramics and projectile points associated with three large oval-rectanguloid structures (Bentz 1983). However, this site was not as intensively occupied as the Owl Hollow villages in the upper Duck valley, and the structures are more similar to those found at the Yearwood site.

The similarities between Owl Hollow and La Motte may be due to their adaptation to a prairie edge environment and cultural interaction though southern outliers of the Prairie Peninsula. For example, the La Motte culture has been described as having "a decided prairie orientation" (Winters 1963:62). The location of La Motte sites in the lower Wabash Valley might be seen as centered on the northern terminus of a southern arc of prairie outliers that extend into west-central Kentucky and the Eastern Highland Rim of Tennessee. The prairie openings of west-central Kentucky are called the "Barrens" because early settlers believed that the absence of trees signified a barren or unproductive soil (Braun 1950:155). The main area was the so-called "Big Barrens," a narrow strip of prairie that extended from the Ohio River about 35 miles west of Louisville into north-central Tennessee and corresponding to the Pennyroyal Plain. The Pennyroyal is a lower cuesta of the Mississippian Plateaus and connects with the Eastern Highland Rim of Tennessee. The other prairie area in Kentucky is in the western part of the state in the Jackson Purchase section, and consists of two tracts extending from the Ohio River down to the Tennessee border.

Transeau (1935) does not show the southeastern outliers of the Prairie Peninsula penetrating south-central Tennessee, but the flat Highland Rim in Coffee and Franklin counties is called the "Barrens" today, and the presence of former prairie openings is indicated by the occurrence of relic prairie floral species. This unique vegetation in this area of the Eastern Highland Rim has been described by Lewis (1954:11-12):

> What is significant about this area is its distinctive prairie flora, such as: the prairie cone flower, blazing stars, Indian grass, prairie dock, etc. In addition to the actual prairie flora, the Highland Rim area is characterized by blackjack oak, post oak, and cedar trees which are able to maintain themselves on dry uplands and therefore able to penetrate former prairie areas.

The extent of prairie openings in the Tennessee Barrens is not known, since modern timbering and farming and the growth of secondary oak forests have completely altered the prehistoric floral pattern on the flat Rim. Topographically, the Barrens has a rolling karst relief with many poorly drained flats and shallow depressions. The "dry" Barrens forest association has been characterized as southern red oak-scarlet oak, post oak-blackjack oak, and mockernut hickory with a grassy understory or prairie openings and the "wet" Barrens as supporting a swamp forest of willow oak, overcup oak, water oak, red maple, sweetgum, and blackgum (personal communication with H.R. DeSelm). Gattinger (1901:23) calls these the "Oak Barrens."

While there is no conclusive evidence at this time that the Owl Hollow culture was adapted to a prairie edge environment, the location of such sites as Owl Hollow, Raus, and Hamby on small tributaries in the uplands could reflect a central location from which a wide range of biotic zones including prairies or oak openings was exploited. La Motte sites are often set in a definite edge area in open woods between the prairie and dense woods and sloughs of the Wabash floodplain (Winters 1963). If the relationship between Owl Hollow and La Motte can be explained by a diffusion of ideas through a southeastern ext ens ion of prairie openings which functioned as an interaction area during the late Middle Woodland period, village sites with circular middens, dual summer and winter houses, and characteristic Owl Hollow-La Motte ceramics and projectile points should also be found in those central and western Kentucky counties where prairie openings and deciduous forest edge were most extensive. Thus far, survey along the Barren and Green River drainages of south-central Kentucky has produced material more reminiscent of the McFarland culture (see Boisvert and Gatus 1977), although limestone tempered simple stamped pottery occurs on several sites in this area (Schwartz and Sloane 1958; Carstens 1976). If continued survey of these counties fails to reveal the presence of an Owl Hollow–La Motte like culture, the possibility of direct population movement between the lower Wabash valley and the Eastern Highland Rim of south central Tennessee should be seriously considered as a working hypothesis. To test this and other hypotheses about Middle Woodland cultural dynamics in the Eastern Highland Rim, future research designs must take a more regional approach, encompassing other localities in the Interior Low Plateaus.

8

Geometric Enclosures in the Mid-South: An Archaeological Analysis of Enclosure Form

Robert L. Thunen

Geometric enclosures are key architectural remains to an archaeological understanding of the social complexities of the Middle Woodland period. An architectural analysis of enclosures in the Mid-South is presented. Seven geometric enclosures are examined with reference to their form and the degree of site planning. All seven enclosures are found to lack the degree of planning and structural complexity of enclosures found in Ohio.

INTRODUCTION

Architecture serves to organize, define, and coordinate human activities spatially. Because it is structured and conditioned by cultural institutions such as politics and religion, architecture provides archaeological clues to a variety of activities. In this article I investigate one aspect of architecture: site planning and the design process. Focusing on an architectural analysis, I illustrate various ways in which Middle Woodland groups in the Mid-South structured earthen enclosures and determined the placement of mounds within.

Since the early nineteenth century, scholars have sought to explain the function and form of enclosures. Squier and Davis (1848) divided enclosures into two classes, "works of defense" and "sacred enclosures." Hilltop earthworks, with names such as Fort Ancient, Fortified Hill, and Fort Hill, were thought to be refuges for the Mound Builders in their defense from the barbarian Indians (Silverberg 1968). Although the notion of a Mound Builder culture was eventually disproved, the belief that these represented defensive earthworks persisted. Recently geometric enclosures have been interpreted as vacant ceremonial centers (Prufer 1964), regional transaction centers (Struever and Houart 1972), and as centers symbolizing internal social divisions among particular groups (Greber 1979a). Although hilltop enclosures have received less attention than geometric enclosures, hilltop earthworks are now viewed as areas dedicated to the enactment of rituals (Faulkner 1968; Essenpreis and Moseley 1984).

Recent interpretations emphasize a specialized social/religious function for both types of enclosures. Yet little evidence of activities and functions exists, with the exception of the burial mounds associated with some enclosures. The terms sacred enclosure or ceremonial center, often implying a ritual or regional function beyond a local cemetery, remains contested today. Were enclosures sites used for a wider scope of ritual activities? Were the sites visited by a variety of non-local groups? To what extent are earthwork

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groups centers or focus points for local or regional groups? These are all difficult questions, perhaps reaching beyond the ability of the archaeological data to provide us with satisfactory answers. Nevertheless the questions and models must be posed. If we apply the term "ceremonial center" to the prehistory of the Mid-South or Midwest it must not be simply a borrowed analogy, but a model suitable for explaining the empirical evidence.

Previous explanations lacked a concern with enclosure design and construction and attempted to analyze site function without reference to how architectural design affected a site's structure (a notable exception is Essenpreis and Moseley 1984). In order to define site use, archaeologists must examine how organizational constraints, such as mobility, subsistence, and political organization, contribute to the architectural structuring of enclosures. I seek here to examine the particular types of architectural criteria that were important for design considerations in Middle Woodland enclosures in the Mid-South.

The Middle Woodland period in the Mid-South is one of cultural diversity and interaction, as exemplified by the Marksville, Miller and Copena cultures. I view Mid-South geometric enclosures as dedicated areas for local social and religious rituals. Enclosures have also been suggested as sites for regional gatherings (Struever and Houart 1972), but this did not occur at all geometric enclosures in the Mid-South. I suggest that the degree of regional participation may have depended on ease of access and a local group's ability to sponsor such gatherings.

Archaeological research has centered on two aspects of earthen enclosures: 1) the burial mounds associated with enclosures (e.g., Mills 1907; Moorehead 1922); and 2) site function (cf. Sears 1956; Griffin 1956; Brown and Baby 1966; Baby and Langlois 1979; Greber 1983). Both lines of research have frequently ignored spatial relationships among the enclosure's architectural components. Unfortunately, burial mounds were often excavated without reference to their placement, orientation, or internal construction, while embankments were viewed only as walls or defensive battlements. Earthworks (i.e., mounds and embankments) were treated as static architectural features. Recent investigations (Brown 1979, 1982; Greber 1979a, 1979b, 1983; Essenpreis and Moseley 1984) have attempted to examine enclosure architecture within a context of cultural dynamics and site development. This is crucial since enclosure designs were not all the same. Enclosures are built environments; they represent particular construction responses to ideological and political concerns.

Lack of architectural preservation at enclosures is a further problem: mounds and embankments are frequently preserved, while wooden structures were subject to natural decay or destruction by man. Thus, the open areas within the enclosures are often considered to be plaza areas for group rituals. However, recent investigations at Seip by Baby and Langlois (1979) suggest that the archaeological interpretation of these areas as empty plazas is premature. Their excavations yielded evidence of at least four wooden structures within the enclosure that functioned as specialized activity loci. These buildings suggest that there were more architectural elements to an enclosure than just embankments and mounds. Therefore, any architectural analysis of enclosures is incomplete until an investigation of associated non-earthen architectural structures is undertaken.

Another archaeological problem with the investigations of enclosures is intensity of occupation. Archaeologists investigate a site after its use-period, when several hundred or thousand years of natural and cultural modification have altered both the site and the landscape. Understanding a site's chronology is of prime importance to any study of architectural development. Yet there has been a lack of focused research on the architectural development or planning of Middle Woodland enclosures (Greber's work notwithstanding: 1949a, 1979b, 1983). At best there are carbon-14 dates for the burial mounds and some

ceramic data for placing the site within a relative time period. This is one of the reasons why enclosures have been regarded as static architectural structures—because we have lacked the temporal control to ascertain an architectural sequence. Therefore, the study of enclosures should be approached with caution, realizing the limitation of the current database for enclosure architecture.

ENCLOSURES AS SOCIAL DESIGN

The theoretical positions of Brown (1982) on site planning, Hunter-Anderson (1977) on architectural form, and McGuire and Schiffer's (1983) theory of architecture provide a useful framework for the investigation of architectural site planning of mounds and embankments at Middle Woodland enclosures. In this section, I construct a set of expectations for site planning that are used to examine Middle Woodland enclosures in the Mid-South.

The issue of planned versus unplanned site layout has implications for the larger issues of the Middle Woodland society as well, since site planning can also be linked to the investigation of social complexity and interaction in the Middle Woodland period (Brown 1982). Were enclosures used for local, regional, or intraregional rituals or festivals? This question has been posed repeatedly, but has never been satisfactorily resolved. Extensive investigation of the use patterns of enclosures would help to clarify this issue. The archaeological evidence for intraregional participation may simply reflect the accumulation of exotic artifacts through trade rather than the actual participation of non-local groups at enclosures.

What do enclosures indicate about Middle Woodland groups? Were they used by isolated villages, kinship-based networks of villages, chiefdoms, or polities? All have been proposed as the political forces behind enclosures. The question of social complexity is, of course, closely tied to hypotheses about the degree of interaction at enclosures. Site planning provides one approach to examining the question of social complexity. Linking the ability to plan, construct, use, and maintain monumental architecture to particular levels of social and political inequality is a basic premise of this study; hunter-gatherers did not build pyramids, nor did they need to. On a continuum, those groups with little defined social inequality do not build monumental architecture or burial areas beyond that which expresses the local social group. In contrast, increased inequality becomes expressed by the individual and/or sub-groups with the utilization and sanctification of their status through symbols and architecture.

However, the link between enclosures and social complexity is a very general one. During the Middle Woodland period, most groups had the same general level of social complexity; they were not simple egalitarian bands of hunters and gatherers, nor were they as formal or complex as the later chiefdom societies. Within this intermediate level of tribal societies, numerous forms of social organization may have occurred (Braun and Plog 1982). This raises the question, if all Middle Woodland societies had the manpower and organizational abilities to build enclosures, why did some groups not build any, while others built highly structures ones? The answer may be that enclosures, rather than representing more socially complex groups, are the product of formalized social interaction between diverse non-local groups. Enclosures may delineate the need for a highly structured area to mediate between groups with different cultural traditions. Whether enclosures were centers for information processing and mediation still remains to be examined, but an analysis of site planning would provide critical data. Several important aspects of Middle Woodland social dynamics can be examined through enclosures. By investigating the degree of planning at enclosures, questions about social complexity, degree of interaction, and site function can be addressed.

Site planning is defined as the arrangement of architecture and activity into a coherent and redundant pattern across the landscape and through time. Furthermore, following Brown (1982), I hypothesize that a planned formalized area indicates higher levels of cost to a society through the focused commitment of a group's resources, time, and energy. But a formal, organized area also suggests a higher benefit to an organization through the presentation of meaningful symbols and architecture in a structured manner (Brown 1982; Charles and Buikstra 1983). Site planning for monumental architecture differs somewhat from residential architecture in the incorporation of symbols and designs which serve no direct structural purpose to the structure or area. These added elements raise the costs of construction and maintenance, but they may be necessary for the ideological or religious functions of the structure (e.g., stained glass windows in a church or an elevated throne in a meeting room). These symbols or designs provide information which make the structure meaningful to the participants.

As McGuire and Schiffer (1983:281) have pointed out, we are not so interested in how a "structure becomes imbued with meaning but rather . . . how symbolic requirements enter into the design process and influence the physical form of architecture." By emphasizing the design process we avoid the difficulty of trying to assign and assess the symbolic meaning to architectural design. McGuire and Schiffer (1983:281) use a functional approach, suggesting that increased "structural investment in symbolic functions" is the result of greater social distinctions. Following Wobst (1977) and Hodder (1979), they view increased symbolic structuring as the means by which increased amounts of information are transmitted among diverse groups. They also accept Durkheim's (1915) argument that as a society becomes more hierarchically organized, architectural structures and artifacts with high symbolic value assist in integrating the social divisions of society through shared symbols and meaning. Finally, they hypothesize that transformations in the social group or its goals will lead to changes in utilitarian and symbolic structuring of a built environment. Site planning should, therefore, provide better communication for a group that has increased information needs. But that increased information results in a higher organization cost.

For the groups or subgroups that construct monumental architecture, production costs were a relative matter. Unlike residential architecture, monumental architecture is not subject to logic whereby groups will always attempt to minimize their production costs. This lack of a logical relationship between cost and production occurs because construction focuses on political and religious matters where the costs of goals often have no relationship to site production. Hence groups may expend enormous energy to construct a piece of architecture, disregarding all but their most basic survival needs during the construction. Therefore, I view site planning as one means whereby Middle Woodland groups attempted to manage those relative costs. With an organized plan, both long and short term productions could have been coordinated such that production costs did not become unreasonable.

An organization will maintain a structure or site to keep it usable during its occupation. McGuire and Schiffer (1983) viewed production and maintenance costs in terms of energy expended, value of materials, and expertise required. They suggested that the goals of production and maintenance often come into conflict: "low maintenance cost is achieved by greater manufacture costs, and low manufacture costs tend to inflate the costs of maintenance" (McGuire and Schiffer 1983:282). In the case of monumental architecture, however, the relationship between high construction costs and lower maintenance is not so simple. Although normal maintenance may be easier, repairs critical to the longevity of the building, such as a collapsing roof or rotting support beam, can increase maintenance costs to the point where the site or structure may be abandoned rather then rebuilt. The commitment to maintaining

and rebuilding a structure or site is directly proportional to its importance. A structure or site with high use or powerful meaning such as the Statue of Liberty, St. Peter's basilica, or Lenin's tomb might be rebuilt or repaired no matter what the cost, as long as each remains meaningful to its culture. Once structures or sites lose their relevance, they may be abandoned, altered, destroyed, or neglected. Maintenance considerations are incorporated into the process of planning, and a high degree of site planning should also reflect greater concern with keeping the site or structure ready for use.

Following Hunter-Anderson's (1977) study of house types, several general statements can be made about enclosure form and site planning. There are two basic forms of geometric enclosures: 1) curvilinear—circles and half circles, and 2) angular—squares and rectangles. One of the major distinctions between the two enclosure forms is how space can be utilized within them. Curvilinear enclosures have fewer formal positions for the placement of mounds than angular enclosures. Inside half circles and circles there are only two optional positions: dead center and opposite the entryway. This lack of emphasis on fixed and formalized positions provides greater flexibility in the positioning of mounds within these enclosures, for all locations are equal (until cultural values have been placed on particular locations). Angular enclosures provide a greater number of optimal positions, with an emphasis on alignment of corners, entrances, and mounds. Paradoxically, although there are more fixed positions in angular enclosures this increased number means less flexibility in the placement of mounds. The location of the mounds becomes fixed with the choice of an angular enclosure.

The two enclosure forms can be contrasted within the context of site planning. Half circles and circles have a greater flexibility in the placement of mounds within them, while angular enclosures are highly restrictive in the placement of mounds at the angles, center, and entrances (Figure 8.1). There is one additional type of enclosure to be considered, namely the conjoined form, where two or more geometric shapes are joined together. Here, the location of mounds becomes prescriptive, requiring a coordinated plan that utilizes space within all enclosures. Ranking enclosure forms based on ease and flexibility of placement of mounds, I order enclosures in the following manner:

1) open areas: the most flexible; mounds can be put anywhere.
2) curvilinear: only two optimal positions inside.
3) angular: at least five or more optimal positions inside.
4) conjoined: the least flexible, for mounds must be positioned in relationship to more than one enclosure.

During the Middle Woodland period, enclosures in the Mid-South are situated on a variety of land forms and exhibit a diversity of designs and constructions. Two basic types were built: 1) geometric and 2) hilltop. The major architectural distinction between the two types is based on design and location. Middle Woodland peoples used Euclidian geometry to produce enclosures in the shape of squares (Figure 8.2), circles (Figure 8.4), and half circles (Figures 8.3, 8.5, 8.6, 8.7, 8.8) (e.g., Marshall 1979). Geometric enclosures were located on flat, easily accessible land surfaces such as those seen at Seip or Marksville. Hilltop enclosures follow the topography of an area, rather than being independently designed (a design that is preset, such as a circle or square, into a given environment); examples include Old Stone Fort (Faulkner 1968) and Fort Ancient (Essenpreis and Moseley 1984). These sites are located on mesas or hilltop-like landforms and the embankments generally follow the bluff line. The landscape contributed to the design selected. Geometric designs utilize a flat open environment for construction of enclosures, while hilltop designs focus on restricted environmental areas where the topography helps to shape the

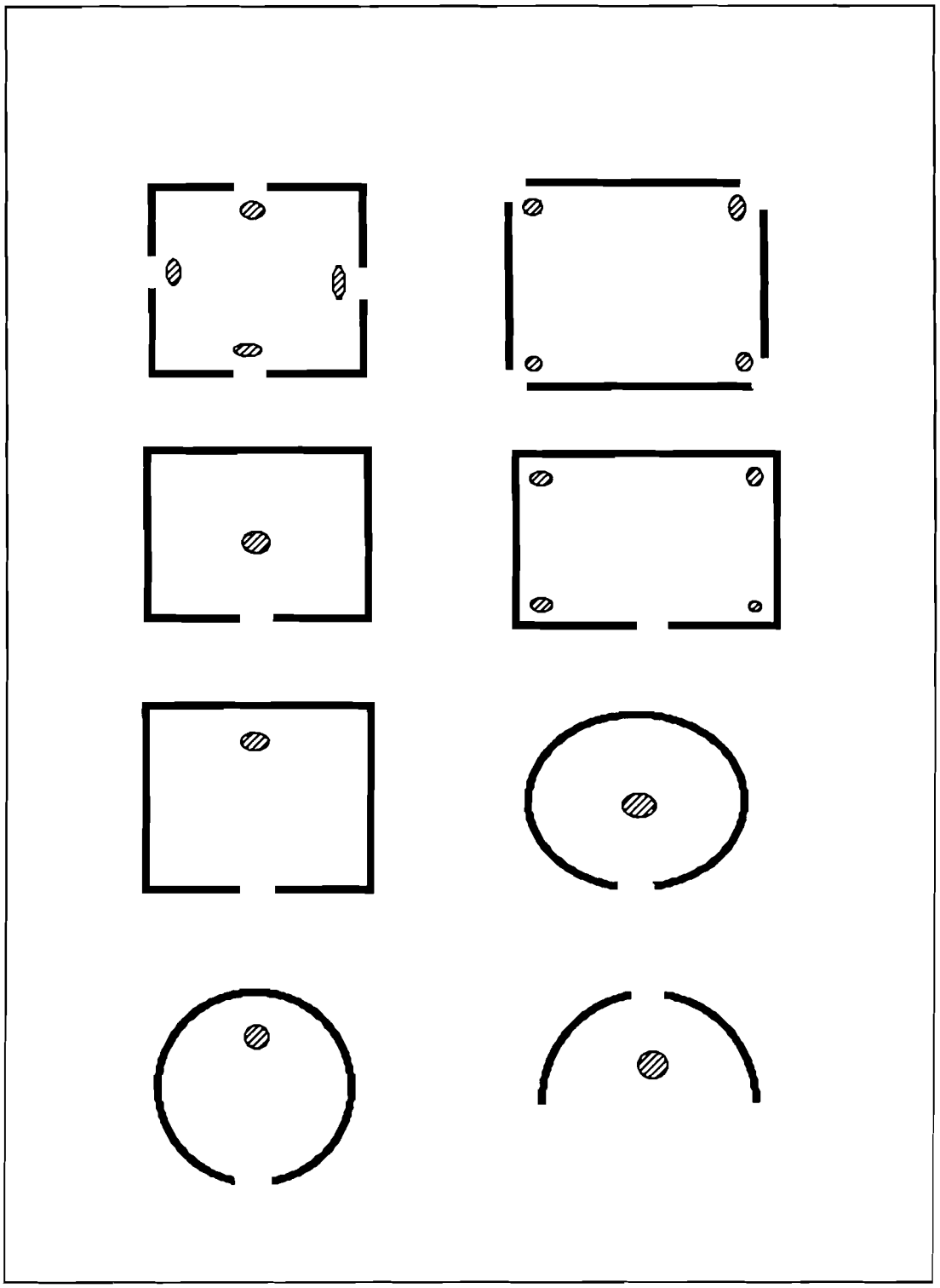

Figure 8.1. Various optimal positions for mounds within the geometric enclosures.

enclosure. Another difference between these two types of enclosure is the degree of planning involved in their construction. Geometric enclosures require a choice in location, as well as a formal, pre-construction site layout so that the alignment and angle are correct.

In contrast, hilltop embankments often follow the edge of a mesa. Although the selection of a hilltop enclosure site may be more difficult in terms of finding the right topography, the embankment itself requires less planning.

In this article I focus on geometric enclosures for two reasons: first, because geometric enclosures are directly associated with the Marksville and Miller cultures which occupied the Mid-South, and second, hilltop enclosures are found only along the perimeter of the Mid-South. The available evidence suggests the latter were not used by Miller or Marksville people.

