NATIVE CONSTRUCTIONS OF LANDSCAPES
IN THE BLACK WARRIOR VALLEY, ALABAMA, AD 1020-1520

by
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ABSTRACT

MINTCY D. MAXHAM: Native Constructions of Landscapes in the Black Warrior Valley, Alabama, AD 1020-1520
(Under the direction of Professor C. Margaret Scarry)

From AD 1120-1520, Moundville chiefs controlled a 40-km stretch of the Black Warrior Valley below Tuscaloosa, Alabama. Chiefs and the highest-ranking elites lived at the multiple-mound capital of the polity—the Moundville site—while lesser elites resided at secondary political centers. Most people in the chiefdom were commoners and lived in small homesteads scattered throughout the valley. I combine regional and site-specific approaches in order to explore the spaces in which commoners lived. I take the theoretical approach that people are agents whose decisions about creating their landscapes reflect the ways they identified themselves and ordered their worlds.

In the first part of this dissertation, I explore broad settlement and population trends in the Black Warrior Valley. I identify relationships between site locations and environmental factors such as soil type and distance to nearest water source, and social factors including distance to nearest mound site and distance to nearest homestead. Not surprisingly, people chose to live on fertile soils that their ancestors lived on, and they chose to live near each other. People moved from the valley to the center at the chiefdom's advent to help construct the more than 20 earthen mounds that comprise the site, then moved back into the valley after mound construction was complete.

The second component of my dissertation is a detailed study of a small nonmound site in the Black Warrior countryside that dates to the late Moundville I phase (ca. AD 1200), the

Grady Bobo site. Features excavated at the Bobo site represent the remains of an event related to the death of individual. People gathered here to celebrate his life, mourn his passing, and reinforce kinship and community ties with each other.

Historically, most archaeological research has focused on elite individuals because of their greater visibility—elites are associated with monumental architecture and high-status goods. In this project, I transform current models of the development of Moundville society by examining the small sites where the majority of its population lived and worked. My goal is to enrich, diversify, and amend Moundville's history by studying the lives and decisions of commoners.

For Lewis

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TABLE OF CONTENTS

List of Tables

LIST OF FIGURES

Chapter 1: Introduction

Around AD 1000, many Native American societies in the southeastern United States dramatically reorganized their social and political systems. Traditionally, these societies had been relatively egalitarian, but at the turn of the 11th century, some people were able to parlay economic prosperity and charisma into positions of social and political prominence. A select few among these elites attained formal authority and served as chiefs. These chiefs lived atop massive earthen mounds, literally and symbolically elevated above the rest of the population. Most people in these societies were commoners; they recognized their chiefs as political and spiritual leaders who represented them in relationships with other Southeastern chiefdoms and with the supernatural world.

One Southeastern society in which chiefs emerged is Moundville in west-central Alabama, where the transition from a relatively egalitarian society to a hierarchical chiefdom took place around AD 1120. The lifeways of the commoners who lived in this chiefdom are the subject of this dissertation.

OBJECTIVES

My goal is to evaluate and refine our current understanding of rural settlement in the Black Warrior Valley from the Late Woodland period through the end of the Mississippian period, approximately AD 1020-1520. I look at the ways in which people organized themselves spatially and socially through time, and consider these trends to be the result of conscious decisions made by Moundville's commoners that reflect their active participation in social, economic, and political realms.

I meet my goal by looking at settlement: (1) at the regional level, conducting an in-depth analysis of existing survey data; and (2) at the site level, using new data from two rural sites excavated by the University of North Carolina and comparing these data to those from other excavated nonmound sites. As I elaborate later in this chapter, previous attempts to model settlement in the valley have suffered from inadequate data. I take advantage of the growing number of small surveys of the valley that have never been systematically studied and explore the relationships among sites identified in these surveys. I also examine the excavation of one rural site in detail—a significant addition to the small number of excavated nonmound sites in the valley.

The first component of my research has two objectives. One is to identify patterns in the distribution of sites in the valley and how those patterns change through time. I consider the relationship between site location and the following environmental factors: soil type, topographic landform, and distance to a major waterway. I also consider sociocultural factors: distance to Moundville, distance to nearest single-mound site, and distance to nearest nonmound site. I quantify these variables for each site in the bounded survey region and identify which factors were most important to people when choosing where to live during the Late Woodland and Mississippian periods. I relate these trends to changes in the broad social, economic, and political networks to which the valley's residents belonged.

The second objective is to estimate the number of people who lived in the Black Warrior Valley from the West Jefferson phase through the Moundville III phase. I calculate relative populations from phase to phase, identifying the direction and magnitude of population changes in the valley. I then examine how population trends articulate with current understandings of the emergence, climax, and fall of the Moundville polity.

The second component of my research also has two objectives. First, I collate and present the results of fieldwork at two late Moundville I (ca. AD 1190-1260) nonmound sites, the Gerald Wiggins site and the Grady Bobo site. I focus on the Grady Bobo site, where University of North Carolina crews spent three seasons excavating the site in its entirety. I draw on analyses of pottery, stone, animal bone, and plant remains from this site and other excavated nonmound sites to explore the activities in which Moundville's commoners participated.

The artifact assemblage from the Grady Bobo site is quite different from other excavated nonmound sites (Maxham 1998, 2000a, 2000b, 2001); people at the Grady Bobo site processed, served, and consumed food in ways that are not consistent with domestic use. Thus the Grady Bobo site does not fit into the traditional Mississippian classification scheme of paramount center, local center, and farmstead. The second objective of this section of my dissertation is to present an alternate settlement model. I then explore how this new vision of rural settlement relates to social organization among people who lived in the Black Warrior Valley countryside.

THEORETICAL FRAMEWORK

My dissertation is concerned with settlement patterns and population trends, but I am interested in more than the distribution of sites and changes in the number of people living in the valley. Ultimately, this dissertation is about the lifeways of people who lived in the

Black Warrior countryside. Understanding where and how they lived are important steps to understanding who they were.

Identity is membership in a social group and the expected behaviors associated with that membership. Identity is how you define yourself and how others define you. These affiliations—along lines of gender, occupation, kinship, social status, religion, ethnicity, nationality—create bonds and boundaries among people that help them make sense of the world and organize their day-to-day lives (Schortman 1989:54). Identity is scalar and dynamic. Which aspect of one's identity takes priority depends on context.

We signify membership in a social group by the way we talk, the way we dress, our possessions, who we interact with. We create identity through repeated, habitual routines, including daily domestic tasks like cooking and eating. Identity is also expressed in the layout of space, the arrangement of the cultural landscape—how people build their houses and where they place them. Not all aspects of identity are accessible through the archaeological record, but fortunately for us, the organization of space and the material remains of habitual tasks are.

The concept of identity as I use it is similar to Bourdieu's habitus. Habitus is a common code shared by a social group, "internalized structures, schemes of perception, conception, and action common to all members of the same group or class and constituting the precondition for all objectification and apperception" (Bourdieu 1977:86). While habitus is regular, it is not a set of prescribed rules that determine how people act. Habitus constrains one's actions, presenting primary strategies that may or may not be followed. People do not just mindlessly follow routine or dictates; people are not wind-up toys or puppets. People are creative, and there is room for improvisation. When people deviate from the routine, there is a potential for change—change in habitus, they way people look at and act toward the world around them, and change in the ways in which identity is constructed. People, then, are agents, whose decisions and behaviors, whose daily practices, create the principles that order their lives and determine their identities.

The categories "commoner" and "elite" are constructs of the researcher, and as such must be defined. Very broadly speaking, we can divide members of chiefdoms into two social ranks—the elite and everyone else. While it is technically more correct to call "everyone else" the nonelite, anthropologists often refer to this segment of the population as commoners (cf. Muller 1997:399). Elites—the rulers, the wealthy, the privileged—comprise a relatively small portion of chiefdom society; most people were commoners. The actual divide between commoner and elite is somewhat arbitrary, but behavior varies within even the most homogenous social group.

So how did the people of the Black Warrior Valley perceive their world? What were the common codes that constrained the thoughts, perceptions, expressions, and actions of commoners? Habitus, by definition, lies below the level of consciousness, and people expend a tremendous amount of energy to maintain its concealment. How then can one begin to understand the habitus of a social group?

Because habitus is the product of repetition, archaeologists can look for evidence of habitual behaviors and routines. Fortunately, this is precisely the kind of evidence that preserves archaeologically (Lightfoot et al. 1998:201). We are more likely to find the material correlates of repeated practices than of one-time events. These daily practices reflect identity. The decisions people made about where to build houses, to process, cook, and eat food, to make stone tools, to dispose of refuse, to gather to celebrate life, and to perform rituals over the dead tell us how people organized their world. These habitual behaviors manifest themselves materially in the organization of space, domestic activities, and refuse disposal.

I explore daily practice in the Late Woodland and Mississippian period Black Warrior Valley through its material correlates. At the regional level, I examine the arrangement of space as manifest in settlement patterns. At the Grady Bobo site, I study the activities surrounding food processing and consumption. Together, these lines of evidence allow me to study the nature of community in the Black Warrior Valley and the ways in which residents of the valley defined themselves relative to each other.

Landscape.

Crumley (1994:6) defines landscape as "the material manifestation of the relation between humans and the environment." Landscape thus encompasses both natural and built environments, from topography and soil productivity to mound construction and the distribution of human settlement. By building mounds, houses, etc., people create "maps" that reflect their economic and social relationships with one another (Kolb and Snead 1997:611; see also Earle 1997:157-158). As those relationships change, people change the landscapes they have constructed (Marquardt and Crumley 1987). Landscapes are thus one of the ways in which people express identity.

Following Crumley (1979:143-144) and Lightfoot (1998:202-203), I study the Black Warrior landscape at two spatial scales—the valley as a whole (what I call the regional scale) and the individual site (the local scale). At the regional scale, I use survey data to estimate changes in relative population densities through time, and I evaluate the relative weight people gave to social and environmental factors when deciding where to live. At the local scale, I consider how the Grady Bobo site fits in the larger settlement pattern during the late Moundville I phase. By comparing the activities people participated in at this site to the activities of daily life at other excavated rural sites, we can better understand how rural sites, and hence people, articulated with one another at the beginning of the Moundville chiefdom's consolidation.