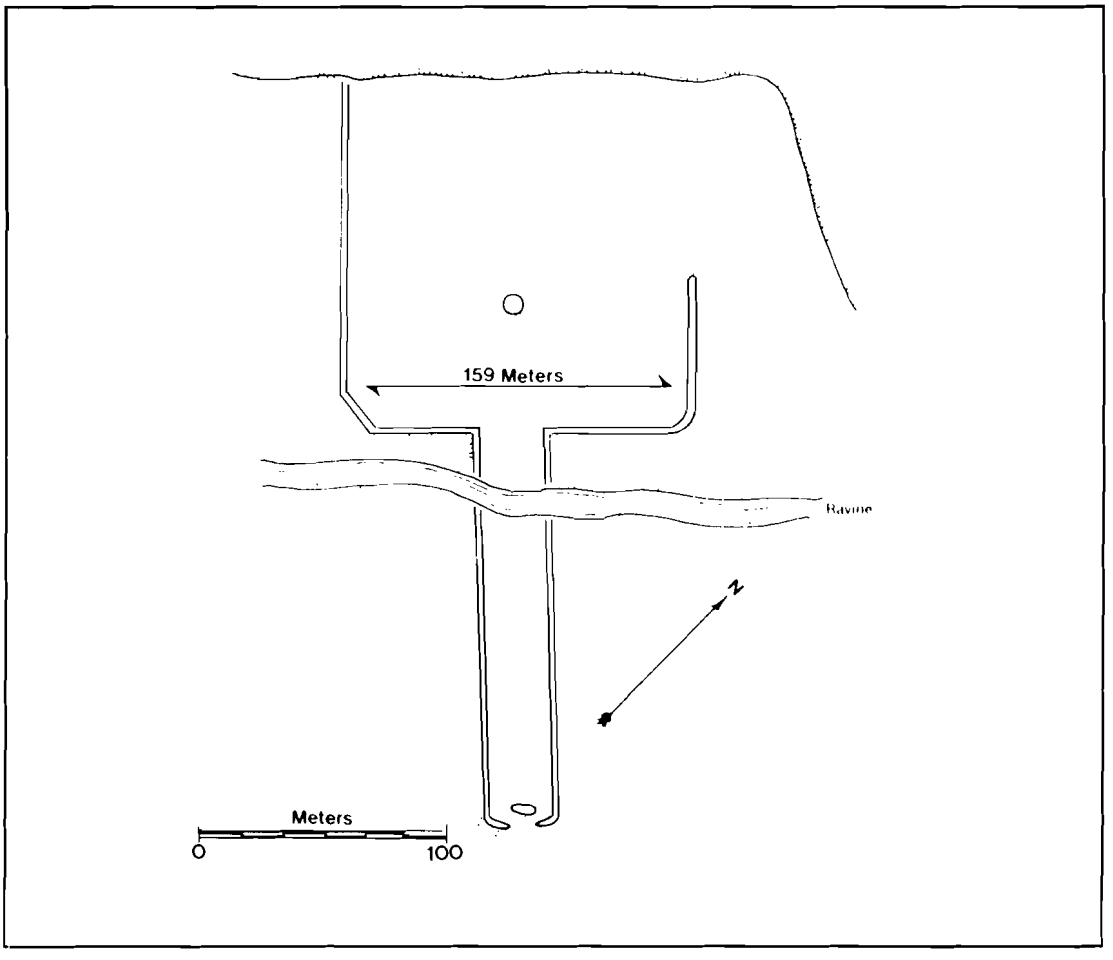

Figure 8.2. "Tuning Fork" (15-Fu-87) (Webb and Funkhouser 1932).

Middle Woodland geometric enclosures in the Mid-South exhibit a variety of embankment forms and mound locations. By establishing criteria for examining site planning among enclosures, it is possible to evaluate relative group complexity and site function, since the relationship between social complexity

and site planning is basic. Information about enclosure planning, architecture, and mortuary treatment will contribute to our knowledge of the use of enclosures both on a local and regional level. From the site planning model created above, the following premises and test implications can be derived:

1a) Premise: If geometric enclosures areused for more than simply the burying the dead, but also mortuary related ceremonies (cf. Seeman 1979), then space for such rituals or activities must be defined or allotted within the enclosure.

1b) Premise: If social relations are defined by mortuary treatment and enclosure architecture (Greber 1979a, 1979b), then the placement of burial mounds and activity areas within the enclosure should be non-random.

A) Test Implication: Mounds and activity areas should be systematically arranged within the enclosure.

2a) Premise: If embankments define a burial and ritual area then they represent an important first stage in the architectural process of an enclosure by defining the area. This site definition helps to formalize the area and can be used as a territorial marker (Charles and Buikstra 1983).

2b) Premise: Construction of geometric embankments must be started prior to the placement of mounds inside them. It is a far greater cost to construct a geometrically shaped enclosure to encompass mounds once the mounds are built (particularly if the enclosure is a rectangle or square design), because it is necessary to base the alignment of the wall in relation to the mounds rather than the reverse.

B) Test implication: Geometric embankments should be constructed early in the development sequence of enclosure use.

Enclosures in the Mid-South will now be examined for the amount of site planning based on the placement, orientation, and location of embankments and mounds.

MID-SOUTH ENCLOSURES: AN OVERVIEW

Previous research has identified seven Middle Woodland geometric enclosure complexes in the Mid-South. From north to south, they are:

1) 15-Fu-37, Kentucky (Webb and Funkhouser 1932; Carstens 1982); Figure 8.2
2) Pinson Mounds, Tennessee (Thunen 1984; Morse 1986); Figure 8.4
3) Savannah, Tennessee (Stelle 1871; Dye and Walthall 1984); Figure 3
4) Leist, Mississippi (Phillips 1970); Figure 8.5
5) Little Spanish Fort, Mississippi (Phillips 1970); Figure 8.6
6) Spanish Fort, Mississippi (Phillips 1970); Figure 8.7
7) Marksville, Louisiana (Toth 1974, 1979); Figure 8.8

Shapes represented are as follows; one square, one full circle, and five half circles (See Table 8.1 for the relationship of mounds and other earthwork features with enclosures). Williams and Brain (1983:352, 396-398) cautiously suggest that Leist, Spanish Fort, and Little Spanish Fort are of Poverty Point age.

	A	B	C	D	E
Tuning Fork	2	0	square	yes 2 linear embankments	possibly
Pinson	0	1	circle	none	unknown
Savannah	16	?	half circle?	unknown	unknown
Spanish Fort	0	0	half circle	no	unknown
Leist	0	1?	half circle	no	unknown
Little Spanish Fort	0	1	half circle	no	unknown
Marksville	3	2	half circle	yes?	yes

KEY:

A. Conical Mounds
B. Platform Mounds
C. Enclosure Form
D. Associated Embankments
E. Entrances

Table 8.1. Structural comparison of the enclosures.

They point out, however, that very few Poverty Point artifacts have been recovered from these sites. Data presented by Phillips (1970) more convincingly argues for a Marksville association.

Based on the data compiled in Table 8.1 several general observations can be made about these enclosures. First, six of the seven contain mounds; only Spanish Fort appears to lack associated mounds, and this may simply be a result of modern agricultural practices. Conical mounds are associated with three sites (Marksville, 15-Fu-37, and Savannah), while Pinson Mounds and Leist have associated platform mounds. Savannah and Marksville have both conical and platform mounds within the enclosure, whereas Pinson Mounds has a platform mound within the enclosure and a conical mound immediately adjacent to it. Of the seven, only the mounds at Marksville and Pinson Mounds have been explored beyond initial test pits.

Although no site report has been produced for the excavations which occurred in the 1930s, Toth (1974) has summarized the field notes for the Marksville excavations. With the exception of Mound 4, in which 12 burials were recovered (Toth 1974:25), little information was recovered from the mounds to identify their function. At present, the function of mounds within enclosures in the Mid-South is still the subject of speculation, but evidence from the north suggests that the conical mounds were used in mortuary activities, either for processing and/or burying the dead. A Middle Woodland age for platform mounds has only recently been established (Mainfort, Broster, and Johnson 1982; Rafferty 1983), and their function is unknown.

All seven embankments have been damaged or completely destroyed by modern plowing. Embankment heights range from two meters at Marksville (Toth 1974:9), to three meters at Spanish Fort (Brown 1926:71) and Leist (Phillips 1970:369), to one meter high at Little Spanish Fort (Phillips 1970:381) and Pinson Mounds, with an average height of one and a half meters. Little is known about the construction

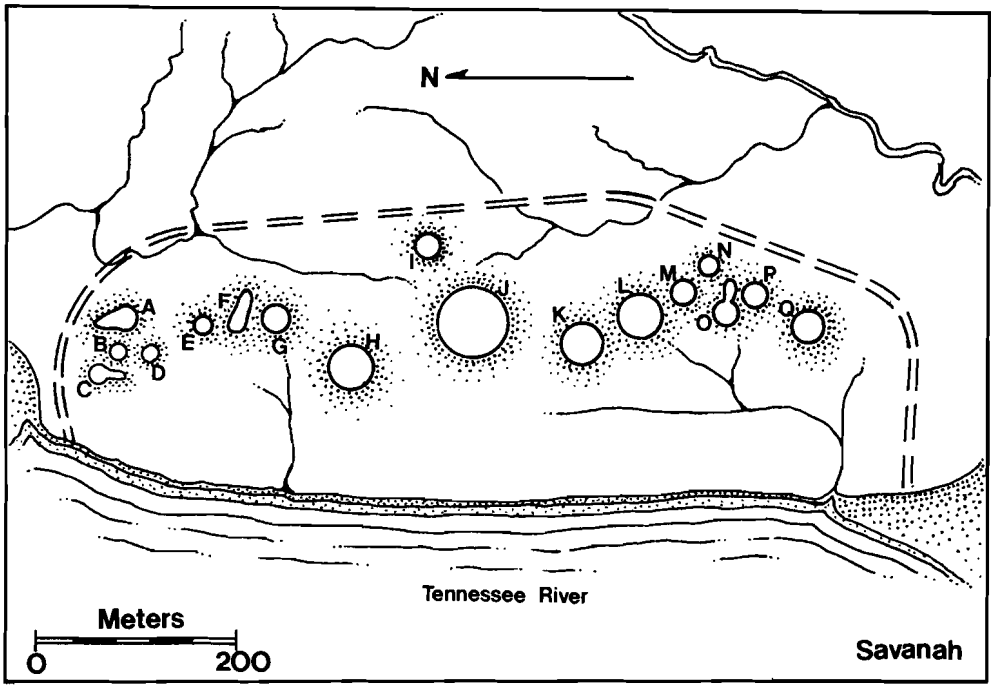

Figure 8.3. Savannah mound group (Thruston 1890).

phases represented in the embankments or whether they were built as one event or as several. Profile maps are available only for the Pinson Mounds embankment (Morse 1986). Future research needs to focus on the embankments in order to demonstrate how they may fit into the ceremonial context of the site (e.g., Essenpreis and Moseley 1984).

Entryways into enclosures can be significant in understanding the movement of people and rituals into a defined space. Furthermore, an entrance may reveal information related to celestial concerns (e.g., Wheatley 1971). Of the seven enclosures, only 15-Fu-37 and Marksville definitely have entrances. The entrance at 15-Fu-37 is similar to those found in the Ohio works, using linear embankments to define a corridor 183 meters long (Figure 8.2). The Marksville enclosure (Figure 8.8) is cut by what Fowke defined as "gateways" (see Fowke's map in Toth 1974:17), but their function and antiquity are unknown. Myer (1922) illustrates several openings in the Pinson Mounds enclosure, but these may be the results of erosion and at least one (the northernmost) is attributable to modern agriculture.

Examining the location of mounds within all six sites, there appears to be neither an overall organization nor defined spatial orientations of the mounds to the enclosures. There is not a coherent intersite style among all enclosures. Unlike later Mississippian communities, where the orientation and position of each mound seems prescribed (e.g., Cahokia, Moundville, Kincaid), Middle Woodland enclosures in the Mid-South seem to lack an extended diachronic design for the site. The 16 mounds at Savannah and the Marksville mounds are not geometrically oriented to each other (though they may be celestially oriented), and they do not serve to formalize or define any plaza areas. The single exception in spatial planning is site 15-Fu-37. Here, the two mounds are closely aligned and oriented both to the enclosure and the entryway, a situation closely resembling the design of geometric enclosures and mounds

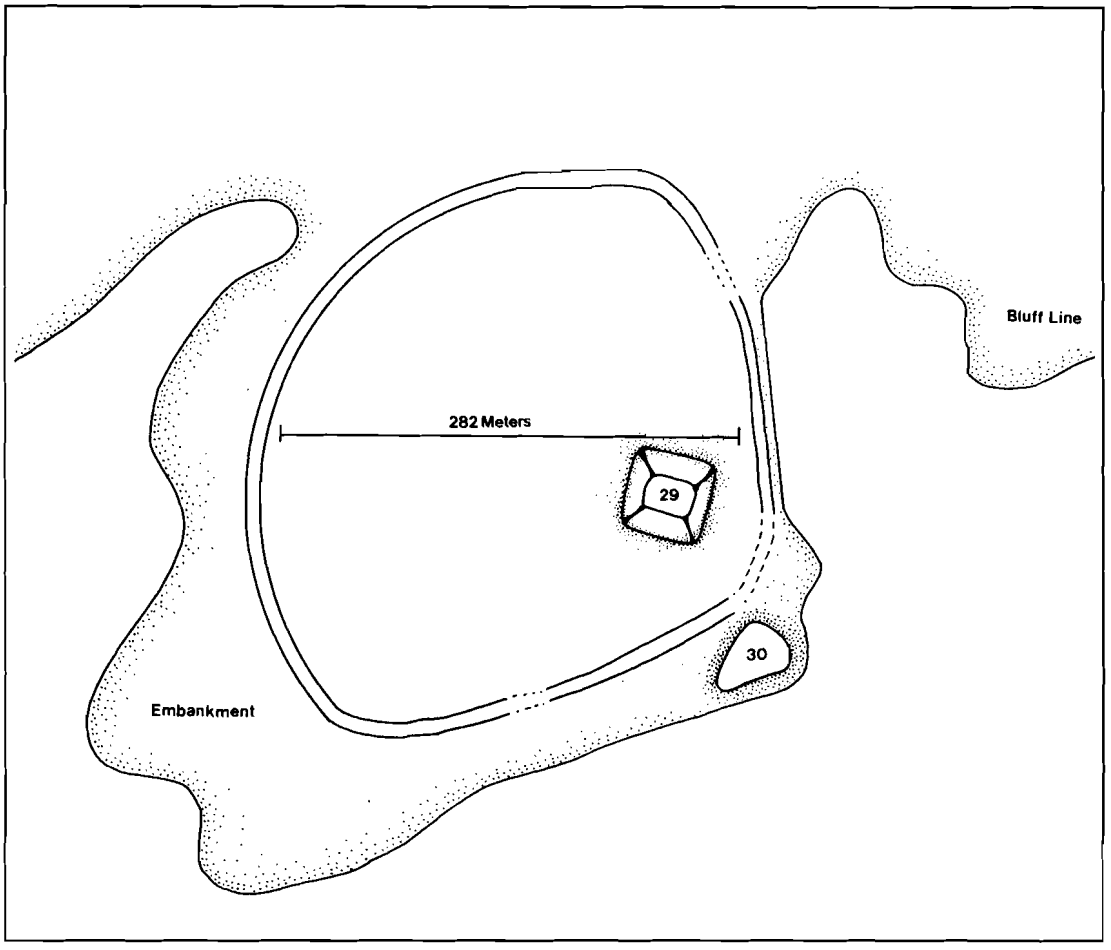

Figure 8.4. The Eastern Citadel at Pinson Mounds.

in Ohio. Indeed, this site may represent an extension of the design knowledge from the Ohio heartland down along the Mississippi River.

Six of the seven embankment walls appear to have defined and framed site activities. Only Pinson Mounds has a large group of mounds outside its circular enclosure (Mainfort 1986). Marksville has two small outside embankment areas: one to the north helping to enclose a small "finger shaped" bluff, while the other embankment to the south is a small circular enclosure approximately 91 m in diameter (Figure 8.8). At Leist, Mounds A and C are outside of the enclosure, but unfortunately too little is known about the overall site to establish a chronological relationships between all earthworks. For the most part, embankment walls provided a boundary and directed the activities toward the inside of the enclosure. Furthermore, with the exception of Pinson and perhaps Leist, no further associated mound building occurred outside the enclosures.

Assuming that enclosures represent the commitment of energy and resources by a community and not the construction efforts of a sub-group such as clan or extended family, what do enclosures tell us about the social groups that used them? In all seven Mid-South cases, specialized knowledge was required to plan and construct the geometric embankments. Construction of the enclosures required a plan with a

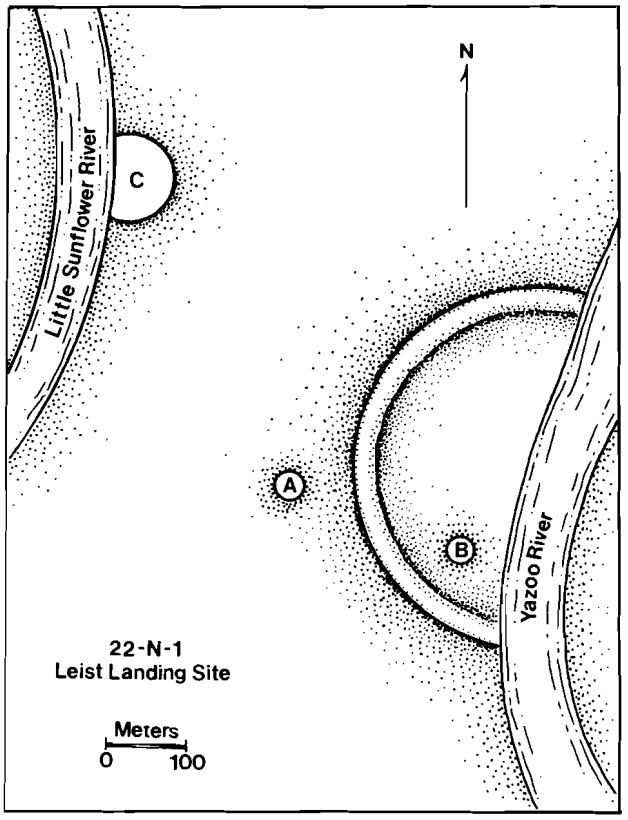

Figure 8.5. Leist (Phillips 1970).

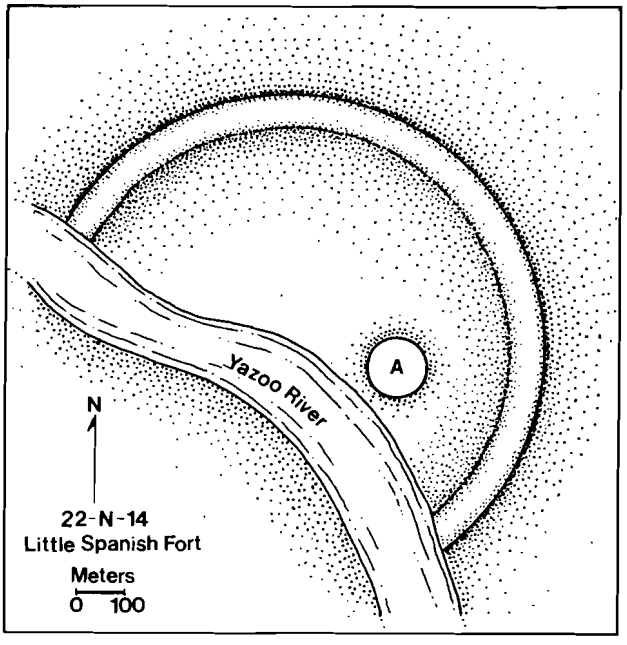

Figure 8.6. Little Spanish Fort (Phillips 1970).

guidance system to help align the geometric form. The relative ages of the walls and associated mounds is unknown, making it difficult to interpret site development. Nevertheless, planning and coordination was clearly required to build embankments, and whether the requisite knowledge was controlled by ritual specialists (known only to a shaman, for example) or available to the community at large, the design and construction of the enclosure required technical knowledge.

The potential for rituals and/or activities in Mid-South enclosures is quite evident, as all seven sites have appropriate space inside. Enclosures are defined space. Not only do they define a particular area for specific tasks, but also they mark *de facto* a territorial area (e.g., Charles and Buikstra 1983). The enclosure walls also act to set up an outside/inside dichotomy. This dichotomy could have been especially important in bringing together people who did not live in the same village, but shared common kinship or political alliances. Enclosures may, therefore, facilitate a sense of unity by bringing different residential groups together in a focused setting.

The architectural structuring of Mid-South enclosures is relatively simple; there are apparently no internal structural divisions that deny access to individuals or sub-groups (although no extensive excava tions have been undertaken within plaza areas to determine the presence of wooden structures or constructions). If McGuire and Schiffer (1983) are correct in asserting that "structural investment in symbolic functions" is the result of greater social distinctions, then enclosures in the Mid-South (when

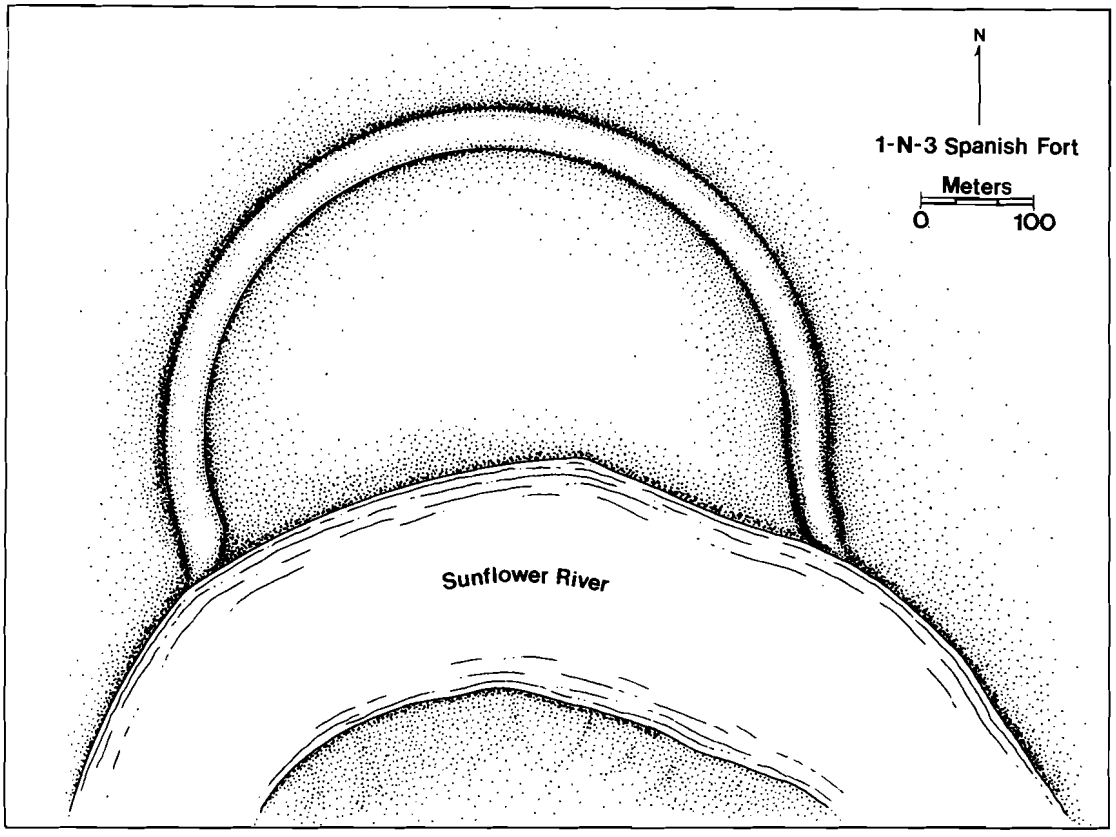

Figure 8.7. Spanish Fort (Phillips 1970).

taken at face value) appear to have minimal social barriers and/or boundaries. Furthermore, if we assume "structural investment" to mean both the particular placement of the structures and the amount of energy invested in each structure, it provides interesting ways to view enclosures. If social distinctions were to be emphasized, then the placement of the mound/burial area inside the enclosure would be important. Thus, there should be preferred or favored positions within each geometric enclosure (Figure 8.1). Favored locations inside a square enclosure would be the center, a corner, or opposite the entryway; these positions provide defined focal points which greet the individual entering the enclosure. With circular enclosures, the optimal position is central or opposite the entryway, and the placement of mounds should also be central or opposite an entryway.

In five out of the six enclosures with associated mounds, the placement of mounds does not seem to relate to particular prescribed locations. The only exception is site 15-Fu-37, where both mounds are located in strategic places, one at the entrance, the other dead center within the enclosure. Within half circle enclosures, the optimal location for mounds is harder to evaluate. It is not clear if the optimal position should be the center or off to a side, thus allowing more room inside the enclosure. Interestingly,

in three of the four half circle enclosures with mounds, the primary or largest mound is located to the side within the enclosure (Marksville Mound 6, Little Spanish Fort Mound A, Leist Landing Mound B). At the Savannah site, the mounds seem to mimic the topography in a linear fashion, rather than being located in optimal positions. It should be noted, however, that the largest mound at Savannah (Mound J) was centrally positioned within the alleged enclosure and that there are seven mounds to either side of the central mound. This symmetry may be either purposeful or recreational.

The seven Mid-South enclosure sites may be ranked on the internal design and position of mounds as an indication of structural investment, from highest to lowest as follows:

1) 15-Fu-37 site
2) Savannah group
3) Marksville
4) Pinson Enclosure
5) Little Spanish Fort
6) Leist
7) Spanish Fort

Note that this ranking is essentially synchronic in nature, i.e., the ranking is based on the sites at the end of their use-life. The appearance of site planning in a spatial sense is probably exaggerated, since a site undergoes a process of accumulations over time, allowing the archaeologist a sense of the final pattern or set of relationships. The rank ordering above is based on the final position of mounds and design of enclosures (see Table 8.1).

What are the implications of site rankings for social groups and interactions in the Mid-South? First, let us look at the four largest enclosures in terms of both structural and energy investment: from north to south they are; 15-Fu-37, Pinson Mounds, Savannah, and Marksville. All four sites represent structural and energy investments beyond simply assembling an enclosure and mounds together, but these four sites do not appear to represent societies that differentiated beyond sex, age, and ability. There are no internal walls to prevent access, nor do the burial patterns from Marksville indicate social hierarchical differences (Toth 1979). Nonetheless, these sites represent a focused amount of energy invested into a particular area.

It is reasonable to assume that these enclosures were used by a number of small local groups that were related through kinship or political ties, but the extent of the hypothesized relationship is not known. It is also unclear whether all related groups buried their dead there, or whether only some buried their dead there and others simply participated in rituals. The difference between these two use patterns may provide a useful avenue for further study at these sites. Finally, the archaeological data provides little information about the relative duration/intensity of occupation among these sites. Testing at Marksville may indicate that a permanent village was present (Toth 1974), but it is not clear that a year-round occupation occurred at the other sites. To this end, an investigation of the archaeological record to evaluate the use-patterns would provide a significant contribution to an understanding of the social dynamics of enclosure sites. Based on the structural and energy investments at the four sites, a regional function for these sites seems probable. Such a function has, in fact, been demonstrated for Pinson Mounds (Mainfort 1986).

The Yazoo Basin sites (Spanish Fort, Little Spanish Fort, and Leist) seem to be closely related. Their designs are similar, consisting of half circle embankments located along streams, and they lack multiple mounds inside the enclosures. These enclosures represent the minimum amount of energy and structure for an earthwork and could represent several different socio-political situations: local groups that could not generate the necessary ties or obligations to construct large earthworks, a group that has moved across

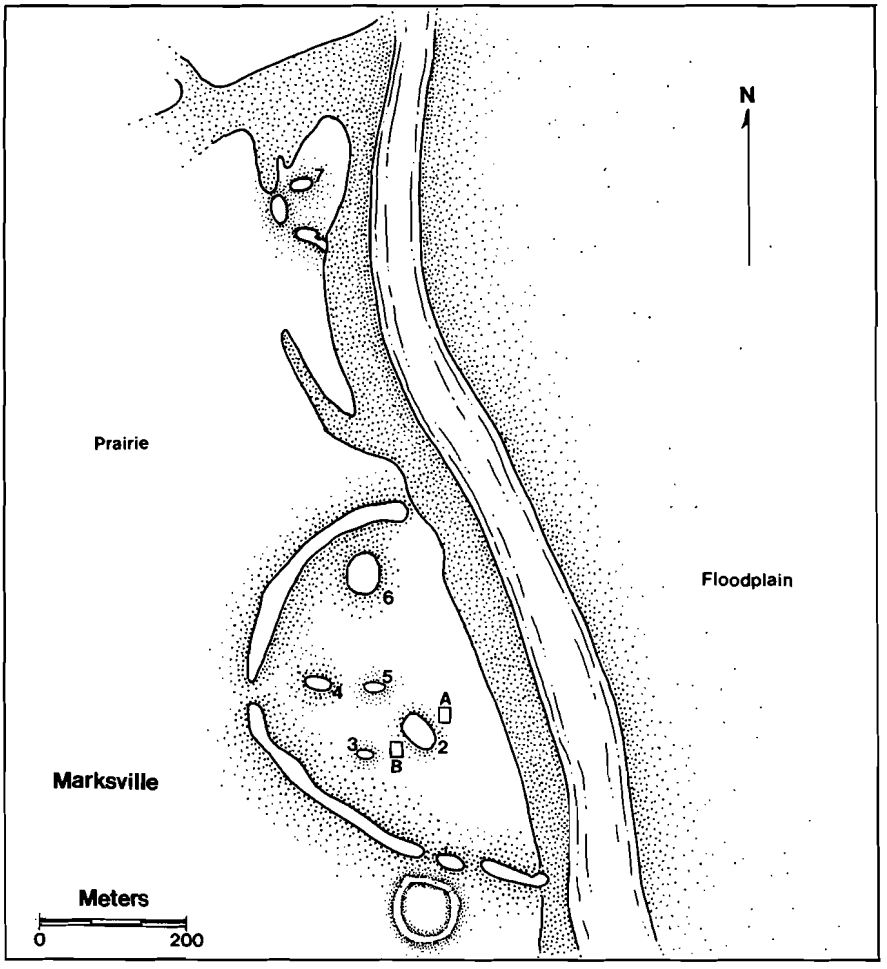

Figure 8.8. Marksville (Toth 1974)

the landscape for several generations changing earthworks as they move, or the three sites may have been occupied simultaneously. Unfortunately only Leist has been tested, and these excavations were very limited. Consequently, the exact chronological relationships have not been established (see Phillips 1970). It is interesting to note that these three sites are set back off of the major (presumed) trading routes through the Mid-South, whereas the other four are easily accessible to either major rivers or known historic trading routes (cf. Goad 1979).

The production and maintenance of enclosures is closely associated with the use pattern of the site. Once archaeologists understand the duration and period of use, then understanding of the forces behind production should come into focus. The construction of an enclosure or mound is directly associated with the use of a site. Conical mounds generally cover the final stage of a mortuary process (such as the covering over of a burial crypt or charnel house). Although the exact functions of Middle Woodland platform mounds are unknown, I hypothesize that they were focal points for group rituals, perhaps mortuary processing events of some kind. The number of people participating in a particular ritual directly

affects the structuring of the site. Use and production can be incorporated directly together through the ritual process. By examining the use pattern of enclosures, archaeologists may gain insight into the activities at a particular moment (synchronic design), which should help to interpret the development and use of the site through time (diachronic design).

Earthworks are largely maintenance free. An embankment requires little care, particularly if some kind of ritual is used through which dirt is added to the wall each time the site is used. Here maintenance can be concealed within the goals of rituals. The larger mounds within enclosures appear to have been built in stages (see Morse 1986), suggesting that maintenance again could be incorporated into rituals. In this instance, there may be no conflict between production and maintenance; the goals are fused together. Groups may use rituals to maximize both goals simultaneously and minimize the cost of maintenance. Earthworks such as those built in the Mid-South are very effective and efficient architectural structures: effective because they were built to impressive heights (Sauls Mounds at Pinson is 72 feet tall); efficient because they utilized a readily available local raw material and the cost of maintenance was relatively low.

MIDDLE WOODLAND ENCLOSURES AND SOCIAL SYSTEMS IN THE MID-SOUTH

In the Mid-South during the Middle Woodland, social inequality and political organization was not a rigid structure. There appears not to have been hereditary ranking until the Mississippian Period. For the most part, individuals appear to have been judged on membership in a kin-based organization with internal positions based on age, sex, and ability (cf. Greber 1979a, 1979b). Further, villages appear to be tied together in tribal structure, perhaps incorporating two to five small villages. This pan-residential group was probably the focus for much of the ceremonialism that is suggested for the Middle Woodland period. Subsistence and settlement data (Ford 1979; Jenkins 1979; Walthall 1980) suggest that groups were periodically sedentary, but still moved in response to the availability of specific resources at particular times. Thus, although there was a commitment to a territorial area, groups moved inside that area as necessary.

Defining the nature of Middle Woodland social organization in the Mid-South is a difficult task, since little research has been done to synthesize the accumulated data into a coherent statement. As mentioned earlier, there are three principal cultural groups which appear to occupy the riverine areas of the Mid-South during this time period (100 B.C.-A.D. 400): Marksville, Miller, and Copena. Marksville culture sites represent three basic types: villages, conical burial mounds, and villages with conical burial mounds (Toth 1979). These sites are scattered up and down the alluvial flood plains, adjacent streams, and oxbow lakes of the Central and Lower Mississippi Valley (Toth 1979; Morse 1983). For the most part, these consist of small village sites with no embankments and only an occasional cluster of burial mounds.

Two Marksville burial mounds were excavated at the Helena Crossing site by Ford (1963). Both mounds contained what Brown (1979) has referred to as burial crypts, with one or more individuals placed in the crypt. Several tombs were apparently reused, suggesting multiple visits to a particular tomb (Brown 1979). According to Toth, Helena Crossing represents the only presently known Marksville site where the concern for "individual status" was so pronounced (Toth 1979:195). As both Toth (1979) and Brown (1979) point out, at other Marksville mound sites the energy invested in individual burial goods and tomb

preparation is not as great as at the Helena Crossing site. Based on a survey of the known Marksville sites, Toth (1979:197) suggests that there was little social inequality beyond segmentary units and that political integration did not reach beyond a cluster of small villages forged into tribal units.

The Miller culture of the Tombigbee drainage is very similar in many respects to Marksville. Camps, villages, conical burial mounds, and villages with mounds are found throughout the area (Jenkins 1979). Burials occur in crypts, on prepared platforms, and in possible charnel houses (Jenkins 1979; Walthall 1980). Grave goods indicate connections with Marksville and Copena, as well as groups to the north and south. Groups were scattered throughout the river drainage with no apparent central hierarchy beyond a small tribal clustering of villages.

The Copena culture is centered along the Tennessee River in northern Alabama. Sites were typically bottomland villages and upland rock-shelter camps (Walthall 1980). Burials were placed in both small accretional mounds and burial caves. Neither the mounds nor the caves that have been excavated suggest elaborate preparation or burials, although this may be due to poor skeletal preservation. Typical artifacts found in the burial mounds include copper reel-shaped gorgets, earspools, bracelets, breastplates, celts, greenstone celts, ground galena nodules, and steatite elbow pipes (Walthall 1980:119). In summarizing the Copena data, Walthall (1980) viewed the burial mounds and villages as the work of a small number of kinsmen, similar to what Toth has described for the Lower Mississippi Valley.

From this brief description of these three Middle Woodland cultural groups, several conclusions can be drawn. During the Middle Woodland period social inequality was not particularly great. Evidence from the burial record for the Marksville, Miller, and Copena cultures suggests differences based on sex, age, and ability, rather than inheritance of political power and authority. Reconstructed settlement and subsistence patterns indicate a loose network of local groups focusing on hunting and gathering with limited horticulture. Exotic goods from outside the local area suggest trade with groups to the north and south, including the Illinois-Ohio area. The exact nature of contact among Copena, Marksville, and Miller is not known, but the archaeological data suggests more than simply casual trade.

During the Middle Woodland in the Mid-South, earthwork enclosures provided a focal point not only for individual villages but also for regional gatherings. The groups that used enclosures had few social distinctions between them; tribal organization seems to have loosely united different villages. Attention to detail in the individual enclosures is not great. Only 15-Fu-37 seems prescriptively and diachronically laid out, which may reflect direct influences from Ohio. Several of the enclosures represent large investments of energy in terms of earth moved. I view this not so much as an indication of more complex societies, but rather as a reflection of larger groups meeting at these sites. Pinson Mounds, Marksville, and Savannah do not appear to have spatial layouts that indicate concerns with social distinctions for the dead or the living. This view may be altered with the investigation of non-earthen structures (e.g., Baby and Langlois 1979), but for the present the architectural evidence suggests a lack of hierarchical social status. Unless archaeologists gain some understanding of the range of architecture and features present at enclosure sites, it will never be possible to determine the social situations responsible for these sites, nor to understand the larger milieu of Middle Woodland social interaction.

9

Burial Pattern and Tomb Construction Story Mound I, Hoecake Site (23-Mi-8) Mississippi County, Missouri

Richard A. Marshall

The paper describes the burials found within the three log-lined tombs and suggests that the tombs are intermediate between the classic Middle Woodland log-lined burial chamber and the later charnel house of the late prehistoric period of the southeast. Details of construction and sequence of closure of the tombs are given.

INTRODUCTION

This paper describes the features and materials found while conducting salvage archaeology at the large Hoecake village and mound site (22-Mi-8) southeast of East Prairie, Mississippi County, Missouri. This work was conducted by the writer, assisted by Darrell D. Henning, during February and the first week of March, 1964.

Late in the fall of 1963, the Archaeological Research Division of the Department of Sociology and Anthropology, University of Missouri, learned that several of the mounds on the Hoecake site were to be leveled in the spring prior to the planting season.

LOCATION AND DESCRIPTION OF THE SITE

The large Hoecake site (23-Mi-8), is an area of several village concentrations covering a total area of approximately 25 hectares (Morse and Morse 1983:190). A scattering of cultural materials and mounds, however, may be found over an area of approximately 80 ha (Williams 1974:56). The site is crossed by Mississippi County Highway AA and is intersected by Mississippi County Highway FF.

The topographical situation attractive for prehistoric occupation is the result of a complex riverine history. The major portion of the site is situated on an isolated remnant of an ancient alluvial plain (Figure 9.1) that is bordered on the east by extinct Channel J of the Ohio River (Fisk 1944). The north and west edge of the remnant was formed by the even older Channel F. The higher elevation here is the result of natural levee building, probably from Channel 1, located just to the west of the remnant. A recent channel of the Mississippi-Ohio River, Channel 6, cut the south edge of the remnant. This scar was nearly removed by a swing of the later Channel 7. Both channels appear to have flowed west and cut the ridge off sharply

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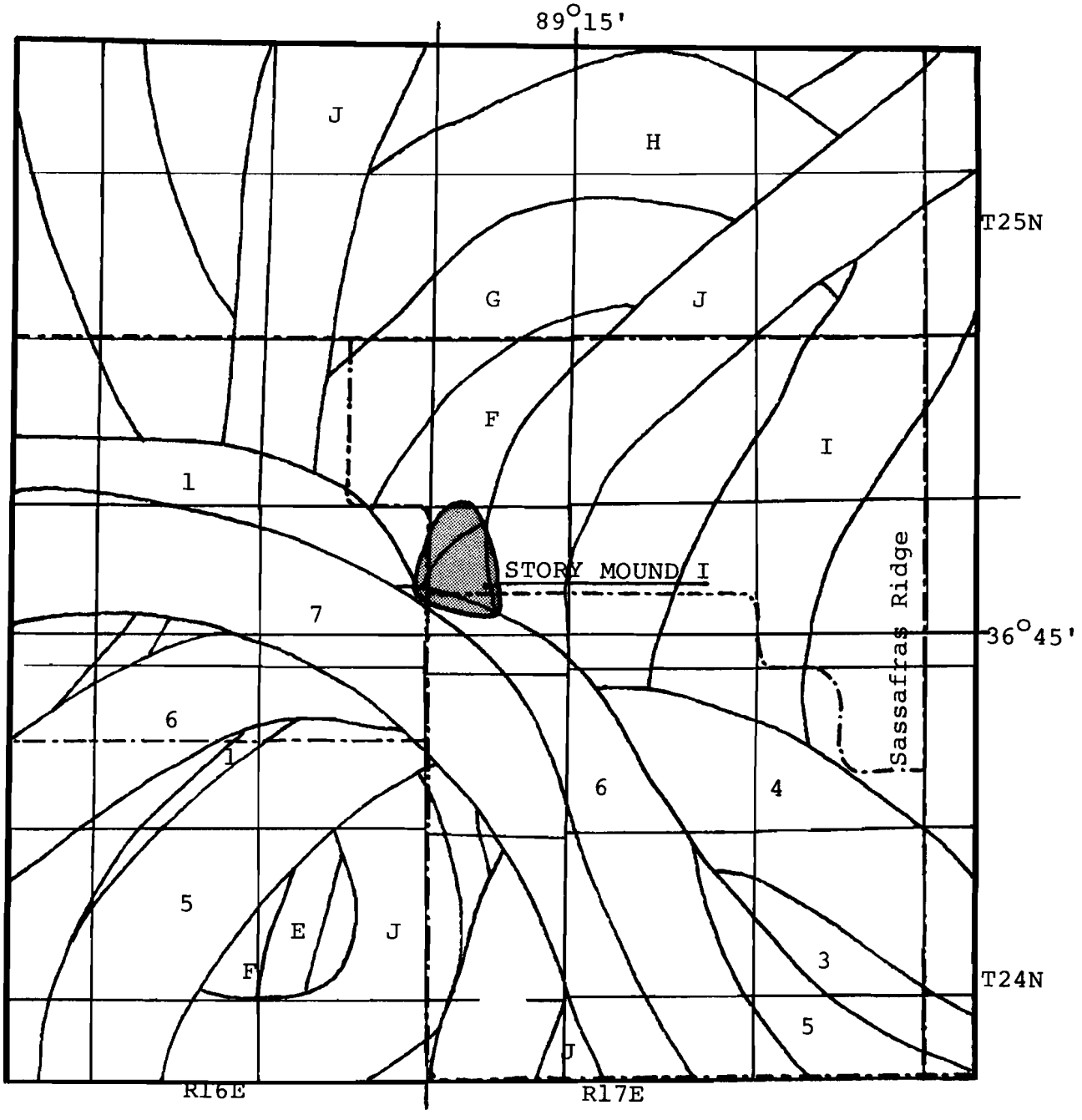

Figure 9.1. Situation of the Hoecake Site. Site is located in the west half, Sec. 6, T24N, R17E. Map is reproduced from Plate 22, Sheet 2, accompanying the Fisk (1944) report.

on the south. Channel 7 is that which is now occupied by Ten Mile Pond and may be considered most recent, but probably predates the first occupation at the site, which occurred *circa* 500 B.C. Channel 7 may have been a large oxbow lake at the time of the first occupation, making the site on the high bank ideal.

The most prominent part of the site is that corner formed by Channels 6-7 and F (Fisk 1944). During times of extreme high water, at least in historic times, the remnant became an island.

Village areas

Several village concentrations and mound clusters are present at the Hoecake site. Much of the site has now been land formed and chisel plowed, making future archaeological excavation difficult or impossible. Four major village concentrations make up the site.

Village Area 1 occupation is located on the southeast corner of the remnant, largely paralleling the right bank of Channel 6, and is associated with the Baytown culture.

Village Area 2 is located on the west edge of the ridge overlooking Channel F and north of the end of the ridge. R. Williams tested Area 2 in 1968 (1974:55). Near the northern edge of the area concentration, on higher ground, is a small cluster of mounds. A thin scattering of Mississippian cultural material is present along the higher portion of the ridge, a spillover from Village Area 3.

Village Area 3, starting with the small cluster of mounds mentioned above, extends east, well back onto the remnant. The cultural concentration is primarily Mississippian mixed with some Baytown cultural material. This is Williams' (1974) Test Area 1 and 4. Village Area 4 is centered on the "Y" of the highway. Most of the cultural material appears to be Baytown, but occupation of this area extends back to Middle Woodland times and probably earlier (Marshall and Hopgood 1964).

Other Nearby Occupations

Baytown materials are also present east of Channel J, southeast along the natural levee for about three and one-half to four miles (to Wolf Island), where there is another cluster of Woodland mounds (Williams 1968:86-99). There is also a Mississippian settlement, possibly fortified. Baytown cultural materials may also be found on almost every high place extending to the west, largely along Channel 1, now occupied by Black Bayou, and south of Channel 7 for about four miles. In the latter area there is considerable mixture with Mississippian cultural materials, and this is probably one of the major areas of Emergent Mississippian culture. Baytown culture materials also occur in small concentrations north of Hoecake along Channel J.

Mound Clusters

Of particular interest at the Hoecake site are the mounds. No doubt it is the shape and the great number of mounds at the site that have given it its name of "Hoecake." A hoecake is a cornbread cake cooked on a hot griddle which is circular and raised in the center. The mounds, however, are more widely scattered than the village concentrations. There are records of approximately 29 mounds, now mostly destroyed, and the total number of mounds may have exceeded 45. A reconstruction of mound locations is presently in manuscript form (Marshall n.d.).

THE EXCAVATION

Story Mounds I and II were scheduled for leveling before March, 1964. Story Mound I was located near the southeast portion of the main site area, on the west bank of Channel J just north of eastbound Highway AA. Like most of the mounds at Hoecake, Story Mound I had a conical shape. It was 2.4 m high and some 21 m in diameter, and appeared undisturbed, with the exception of a small pothole in the very center. A five-foot wide trench was begun approximately 4.5 m beyond the east edge of the mound (Figure 9.2). The trench was cut approximately four inches deeper than the level of cultivation and was carried through to the center of the mound, 16.8 m from the beginning of the trench.

Individual basket-loads of soil were clearly visible in profile and occasionally portions of some loads would separate easily from the surface of earlier loads. Where this happened, there was almost always a thin layer of light colored soil (or silt sand) particles which appeared to be water or wind sorted. Frequently the load surfaces were pebbled in such a manner as to strongly suggest the systematic geometric pattern of a basket weave, though this was never clearly demonstrated. Several stages in the construction of the mound were suggested by three zones of soil compaction and moisture (Figure 9.3).

Three burial features were located in the center and west portion of the mound (Figure 9.4). After locating Tombs A and B it was necessary to enlarge the excavation area. In clearing Tomb B, two post molds were noted on the west side of the tomb. Just as Tomb B was ready for photographing, a severe winter storm destroyed our protective covering and heavy rains filled the excavation.

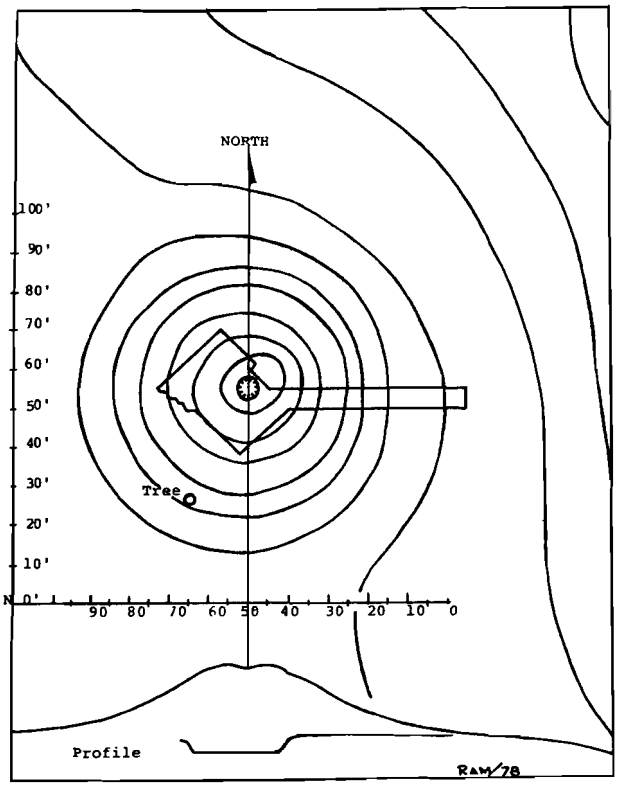

Figure 9.2. Contour map of Story Mound 1 showing outline of the excavation and profile. A composite map made from several field maps and sketches made in 1964.