Lightfoot (1998:202-203) contends that local and household contexts provide glimpses into the daily lives of individuals, while the layout of space at the community and regional levels reflects dominant organizing principles, i.e. those of the ruling group (see also Deagan 1995; Scarry and McEwan 1995). In this dissertation, I test the applicability of this hypothesis to the Black Warrior Valley case. The dramatic social and political changes in the Black Warrior Valley would have prompted people to make decisions about how to organize their lives, and these decisions would have impacted their relationships with each other and the environment (Marquardt 1994:204; Crumley 1979; Crumley and Marquardt 1987; Crumley et al. 1987). Did these decisions result in significant changes in the maps that guided people in their everyday relationships?

Foodways.

I also examine identity through foodways. Food consumption is a repeated activity in which everyone must participate, and pottery, plant, and animal remains can tell us much about people's diets. Further, beyond biological needs, people use food to convey social messages about themselves and their relationships to others; thus plant and animal debris from food processing and consumption and the containers in which food was prepared and served reflect aspects of people's interactions with each other in day-to-day life (Hastorf 1991; Johannessen 1993; Welch and Scarry 1995).

I calculate the ratio of pottery sherds from jars, bottles, and bowls at the Grady Bobo site and compare it to ratios computed for other nonmound sites in the valley, thus estimating the relative proportions of food processing, cooking, and serving that people participated in at these sites. I find that people did not use food in the same ways at all of these nonmound sites. I consider what this means about identity—were there different groups of people living in the Moundville countryside or do these differences reflect different uses of food by the same group of people? These questions reflect back on the issues of landscape and the creation of the social networks in the Black Warrior Valley.

THE MOUNDVILLE CHIEFDOM

From AD 1120-1520, Moundville chiefs controlled a 40-km stretch of the Black Warrior Valley below Tuscaloosa, Alabama (Bozeman 1982; Steponaitis 1983; Knight et al. 1999; Welch 1998). The Moundville site, approximately 25 kilometers south of the fall line, served as the chiefdom's political center (Figure 1-1).

The Moundville site contains at least 29 mounds within its 75 hectare core. Fifteen of these mounds are systematically arranged along the periphery of a rectangular plaza; three mounds are located inside the plaza (Knight and Steponaitis 1998:2-6). The rest of the mounds are scattered outside the plaza-periphery complex.

The basic layout of the Moundville center took shape quickly and was in place by the end of the Moundville I phase, ca. AD 1260 (Knight and Steponaitis 1998:15; Knight et al. 1999). It is clear that the orderly arrangement of mounds around the plaza was planned from the beginning. The mounds around the plaza alternate between those with burials and those without. Mounds without burials likely supported elite residences or other structures. Archaeologists hypothesize that at least one burial mound was paired with each elite residential mound (Knight 1998:51; Peebles 1971). Knight (1998:52-53) further posits that each pairing embodies a resident corporate group. Assuming mound size is a measure of the rank of the corporate group associated with it, then the highest status areas of Moundville were at the northern end of the site, as mound size decreases from north to south (Knight 1992:4, Knight 1998:Figure 3.3; Peebles 1971, 1978).

Chiefs and the highest-ranking elites lived at the multiple-mound capital of the polity while lesser elites lived at the approximately 15 single-mound political centers (Welch 1998:148-161) located 25 kilometers north and south of Moundville. Some commoners lived in the immediate vicinity of these mounds, but archaeologists argue that most of the chiefdom's population lived in small homesteads without mounds. Figure 1-2 depicts the geographic locations of the valley's mound sites, but this figure is deceiving—not all mounds were contemporaneous.

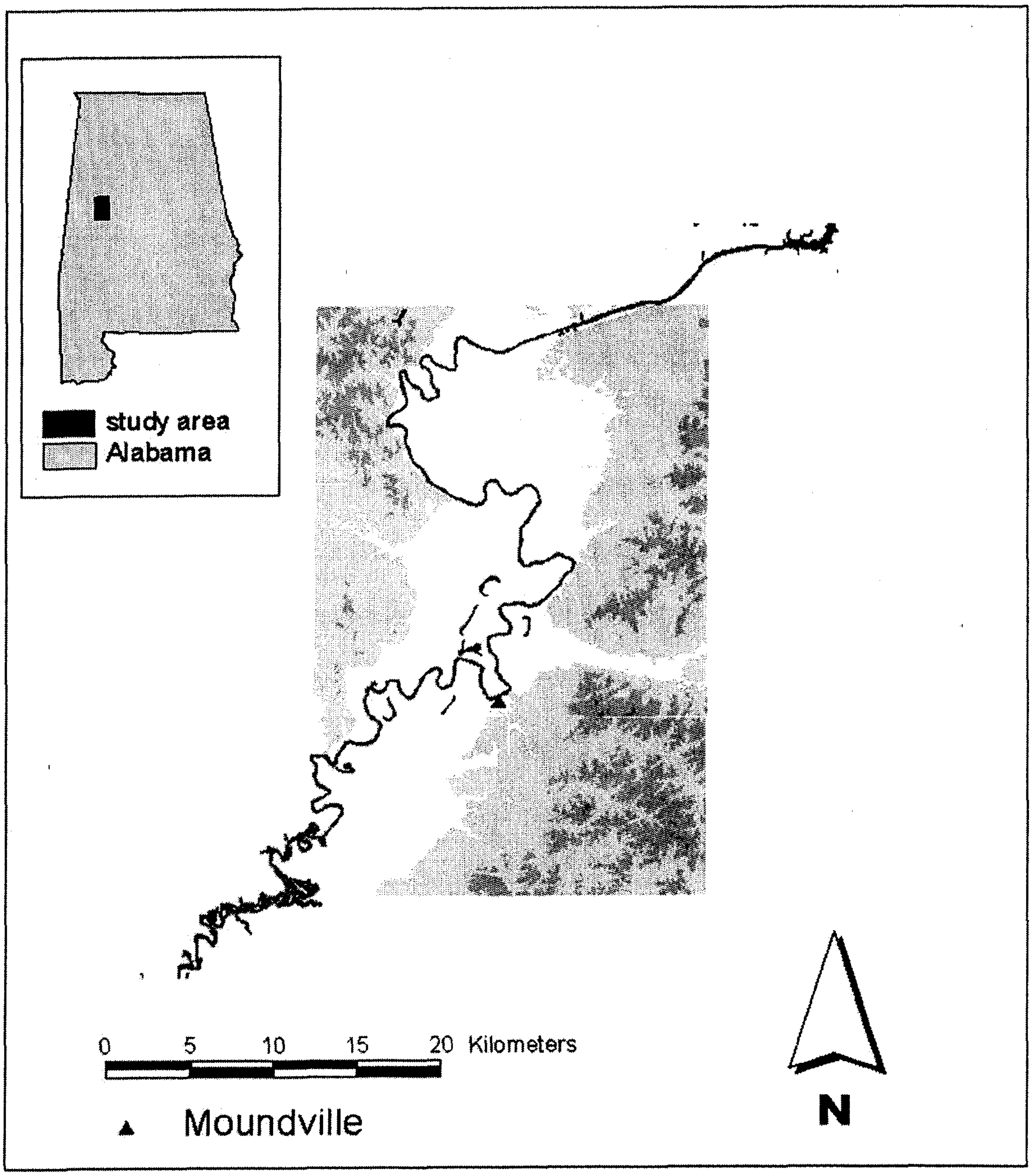


Figure 1-1 Geographic extent of the Moundville chiefdom in the lower Black Warrior Valley.

Chiefdom Organization.

Anderson (1994:7) defines chiefdoms as "multicommunity political units under the control of a hereditary decision-making group or elite." Chiefdoms are characterized by institutionalized and permanent offices of leadership, a religious ideology that maintains the authority of the elite, and social ranking relative to a mythical common ancestor (Steponaitis 1978:419; see also Earle 1991; J. Scarry 1996a:4). Chiefdoms with one level of superordinate political offices are called simple chiefdoms; those with two or more are known as complex chiefdoms (Steponaitis 1978:420; 1991:193; see also Anderson 1994; Hally et al. 1990; Wright 1984). Moundville was a complex chiefdom.

Peebles and Kus (1977) define archaeological correlates of chiefdom organization and demonstrate, point-by-point, how Moundville fits that definition. Moundville burials exhibit ascribed ranking; there is a hierarchy of settlement types and sizes within the polity; homesteads were located in areas where families could be economically self-sufficient; and there is evidence of organized activities that extended beyond the household-level, e.g., monumental construction (Peebles and Kus 1977:435-443).

The general sequence of the development and dissolution of Moundville is believed to parallel those of other North American complex societies, such as Cahokia (Knight 1997; Milner 1996, 1998) and Chaco (Sebastian 1992; see also Anderson 1994; Peebles 1987; J. Scarry 1996b), but I would argue that much of this parallel is because the Moundville settlement model depends on preconceived ideas of Mississippian site hierarchies and site types and relies very little on actual surveys and excavations in the Black Warrior Valley (see Emerson 1997a; Maxham 2000a). With present data, it is difficult to assess the degree of developmental variation among chiefdoms.

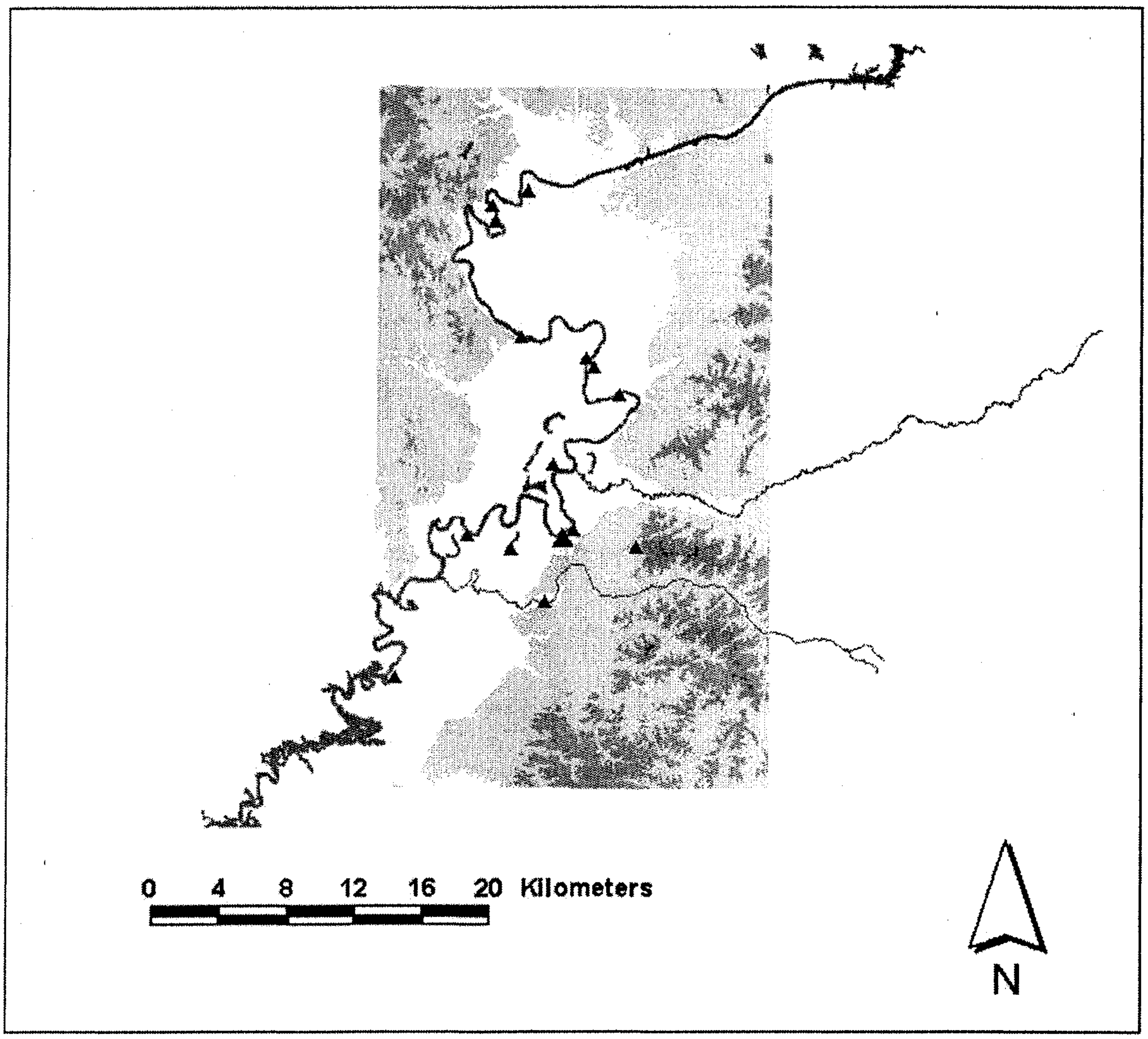


Figure 1-2 Moundville and outlying single-mound sites. Not all sites are contemporaneous.

According to the Mississippian chiefdom model from which the Moundville settlement model is derived, there are three types of sites: paramount centers, local centers, and farmsteads. Complex chiefdoms had both paramount and local centers; simple chiefdoms had only local centers (Anderson 1990; Steponaitis 1978). Paramount centers such as Moundville were occupied by members of the region's highest social ranks, including the chief and his/her close relatives (Peebles and Kus 1977). Archaeologists have argued that single-mound sites were places where lesser elites lived. These sites are believed to be local centers where elites administered some degree of political, economic, and religious control over the commoner population (Welch 1998; see also Lindauer and Blitz 1997).

Archaeologists usually assume that all sites without mounds are farmsteads (cf. Emerson 1997d). Excavated Mississippian farmsteads typically consist of one or two houses and associated storage and cooking features (Knight and Solis 1983; Mehrer and Collins 1995:47; Solis and Knight 1983; Smith 1995:236). Most commoners in Mississippian societies presumably lived in these small, outlying sites.

Hammerstedt (2000:7) has identified three basic models of commoner settlement in Mississippian chiefdoms: (1) commoners lived in clusters of small homesteads; (2) commoners lived in homesteads dispersed evenly across the chiefdom's territory; and (3) all commoners lived at mound sites, forming nucleated communities. Hammerstedt demonstrates that current evidence shows that each of these models is applicable to some chiefdoms in the Mississippian world—there is no uniform Mississippian settlement pattern.

Black Warrior Valley Settlement Studies.

Our understanding of settlement in the Moundville chiefdom is largely derived from the work of Peebles (1978), Steponaitis (1978), Bozeman (1982), Hammerstedt (2000), and Myer (2002). Peebles's and Steponaitis's initial settlement models were based on 1930s surveys conducted by Jones, DeJarnette, and colleagues. Peebles (1978:393) proposed that Moundville phase sites were grouped spatially into three clusters composed of villages and mound and village pairs. But there are three basic problems with this model (see Bozeman 1982:265-268).

First, the distribution of sites was based on limited surveys from the 1930s that did not include nonmound sites. According to Welch (1998:138), archaeologists were unaware of the abundance of nonmound sites until the late 1970s. A second problem with Peebles's model is that he treated all Moundville-era sites as if they were contemporaneous when they in fact were not. The Mississippian period in the Black Warrior Valley encompassed five centuries and four archaeological phases (Steponaitis 1983); many sites were occupied for only a short period of time and their occupations did not overlap. Third, site sizes were often derived from artifact scatters on the surface of multicomponent sites. We now know that the Terminal Woodland components of many of these sites are larger than later Mississippian occupations (Bozeman 1982). Recorded site sizes thus reflect the larger, earlier West Jefferson components. The overlapping Mississippian sites are much smaller.

Peebles (1978) also looked at relationships between the locations of known sites and features of the environment. He concluded that Mississippian people in the Black Warrior Valley preferred to live on fertile, well-drained soils—silt loams, fine sandy loams, and clay loams (see Ward 1965). Hammerstedt (2000) and Myer (2002) confirmed this finding using new survey data, though Hammerstedt (2000:67) notes that despite the passage of 20 years, surveys are still biased toward these soil types. Peebles further observed that sites seem to be located on the boundaries of environmental zones, presumably so people could maximize access to more kinds of plants and animals.

Steponaitis (1978) applied a spatial efficiency model to the distribution of mound centers in the Black Warrior Valley. He argued that Moundville and its ten minor centers were placed very close to the predicted optimal locations. Like Peebles, Steponaitis assumed that mound centers were contemporaneous, but a reanalysis accounting for chronology supports his basic conclusion that mounds in the valley were located to minimize movement costs (Bozeman 1982:300).

Hammerstedt and Myer have focused their research on the distribution of nonmound sites in the valley. In the first three seasons of their Black Warrior Valley Survey, they surveyed approximately 13 km^2 and concluded that the settlement model most applicable to the Black Warrior Valley is one of loose clusters of farmsteads around mound/village centers (Hammerstedt 2000; Hammerstedt and Myer 2001; Myer 2002). Hammerstedt (2000) and Myer (2002) also considered environmental variables that may have influenced site location: soil type, topographic landform, type of nearest water source, and distance to nearest water source.

Like Peebles, Hammerstedt and Myer found that people preferred well-drained, fertile soils; most sites are located on terraces and floodplains. The first two seasons of the Black Warrior Valley Survey were biased toward plowed fields and thus well-drained, fertile soils (Hammerstedt 2000:56), but during the third season, Myer (2002:34) tested soils that were not under cultivation. Still, their surveys were limited to the valley proper and did not include uplands.

SETTLEMENT MODEL TO BE TESTED

The last 30 years of settlement studies and excavations of mound and nonmound sites have resulted in a general settlement model for the valley. In this section, I summarize this model and how it would be manifest archaeologically in terms of relative numbers, types, and locations of sites by phase (Figure 1-3). These expectations are the hypotheses I test in subsequent chapters.

I outline these settlement hypotheses in chronological order, grouping by the developmental phases defined by Knight and Steponaitis (1998): Intensification of Local Production, Initial Centralization, Regional Consolidation, the Paramountcy Entrenched, and Collapse and Reorganization. The calendar dates I associate with each of these phases, however, are different than those Knight and Steponaitis (1998) use. I instead use the calibrated date ranges estimated by Knight et al. (1999: Figure 7).

Intensification of Local Production: West Jefferson phase (AD 1020-1120). Archaeologists believe that the population of the Black Warrior Valley prior to the Mississippian period was relatively low. Welch (1990) in fact argues that there was no permanent Late Woodland occupation of the valley until the Terminal Woodland West Jefferson phase (cf. Jenkins 2001).