Description of Tombs and Features

TOMB A

Discovery was first indicated by an unusual zone of orange mottled clay lying on the undisturbed soil below the mound fill. This seemed to peel away easily from the original soil. During removal of this orange earth small depressions, appearing to be log molds and filled with a fibrous material which might have been bark and wood, were observed. This feature continued horizontally for about one meter and then dipped quickly to a greater depth. The log molds appeared to begin to dip into a large pit and became indistinct. Four human burials and an additional human skull were uncovered in the interior of the pit. These will be described in greater detail later.

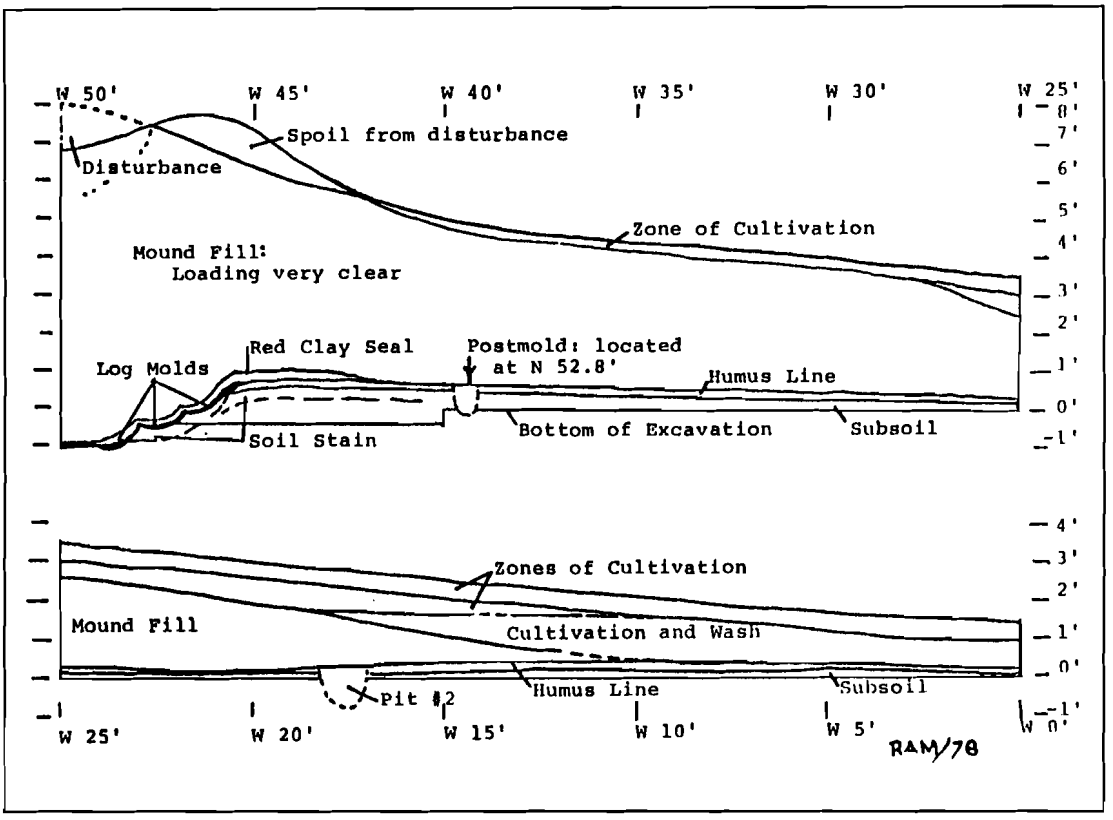

Figure 9.3. North profile of trench along the N 55' line to the W 50' grid line.

Considerable detail regarding construction of the tomb was recorded. The tomb began with the excavation of a pit approximately 3 m by 4 m and 70 cm deep, with the corners oriented in the cardinal directions. The sides of the pit sloped inward and were lined with logs ranging from 15 to 30 cm in diameter and 2.6 to 3.7 m in length (Figure 9.5). The logs were placed two to the northeast and southwest sides and three to each of the ends.

Roofing of the tomb seems to have taken place in a manner which would have given the roof great strength. Fourteen logs, approximately 13 cm each in diameter, were placed across the tomb (at regular intervals of about 20 to 25 cm apart) and beyond the ends in a direction paralleling the shorter axis of the tomb. At right angles to these roofing timbers, several logs (not more than six), approximately 10 cm in diameter, were placed and then the whole again raftered by a number of 7 to 10 cm diameter logs or poles. These last two layers of logs extended as much as a meter beyond the edges of the tomb. The two rafter layers may have been separated by a layer of cane matting, but this was never confirmed.

Prior to the placement of the roofing timbers and the burials, the whole tomb was lined with split cane matting (Figure 9.6). Evidence of mat impressions was found scattered throughout the floor of the chamber and below the burials, in the corners of the chamber formed by the floor and walls, on top of the logs forming the walls of the chamber, and below the roofing timbers. In places, there was evidence that after the burials were placed in the tomb, more mats were stretched so as to form a canopy cover for the tomb over which the roofing timbers were placed. There was little evidence of multiple layers of cane

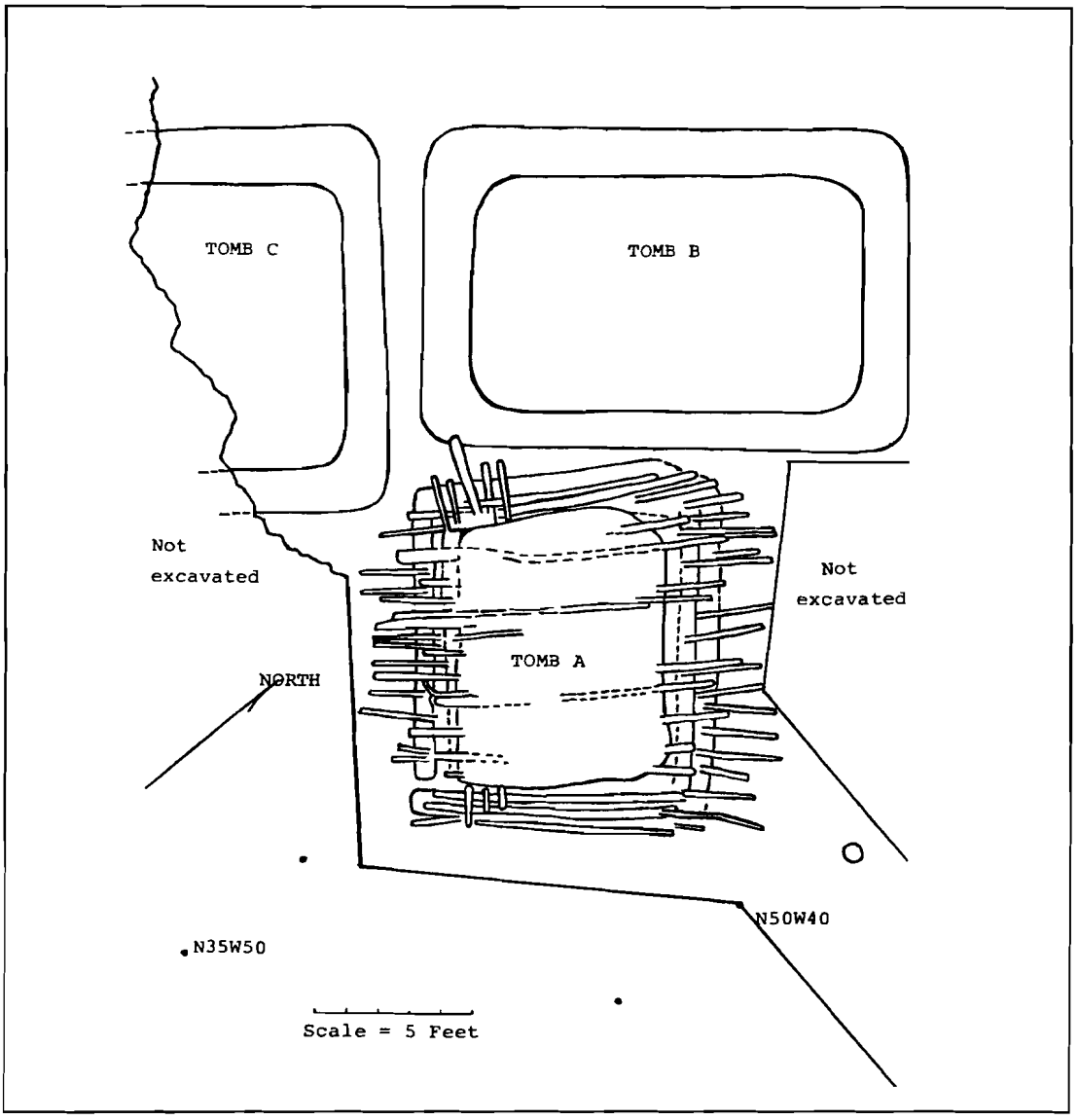

Figure 9.4. Excavated portion of Story Mound 1 showing tombs and other features.

matting at the upper edges of the pit for Tomb A, but there was evidence to suggest the practice was common for Tombs B and C. Since there was cane matting adhering to some of the skeletal remains, it is assumed that Tomb A was similarly lined, bottom and top, before roofing. In Tombs B and C, the mat lining was brought out to the edges of the tomb and held in place by a layer of heavy clay. The canopy was then stretched and anchored by heavy clay on the other end. These different layers of clay were found to cleave along the lines of the mat impressions. While the burials were being removed, split cane matting was noted lining the floor and overlying several small split logs that apparently formed a sub-floor structure.

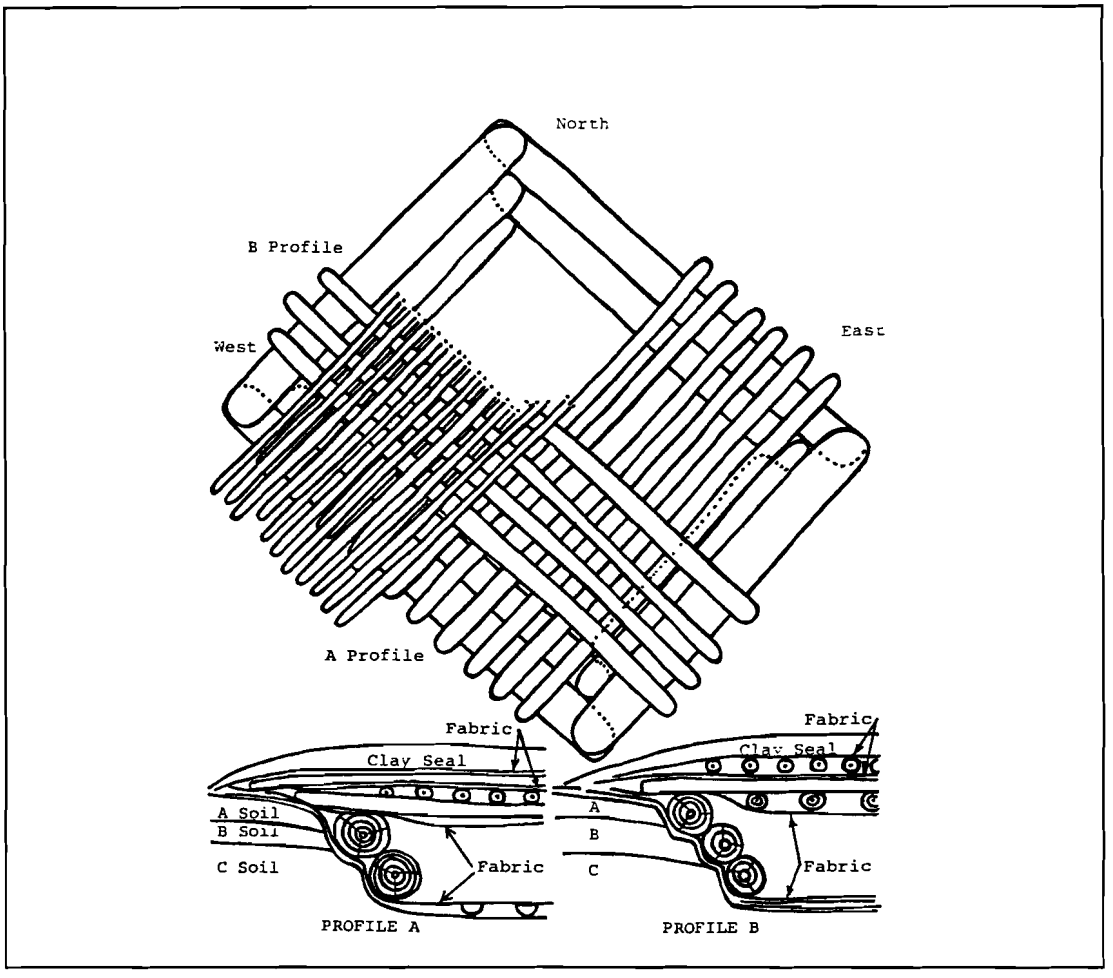

Figure 9.5. Schematic diagram of Tomb A construction. From north, to right and around, tomb construction showing fitting and wedging of log lining at corners; first rafting, across short axis; second rafting, across long axis; and third rafting. Not shown are fabric linings and split-log floor. Profile A is a cross section through the south-west side, and Profile B is a cross section through the west-north side (note position of fabric linings).

TOMB B

Tomb B was carefully lined with split cane matting of at least two different weaves and canopied with twined textiles (Figure 9.6). Some of the roofing timbers of Tomb A overlay some portions of the roofing timbers of Tomb B, and the split cane matting used in lining Tomb A overlapped similar matting used in Tomb B in that portion where they were joined. This indicates that Tomb A is later than Tomb B. Tomb B had dimensions at the ground surface of 3.3 m by 4.9 m and 2.4 m by 4 m at the bottom of the pit; Tomb B was approximately the same depth as Tomb A and was sealed with a gray gumbo clay.

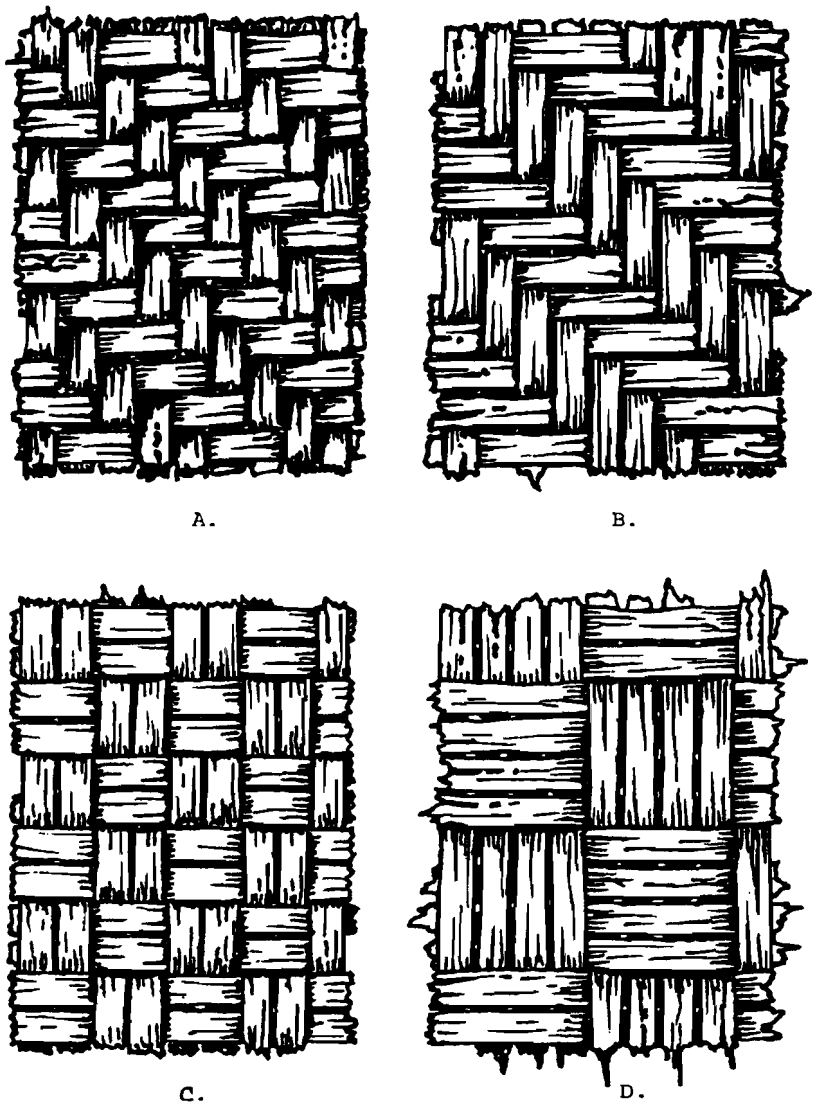

Figure 9.6. Split cane matting from the Story Mound 1 tombs. Reconstructions are from impressions in the clay seal of the tombs. They are approximately natural size.

TOMB C

Tomb C was located immediately to the southwest of Tomb A, with the long axis in approximately the same orientation as the latter. The northeast side was exposed across its full width, which was comparable in size to Tomb A and was approximately the same width. Here, as in Tomb B, some of the roofing poles of Tomb A overlie the roofing poles of Tomb C. Some of the cane matting and textiles used

in lining Tomb B overlapped similar textiles in the north corner of Tomb C, but there was no evidence of the overlapping of roofing timbers between Tombs B and C. Tomb C was also sealed with gray gumbo clay, but the tomb was not fully excavated because of the storm.

Burials (Figure 9.7)

All burials suffered extensive damage when the roofs of the tombs collapsed. Log impressions from the roof could be traced across some of the remains and bone preservation was very poor.

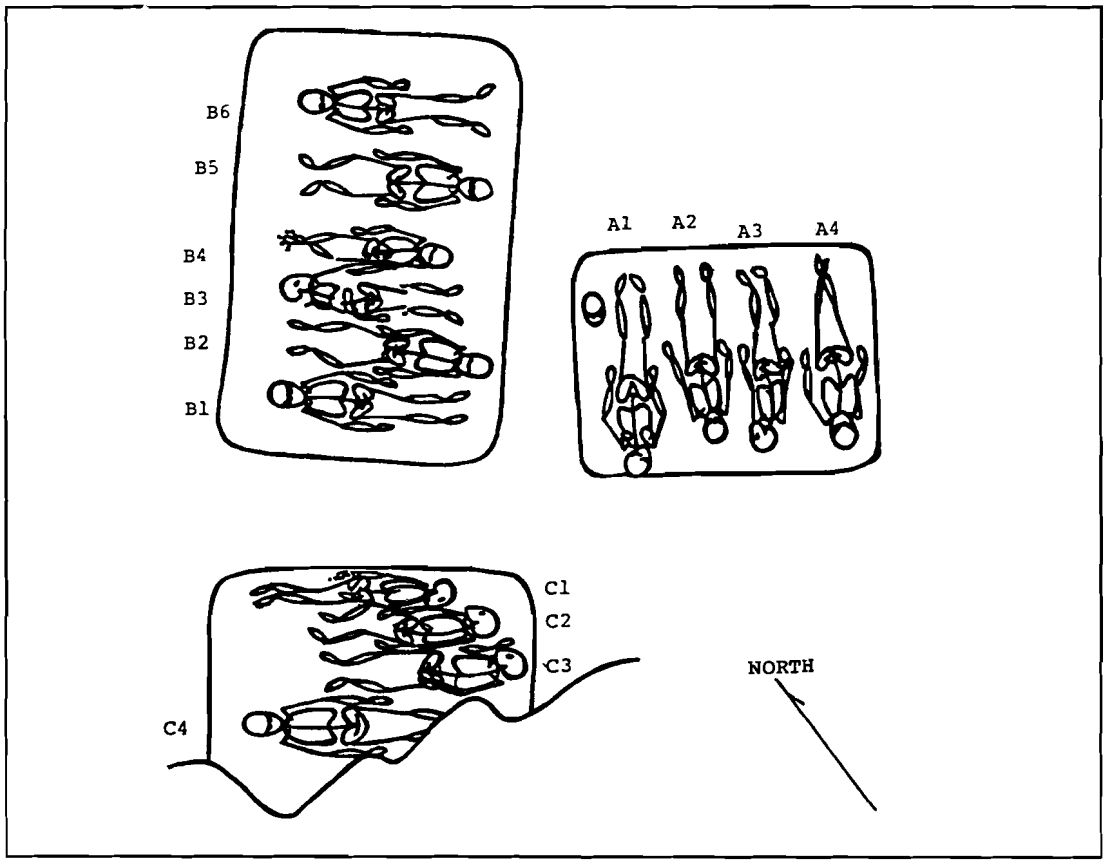

Figure 9.7. The position of burials in the Story Mound 1 Tombs.

TOMB A

Burial A1 was an adult male in an extended prone position at the northwest end of the tomb. The face was turned to the south with the head resting on the right side. The arms were alongside the body, the palms up, and the feet widespread with the toes turned in.

At the right of Burial A1, and associated with it near the distal end of the lower leg, was a human skull less the mandible. The unaltered skull was upright facing the southwest.

Burial A2 was an extended, supine adult female with the head to the southwest. The arms were extended alongside with the palms of the hands up, the fingers of the right hand touching the lower portion of the pelvis and the proximal right femur.

Burial A3 was an extended, supine adult male, with the arms extended alongside the body. The left palm was up while the right hand was turned inward toward the right femur. The skull lay on the left side, the face toward the northwest.

Burial A4 was an extended, supine adult male. The right arm was close alongside the body with the palm up while the left hand was turned up. A potsherd was found 2 cm above the right elbow. The feet of burial A4 overlapped slightly; the feet of the other three burials were separated. All four Tomb A burials were primary interments. No artifacts were found directly associated with any of the burials.

TOMB B

The burials of Tomb B were not sexed or measured because they were not removed. There were two adolescents in the group.

Burial B1 was an extended, supine adult that lay near the south end of the tomb. The head faced northwest and the arms were alongside the body.

Burial B2 was an adult, taller than the others and thus probably male. It was interred in an extended, supine position with the head to the southeast. The arms lay alongside the body, but the left hand lay adjacent to the left hand of Burial B1.

Burial B3 was an adolescent in an extended supine position, and like B1 the skull was to the northwest. This was not a secondary interment, but not all of the bones were in perfect articulation. The backbone was separated in the mid-thoracic region and arched to the north and the left arm was detached at the shoulder and underlay a portion of the pelvis of Burial B4. A shell tempered potsherd was located adjacent to the right elbow.

Burial B4 was also an extended supine adolescent, but the head was to the southeast. The skull and cervical vertebrae appeared to be in proper position and undisturbed, but the pelvis was tilted to the north and was not oriented in line with the other remains. The left leg was disarticulated at the proximal end of the femur, with an unnatural bend at the knee, and the foot was not articulated. These bones were against and overlay in large part those of the right foot. The right leg did not appear to be out of natural position except at the pelvis. The unusual positioning of Burials B3 and B4 will be discussed later.

Burial B5 was located to the north of Burial B4, with the head to the southeast; the position of this skeleton was like that of Burial B2. Burial B6 was located to the north of B5, the head oriented to the northwest.

Some discussion is necessary concerning the positions and condition of Burials B3 and B4. Both of these adolescents were found very closely placed together; they were not neatly spaced as Burials B5 and B6 or the burials of Tomb A. Burials B1 and B2, though not crowded, were more closely spaced than Burials B5 and B6.

TOMB C

Only four burials were recorded in Tomb C, but the tomb was not completely excavated; several additional burials may have been present. The burials were oriented in the same direction as those in Tomb B, but the long axis of the tomb was the same as Tomb A.

Burial C1, which was completely exposed, was an adult female lying on the left side, with the head to the southeast and face to the southwest. The vertebral column was broken in the thoracic region and the pelvis was twisted upward, with the right femur disarticulated from it. The arms were extended alongside, but not articulated. Below the pelvis, other than as noted above, the skeleton appeared to be undisturbed. Burial C2 was crowded between the northeast wall of the tomb and Burial C2.

Burial C2 was a near-adult, buried in an extended supine position. The skull lay on its right side and was oriented to the southeast. The arms were extended but the right arm was disarticulated at the elbow and the hand was also disturbed, with part of the pelvis of Burial C1 overlying it.

Burial C3, an adult male, was placed in an extended, supine position, close to Burial C2. The skull, lying on its right side and oriented to the southeast, was crowded against the southeast edge of the tomb. The right arm was flexed so that the hand was in front of the face, while the left arm was resting on the left half of the pelvis.

Burial C4 was oriented in the opposite direction of the other Tomb C burials; all but the lowest extremities were excavated. This was an extended, supine adult, that was larger than any of the other individuals in the tomb. Above the left leg a clay and shell tempered cord marked sherd was found.

Internal structure

The overlapping of roofing timbers as well as lining fabrics provides a succession of tomb construction in proper sequence. Tomb A was the last sealed and perhaps last constructed. Tomb B was sealed earlier than Tomb A, as roofing timbers and lining textiles of Tomb A were found overlapping the lining textiles of Tomb B where the two were adjoined. Tomb C linings were overlain by Tomb B linings, but there was no overlapping of roofing timbers. Some Tomb A roofing timbers overlapped both lining and roofing timbers of Tomb C, thus giving clear evidence of at least the sealing order, if not the construction order, of the tombs. It is interesting to note that in Tombs B and C, in which the interments were oriented southeast–northwest, the inhumations were crowded, while those in Tomb A were widely spaced. The presence of the isolated skull, perhaps a trophy, in Tomb A, and the fact that the tomb occupied the center of the mound, suggest that the individuals buried there may have been of higher status than individuals in Tombs B and C. There is no other evidence of possible social distinctions.

The structure of the Story Mound I tombs suggests that they represent what Brown (1979) has referred to as mortuary crypts. Such structures were constructed and roofed, but left accessible for a duration of time. The placement of individuals in the flesh at different times could then take place with a minimum of effort, yet the bodies would be protected from predation. The partially disarticulated and crowded remains on Tomb B may suggest such a practice. Burials B6 and B5 were apparently the initial interments and, in anticipation of future burials, were placed at the north end, leaving space for additional bodies. Burials B3 and B4 were then the next interments, apparently originally spaced, but leaving room in the tomb for one more person. At the time of the addition of Burials B2 and B1, there was not sufficient space for both, and Burials B3 and B4 were thus shoved northward to provide space. Burials B2 and B1 were then crowded into the south end of the tomb. The reverse sequence is possible, but the less crowded

positionings of Burials B6 and B5, like the Tomb A burials, suggest that they were the earlier burials in the tomb. The deliberate crowding of burials in Tomb B, however, is not as marked as that in Tomb C.

It is clear that Burial C1 was hastily placed into Tomb C, disturbing Burial C2. The remaining Tomb C burials are closely spaced, but less so than some individuals in Tomb B. The interpretation of a succession of individual or multiple burials in Tombs B and C suggests the probability of a "preconstruction" pattern for burial tombs rather than an "event-specific" construction.

Postmolds and Pits

While excavating the original test trench into the center of the mound, a post mold was found about one meter east of the beginning of the orange earth layer overlying Tomb A (Figures 9.3 and 9.4). After the excavation of the interior of Tomb B, two post molds were located outside and west of the tomb. There was never a chance to test for others. This is certainly not sufficient evidence to suggest a fence or house at this place built to surround the group of tombs as a charnel area. It is, however, sufficient to point out for future mound and tomb excavations of this kind, particularly in southeast Missouri, that it would be prudent to keep in mind the possibility of some kind of surrounding structure. A similar possibility has been noted for the King Site (22-NM-202; Marshall 1972). A single pit (Pit #2; Figure 9.3) was found well outside the feature area, not appearing to be associated with the mound.

DESCRIPTION AND COMPARISON OF MATERIAL

Few artifacts were found in the excavation of Story Mound I. None came from the mound fill, suggesting the fill was taken from a sterile area away from the village. The few artifacts from the mound came from the heavy clay earth used in sealing the tombs.

Two pieces of stone were found, both having no sign of deliberate use. One of these is a flake from a water-worn, patinated river pebble; it came from the pit fill of Tomb A at the surface of the clay seal.

Nine pottery sherds were found, including three relatively thick sherds of Mulberry Creek Cord Marked; two of these came from Tomb A. A fourth cordmarked sherd, tempered with grog and fine shell, was associated with fill or seal over Tomb C. The single Baytown Plain sherd came from Tomb A, while the four Mississippi Plain sherds were recovered from Tombs A and B.

Four sherds are cordmarked. Sherd 1 from Tomb A is tempered with moderately large, abundant clay particles and is 6 mm thick. Cord impressions are rather fine, not too closely spaced, and appear to be smoothed over lightly. It falls well within the description for Mulberry Creek Cord Marked (Phillips, Ford, and Griffin 1951). Sherd 2 from Tomb A is a second example of Mulberry Creek Cord Marked and is 3.5 mm thick. It is badly eroded and soft, but compact. There is a moderate amount of clay tempering well within the range described for the type. The cord impressions are eroded, but were not too closely spaced. Both of these sherds came from fill above the tomb. A third specimen of Mulberry Creek Cord Marked came from the fill above Tomb B; it was found at the edge of the tomb pit and appears also to have been in the roof seal. This sherd is moderately thick (6 mm), and is marked with relatively fine, deeply impressed cords that are closely spaced. Sherd 4 differs from typical Mulberry Creek Cord Marked sherds. It came from Tomb C, where it was found alongside one of the collapsed roof timbers and above the left leg of Burial C4. In this position it would have been contained within the immediate overlying fill or seal of the tomb. The sherd is small, 4 mm thick, with cord marking like that of Sherd 3 and tempered

with moderately large and fine particles of clay and a considerable amount of fine particles of crushed shell.

Fabric Impressions

The impressions of several split cane mat and textile weaves were recovered from the tombs. Impressions were noted in areas throughout the tombs, most notably on the floors and in the areas adjacent to the rim of the pits where the tomb linings were brought together for sealing. Samples were taken to the Laboratory of Anthropology, University of Missouri. The finest example came from Tomb B as it was being opened along the southwest end. Plait 2 (Figure 9.7d) was particular to Tomb A while Plait 1 and Twill 1 and 2 (Figure 9.8) occurred only in Tomb B, and both appear to have been used exclusively as a canopy covering the tomb prior to roofing and sealing. Plait 2 was used for both lining and as a canopy in Tomb A.

The split cane used in all four mat weaves was the same size, approximately a quarter of an inch wide. The textile cords were approximately an eighth of an inch in diameter.

Split Cane Matting

Four different split cane mat weaves were observed in the excavation, but unfortunately no selvage edges were noted or recorded. The four weaves appear to be variations of two basic ones, twilling and plaiting.

The two twills, both even regular twill float weaves (Scholtz 1975:66), consisted of a simple two over and two under (Figure 9.7a) and an enlargement of this with three over and three under (Figure 9.7b). The former is a type of mat and basket weave which has occurred archaeologically over a wide area in the eastern United States, while the other may be equally common.

The two plait weaves were a simple two over and two under and a compounding of the same using four over and four under (Figure 9.7d). The former, again, appears to be relatively common over much of the eastern United States, while the latter is relatively uncommon.

Textiles

Two different textiles, both twined, were found. One consists of a tightly filled fabric consisting of straight, two-strand warp cords and two single-strand weft cords twined around the warp (Figure 9.8a). The second textile was composed of straight, two-strand warp cords and two single-stand weft cords twined around the warp. These latter strands were spaced approximately a half-inch apart, leaving an open or gauze-like fabric (Figure 9.8b). Such fabric, in several variations, is found throughout the Mississippi alluvial valley in the form of impressions on clay objects and pottery, e.g., Kimmswick Fabric Impressed (Phillips 1970). The former textile is a common fabric, but it is not often represented in clay impressions.

SUMMARY AND CONCLUSIONS

The Hoecake site in southeast Missouri, seriously damaged through agricultural development, can still provide archaeologists with much data. This paper has provided information on a test excavation of just one of the formerly numerous mounds at the site. The details of the mound, the investigated features,

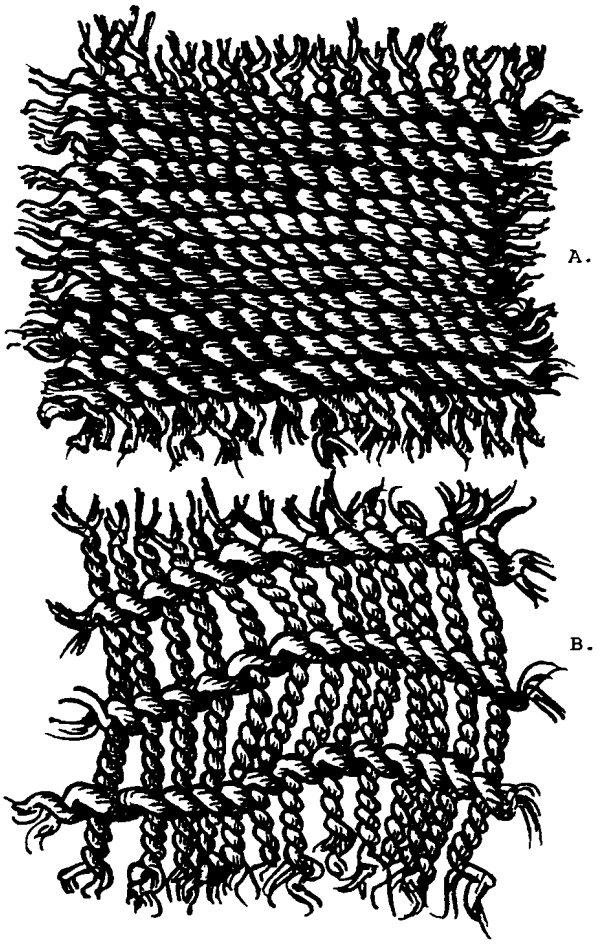

Figure 9.8. Twined textile from the Story Mound 1 tombs. Reconstructions are from impressions in the clay seal of the tombs. They are approximately four times natural size.

and their construction and content have been described, with particular emphasis on details of tomb construction. Certain details of ceramic inclusions in the mound, tomb construction, and the combined carbon-14 samples (M-2212 and 2213) which yielded a single date of A.D. 663 ± 184, indicate the Woodland pattern burial complex at Hoecake survived as late as the beginning Emergent Mississippian culture (Williams 1974:85; Morse and Morse 1983:182).

Twenty years ago the presence of shell tempered pottery with a date A.D. 700 was inexplicable, even aberrant. Today, with more recent finds in the southeast Missouri and northeast Arkansas areas, we find such a date in conformity with developing interpretations.

Though southeast Missouri is regarded as "marginal" to the classic Middle Woodland cultural centers, that area did indeed participate in the Hopewell Interaction Sphere (Morse and Morse 1983:172). At Hoecake, however, we have Late Woodland culture (Late Hoecake phase; Morse and Morse 1983:190-192) with an almost classic Middle Woodland mortuary crypt complex (Brown 1979:215). I see this as

the result of a strong but conservative Middle Woodland-like tradition adapted to the southern riverine environment. Perhaps even more importantly, Hoecake suddenly found itself located at a crucial geographic point where it could focus on control and distribution of trade goods from adjacent resource extraction points in the Ozark escarpment and upriver locations and funnel them to southern and southeastern consumer sources. Hoecake then is an integral linkage in the vast trading network established much earlier (Poverty Point period) and an important participant in contemporary socio-political developments throughout the Mississippi alluvial valley and adjacent uplands immediately preceding the advent of Emergent Mississippian culture. The mortuary pattern is essentially Woodland, but perhaps intermediate between the classic Woodland and the later Mississippian mortuary practices. Hoecake is an important site in the Central Mississippi and one that has received far too little investigation by archaeologists.

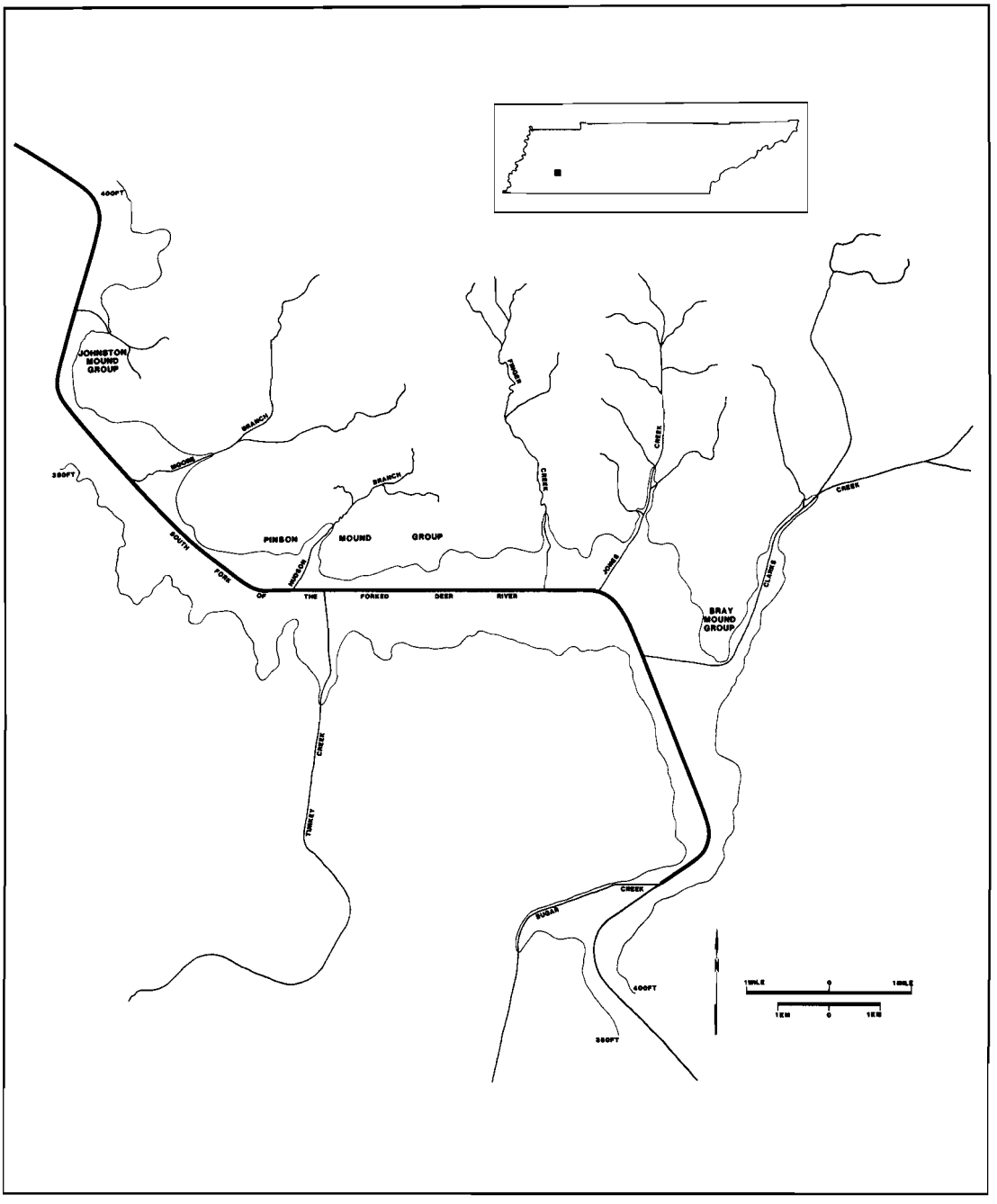

Figure 10.1 Location of the Pinson Mounds site.

10

Pinson Mounds: Internal Chronology and External Relationships

Robert C. Mainfort, Jr.

The Pinson Mounds site is the largest Middle Woodland ceremonial center in the Mid-South and possibly in all of eastern North America. Recent excavations have demonstrated that the mound complex, which includes five large platform mounds, was built between A.D. 1-500, with most of the earthworks dating to the first two centuries A.D. The radiocarbon chronology of the site is discussed with respect to its implications for other Middle Woodland sites in the Mid-South and Lower Mississippi Valley.

INTRODUCTION

The Pinson Mounds site (40-MD-1) is located in western Tennessee, about 16 km south of Jackson, and occupies a relatively flat tableland overlooking the South Fork of the Forked Deer River (Figure 10.1). Lying within the transitional zone between the West Tennessee Uplands and the Coastal Plain, this locality provides ready access to a variety of resources known to be of importance in Middle Woodland diets (Broster and Schneider 1977). It may be of note that the site is underlain by the very gently sloping, well-drained Lexington Silt Loam (Brown *et al.* 1978), which is also the dominant soil type at the nearby Johnston mound group, a site believed to be antecedent to Pinson Mounds (Kwas and Mainfort 1986). However, the favorable topographic and physiographic variables seem in themselves insufficient to account for the construction of a major mound complex at this specific locality.

THE PINSON MOUNDS SITE

In both total area, as well as the quantity of earth employed in construction, the Pinson Mounds site is very large. The site encompasses about 160 ha, within which are at least 12 mounds, a large circular embankment, and several ceremonial habitation areas (Figure 10.2). By comparison, the Mississippian center of Moundville occupies about 100 ha (Steponaitis 1983). The total volume of earthwork fill exceeds 100,000 m^3, a figure greater than the volume calculations for either of Seeman's (1977) first-order Middle Woodland sites (Seip and the Hopewell site). Recent research at the site has demonstrated that all of the mounds are of Middle Woodland age (Mainfort 1986).

Occupying the center of the site is the imposing Sauls Mound (Mound 9), which stands approximately 22 m tall and contains roughly 50,000 m^3 of fill (Shenkel 1986). A recently completed topographic map

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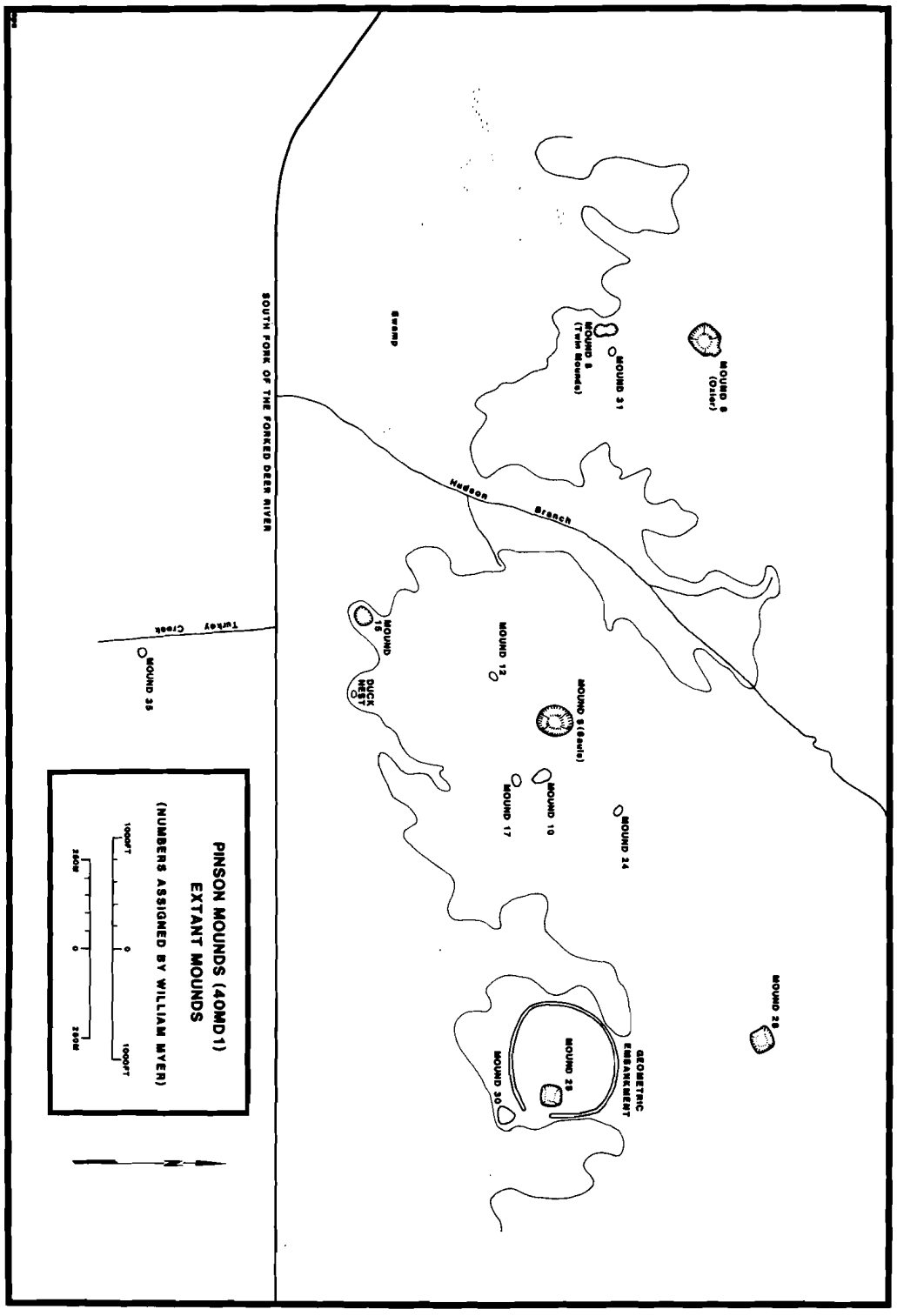

Figure 10.2. The Pinson Mounds site.

of this earthwork based on aerial photographs has revealed that the mound is essentially rectangular in shape, with the corners aligned roughly toward the cardinal directions. A series of thin-wall core samples taken from Sauls Mound in 1982 produced inconclusive data concerning the construction history, although it seems likely that this large mound was constructed in several, albeit poorly defined, stages. Several smaller earthworks are located in the immediate vicinity of Sauls Mound, including a small, irregularly shaped platform mound (Mound 10), Mound 12 (a burial mound), and Mound 24, the former two of which have been the focus of recent excavations.

To the northeast and east, respectively, of Sauls Mound are two large platform mounds, mounds 28 and 29, each located approximately 1020 m from the centrally located earthwork. The northeastern platform, Mound 28, has a height of about 4 m, which auger testing has revealed to be composed of uniform fill with no indication of multiple construction stages. The slightly smaller Mound 29, however, was built in at least two stages, one of which is marked by the presence of a pale tan sand floor (Morse 1986). The embankment surrounding Mound 29 was constructed in the shape of a truncated circle and is approximately 360 m in diameter, with walls averaging 2 m in height. It encloses an area of about 6.7 ha, which is comparable to Mound City, Ohio. Mound 30 occupies the bluff top to the southeast of Mound 29 and just outside the embankment. It may be an eroded burial mound, with a height of over 2 m and a diameter of roughly 24 m.

Located about 1000 m northwest of Sauls Mound, Ozier Mound (Mound 5) is the second largest mound at the site, standing approximately 10 m tall; a ramp extends from its northeast side. A pair of large, intersecting, conical burial mounds, known locally as the Twin Mounds (Mound 6), lies approximately 250 m south of Mound 5, as does the smaller Mound 31. Another large platform mound, Mound 15, is located about 580 m southwest of Sauls Mound. Although damaged by plowing, this structure was formerly about 3 m tall; auger testing indicates that the earthwork probably represents the product of a single construction event. The "Duck's Nest" is a small circular embankment with a diameter of about 10 m; it lies about 250 m east of Mound 15 and overlooks the bottomlands.