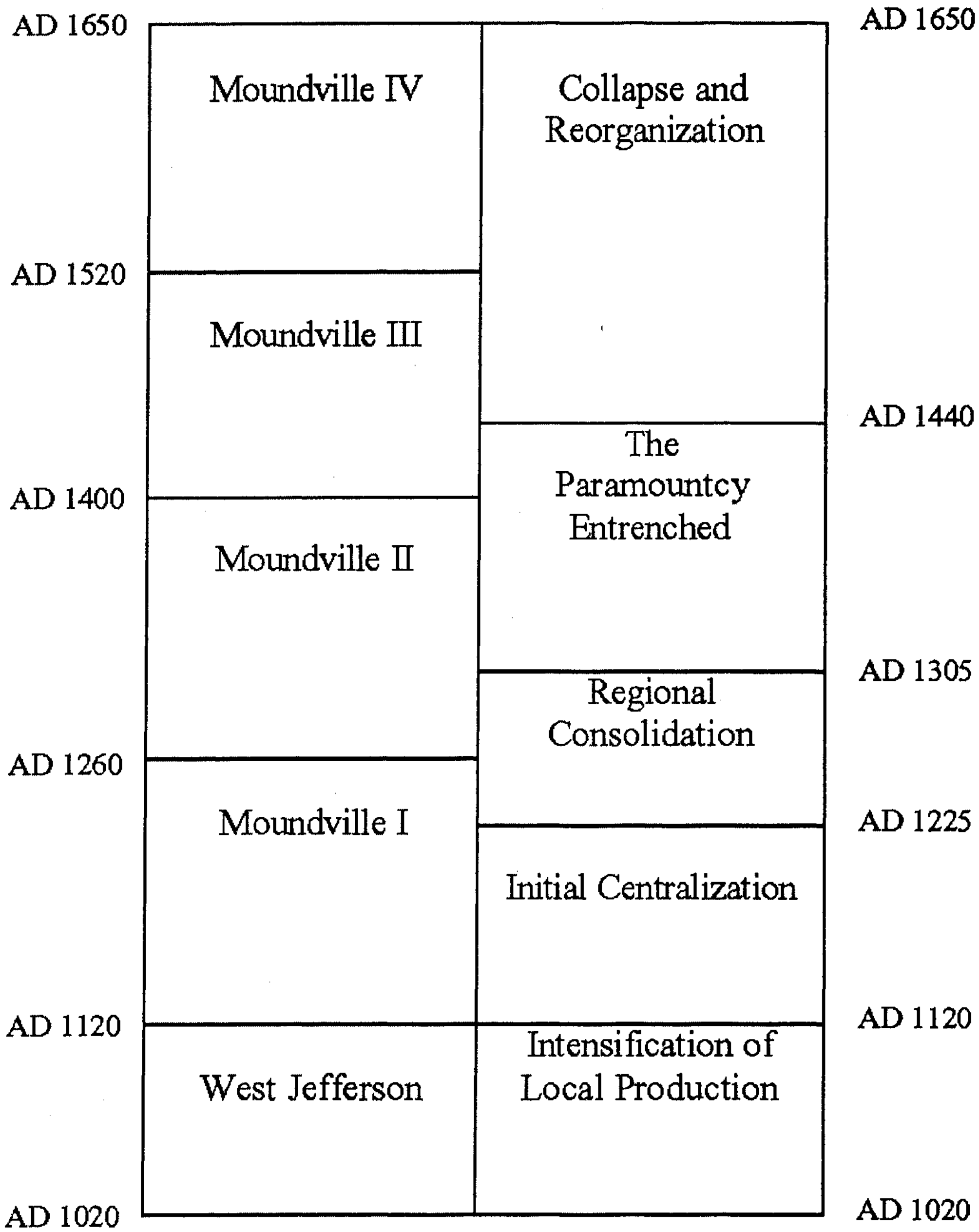


Figure 1-3 Chronology in the Black Warrior Valley (after Knight and Steponaitis 1998:Figure 1.2; Knight et al. 1999:Figure 7).

Welch presents a model of seasonal aggregation and dispersion during the West Jefferson phase. According to Welch (1981), in the late spring through the fall, people aggregated in villages on the floodplain. From winter to early spring when flooding was more likely, people largely abandoned these floodplain villages and broke up into small nuclear family groups on higher terraces or in the uplands. Knight and Steponaitis (1998) raise the possibility that warfare was endemic during the West Jefferson period, and that people nucleated into villages for protection. Moundville was probably not occupied at this time (Knight and Steponaitis 1998:11-12).

Archaeologists have identified large West Jefferson artifact scatters in the Black Warrior Valley floodplain; few of these sites have been excavated, but if Welch is correct, they were late spring-fall occupations. But there are also small West Jefferson sites on the floodplain (Hammerstedt and Myer 2001:9). Since we know so little about West Jefferson sites, we cannot rule out the possibility that at least some of the larger sites are actually several superimposed, successively occupied small sites (Scarry and Scarry 1997:18-19). It is impossible to understand the West Jefferson settlement system with current data, especially since we know close to nothing about West-Jefferson-phase settlement in the uplands.

Initial Centralization: Early Moundville I phase (AD 1120-1190). Archaeologists believe that the valley's population increased from the West Jefferson phase to the Moundville I phase (Knight 1991), but much of this population was likely at the Moundville center (Knight and Steponaitis 1998; Steponaitis 1998). At Moundville, people lived in small clusters of houses located on the riverbank and in individual houses north of Mound R, south of Mound E, and at the base of the Asphalt Plant mound (Knight and Steponaitis 1998:12-13; C. Scarry 1986, 1998). The Asphalt Plant mound was one of two mounds built on the Moundville terrace in the early Moundville I phase (Mound X is the second).

During early Moundville I, archaeologists believe that people living in the valley moved from nucleated settlements to small, dispersed farmsteads, intensifying their reliance on corn agriculture (Knight and Steponaitis 1998, C. Scarry 1986; see Ensor 1993, Michals 1998, Mistovich 1995 for farmstead excavations). As Knight and Steponaitis (1998:12) note, however, "other settlement types, as yet unrecognized, may also exist." There is no evidence for outlying mound sites dating to early Moundville I (Knight and Steponaitis 1998; Steponaitis 1992; Welch 1998).

Regional Consolidation: Late Moundville I-Early Moundville II phases (AD 1190-1330). During the late Moundville I phase, most of the major mounds around Moundville's plaza were constructed, bringing the Moundville site plan to fruition (Knight and Steponaitis 1998:14-15). Steponaitis (1998:39-43) argues that Moundville's population peaked during the Moundville I phase; at its height, the population was likely no more than 1700 people. Black Warrior Valley residents built three single mounds north of Moundville—Jones Ferry, Poellnitz, and Hog Pen—during late Moundville I and early Moundville II (Figure 1-4). Archaeologists believe these mound sites had relatively small resident populations (Knight and Steponaitis 1998:16), serving primarily as ritual centers and tribute conduits for the valley's commoners (Knight and Steponaitis 1998:11). People may have clustered their homesteads around these secondary centers (Hammerstedt 2000; Myer 2002).

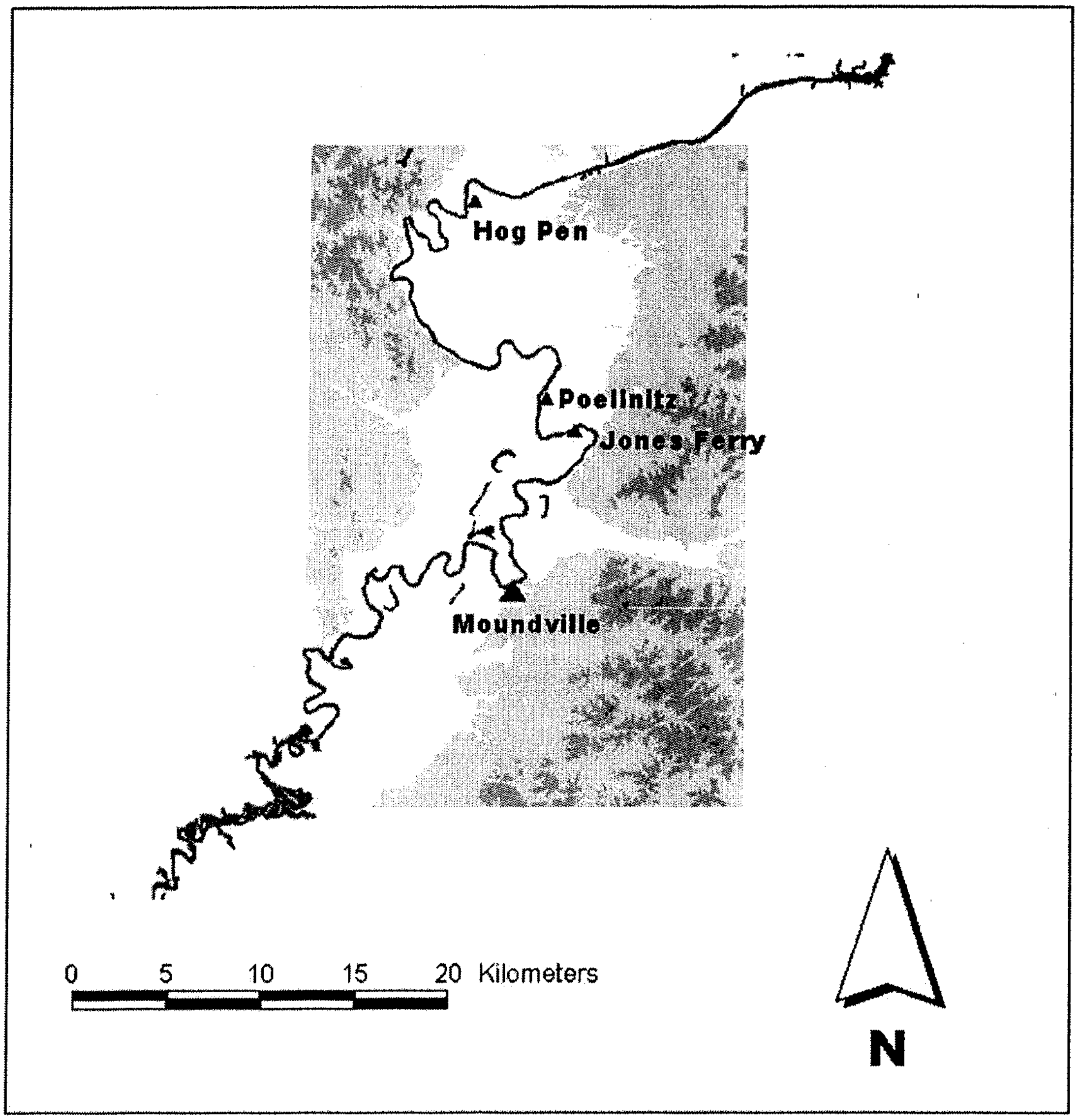


Figure 1-4 Mound sites in the Black Warrior Valley, late Moundville I to early Moundville II.

The Paramountcy Entrenched: Late Moundville II-Early Moundville III phases (AD 1330-1460). During late Moundville II and early Moundville III, the population at Moundville declined, and most of its non-elite residents presumably moved to farmsteads in the valley (Steponaitis 1998:41). However, more individuals were buried at Moundville than when its population was at its peak (Steponaitis 1991:Figure 9.2, 1998). These burials include members of all social ranks (Peebles and Kus 1977), suggesting that funerary rites for both the elite inhabitants of Moundville and commoners from the countryside took place at the center. Eight second-order mound centers were occupied at this time (Figure 1-5), but again, archaeologists presume that most people lived in farmsteads (Welch 1998).

Collapse and Reorganization: Late Moundville III-Moundville IV phases (AD 1460-1650). In the late Moundville III and Moundville IV phases, mound centers in the valley were virtually abandoned, though Moundville continued to be sparsely occupied into the DeSoto era. Nucleated villages like the ones dating to the pre-Moundville West Jefferson phase reappeared on the landscape (Knight and Steponaitis 1998:22). Archaeologists have argued that the Moundville IV phase was a time of major sociopolitical reorganization (see Sheldon 1974; cf. Knight 1994). The valley was largely abandoned by AD 1650.

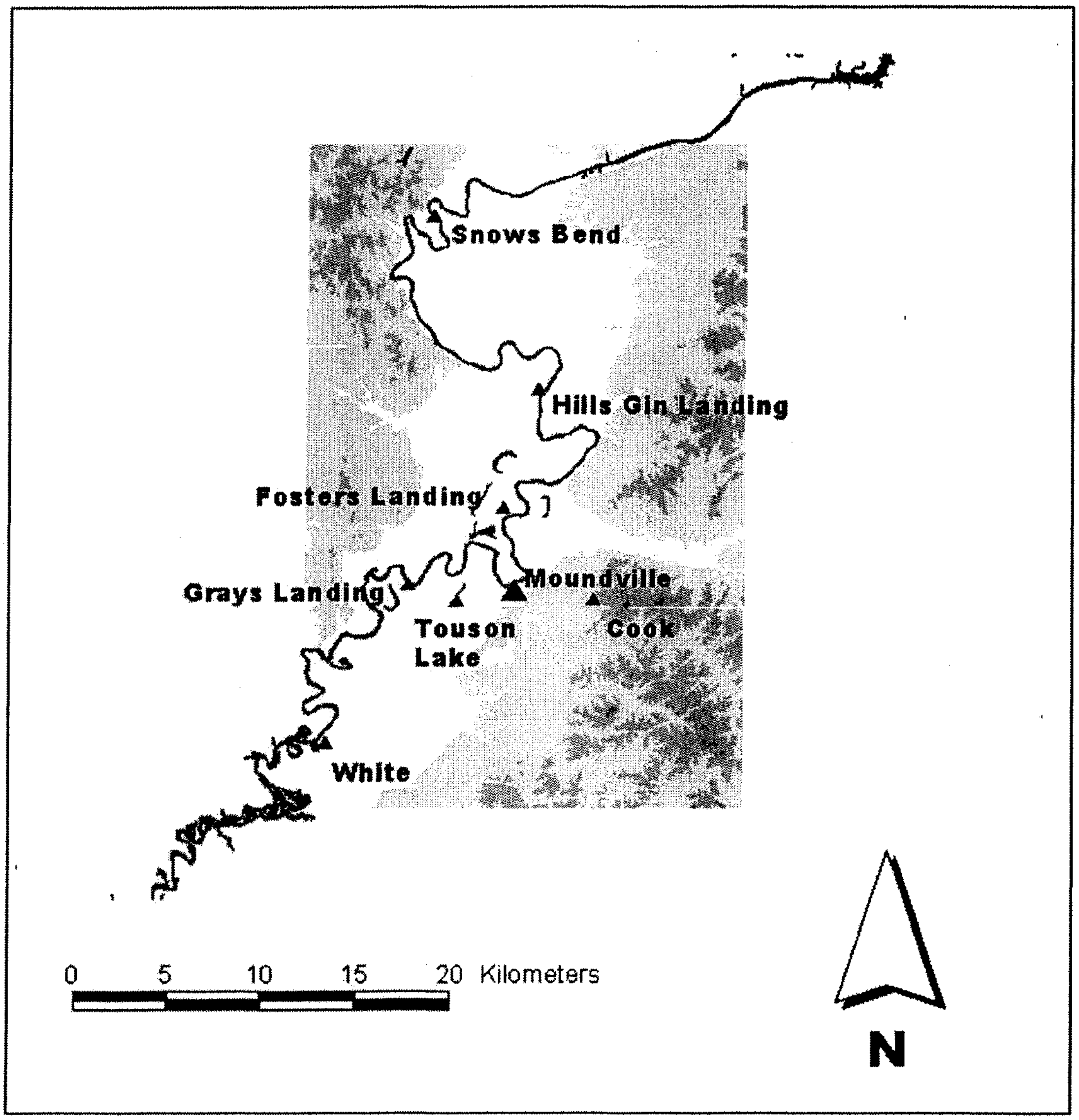


Figure 1-5 Mound sites in the Black Warrior Valley, late Moundville II to early Moundville III.

Hypotheses.

Table 1-1 recaps the population trends I expect under the current settlement model. To summarize, I predict that population in the valley was sparse during the West Jefferson phase. The population declined during Moundville I, leaving a largely empty countryside. During Moundville II/III, I hypothesize that population rebounded to levels comparable to population in the West Jefferson phase. This rebound was followed by the valley's virtual abandonment.

In making these predictions, I assume that all nonmound sites are equivalent, presumably farmsteads. The current model does not allow for different kinds of rural sites. I explore this shortcoming by examining settlement on a finer scale in Chapters 4 and 5. The late Moundville I Grady Bobo site is unlike other excavated nonmound sites, and I suggest this reflects difference in site function. I consider this finding in concert with the results of the chapters on regional settlement, proposing a new view of settlement in the Black Warrior Valley.

SIGNIFICANCE OF THIS RESEARCH

Archaeology tends to focus on elites because of their greater visibility—elites are associated with monumental architecture and high status goods. The Moundville center is a classic example of how elites made their mark on the landscape. As Knight (1998:46) argues, the deliberate organization of the mounds, plaza, and palisade was "a political effort to insure the intergenerational stability of a particular, arbitrary version of social reality." In other words, the organization of Moundville was the materialization of the elite vision of the

Table 1-1 Expectations for rural settlement through time.

Phase	Expected Trends in Valley Settlement
late Moundville III-Moundville IV (AD 1460-1650)	• return to nucleated villages • more sites in uplands (see Schoeninger and Schurr 1998; also see Milner 1998:173)
late Moundville II-early Moundville III (AD 1330-1460)	• more sites in countryside as people move out from center (Steponaitis 1998; cf. Milner 1998:171-172)
late Moundville I-early Moundville II (AD 1190-1330)	• nonmound sites on floodplain, loosely clustered around single-mound sites (Hammerstedt 2000; Myer 2002)
early Moundville I (AD 1120-1190)	• fewer sites in countryside as people move to center (Knight and Steponaitis 1998) • small, dispersed nonmound sites on floodplain (see Milner 1998:100)
West Jefferson (AD 1020-1120)	• low population density (Knight 1991) • both small sites and nucleated villages on floodplain (Hammerstedt and Myer 2001; Welch 1990; see also Milner 1998:98) • small, single-family sites in uplands (Welch 1990)

new social order. Moundville was a community planned by elites and executed through the labor of commoners. By making their vision concrete, elites, the orchestrators of the mound-building effort, attempted to preserve the social order in perpetuity.

I have implied that elites were a homogenous group with one vision, but this was almost certainly not true, neither at the beginning of political centralization nor beyond. When Moundville was constructed, one group of elites was at the top of the social hierarchy, and the organization of space at Moundville reflected this. The highest ranking elites deliberately materialized the social order of the moment with the hope of institutionalizing and perpetuating their position atop the hierarchy. The Moundville center is the manifestation of the elite vision of social order at one moment in time, ca. AD 1225-1260 (Knight and Steponaitis 1998:14; Knight et al. 1999). Elite relationships, like all social relationships, were dynamic, and I leave it to others to explore how those relationships changed after the Moundville was built.

Most people in the Moundville chiefdom were not elite; most were commoners, and they left marks, however subtle, on the landscape (see Joyce and Winter 1996:34). The overrepresentation of elites in interpretations of the past reflects archaeologists' fascination with events that are rare and things that are valuable (cf. Smyth 1996:338). Archaeologists have long recognized this problem (Griffin 1985), and many have risen to the challenge of not only locating and excavating rural homesteads, but also attempting to understand how the people who lived in these homesteads organized their daily lives (e.g. papers in MacEachern et al. 1989 and Rogers and Smith 1995; Ashmore and Wilk 1988; Hogue and Peacock 1995; Lorenz 1996). I add to what we know about the development of Moundville society by studying the rural countryside where commoners lived and worked.

The spatial organization of archaeological sites associated with commoners should reflect the commoner vision of social order. How closely did the commoner and elite versions of the chiefdom's social organization correspond? Was the version of social reality embodied at Moundville accepted by and carried out by the valley's commoners? Or was the elite vision embodied by Moundville merely that, a vision, or perhaps a goal? Until this dissertation and work by Hammerstedt and Myer (Hammerstedt 2000; Hammerstedt and Myer 2001; Myer 2002), archaeologists had few data from the Moundville countryside, and therefore could not make meaningful statements about the spatial—and hence social—organization of commoner households. Archaeologists instead assumed that the social order inferred from the layout of elite space at the Moundville center reflected a social reality accepted by elites and commoners alike. I argue that commoner social organization can only be understood by studying the organization of the spaces in which they lived and the routines of their everyday lives (Lightfoot et al. 1998).

Some may consider studying commoners and their daily activities less exciting than studying mounds and prestige goods. But it is only by studying commoners that we can begin to fully understand Moundville's social and political organization. The day-to-day practices of the Black Warrior Valley's residents and the landscapes that were a result of those practices are expressions of both the vertical and horizontal networks of which they were a part. In this dissertation, I explore the feedback relationships between people and the Black Warrior Valley environment in which they lived, and I describe how those social landscapes changed in the face of the rise and fall of one of the most prominent chiefdoms in the southeastern United States.

DISSERTATION OUTLINE

I present the results of my research in the chapters that follow. I begin with a regional perspective on landscape and settlement, then narrow my focus to one site and examine how that site fits into the regional picture. I describe the content of each of these chapters below.

Chapter 2 examines the character of the regional landscape. I begin this chapter by describing the major archaeological surveys of the Black Warrior Valley. While each of these surveys has shortcomings, I argue that by combining their strengths, we can generate a surprisingly comprehensive picture of rural settlement. I then proceed to do exactly that, considering the relationships between site locations and features of the natural and sociopolitical environments and how those relationships in turn reflect choices and compromises made by the valley's rural settlers.

In Chapter 3, I use counts of grog- and shell-tempered pottery sherds recovered in the valley's surveys to assess broad population trends in the countryside from the Late Woodland period through the end of the Mississippian period. I assess these trends in light of what we know about population and political trends at contemporaneous mound sites in the valley, bringing commoners' role in Moundville's history into sharper focus.