The spatial arrangement of the large platform mounds (Mounds 5, 9, 15, 28, 29) suggests that their relative placement may have been intentional. The largest mound in the complex, Mound 9, is located near the center of the site. Mounds 28 and 29 are equidistant from Mound 9 and are located at the northeast and southeast corners of the site, respectively, while Mound 5 occupies the northeast corner. Although the placement of Mound 15 is the least geometrically exact of the larger mounds, examination of Figure 10.2 will show that this earthwork is located at the *topographic* southwest corner of the site. Too little is known about the evolution of large ceremonial sites, and the establishment of absolute temporal relationships among the large platform mounds of the Pinson group should be a major priority of future research at the site.

Although mentioned in the early antiquarian literature (Haywood 1823; Troost 1845; Cisco 1879; the site was not described by Squier and Davis [1848]), the Pinson Mounds site was not investigated by professional archaeologists until the 1960s, a notable exception being the work of William Myer, who published a map as well as a brief description of the site in 1922. Myer, however, erred in his identification of over 30 mounds at the site. Late excavations have demonstrated that many of the mounds recorded by Myer are actually natural landforms (Mainfort 1980; Morse 1986). Despite the size and obvious importance of the site, Pinson Mounds has been virtually ignored in recent Hopewellian syntheses (e.g., Struever and Houart 1972; Seeman 1977; Brose and Greber 1979), probably because of the limited amount of published information available.

During the late 1950s, local interest in establishing Pinson Mounds as an archaeological park prompted a limited survey and excavation by Fischer and McNutt (1962) and the more extensive investigations of Morse (1986). Following acquisition of the site by the State of Tennessee, John Broster of the Tennessee Division of Archaeology conducted fieldwork at several significant localities within the site in 1974 and 1975 (Mainfort 1980). Although the efforts of these researchers established that Middle Woodland societies were responsible for most of the earthworks at Pinson Mounds, the large size of several of the platform mounds, as well as the discovery of an isolated Mississippian farmstead (Fischer and McNutt 1962; Mainfort, Broster, and Johnson 1982), left the cultural affiliation of the largest platform mounds open to question (Morse and Polhemus 1963; Broster and Schneider 1976). This was the most crucial problem addressed by recent fieldwork at the site.

INTERNAL CHRONOLOGY

Although the site and adjacent areas had been sporadically utilized since roughly 8000 B.C. (Mainfort 1980; Broster 1982), it was not until the Early Middle Woodland period that Pinson Mounds became a locus for intensive habitation. Represented by an artifact assemblage in which fabric marked ceramics predominate, evidence of this occupation has been uncovered in the Mound 14 sector, the lower fill of the geometric embankment, and in the habitation zones revealed beneath Mound 12 (Mainfort, Broster, and Johnson 1982; Morse 1986; Mainfort 1986b). The latter include an undisturbed occupation deposit that underlies a stratum dated to 20 B.C. ± 115 (UGa-3716), a date consistent with the known temporal range of fabric marked ceramics (e.g., Butler and Jefferies 1982). There is presently no evidence to link earthwork construction at Pinson Mounds with the fabric marked ceramic horizon, although limestone tempered fabric marked sherds comprise a significant portion of the artifact assemblage from the conical burial mounds at the nearby Elijah Bray mound group (40-CS-95; see Myer n.d.). Rather, the earliest mound construction seems to have been initiated around A.D. 1, by which time cord marking was the most common decorative mode on ceramics (Mainfort 1986a).

Limited excavations and core testing conducted at Ozier Mound (Mound 5) provide documentation about the earliest construction of earthworks at the Pinson Mounds site. Constructed in the form of a truncated pyramid, with a ramp extending from its northeastern side, Mound 5 is the second largest earthwork within the mound complex. Its dimensions are as follows: height, 10 m; base, 73 m by 70 m; top, 30.5 m square; volume, 26,000 m^3. Test excavations were confined to the central area of the mound, where it was felt that evidence of a structure, if present, would be located. A prepared floor or occupation surface, consisting of a thin (about 5 cm thick) layer of pale yellow sand, was encountered at a depth of about 80 cm below surface in all of the excavation units and most of the supplementary auger tests. Associated with the sand floor or occupation surface were two prepared hearths, one of which contained a large sherd of Furrs Cord Marked pottery; the hearths were not associated with a structure. Charcoal samples from the features produced uncorrected radiocarbon dates of 20 B.C. ± 110 (UGa-4543) and A.D. 190 ± 160 (UGa-4174), which suggests that the upper occupation level of Ozier Mound was completed during the first century A.D. (Mainfort 1986a). A series of thin-wall core samples was subsequently obtained for Mound 5, reaching a depth of 10.67 m below the surface of the earthwork and revealing the presence of at least five earlier sand floors. No water-laid soils were associated with the sand floors. A sand floor was also encountered during the testing of Mound 29, and it may also be

noteworthy that pale yellow sand was used to cover the primary mound within the northern Twin Mound (Mainfort, Shannon, and Tyler 1985).

Although radiocarbon dates have not been obtained for the remaining large platform mounds at the Pinson Mounds site, the ubiquitous presence of sand tempered plain and cordmarked ceramics throughout the mound complex (as well as the lack of Mississippian artifacts) suggests the contemporaneity and relatively early age of all the large earthworks. Additional support for the assertion that all of the largest mounds at the site were constructed during the first centuries A.D. is provided by radiocarbon dates obtained for the Twin Mounds (Mound 6). This unusual earthwork consists of a pair of large, intersecting conical burial mounds, each with a diameter of about 24 m and a height of 7 m. The Twin Mounds contain approximately 4,000 m^3 of earth, making this structure one of the largest recorded Middle Woodland burial mounds (see Seeman 1977:265-288).

The northern mound was partially excavated in 1983, revealing it to be a single-event structure with complex stratigraphy. Among the more notable construction features were a flat-topped core or primary mound covering the central burial area; a low, sand-covered platform that encircled the primary mound; a cap of large sandstone boulders that covered part of the northern half of the mound; and six sub-mound tombs, of which four were excavated (Figure 10.3). A total of 18 individuals, all of them adult primary inhumations, was recovered, 16 of these from the tombs. Non-local grave goods included a mica mirror, copper earspools, numerous freshwater pearls and *Marginella* beads, and two objects fashioned from speckled green schist—a pendant and a boatstone. In contrast to many Middle Woodland mortuary facilities, such as those at Helena Crossing (Ford 1963), the Twin Mounds tombs do not appear to have served as processing crypts (Brown 1979; Mainfort 1986a). Radiocarbon dates on charcoal obtained from individual logs that were used to cover several of the sub-mound tombs indicate that the Twin Mounds are essentially contemporary with the completion of Ozier Mound, i.e., somewhat prior to A.D. 100 (Mainfort, Shannon, and Tyler 1985).

The smallest platform mound at the site, Mound 10, is located about 100 m east of Sauls Mound (Mound 9). This essentially polygonal earthwork measures approximately 60 m long, with a maximum width of about 40 m; the unusual shape does not seem to be the result of plow damage. Excavations conducted in 1982 revealed that it was built on a low, natural rise and that the mound itself stands only 1.3 m in height. The asymmetrical shape and small size of the mound suggested that it postdated the major period of earthwork construction at Pinson Mounds, an inference that was supported by limited test excavations. Near the center of the mound, a large hearth containing sand tempered pottery sherds, several chert flakes, calcined bone, and charcoal was exposed immediately below the plow zone. Two uncorrected radiocarbon dates were obtained from this feature: A.D. 65 $\pm$ 130 (UGa-4679) and A.D. 270 $\pm$ 85 (UGa-4680). The hearth and the mound itself should, therefore, date to approximately A.D. 190. No evidence of an associated prehistoric building was encountered (Mainfort 1986a).

Possibly contemporaneous with the construction of Mound 10 was a significant non-mound (mortuary?) ceremony conducted about 400 m south of Sauls Mound and 150 m north of the "Duck's Nest." Represented by a large deposit of ash, calcined bone, and a concentration of ceramics and lithics within an area of about 70 m^2, a locality known as the Duck's Nest Sector has produced a higher concentration of artifacts than any other area tested within the Pinson Mounds site. None of the calcined bone fragments were large enough to permit identification, which precludes conclusive functional attribution of this deposit.

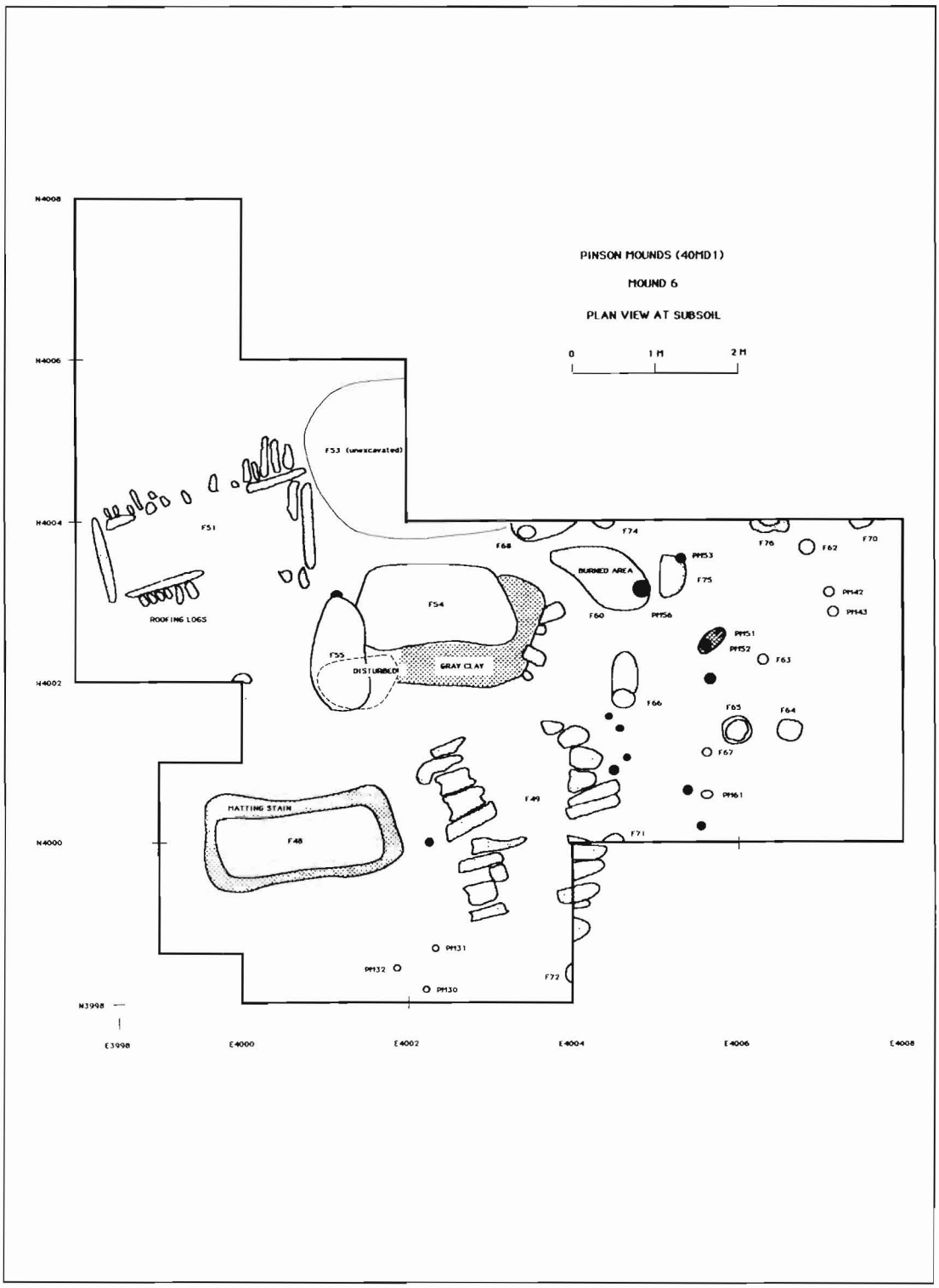

Figure 10.3. Mound 6 plan view.

Although Furrs Cord Marked accounts for approximately 60 percent of the over 2,000 pottery sherds recovered, at least 10 of the 47 vessels represented are of non-local origin (Mainfort 1986a). Included are examples of Swift Creek Complicated Stamped, Turkey Paw Cord Marked, McLeod Simple Stamped, several limestone tempered plain and cordmarked vessels, and a grog tempered red-filmed ware that may have been produced in northern Florida or the Lower Mississippi Valley (Plate 10.1). Rather than representing trade items, it seems more probable that these non-local vessels were brought to Pinson Mounds by representatives of the groups that produced them, specifically for use in ceremonies at the site. Although lithic materials are sparse in most areas within the mound complex, the Duck's Nest Sector yielded 883 pieces of chert debitage and 56 chert tools; many of the latter (N=38) are fragments of broken bifacial implements. Several pieces of galena were also recovered. Uncorrected radiocarbon dates of A.D. 125 ± 105 (UGa-4677) and A.D. 245 ± 70 (UGa-4678) on charcoal samples from the Duck's Nest Sector deposits produce a mean date of about A.D. 200, a date very close to that obtained for Mound 10. The case for the contemporaneity of Mound 10 and the Duck's Nest Sector is strengthened by the inclusion of several sherds of Swift Creek Complicated Stamped and the grog tempered red-filmed ware in the fill of the former.

Plate 10.1. Non-local ceramics from the Duck's Nest Sector.

As noted earlier, several short-term habitation sites, interpreted as "mortuary camps" by Broster and Schneider (1976, 1977), have been located at Pinson Mounds, including the Mound 12 sector (between Mounds 9 and 12), the Twin Mounds sector (south of Mound 6), and the Cochran site (northwest of the Twin Mounds) (Mainfort 1980; Morse 1986). These localities are characterized by the presence of ovoid tension poled structures (approximately 5 to 7 m in diameter), associated mortuary features, and a paucity of occupational debris. Of particular note is the association of non-local microlith blades, quartz crystals, and unworked copper fragments with the floor of a large house at the Cochran site, which make this locality a possible example of what Baby and Langlois (1979) have referred to as "specialized workshops" at Mound City. Tightly clustered radiocarbon determinations on features in the Mound 12 sector and at the Cochran site indicate that these areas were occupied around A.D. 270-300 (Mainfort 1980; Mainfort, Broster, and Johnson 1982), considerably later than the major period of mound construction at the site. While the Cochran site apparently postdates the nearby Twin Mounds by some 200 years, occupations in the Mound 12 sector occurred about 150 years prior to the construction of the nearby mound from which the area takes its name. No radiocarbon determinations are available for the Twin Mounds sector, but the presence of Swift Creek Complicated Stamped and clay tempered red-filmed sherds suggest that this area is contemporary with the Duck's Nest Sector and perhaps with the nearby Twin Mounds themselves (Mainfort 1980).

Mounds 12 and 31, both of which are small burial mounds, are not located with any evident regard for the planning that seems to have dictated the placement of the large platform mounds at the site. Mound 31 measures about 15 m in diameter and may have originally stood about 1.5 m in height (Mainfort 1986a; Morse 1986). The central feature of this earthwork was a shallow, sub-mound pit containing the extended remains of an elderly male; no evidence of logs or other covering over the pit was encountered. Other than several possible shell beads and some red ochre, mortuary accompaniments were lacking; several deposits of calcined bone were included in the pit fill. Surrounding the central feature on the mound floor was a U-shaped ring of clay subsoil which covered a deposit of pottery sherds, chert flakes, and unidentified calcined bone; analogous features (albeit lacking associated artifacts and bone) were recorded by Jefferies (1976) at the Tunacunnhee site in northern Georgia. An uncorrected radiocarbon date of A.D. 380 $\pm$ 125 (UGa-4214) was obtained on a wood charcoal sample recovered from beneath the clay ring, while a small pit associated with the mound floor that contained Marksville-like ceramics produced a date of A.D. 470 $\pm$ 60 (TX-5486).

Excavation of Mound 12 revealed a low, puddled clay mortuary platform (Mainfort 1980), similar to those documented at Pharr (Bohannon 1972), McQuorquodale (Wimberly and Tourtelot 1941), Womack (Koehler 1966), and Grand Gulf (Brookes 1976). A large crematory facility containing the remains of two individuals was uncovered near the center of the platform; no grave goods were found. Two virtually identical radiocarbon dates on charcoal form the central feature indicate that Mound 12 was constructed around A.D. 460 (Mainfort, Broster, and Johnson 1982). A second clay platform was constructed over the original structure before the central feature had cooled; several possible crematory pits and hearths were associated with this surface, but few artifacts were recovered. Mound 12 postdates the major period of mound building by several hundred years and seems to represent the last Middle Woodland earthwork constructed at the Pinson Mounds site.

The chronology of Pinson Mounds, as presently understood, can be briefly summarized as follows. Based on the core samples and dates obtained from Ozier Mound, the dates from the Twin Mounds, and the uniform artifact assemblage from the site, all of the large mounds were probably constructed during

the first century A.D. Pinson Mounds continued to function as an important regional ceremonial center until at least A.D. 200, as indicated by the ceremony represented in the Duck's Nest Sector. However, mound construction seems to have been severely curtailed by this time, as the small size and asymmetrical shape of Mound 10 suggest that it was built by a relatively small social group. The large ovoid houses encountered in the Mound 12 sector and at the Cochran site date to approximately A.D. 300, and it is difficult to assess their relationship to mound construction at the site, as they were apparently built long after the major mounds. Mound 31, which was probably constructed during the fifth century A.D., represents a good example of the sort of earthwork that a small social group might build to honor an important individual in death. Perhaps the proximity of this small mound to the Twin Mounds is not entirely coincidental. The most recent dates for mound construction at the Pinson Mounds site are those obtained for Mound 12, a relatively small mortuary structure built around A.D. 460 which seems to mark the terminal Middle Woodland use of the site.

MIDDLE WOODLAND PLATFORM MOUND SITES

Perhaps the most significant accomplishment of the recent fieldwork at Pinson Mounds has been the demonstration that the large platform mounds at the site are conclusively of Middle Woodland age. However, the examples from Pinson Mounds are not unique. The possible Middle Woodland affiliation of the platform mounds associated with the Marietta, Newark, and Cedar Banks works in Ohio has long been recognized and debated (Prufer 1964; Graybill 1980; Essenpreis [1978] argues that the Marietta platforms are Fort Ancient structures). Recent data from Pinson Mounds lends a measure of support to a Middle Woodland age for these earthworks.

Less well-known are a number of examples from the Mid-South area (Figure 10.4). Rafferty (1983, 1984) has convincingly demonstrated that the Ingomar mound group in northeastern Mississippi, which includes a ramped, 8 m tall platform mound (Mound 14), is of Middle Woodland age. Interestingly, Ingomar Mound 14 is oriented at approximately 56° east of north, as is Mound 5 in the Pinson group. The Ingomar ceramic assemblage consists primarily of the sand tempered types Baldwin Plain and Furrs cord Marked and also includes a single clay tempered red-filmed sherd virtually identical to specimens recovered from Pinson Mounds. Located in the Yazoo River basin, the Leist site includes a conical mound approximately 9 m tall, a large platform mound (Mound C), a hemispherical embankment, and a smaller, irregular embankment surrounding the platform mound (Phillips 1970:376-373). The flat-topped Leist Mound C measures approximately 107 m by 75 m at its base and stands over 4 m tall. A small secondary mound is located on the southern end, which, as noted by Phillips (1970:369), is a feature analogous to Marksville mounds 2 and 6. Limited testing and surface collections imply an age of somewhere in the A.D. 1 to 400 range for Leist Mound C, although the hemispherical embankment may have been constructed during the Poverty Point period (Stephen Williams, personal communication).

The lack of radiocarbon dates for the Marksville site is especially distressing, given the importance of the site itself, as well as the fact that "Marksville" is virtually synonymous with "Middle Woodland" in the Lower Mississippi Valley. The site proper includes five mounds within a large hemispherical enclosure, a sixth mound within a small enclosure to the north, and a small circular embankment. Marksville mounds 2 and 6 are platform mounds, apparently with secondary conical additions, while Mound 7 may also be a flat-topped earthwork. Although there remains some difficulty in ascribing

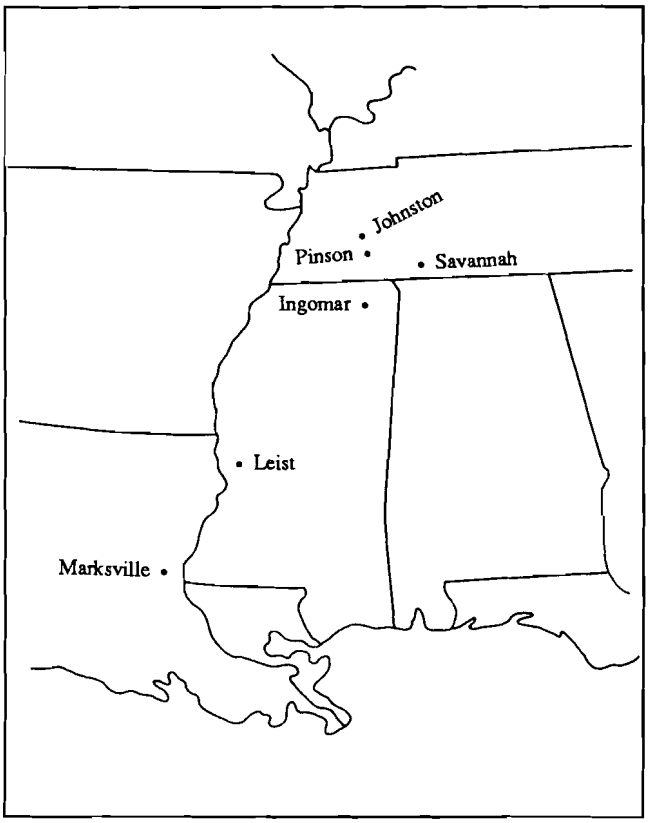

Figure 10.4. Middle Woodland platform mound sites.

cultural affiliation to these earthworks (cf. Toth 1974), the associated ceramic assemblage suggests that all are part of the Early Marksville (i.e., A.D. 1-200) component at the site.

Of particular interest because of its proximity to Pinson Mounds is the Johnston mound group (40-MD-3), which is located only several kilometers northwest of the former site. The Johnston site occupies an area of at least 30 ha and among the three surviving earthworks is a platform mound (Mound 4) measuring approximately 6 m tall and 60 m square at the base; smaller mound to the northwest (Mound 5) was recorded by William Myer (n.d.) as being flat-topped, although it is now somewhat rounded due to plowing. Ceramic collections from the site have yielded an assemblage that is virtually indistinguishable from that of Pinson Mounds and have established that the Johnston group is a Middle Woodland mound group that may be the precursor of Pinson Mounds (Kwas and Mainfort 1986).

On the bluffs above the Tennessee River, within the town of Savannah, Tennessee, are the remains of a major Middle Woodland ceremonial center (40-HR-29), the magnitude of which may have rivaled even that of Pinson Mounds (Stelle 1872:408-415; Peterson 1980; Dye and Walthall 1984). Sixteen mounds and a lengthy embankment were originally recorded at the site, and while the accuracy of Stelle's (1872) map can be questioned on some counts, it is known that the largest mound was flat-topped and measured approximately 100 m square at the base, with a height of 10 m (David Dye, personal communication). Several smaller platform mounds also seem to have been present. Early excavations in several of the earthworks yielded a number of Middle Woodland mortuary artifacts, including copper earspools. More recently, limited testing of a habitation area within the mound complex exposed a pit containing limestone tempered fabric marked ceramics, a portion of a greenstone celt, and a Copena projectile point. Charcoal from the pit yielded a radiocarbon determination of 15 B.C. $\pm$ 140 (Peterson 1980:47-48).