In Chapter 4, I begin to tie the regional to the local, examining how one nonmound site fits into the overall picture I create in Chapter 2. I first briefly summarize the history of archaeology at the Grady Bobo site, a nonmound site located 20 km north of Moundville. I then discuss the University of North Carolina excavations at the Bobo site and present the results of artifact analyses from those excavations. In Chapter 5, I assess site function from the perspective of foodways, focusing on the ceramic, faunal, and botanical data to understand the activities in which the people at the Bobo site took part. These data and comparisons with other excavated nonmound sites lead me to interpret the Grady Bobo site as a community center where people gathered to prepare and eat food.

I conclude with Chapter 6, a synthesis of what this project has contributed to our understanding of rural settlement and social organization in the Black Warrior Valley during the Late Woodland and Mississippian periods. Though this dissertation is linear, the regional data helps us to interpret the local data, and the local data inform our understanding of regional settlement. I consider this feedback relationship in Chapter 6, underscoring how these different lines of investigation complement each other and have contributed to our current vision of daily life in Moundville's countryside.

Chapter 2: Environmental and Social Features of the Late Woodland and Mississippian Landscapes

Ideally, archaeologists identify settlement patterns and quantify population trends by randomly sampling a bounded region and analyzing the distribution of sites in that region. This is rarely possible, and most surveys are biased in some respect. In the lower Black Warrior Valley, almost all major surveys (Alexander 1982; Bozeman 1982; Hammerstedt 1999; Myer 2002; Nielsen et al. 1973; Walthall and Coblentz 1977) have systematically omitted at least one important category of sites—upland sites. Only 55.1 hectares of the 1387.3 surveyed hectares of the Hammerstedt-Myer (HM) transects, less than 4%, are in the uplands (see Table 2-1 for survey names and acronyms used in this text). While the data collected in these surveys are certainly useful, we must look at the distribution of sites in the uplands to get a more complete picture of settlement in the Black Warrior Valley.

Fortunately, one set of archeological surveys of the valley does sample both upland and floodplain zones. Archaeologists working for local consulting firms surveyed the areas around more than 300 proposed methane gas wells in the Moundville vicinity. My work is the first systematic study of the data collected in these surveys and is thus the first serious attempt to examine upland settlement in the Black Warrior Valley. By considering the distribution of sites within the Moundville Coal Degasification Field (MCDF) survey region as well as the locations of sites recorded in earlier, more biased surveys, I present the most complete picture to date of the choices Black Warrior residents made when constructing their landscapes.

Table 2-1 Surveys of the Black Warrior Valley and acronyms used in this text.

Survey Name	Acronym
Big Sandy Survey	BS
Hammerstedt-Myer Survey	HM
Moundville Coal Degasification Field Survey	MCDF
University of Michigan Museum of Anthropology Survey	UMMA

REGIONAL ENVIRONMENTAL AND CULTURAL DATA

Since the early 1980s, the Alabama State Oil and Gas Board has defined 22 coal degasification fields (for more info, see http://www.ogb.state.al.us/). These fields, ranging in size from 2.6 to 686.3 km^2, are bounded areas in which wells are drilled to release methane gas from coal seams. Wells in the first established fields were drilled in advance of mining, but wells in later fields were drilled for the express purpose of commercial coal bed methane production. Many of the state's 5,600 gas well pads and accompanying access roads were surveyed by archaeological consulting companies prior to their construction. Survey reports indicate that for each 0.5 acre (0.202 hectare) well pad, an area double in length and width (2 acres or 0.809 ha) was surveyed.

One of the 22 fields, the Moundville Coal Degasification Field (MCDF), straddles Hale and Tuscaloosa Counties, encompassing the heart of the Moundville chiefdom (Figure 2-1). The MCDF is 265 km^2 in area and, as the shading in Figure 2-2 indicates, includes both valley and upland zones. Within this field, 301 wells were drilled, but not all of the associated well pads were surveyed, and in many cases an area was surveyed but no well drilled. Reports at the University of Alabama's Office of Archaeological Research (see References Cited) indicate that 357 well pad areas were surveyed in the MCDF, totaling 298.50 ha (2.98 km^2) (Figure 2-2).

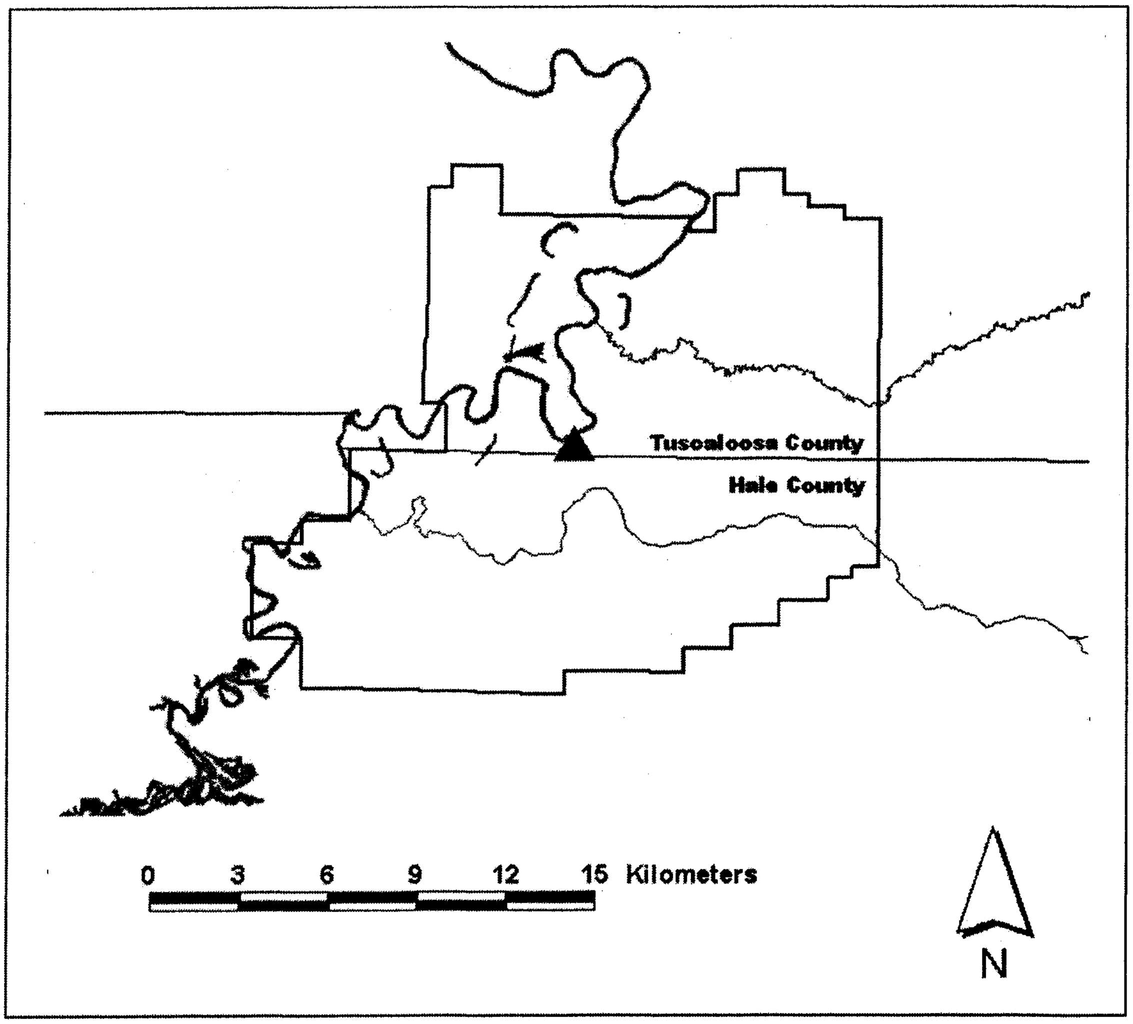


Figure 2-1 Geographic boundaries of the Moundville Coal Degasification Field (MCDF).