Since platform mounds have traditionally been closely identified with Mississippian chiefdoms (e.g., Griffin 1973; Jennings 1974), it is important to note that none of the Middle Woodland platform mound sites, including Pinson Mounds, are analogous to the major Mississippian centers such as Moundville, and that there is currently no evidence that Middle Woodland platform mounds supported public buildings. While there is growing evidence that demonstrates that these Middle Woodland ceremonial

centers were not "vacant" (Prufer 1964:71), it seems unlikely that they represent seats of power and authority for hierarchically organized societies. As more of these centers are recognized, however, it may be necessary to revise current assessments of Middle Woodland socio-political organization drastically.

PINSON MOUNDS CHRONOLOGY IN A REGIONAL CONTEXT

Although Middle Woodland cultures, and particularly the burial mounds and other ceremonial earthworks construct by these societies, have been a focus of intense archaeological interest since the time of Atwater (1820), Squier and Davis (1848), and even earlier antiquarians, the chronology of this time period remains rather poorly understood. In the absence of adequate temporal control, researchers are severely limited in their ability to define key regional sequences (e.g., Prufer 1964; Toth 1979), to say nothing of explicating Middle Woodland inter-regional dynamics (Struever and Houart 1972; Seeman 1977). Even the important radiocarbon determinations generated by the re-excavation of some classic Ohio ceremonial centers raise almost as many questions as they answer (Greber 1983).

The sequence of radiocarbon dates obtained for Pinson Mounds, while admittedly neither exhaustive nor lacking in certain ambiguities, nevertheless represents the largest body of chronological data available for a single Middle Woodland ceremonial center and, importantly, provides clear indications of changes in site utilization over a period of roughly 700 years. Major earthwork construction seems to have been initiated and completed during the first century A.D., while at *circa* A.D. 200 there is evidence of utilization of the site by (or, at least, contacts with) Middle Woodland cultures throughout the southeast. The construction of Mound 10, also around A.D. 200, seems to mark a decrease in the importance of Pinson Mounds, and after A.D. 300 the site was apparently used only by small, local social groups. Apparently the social, political, and ideological forces that enabled an unknown number of rather loosely organized societies to undertake a program of massive earthwork construction at the site were relatively short-lived, spanning a period of perhaps only one or two hundred years.

Since the Pinson Mounds ceramic assemblage is essentially identical to that of the Miller culture to the south (Jenkins 1982), a comparison of the Pinson dates with those from Bynum (Cotter and Corbett 1951) and Pharr (Bohannon 1972), two of the largest Middle Woodland mortuary sites recorded in the Mid-South, should be useful. Unfortunately, the single Bynum date (A.D. 674 $\pm$ 150) is not credible, while the date of 395 B.C. $\pm$ 90 (GX-845) for Pharr is probably several hundred years too early for mound construction at the site. Based primarily on relative frequencies of ceramic types in mound fill, Jenkins (1982:69) has recently proposed that Bynum Mound D should date to approximately 100 B.C.-A.D. 1, with Bynum A and B, as well as all earthworks in the Pharr group, falling within the period A.D. 1-100. The ceramic assemblages from both sites is dominated by the types Saltillo Fabric Impressed and Baldwin Plain, with only a very small percentage of Furrs Cord Marked, and there can be little doubt that these ceramics were produced by the societies responsible for mound construction at the sites. But Jenkins' proposed chronology is open to criticism on several counts.

The undisturbed occupation stratum (Stratum 6) underlying Pinson Mound 12, dating to sometime prior to 205 B.C. $\pm$ 115 (Mainfort, Broster, and Johnson 1982), has yielded a ceramic assemblage comparable to those of Pharr and Bynum, and Mound 12, Feature 61 yielded a portion of a small Marksville Incised bowl in association with a quantity of fabric marked ceramics. Further, the Pinson Mounds data suggest that cord marking was the dominant decorative mode on ceramics by around A.D. 1. Hence, Bynum and Pharr may actually be somewhat older than suggested by Jenkins (Mainfort 1986b).

Additionally, Jenkins relies heavily on the estimated ages of Marksville ceramic types in the Lower Mississippi Valley, which are based on a paucity of radiometric dates, and, although the relative chronology has been reasonably well established (Toth 1977), the absolute chronology is not so soundly based.

The 500 year time span encompassed by the four critical dates from the Helena Crossing mounds, which range from 150 B.C. to A.D. 325 (Ford 1963), is unfortunate. While the log-covered mortuary crypts at the site were clearly re-used (Brown 1979), the actual time period involved must have been substantially shorter than that suggested by the radiocarbon dates. Toth (1979) simply dismisses the earliest (150 B.C. ± 150) and latest (A.D. 325 ± 150) dates from Helena, which not coincidentally places the site squarely within his presumed age for Early Marksville (i.e., A.D. 1-200). Toth's dismissal of the 150 B.C. date can now be seriously questioned on the basis of Shenkel's (1984) recent work at Big Oak Island, as well as the occurrence of Marksville ceramics at Bynum and Pharr, sites which, as suggested above, may have been constructed during the first or second century B.C. Also pertinent here is Ford's comment that the paste on many of the Helena ceramic vessels is "fairly soft" (1963:33), a description frequently applied to vessels on the early and of the Marksville time line. Recent data from Pinson Mounds and other sites, as well as the dearth of radiocarbon dates for the Lower Mississippi Valley, points to a need for a refinement and/or reassessment of Marksville chronology.

The presence of limestone tempered ceramics at Pinson Mounds suggests some degree of contact with the Copena societies of the Tennessee River valley. Although long recognized as a local Middle Woodland variant, no radiocarbon dates were obtained for Copena sites until fairly recently. Cole (1981) has reported a series of dates from Murphy Hill that suggest that this locality served as a Copena mortuary site between 50 B.C. and A.D. 200, the inferred peak of construction at Pinson Mounds. However, samples of charred bark associated with sub-mound burial pits at the Ross and Leeman mounds produced dates of A.D. 320 ± 65 and A.D. 375 ± 75, respectively (Walthall 1972). The size of these mounds, as well as the presence of large quantities of exotic mortuary goods, is noteworthy in light of the relatively late dates, although it should be emphasized that neither site is remotely comparable in size to Pinson Mounds. Peterson's (1980) date of 15 B.C. ± 140 on a Copena pit at the Savannah, Tennessee mound complex (40-HR-29) is especially important, in that it suggests the contemporaneity of this large center with Pinson Mounds. This site has produced a number of Hopewell Interaction Sphere commodities, and further excavations at Savannah are of paramount importance for an adequate interpretation of Copena.

Two other Middle Woodland sites in the southeast, both of which have yielded notable concentrations of Hopewellian artifacts, warrant mention. Dates obtained for the Tunacunnhee site in northern Georgia (Jefferies 1976) suggest that the site was occupied around A.D. 200, while a pair of dates for Mandeville Mound B place it securely about A.D. 260 (Smith 1979). These dates indicate a continuation of inter-regional exchange during the waning years of Pinson Mounds. It is also interesting to note in this regard the fact that despite the immense size of the site, relatively few classic Hopewellian commodities have been found at Pinson Mounds.

The complexity and time depth represented at the major Ohio ceremonial centers have only recently become apparent, thanks in large measure to the work of N'omi Greber (1979, 1983) at Seip and Harness. Of particular interest is the fact that the construction and use of the "big houses" at both of these sites has a median date of about A.D. 300 (Greber 1983:89-92), at least 100 years after the major period of earthwork construction at Pinson Mounds. The few dates available for other "classic" Hopewell sites are not particularly instructive. Current evidence suggests that Hopewell Mound 25 and Tremper were

constructed during the first century B.C. (see Prufer 1964), while Mound City may span a period from A.D. 1 to 200 (cf. Brown and Baby 1966). These dates, as well as those obtained for a number of the Illinois "crypt" burial mounds, which cluster primarily within the first two centuries A.D (Buikstra 1976:62), correspond very nicely to the dates from the Twin Mounds and Ozier Mound.

Finally, mention should be made of the Mann site in southwest Indiana, the importance of which has long been masked by a dearth of fieldwork and published reports. This impressive site occupies an area comparable to the size of the Pinson Mounds site and includes at least 10 mounds and four geometric embankments of various sizes. The five published radiocarbon dates suggest a long history of Middle Woodland occupation beginning around A.D. 250 and lasting until A.D. 500, with the largest mound (Mound 9) dating to about A.D. 420 (Kellar 1979).

The extant radiocarbon dates suggest the general contemporaneity of Pinson Mounds, the Savannah Mounds, and Helena Crossing (Marksville and the burial platform at Crooks could be added to the list based on ceramics, as could, perhaps, Bynum and Pharr); the time period in question is about 50 B.C. to A.D. 200. Also contemporary are many of the documented Middle Woodland crypt-style mounds in Illinois, as well as some of the classic Ohio centers. Evidence from Tunacunnhee and Mandeville indicate that long-range interregional exchange continued into the third century A.D. Construction of mortuary earthworks, including the use of non-local goods, continued on a relatively small scale in the Tennessee Valley into the mid-fourth century A.D., but the Ohio tripartates and the Mann site seem to represent some of the last major construction projects undertaken by Middle Woodland peoples.

SUMMARY AND CONCLUSIONS

The Pinson Mounds site is one of the largest recorded Middle Woodland ceremonial centers, and the presence of five large platform mounds is unique among sites of this time period. There is presently no evidence that the platform mound supported buildings. Most, if not all, construction of the major mounds was completed during the first century A.D., and the three earthworks demonstrated to have been constructed after A.D. 100 seem to reflect the efforts of fairly small social groups. The peak construction and usage of the Pinson Mounds site seems, therefore, to be roughly contemporary with the early Ohio centers (i.e., Mound City, etc.) as well as some of the Illinois mound groups (i.e., Klunk, Peisker, etc.), but clearly predating the Ohio tripartite enclosures. Non-local ceramics recovered from several areas within the mound complex, but particularly those from the Duck's Nest Sector, suggest the participation of social groups from throughout the southeast in ceremonies conducted at Pinson Mounds, while intimations of social ranking were revealed by excavations in the Twin Mounds.

The Pinson Mounds data suggest that the first century A.D. saw the rise of presently undefined socio-political and/or ideological forces that enabled large numbers of individuals from a number of communities to participate cooperatively in the construction of very large earthworks at the site. By A.D. 200 or shortly thereafter, however, it was no longer possible and/or necessary to mobilize people on such a large scale, and by A.D. 300 the ritual activities represented at the site seem to be the product of single small socio-political units. An understanding of the florescence and decline of ceremonial expression at Pinson Mounds awaits additional excavations at the site, as well as intensive survey and testing of other Middle Woodland sites within the Forked Deer River drainage and adjacent areas in western Tennessee.

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11

Seeing the Mid-South from the Southeast: Second Century Stasis and Status

David S. Brose

Despite the geographical location of the Pinson Mounds site, the structure of its earthworks does not appear closely related to those known for the Mid-South or the Lower Mississippi Valley. Beyond apparent chronological problems, much of the "Middle Woodland" complex of northwest Florida and southern Alabama may provide interesting parallels to Pinsonian activities. Investigation of whether Pinson Mounds is better appreciated as the cultural center of Ohio/Gulf interaction, rather than as the Illinois/Mid-South/LMV nexus, concludes that such a conceptual approach is irremediably flawed.

The Pinson Mounds site and, to a degree difficult to assess in detail, the apparently related Ingomar and Miller complexes/cultures, have appeared to be somewhat anomalous Middle Woodland phenomena (Jenkins 1979; Rafferty 1983). Despite the occasionally present ceramic sherds attributed to Marksville or Swift Creek (Santa Rosa variant), there was little in the known repertoire of exotic artifacts or overall mound construction which unambigously related this complex to more thoroughly understood (or perhaps more conventionally misunderstood) Middle Woodland materials in the Lower Mississippi Valley, or in the river valleys draining the eastern Appalachians or its piedmont.

Behind this perspective lies the assumption that there were basic distinctions between those Middle Woodland societies which, to the extent that they could be considered Hopewell participants, were participants via some differential access to one or another of the two centers of influence in the upper Midwest: Havana, found along the lower and central segments of the upper Mississippi, Illinois, and Wabash river valleys in Illinois; or Hopewell, along the lower and middle segments of the Miami, Scioto, and Muskingum river valleys in Ohio.

All too frequently the regional cultures of the Middle Woodland period in the eastern woodlands are equated with the culture responsible for the ceremonial activities reported at the Hopewell site just west of Chillicothe, Ohio. There are, of course, historical reasons why this has been done, but there are better logical reasons why it should stop.

The belief that Hopewellian materials recovered from southern sites were derived from the Midwest has long tenure in American archaeology (Brose 1979). Even beyond the historical reasons, this is a retention of the discredited Age/Area hypothesis, where frequency of occurrence and complexity of elaboration are taken as locus of origin.

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Hopewell itself may be the most complex of all of those "Hopewellian" sites which were centered in southern Ohio. It may also be the least well understood, and it is surely among the most poorly dated. Even within the Scioto valley, Hopewellian sites, or rather sites of the Middle Woodland period, display a nearly unduplicated range of variability (possibly from as early as 100 B.C. to as late as A.D. 600). This variability is expressed in virtually every aspect of archaeologically recovered data (cf. Seeman 1977). Indeed, it is only in comparison to distant areas that Ohio Hopewell displays much cultural integrity at all. Even within Ohio Hopewell, Greber (1976, 1983) has both noted the variability present within the central Scioto and provided increasing evidence that the largest "charnel house" structures (big houses) are, at least in part, as late as the fourth to fifth centuries A.D.

It has been assumed that the influences of the two Midwestern centers into the south were chronologically equivalent, if geographically disparate. It has generally been accepted that Illinois (Havana) was the source of Hopewellian influences west to Missouri and Kansas; north to Wisconsin, Minnesota, and perhaps Michigan via Northwest Indiana; south to the Wabash, thence (perhaps) into west/southern Indiana; eventually, and by steps uncertain, into the Lower Mississippi Valley. The external influence of Ohio Hopewell, while less ceramically obvious, has been traced east to New York and possibly thence northward to eastern Ontario; south (avoiding West Virginia and Kentucky) into eastern Tennessee and western North Carolina; down the Tennessee River to northeast Alabama; into and through western Georgia; and across northern Florida (Griffin 1967). So neat a scheme not only ignores the sites across the whole of south central Ontario, it avoids any commitment on significant portions of western Tennessee, northwest and central Alabama, and northeast Mississippi. While some syntheses have suggested (in the breach) that spheres of Middle Woodland interaction bypassed or avoided those areas, the existence of Pinson Mounds and the results of its recent investigations must challenge a good deal of our (often ignorant) procrastination. It appears that any model of the semi-continental phenomenon which cannot account for what we now know of Pinson must be rejected (cf. Mainfort, this volume).

For that the Pinson Mounds site is in great part of Middle Woodland attribution can scarcely be doubted (Mainfort 1986, this volume). Beyond the vagaries of radiometric determinations (and their notorious "corrective" factors), the affiliation of the ceramics seems relatively clear. If we concentrate on those ceramics recovered to date at Pinson Mounds, we should be forced to look south. With the exception of a few poorly preserved early Swift Creek Complicated Stamped sherds, and even fewer red painted, or Marksville incised or zoned stamped sherds, nearly all of the pottery is sand- or sand-and-grog tempered, and either cordmarked or occasionally plain, or rarely fabric impressed. The assemblage is nearly indistinguishable from the undistinguished ceramics characteristic of Miller I/late Miller III, best known in the Tombigbee River valley. As Ned Jenkins (1982) has noted, at Bynum, at Miller, and at the Pharr Mounds the evidence for Hopewellian participation is accompanied by just such ceramics. Regardless of how easy or difficult it may be to seriate middle from late Miller I, or these from mound fill or "village" test pits, it seems certain that the clearest Hopewellian relationships, those most tied to Pinson Mounds ceramically, occurred in the upper Tombigbee sites between A.D. 50 and A.D. 250. Hopewellian influence is clearly waning by the late Miller II period even at the type sites (Jenkins 1979, 1982). Yet to a large degree, and despite the apparent ceramic similarities, there is not much in the external or internal structure of Miller mortuary patterns which shows a convincing relationship with Pinson Mounds.

Nor do the nature and/or distribution of non-ceramic exotic goods (so far as known) at Pinson Mounds seem duplicated in many of the Miller sites, or in any of the ceramically related sites in Tennessee or

Mississippi, or, indeed, at many presumably coeval sites in the Lower Mississippi Valley. Certainly one method whereby archaeologists have sought to understand the regional affiliations of apparently anomalous sites such as Pinson Mounds has been the assignment of geopolitical priority to either Ohio or Illinois as the major midwestern influence (cf. Brose and Greber 1979). We may thus be led to ask whether there are some succinct and relatively accurate ways to characterize the differences between these centers of Middle Woodland activity in the Midwest. A logically sequent question is whether we could expect any such discerned differences to find some unambiguous reflection in differing lines of communication to the South. (By implication, a further question ought to be whether this method would actually achieve the desired results.)

Briefly, and at considerable risk of oversimplification, there do not appear to have been both qualitative and quantitative differences. There are certainly differences in some of the details:

a) Geometric and "biomorphic" cutouts (positive and negative) of mica and copper are often present in Ohio, but are rare in Illinois.
b) Quartz crystals and artifacts of quartz, present in many Ohio mounds, are infrequent in Illinois.
c) Prismatic blade technology differs significantly between Ohio and Illinois.
d) There is little if any silver in Illinois; little if any Knife River Flint in Ohio.
e) There is a wide variety of natural, fossil, and mineral "oddities."
f) Caches of Snyders/Norton points and their blanks are common in Illinois, nonexistent in Ohio. On the other hand, large blank caches of Indiana Hornstone or Obsidian occur in Ohio, not Illinois, and elaborate Obsidian artifacts do so as well.
g) While miniature ceramic vessels occasionally occur in Illinois, whole full-sized pots are far more common as grave goods. The former are present in many Ohio mounds, the latter virtually absent.
h) Shell and bone tubes, instruments, cups, pins, and gorgets with fine crosshatch engraving in zones, while rare everywhere, do occur in Ohio.

These are of course, picayune differences, and without extensive excavation their absence is without much diagnostic value. There are also more gross morphological distinctions:

1) A wide variety of complex and simple earthworks occurs at Middle Woodland loci in Ohio.[1] There may only have been one or two (or none) in Illinois.
2) Large groups of similar mounds characterize Illinois, while Ohio groups consist of fewer mounds of very different sizes and morphology.

[1] At least in Ohio, there appears to have been some degree of celestial significance to the morphology and orientation of some of these earthworks. During the Ohio Hopewell episode, the frequency of sheet mica, rarer in Early Woodland sites, significantly increases. Hopewell mica appears in a rich iconographic series of internal curvilinear geometric cutouts and silhouettes, representing not only geometric zoomorphic forms including serpents' heads and raptors' talons, but as headless, limbless human torsos, profiled human heads, and amputated human hands. Thick mirror-like discs of mica are also found with burials at a number of Ohio sites; and it had been conjectured (Brose 1976) that the location of burials with mica mirrors at either side of the end of the long parallel walls at the Hopeton works represented Solunar ritual. More recent studies may suggest that such mirrors played some part in rituals based upon observation of the northernmost horizontal point of the 18.6 year lunar and solar cycle conjunction toward which the Hopeton parallel is aligned. So are those at Newark and Highbanks (Hively and Horn 1982), and probably those which once extended ENE from Fort Ancient, beside which Essenpreis (personal communication, 1984) has documented similar ceremonial caches of mica, copper, and obsidian. Recently Greber (1981, 1983) suggested copper artifacts may have played a part in the ritual observation of seasonal solar phenomena which, as she is documenting, was reflected in the spacing and orientation of the broken squares or octagons in the earthwork of another congruent series of Scioto Valley Hopewell sites.

Within the Middle Woodland burial mounds quantitive differences also occur. In Ohio a few individuals (or proximally grouped individuals) had many different characteristically Hopewellian materials; some had vast numbers of one or two such artifacts or raw materials; some had only one artifact or two artifacts of a single type; and many individuals had nothing of Hopewellian affiliation at all. In Illinois most individuals had a small number of a few differing Hopewellian artifacts or materials; none had many such artifacts and very few had no diagnostic Hopewellian artifact at all. Mortuary area space and structure too, differ in significant ways which led James Brown (1979) to distinguish Illinois burial crypts from Ohio charnel houses—a valuable, generally applicable, and socially pregnant discrimination in burial programs.

This approach, characteristic of William McKern's Midwest Taxonomic Method (see Griffin 1943b: Appendix A) has never really left Hopewellian studies (e.g., Prufer 1961; Seeman 1977). While it need not be continued, neither should it be unthinkingly rejected. There *are* differences between Illinois and Ohio. These differences include some which appear significant; many of these differences, trivial and/or profound, show differential expression in areas of Middle Woodland activity related to but distant from the Midwestern epicentric foci.[2]

Now if Brown's structural mortuary program hypothesis is correct, then to a large degree the differing Illinois and Ohio burial programs (into which Hopewellian behavior was integrated) must reflect some basic social structure differences. But it seems vain to imagine that Middle Woodland societies of either the Midwest or South were static through the period from 100 B.C. to 500 A.D. We should therefore be prepared to find significant temporal differences in the structure of major Middle Woodland social events (and Hopewellian appurtenances). Such events, or what we can know of them, are most commonly inferred from archaeologically excavated mortuary ceremonies (cf. Brown 1971; O'Shea 1983).

In this light then, it seems worth reexamining Brown's (1979:219) suggested explanation of the fact that "Miller Hopewell" showed evidence of both the Ohio and the Illinois burial programs. Brown took this as an indication that within Miller there were two segments of a single society with differing access to status. While Miller is of some importance because of its obvious ceramic ties to Pinson Mounds, Miller is representative of only one such area where this Illinois/Ohio conceptual dichotomy seems to have failed to explain the burial program: that is, wherever there seems to have been potential access to both "conceptual" systems, there is variation.

Certainly the restricted ceremonial groups in the cryptic mounds of the initial Woodland (Wright 1967) in the Upper Great Lakes (*ca.* 50 B.C.–A.D. 200) give way to large group mortuary structures by the fourth century in both Laurel and Point Peninsula ceramic zones, despite the Illinoian origins of the ceramic tradition at the west and the presence of Ohio artifacts at the east (*viz.* Brose 1968; Mason 1981). Yet it seems that at the Serpent Mounds in Ontario mortuary crypt burials were both early and late (Johnston 1968).

[2] That there is here no discussion concerning the representational specifics of Hopewellian ceramic imagery (*pace* Willoughby and Hooten 1922) is because 1) local differences in Woodland ceramic temper are quite stable throughout the South, while there are no such significant differences in the North; and 2) iconographically significant ceramic designs, as well as overall ceramic motifs, specific ceramic techniques of execution, and (occasionally) ceramics themselves, were widely disseminated during this period.

Unfortunately, although understandably, in many regions of eastern North America archaeologists have relied upon changes in aboriginal ceramics to identify the onset of the Middle Woodland period and to chop it into sub-phases. These rather arbitrary distinctions have resulted in creating what appear as major chronological distinctions between regions with considerable ceramic continuity, such as central Illinois or along the Gulf Coast from New Orleans to Tallahassee, when their ceramics are compared to the regional ceramics of equally dynamic Middle Woodland groups in south central Ohio or the Tennessee valley, although the ceramic changes in these latter areas are by no means so gradual.

This sort of variability in Hopewellian ritual is the likely reason why exactly the same strange ceramic vessels (and at what appear to be at the same mid-4th century date) can be found equidistant from Pinson Mounds in the Illinois-like burial crypts of Mound B at Helena Crossing and in the Ohio-like charnel structures of Pierce Mound A on the Apalachicola at the Gulf Coast (*viz.* Brose 1979).