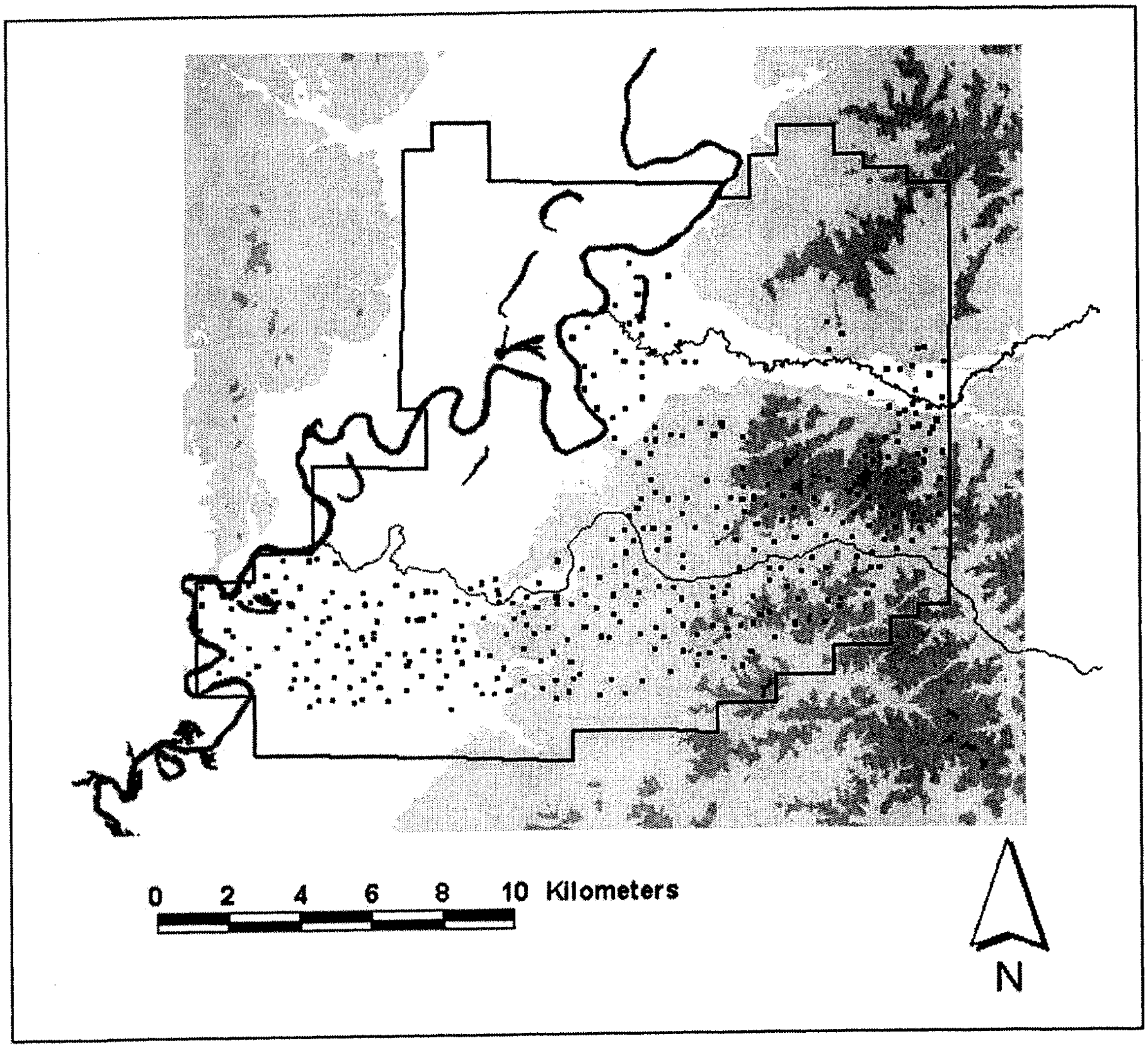


Figure 2-2 Surveyed well pads in the MCDF.

In order to examine spatial relationships among surveyed well pads, archaeological sites, and features of the natural environment, I created an ArcView project file containing themes (layers) representing each cultural and environmental feature of interest.

Environmental Variables.

The environmental features I consider are topographic zone, distance to major waterway, soil series, and geologic formation. I culled these ArcView themes from a number of sources.

I created topographic zones using the United States Geological Survey (USGS) 7.5-minute digital elevation models (DEMs) (http://data.geocomm.com/catalog/US/61087/sublist.html). I defined four topographic classes: 0-49 m, 50-99 m, 100-149 m, and 150+ m above mean sea level (AMSL). Following the convention established in the Alabama State Site File (ASSF), I designated the 0-49 m interval as floodplain and everything over 49 m as uplands.

I combined ArcView's river data with USGS digital line graphs (DLGs) (http://edcwww.cr.usgs.gov/glis/hyper/guide/100kdlgfig/states/AL.html) to create a theme containing the major drainages in the study region. I identified three major waterways—the Black Warrior River, Big Sandy Creek, and Elliots Creek—and used ArcView to construct buffers at 400 m intervals around these waterways.

I produced a detailed soil theme by digitizing the relevant sections of the Tuscaloosa (Johnson 1981) and Hale County soil survey maps (unpublished Hale County maps courtesy of Christopher Ford, Hale County Soil Survey). I obtained a coarse-grained soil map of the entire state from the National Resources Conservation Service State Soil Geographic

(STATSGO) Database (http://www.ftw.nrcs.usda.gov/statsgo_ftp.html). The state soil map is made by generalizing the detailed soil survey data and is designed to be used for broad planning and management. I use both the general and detailed soil maps in my analysis. I also use a generalized theme of Alabama's geological zones generously provided by Sam Mizelle of Moundville's Office of Archaeological Research (OAR).

Cultural Variables.

Using Alabama State Oil and Gas Board maps and archaeological survey reports, I digitized the boundary of the MCDF and the location of each of the 357 surveyed areas within the field. I then consulted the Alabama State Site File (ASSF) and digitized the locations of the 202 recorded archaeological sites within the MCDF's boundaries (Figure 2-3). I created a database containing all recorded information for each site, including its Universal Transverse Mercator coordinates (UTMs), size, and the periods in which it was occupied (Appendix A and B).

Only 16 of 196 nonmound sites in the MCDF intersect the surveyed areas around well pads. Two of the 16 are Euro-American historic sites. Of the 14 aboriginal sites, four had no diagnostic artifacts and cannot be dated. This leaves ten sites with dated Native-American components; eight of these sites are Late Woodland and/or Mississippian.

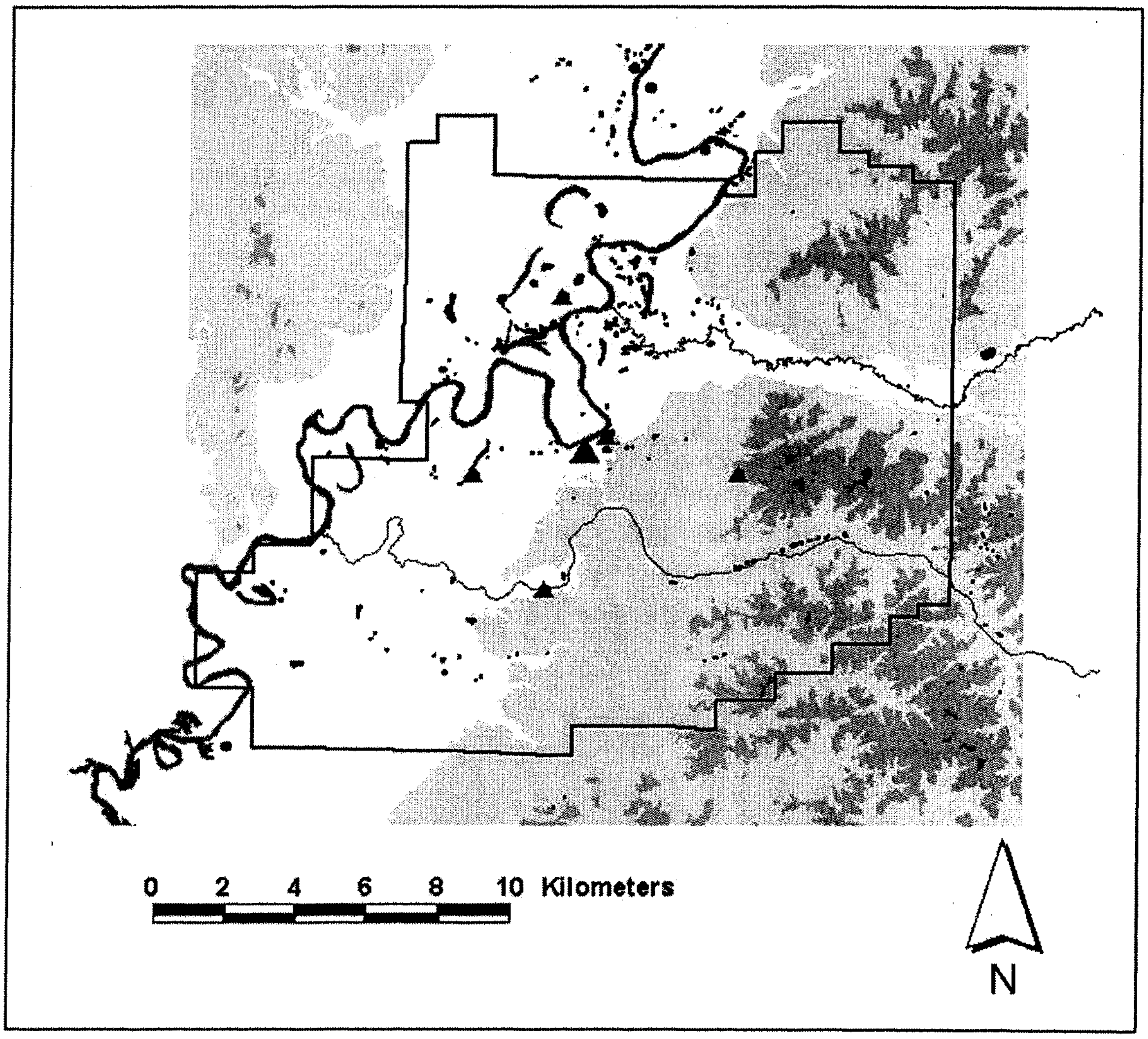


Figure 2-3 Archaeological sites in the MCDF.

The low number of intersected sites in the MCDF is not particularly surprising, as approximately 58% of the surveyed well pad areas are in the uplands, defined here as 50 m AMSL and above. It has long been assumed that the uplands were sparsely populated and that people preferred to live in the floodplain with easy access to the Black Warrior River and fertile soils. My findings confirm this intuitive hypothesis. Table 2-2 shows that 150 of the 202 sites in the MCDF are below 50 m AMSL. Further, Table 2-3 shows that 123 sites are located within 400 m of a major waterway—the Black Warrior River, Big Sandy Creek, or Elliots Creek.

Chronology. One of the most important pieces of information about a site is its date. Unfortunately, the collections from most of these nonmound sites are very small, and dating these sites to archaeological phases based on pottery type-varieties is virtually impossible. In most cases, I had to be satisfied with assigning a site to an archaeological period or periods. The periods in which I am interested here are the Late Woodland and Mississippian.

In the Black Warrior Valley, there is a very clear correlation between pottery temper types and archaeological periods. Pre-Late Woodland pottery is mostly sand- and limestone-tempered. During the Late Woodland, grog is by far the dominant temper type (Jenkins 2003:16). Mississippian pottery in the Black Warrior Valley is almost exclusively shell-tempered (Steponaitis 1983:81). This correlation between temper and chronology is extremely helpful when a site's assemblage consists of only a few sherds. It is very easy to differentiate different tempering materials, even with very small sherds.

Table 2-2 MCDF, elevations of sites.

Elevation (m AMSL)	Nonmound Sites	Mound Sites
0-49	150	4
50+	46	2

Table 2-3 MCDF, distances from sites to major waterways.

Distance to Major Waterway (m)	Nonmound Sites	Mound Sites
0-400	119	4
400-800	31	1
800-1200	13	0
1200+	33	1

For sites for which I had pottery type counts, I made a simple decision rule: if a site had at least one sherd of grog-tempered pottery, I designated it as having a Late Woodland component; if a site had a least one sherd of shell-tempered pottery, I assigned it a Mississippian component. Many sites were occupied in both periods (i.e. had both grog- and shell-tempered pottery), and I assigned these sites both Late Woodland and Mississippian components.