Such variability may be key to understanding what Hopewellian interaction is all about. Certainly one alternative to Brown's hypothesis would be that this is temporal variation to a great extent. Thus it would be a reflection not of purported "trade network" alignments, not of coeval social segments within one society, *but of cultural change through time within that region.*

Let us look at the Miller ceremonial centers in the Tombigbee drainage with this perspective.

According to Jenkins' (1982) recent detailed ceramic reanalyses and chronological assignments, Bynum Mound D was constructed during the Miller I Bynum sub-phase (estimated at 100 B.C.–A.D. 1); Bynum Mounds A and B and Pharr Mound E were constructed during the later Miller I Pharr sub-phase (A.D. 1–A.D. 200); and Miller Mounds A and B are assigned, on the basis of frequency shifts in some ceramics, to the early Miller II Tupelo sub-phase (*ca.* A.D. 300–450). Jenkins has identified no burial ceremony in the latest Miller I Craigs Landing sub-phase (A.D. 200–300) within the upper Tombigbee valley itself.

Brown (1979:211ff) categorized Bynum A and the Pharr Mounds (at least E and D) as Illinois-like burial crypts, while categorizing Bynum B and D as Ohio-like mortuary structures or charnel houses. Jenkins (1979) had summarized the features found at these mounds in a compatible fashion, also suggesting (1979:178) the crypt-like appearance of the Pharr Mound A burials and the Pharr Mound H central features. More recently he has conceded that both Miller A and B mounds could be classified as crypts in Brown's sense (Jenkins 1982:146). Based on my own experience, those two mounds at Pharr are far more similar to the less classic charnel structures and crematories in numerous Ohio mounds than they are to any of the crypt-like structures in the Havana sphere (Brose 1985).

While Brown, as noted, viewed these data as evidence of two coeval social segments, differing throughout the Miller I-II complex at least in access to mortuary status, Jenkins has correctly pointed out that, so far as it can be determined, the majority of those few Miller burial mounds which contain the greatest amount of material diagnostic of Hopewellian interaction occur in the Miller I period. However, as I hope to point out, there are alternatives to Jenkins' conclusion that "it may be argued that Miller I ceremonialism was more closely related to Ohio Hopewell than to Illinois Hopewell" (1982:76).

In short, scattered across the region of the upper Tombigbee valley during the Middle Woodland there is an early period with both crypt and charnel house burial mound programs; a somewhat later period with both mound programs; a later period with no burial mounds known to have been constructed within this valley proper; and a final Middle Woodland period during which the burial mound mortuary programs are ambiguous.

This blend of Ohio and Illinois programs does not mean Indiana contact. Rather it may illustrate a shift between familial and corporate ceremonial activities. Some views (Brose 1979, 1985) of northwest Floridian/southwest Georgia Middle Woodland phenomena suggest the same variability through time in the levels of socio-political structure.

This need not suggest that Hopewellian interaction variably reflected higher and higher orders of corporate membership through time. It does suggest that locally differing cultural perceptions or conceptions of socio-ceremonial corporate group composition have often been mistaken for differing degrees of Illinois versus Ohio exchange in goods and concepts. To the degree that any local group

accepted and used Hopewellian iconography, artifacts, or structures, there must have been particular local conceptions of which artifacts (or behaviors) were appropriate for varying social personae and ceremonial situations. For example, there seems little reason to expect that fired clay figurines, scattered through Porter and Santa Rosa (eastern Porter) middens along the Gulf Coast (*viz.* Lazarus 1960; Walthall 1979), were regarded in quite the same way as were those morphologically similar figurines that were ceremonially immolated on an altar between the burial of bones and the Turner Beast (Willoughby andHooten1922).[3]

By extension this implies that with few exceptions, in areas of free communications, neither burial program nor artifact style or material can be assumed merely to reflect political alignment or temporal position. Certainly, without rigorous testing, even the sources of Hopewellian artifacts cannot be assumed, as we have all learned.[4] It should be equally clear that during the Middle Woodland period, analysis of ceramic relationships offers little insight into the structure of ceremonial relationships. Certainly the coeval complexes to the southeast of Pinson Mounds offer an instructive example of this disjunction.

As noted in discussing the southern extent of Ohio Hopewell influence (Brose 1979, 1980), except for the Chattahoochee River gap, the Appalachian crest seems to have been an effective barrier to the dissemination of Hopewellian items or ideas, few of which appear anywhere on the south Atlantic coastal plain, save those spread eastward into southeast Georgia and northeast Florida from the Florida Gulf Coast. Yet there are several interacting Middle Woodland societies of the Gulf, from Mobile to Charlotte Harbor, and inland through north Florida to the Okefenokee and across the Everglades. These are distinguished by minor differences in frequencies of similar ceramic types, or by their added ceramic tempering. Some of these ceramics have been recovered at Pinson Mounds. Along the entire Gulf Coast,

[3] At the Turner site on the Miami River in southwest Ohio, the central feature of Mound 4 was Altar 1, a large quadrangular basin with sides oriented to the cardinal directions. Above a thick layer of black ash in the bottom of the basin was a two-inch layer of cremated human bone and ash. In the ash bed, along with several large copper nuggets, were two ten-inch hollowed effigies wrapped in thin sheets of mica. The larger, of red slate, is the notorious Beast, which numerous authors have claimed to be an underwater monster, having bull-like horns, four short limbs, and a rattlesnake's tail. The other stone effigy, only incised on the convex, oval-shaped surface, seems to be some four-legged water creature. The Turner group of broken clay figurines was between these two effigies. This complex was in turn overlain by a large serpent effigy made of mica with incised horns which trail back along the upper body. This deposit was capped by fine sand and three layers of limestone blocks. As David Penny (1985) suggests "These figurines portray a group of men and women in a variety of poses, sitting, standing, perhaps prone, all naturalistically detailed with elaborate coiffures and ornaments. Given the context . . . and the naturalistic style of representation, the burial group itself might be portrayed. The corporate or family group members reduced to ashes in the crematory basin may be represented here in modeled, unfired clay."

[4] Beyond the work of Griffin, Cordus, and Wright (1969), Goad (1978), Walthall (1981), and Walthall *et al.* (1979), it is worth noting the assumption that the bulk of marine shell encountered in archaeological sites in the Great Lakes/Upper Midwest was from the Gulf Coast. Perhaps equally unsupported has been the assumption that most Midwest sites at which such shell occurs could be (or should be attributed) to the Middle Woodland, if not to Hopewellian exchange. While only beginning, recent studies of trace elements and $O^{16/18}$ temperature, conducted on several species of *Busycon* from known recent and from prehistoric provenances, do not offer much strong support for the first proposition (Brose, Claussen, Price, and Meyers n.d.).

The latter assumption is clearly wrong: there are more worked and/or unworked shell beads, cups, gorgets, and pins from 16th through mid 17th century Iroquoian sites alone, than from all Early and Middle Woodland sites. Given the differing durations of Archaic, Early, Middle, and Late Woodland/Mississippian it seems unquestionable that there is a constant acceleration of this northward movement of marine shell, with little evidence for a Hopewellian peak.

The local execution of widespread cosmological images, seen in the occasional similarity of decorative motifs, was not a striking characteristic of all Hopewellian pottery. Nor does it survive on many of the ceramics of the various Late Woodland groups, but much of the Hopewellian iconography on human skull segments at Turner and Pinson, or less startlingly on platform pipes and copper sheets, can be seen reflected in the zoned cross-hatched zoomorphic engravings on large circular conch shell gorgets with a single central and two upper margin perforations (cf. Phillips and Brown 1978). Such engraved gorgets occur with single, usually adult male burials.

Although only about a dozen have secure context, these are scattered from Iowa to Texas and from Ohio to northern Florida, in or near areas of earlier Hopewellian activity. To the extent that radiometric determinations or artifact associations are available, the provenance of these gorgets suggests dates from A.D. 300 to after A.D. 1000. It seems likely that those found in contexts after A.D. 450 are heirlooms; there is not 600 years of stylistic difference in either design or execution. Indeed, it is possible that all of these gorgets were manufactured in a rather limited area and within a relatively short period of time.

in back bay sounds and estuaries and along the lower reaches of major tributaries, large and small villages, campsites, and shell middens from A.D. 1 to A.D. 500 yield plain, simple-stamped, check-stamped, complicated-stamped, incised and/or punctated, pinched, and negative or positive red or white or red and white painted ceramics. This combination of Swift Creek and Santa Rosa grades into a mix of Swift Creek and Weeden Island by A.D. 350, as Willey (1949) noted. Often the ceramic motifs occur in combined zones as curvilinear, geometric, or naturalistic shapes, including animals, birds, or human hands. Some well-defined ceramic types combine several different techniques and motifs. Similar ceramics occur in some of the smaller mounds and at many of the larger mounds (most, but not all of which were of multistaged construction, many with flattened tops; some with ramps and causeways, and some with associated geometric or naturalistic earthworks covering a hundred or more acres).

In addition to ceramics which occur with individuals, either whole or actually "killed" as deliberate grave goods, there are vessels which *only* occur as grave furniture. These include double bowls, double-globed jars, gourd effigy bowls, and jars and bowls with appliqued effigy figures; or they may be fully modeled hollow effigies decorated with a variety of motifs, as well as having prefired geometric cutouts. The latter look like (and may well have functioned as) garden lanterns; they could have burned incense (or other substances) equally well (cf. Milanich *et al.* 1984).

On the west these ceramics intergrade with the clay tempered Marksville-influenced, Bayou la Batre-derived Porter zones and stamped ceramic complexes. To the north they intergrade with sand tempered Swift Creek stamped ceramics in Georgia. To the south and east they intergrade with temperless St. Johns and Glades incised and punctated ceramics. Brose (1979) elsewhere suggested that this pre-Weeden Island complex be renamed "Kolomoki-Crystal River" for its larger, better known Middle Woodland sites in the north. There are equally large and more complex sites organized around plazas, such as Shields, North Murphy Island on the St. John's River, Fort Center, or Big Tony's in peninsular Florida. Within most of these variably shaped and differing sizes of mounds, the structures and mortuary treatment are equally varied, reflecting nearly every artifact method and mortuary technique reported in Ohio or Illinois Hopewell. So far as can be determined, both Illinois and Ohio mortuary programs occur in early sites (such as Yent or Tucker) and late sites (such as McKiethen and Kolomoki).

Despite the probable Ohio provenience of specific copper earspools, celts, panpipes, and effigy geometric mica cutouts, and despite the rare presence of Ohio Flint Ridge bladelets, plain or animal effigy stone platform pipes, and fired clay human figurines iconographically similar to (if not derived from) Ohio examples, the striking individual concentrations of artifacts or exotic raw materials characteristic of many Ohio Hopewell sites is lacking in Florida. Most interments in these Florida mounds are accompanied by small amounts of (Copena-derived) galena, and the ubiquity of Middle Woodland conch shell cups, dippers, and gouges suggests a personal and mundane use rather than any ritual status role. So too, the recovery of numerous fragmented and whole clay figurines from domestic middens argues against their having had much ceremonial significance in Florida, while as in Illinois, certain classes of ceramic vessels obviously did. In both respects this pattern is quite unlike that in Ohio.

Overall, the morphology of ceremonial activities represented by burial mounds or artifacts is quite varied within Middle Woodland "Gulf" sites. The concentrations of sites north of the Everglades appears primarily structured by local exchange systems, through which local styles and artifacts flowed. Further, this exchange system functioned at a very different and more significant level than that suggested by the distribution of exotic materials and artifact styles alone (*contra* Goad 1979).

As has been noted (Brose 1979), this distinction from Middle Woodland in the "heartland" of the Midwest, or even from that in the Lower Mississippi Valley, possibly accounts for the more equal distribution of Middle Woodland sites and statuses (at least as inferred from the archaeology of mortuary rituals) in Florida. This seems due to and may represent the social reflection of the availability of less clustered subsistence resources, both spatially and seasonally. That the most complex Middle Woodland sites in Florida do *not* show the highest levels of midwestern interaction, but rather are located inland where seasonally limited access to small local areas was a significant factor in resource procurement, indicates how unimportant and possibly inappropriate "Hopewell" was in understanding the Middle Woodland of this region of the south in any but ceramic terms.[5]

Looking at Pinson Mounds or Ingomar with the Gulf Coast perspective may minimize the apparent validity of explaining the location of major Middle Woodland ceremonial centers in terms of economic logistic distances and least costs to Havana, Marksville, Miller, Ohio, or Santa Rosa sites. Ethnobotanical analyses (e.g., Ford 1985) suggest that even in this core area, the morphological variability and limited samples of cultigens of all sorts represent occasional gardening at best. The bulk of plant foods everywhere is represented by locally available acorns and nuts, especially hickory. Thus, just such casual gardening, hunting, fishing, shellfish collecting, and wild plant harvesting still structure the seasonal scheduling of Middle Woodland populations. Such considerations must be basic for the location of sites in this region, as well as for the possibilities for ceremonial interaction of various sorts. Perhaps such local and ephemeral biotic considerations are more germane to understanding the location of Pinson Mounds than are hypothesized intercontinental trailways or water routes.

Yet if the location of the Pinson Mounds site is not considered anomalous, the scale of mound construction does seem unprecedented for the early Middle Woodland period.[6] There are indeed non-Mississippian flat top or trunctated pyramidal mounds in the southeastern United States assignable

[5] Indeed a similar overall low density of subsistence resources is also characteristic of the Canadian biotic zone from the upper Great Lakes into the St. Lawrence valley. Those Middle Woodland societies of this Lake Forest region, from Laurel with its clear Havana-derived ceramics on the west to Point Peninsula with its Ohio-like individual concentrations of such burial goods as silver and copper covered panpipes on the east, were faced with dramatic seasonal differences in access to those resources. They were committed to highly mobile and socially fluid cultures. Areas of possible population concentrations were necessarily widely separated, of short duration, and yet spatially repetitive in that area where neither plant collection nor gardening have ever been practical without major reliance on fish.

Experienced male-centered work groups spearing or netting shoal-spawning fish may appear to have been a socio-economic structure unlikely to execute much control of either local or distant exchange or over cosmological ritual. Nevertheless, this *is* the region which produced virtually all of the securely identified Middle Woodland copper. Despite the general Great Lakes presence of small, glacially dispersed nuggets and used tools of copper, only within this region were there a limited number of outcrops of native copper which had been extensively quarried aboriginally. There were, of course, even fewer accessible exposures of native copper which had been extensively quarried aboriginally. There were, of course, even fewer accessible exposures of native silver . . . perhaps only the single source in this Sudbury/Cobalt area of Ontario (*viz.* Spence *et al.* 1979). This probably explains the fact that while some "Hopewell" goods do accompany individuals in the Middle Woodland Laurel and Point Peninsula burial mounds, they are highly variable, are usually of native copper, and (in the rare event they seem at all concentrated with anyone) are found as children's gravelots of silver lumps, beads, or foil covered panpipes. In an area which never has supported a hierarchial society, even the most complex Middle Woodland groups seem to have followed the rule, rather than being the exception: these small and highly mobile societies of male-centered alliance and descent for fishing and hunting displayed an unstratified and quite fluid pattern of society, so much so that some anthropologists have considered them completely egalitarian.

[6] Of the four truncated pyramidal mounds within the rectangular earthwork at Marietta, Ohio (*viz.* Squier and Davis 1848: Pl. XXIV) the larger two seem to have had ramps along each side, while the smallest had two ramps, one at each short side; although these were "much obliterated" in 1848 (Squier and Davis 1848:74).

It is possible that at least the largest of the two truncated pyramidal mounds at Marietta are Mississippian; most of the ceramics thus far reported near those mounds and from that western portion of the surrounding rectangular earthwork have been shell-tempered (*viz.* Griffin 1978; Graybill 1980). The truncated pyramidal mound at Baum is wholly Fort Ancient (Brose n.d.), and while "pyramidal" mounds at Cedar Banks and Ginther in Ohio have been in part excavated, it still is not possible to assign the first of these to any cultural period, and neither of these two mounds has revealed the slightest evidence that they were temple substructures. The flat topped mounds within the unambiguously Middle Woodland works at Newark are enigmas whose significance remains unknown, as does their contents.

to the period from 200 B.C.–A.D. 600 (most radiocarbon dates fall between A.D. 50 and A.D. 350), although few of them seem to have been temple substructures (*viz.* Brose 1979).

From the Appalachian summit region into the Georgia-Carolina piedmont there was a shift from the relatively simple low mounds over sub-floor log crypt or pit burials. By at least A.D. 400 circular log structures are built in semi-subterranean pits and covered with earth, often taking the form of a rather flat-topped mound. Indeed, reuse of such ceremonial precincts results in a series of superimposed ritual charnel house structures on sub-structural platform mounds. Yet in this area the concept neither appears to develop further, nor are there significant internal changes in the number, the treatment, the accompaniments, and thus inferentially in the status or statuses of the individuals who are buried in these earth lodge structures (Dickens 1976; Keel 1976).

On the Gulf Coastal Plain and south to the Everglades the burial mounds show both significant differences in their social structure and conservatism in the morphology of the mounds themselves after A.D. 350. The major trend in Weeden Island mound construction, considering the great variability of the Kolomoki-Crystal River complex, is one of simplification and more standardization.

There is a change from a single mound, with one or a limited number of individuals with several high status often exotic iconographic artifacts and a larger number of individuals with few or no such materials, to a pattern of several groups of apparently related individuals with large groups of only occasionally exotic, but still iconographically significant artifacts. The final pattern is of very large numbers of undifferentiated individuals with isolated large caches of broken ceramics, often as a pavement on the eastern side of the mound. At the same time there is a change to a pattern of lesser numbers of relatively small mounds in groups and to the construction of small mounds in association with older larger mounds. By A.D. 900 there is reuse of larger mounds themselves (Brose 1979; Milanich *et al.* 1984).

Further west, and closer to Pinson Mounds, the early Weeden Island related groups in southern Alabama show a slightly different pattern by A.D. 500 with an increase in very large groups of very small mounds, only some of which contain either single burials or ritual artifacts. By A.D. 650 in the Tombigbee and Alabama River valleys, burial in mounds seems to have been abandoned for cemetery interment, a pattern only partially truncated by the downriver introduction of Mississippian societies after A.D. 1200.

Within the Lower Mississippi Valley, as on the Florida Gulf Coast, the Troyville complex, from perhaps A.D. 350 to A.D. 500, shows a gradual transfiguration of burial mound morphology from the Middle Woodland Marksville to that of the Late Woodland Coles Creek cultures.

While several large Kolomoki-Crystal River mounds in Florida and Alabama had flat tops and a few central high-status burials, most of the Marksville mounds were conical, with flat sub-mound platforms that served as floors for ceremonies relating to the mortuary crypt treatment involving (if not including) large groups of individuals. The possible arrangement of these mound groups about open plazas is not clearly the result of initial planning in early Weeden Island or in Troyville. Although not at all characteristic for the Weeden Island phases, the purposeful arrangement of groups of mounds (usually three) about a rectangular plaza is common at Coles Creek sites. And increasingly these were large multi-staged platform mounds with ramps; platforms which supported a rectangular, single post, plastered ceremonial structure, in the floor of which a small number of individuals were buried or reburied while most of the population was buried in extended cemeteries beyond the village margins (Jenkins 1983).

It also appears in the Central Mississippi Valley that there was similar variability within the local Middle Woodland societies which gave rise to a number of Late Woodland societies with still plain, cord or fabric marked, or carved paddle stamped ceramics, tempered with an even wider variety of materials

and often seen in a number of vessel shapes. Rather permanent small villages of generally squared houses represented groups which appear to have been committed to agriculture to a more significant degree or earlier than elsewhere, although mollusc collecting and limited hunting were practiced. These societies also continued to use burial mounds which included platform earth lodges and sub-structure truncated pyramids, as well as a diversity of mortuary treatments with vastly differing investments of social (and bio-mechanical) energy, presumably reflecting locally and regionally variable social structures as well as socially differing roles and/or statuses, however attained or conferred.

With the possible omission of earthlodge sub-structures it is clear that Pinson Mounds is a unique Middle Woodland site, not for any single mound (cf. Rafferty 1983) or mortuary program type, but rather for the fact that it possesses most of them. And even ignoring the flawed logic which would equate flat-topped mounds with societies at a chiefdom level, it would appear that there were social groupings of several differing levels of structural inclusiveness represented at Pinson Mounds during even the early part of its occupation. Sauls Mound is unlikely to reflect the same type of ceremony as that which led to the Twin Mounds (Mainfort, Shannon, and Tyler 1985). And if the Twin Mounds at Pinson Mounds look like an incomplete version of the large Seip mounds in Ohio, this may not be due to the fact that at Pinson the ceremony was interrupted. Rather it should remind us that these geographically different Middle Woodland societies differed in their degrees of inclusiveness in their social structure. And while the Pinson and Seip ceremonies may have occurred at slightly different times, this need not imply that pan-regional periods were structurally equivalent.

The Pinson Mounds site has always appeared rather unusual, given its isolated and relatively impoverished geographic location and the complexity and number of its mounds. The recent investigations into several of these mounds have confirmed their Middle Woodland attribution and thus reinforced their apparently anomalous status. While the ceramic affiliations at Pinson Mounds and Ingomar seem to lie with the Illinois Havana-Marksville influenced Miller complexes of the upper Tombigbee River valley (cf. Jenkins 1979, 1982) the mounds and earthworks at Pinson seem more similar to those recorded for Ohio Hopewell or to some coeval examples in northern Florida and southern Georgia.

Attempting to resolve this apparent inconsistency by assigning the structure of the Pinson and Miller mortuary programs to one or another of the purported Ohio charnel house/Illinois burial crypt programs distinguished by Brown (1979) suggests that rather than identifying political spheres of influence what is revealed is in fact variability in regional social structure.

Concurring with Jenkins' "Miller Variant" characterization of the Middle Woodland complexes of northeast Mississippi and west central Tennessee, it would seem that the structural relationships of the mortuary programs within these Miller Variant sites are comparable to those of southwest Alabama/northwest Florida during this same period (Brose, Jenkins, Weisman 1983): big sites and little sites *not* as a redistributive hierarchy but as an indication of interrelationships among corporate groups with different kinds of social structure which can change through time and which most likely differed from region to region at any single time.

If it is correct that such dyadic imbalance in social structure is a regional level Hopewellian characteristic or requirement, then perhaps Kolomoki, Crystal River, or McKeithen, the pre-Weeden Island ceremonial centers of the Georgia/Alabama/Florida region, can provide the best structural analogue for the apparent resource poverty. Thus structurally the Miller societies of the upper Tombigbee

or the Yearwood-like sites to the east (Butler 1979) may be better candidates for the Pinson and the Ingomar Mounds regional affines than are the large early Marksville ceremonial centers with which Pinson is occasionally linked by ceramics.

The Middle Woodland mound building activities at Pinson do not appear conceptually unique when viewed from the southeast. Nor indeed are they wholly anomalous when viewed from the northwest. At the cost of oversimplification, Brown's (1979) Illinois mortuary crypt program is almost invariably one in which crypts are placed into or under a low platform mound upon which ceremonial activities took place. In this view, however Mississippian "sub-structure" or "platform" mounds may appear in retrospect (*viz.* Jenkins 1982), there should be no question that they have also been one socially accepted form of Middle Woodland ritual space construction, often as a stage in ritual sequences. Such earthen platforms also span the conceptual dichotomy between crypt and charnel house to some degree: platforms with ritual structures in the former, platforms as ritual structures in the latter.

As long as the local context has been viewed from a static and artifact specific perspective, the Pinson Mounds site has defied clear explanation. Despite its volume, a more dynamic interpretation of regional Hopewellian interrelationships suggests that the location of Pinson Mounds and the variable complexity of its mounds, its mortuary structures, and its Hopewellian accessories are evidence of open and changing socio-political structures from the first century into the fifth century A.D.

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