Because the MCDF overlaps the HM survey area, a number of these sites had either been recorded or reexamined in the last four years; for these sites, I relied on the HM period designation, except for the few cases in which their designation conflicted with my decision rule stated above. For the 102 sites for which no artifact data were available, I relied on the period and/or phase assignments recorded on the state site forms. In 21 cases, these sites were classified as "unknown aboriginal."

I digitized 202 archaeological sites in the MCDF—196 nonmound sites and six mound sites (Figure 2-3). Of the 196 nonmound sites, 124 have a Late Woodland and/or Mississippian component (Table 2-4). There are 94 nonmound sites with Late Woodland components, and 84 nonmound sites with Mississippian components; 40 sites have a Late Woodland but no Mississippian component, 30 sites have a Mississippian but no Late Woodland component, and 54 sites have both a Late Woodland and a Mississippian component. Of the six mound sites, only one, Moundville, has a Late Woodland component; all were assumed to have a Mississippian component.

Table 2-4 MCDF, chronological affiliations of sites.

Component	Nonmound Sites	Mound Sites
Late Woodland only	40	0
Mississippian only	30	5
Both Late Woodland and Mississippian	54	1
Total Late Woodland and/or Mississippian sites	124	6

Comparative Data.

For comparative purposes, I examine the relationships between features of the environment and archaeological sites recorded in three other surveys—the 1999-2002 Hammerstedt-Myer (HM) transects (Figure 2-4), the 1978-1979 University of Michigan Museum of Anthropology (UMMA) survey, and the 1976 Big Sandy (BS) survey (Figure 2-5).

I discussed the Hammerstedt-Myer project in Chapter 1. I added layers corresponding to the HM transects, the surveyed areas within these transects, and archaeological sites within these transects to the GIS project file and database I created for sites within the MCDF.

There are 211 sites in the two HM transects. Of these, 204 are nonmound sites, and seven are mound sites (Table 2-5). Of the nonmound sites, 154 have a Late Woodland and/or a Mississippian component. There are 130 nonmound sites with Late Woodland components, and 105 nonmound sites with Mississippian components. Forty nine sites in the HM transects have a Late Woodland but no Mississippian component, 27 have a Mississippian but no Late Woodland component, and 54 sites have both components. Of the seven mound sites, three had both Late Woodland and Mississippian components, and four had only Mississippian components. For quantitative purposes, it is important to note that 162 of the 204 sites in the HM transects fall within the surveyed area. Of these 162, 130 date to the Late Woodland and/or Mississippian periods.

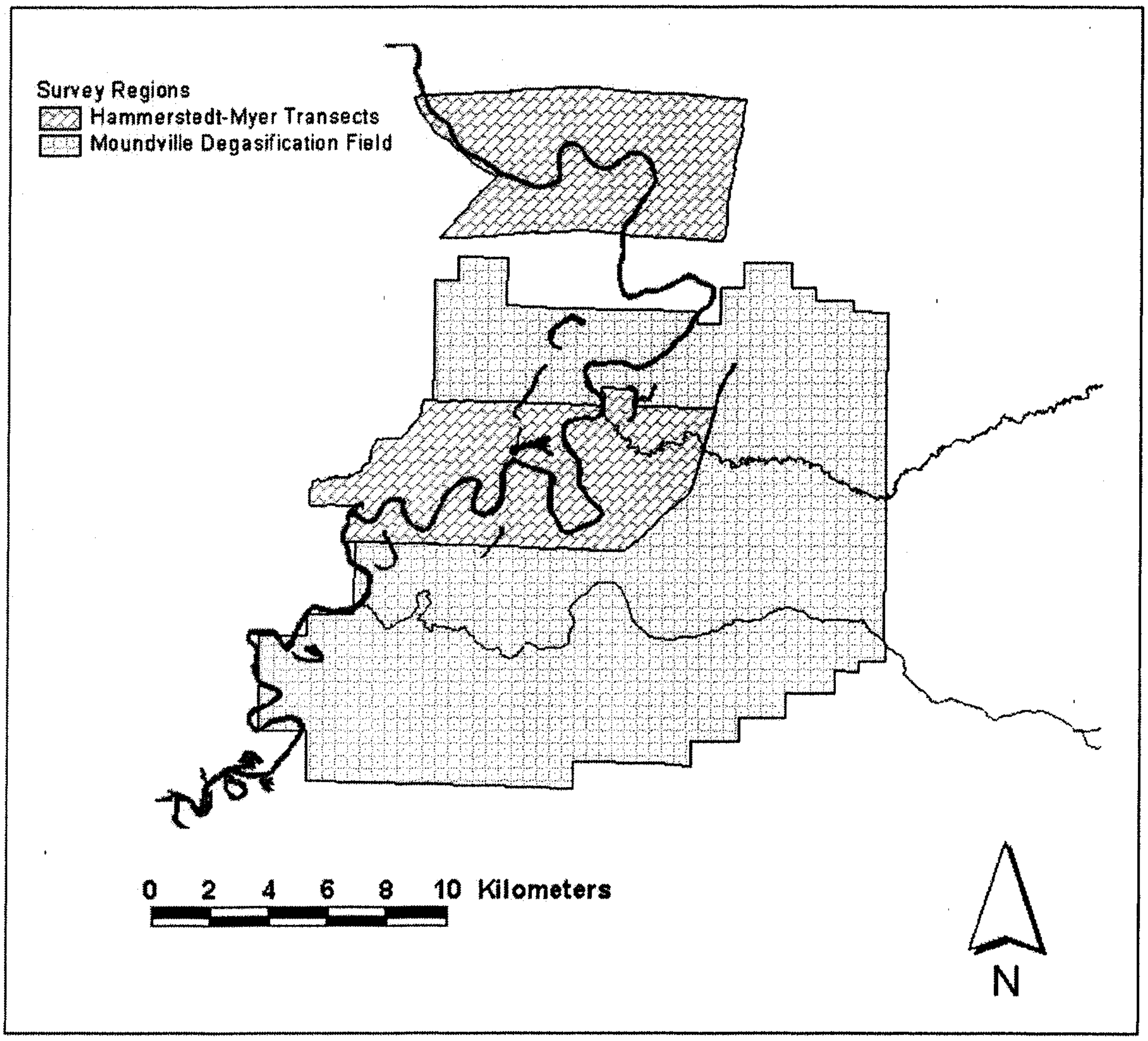


Figure 2-4 HM survey transects.

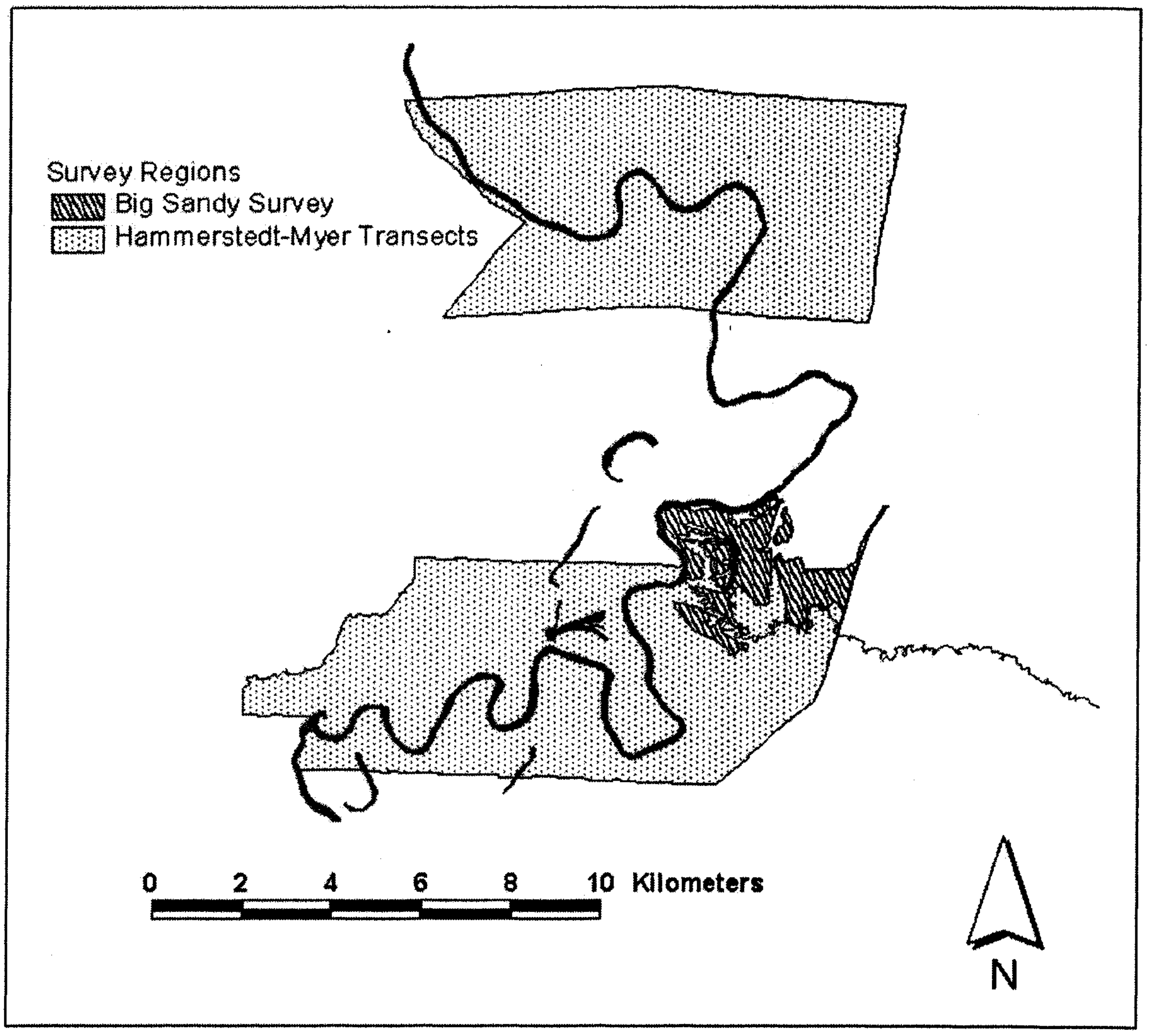


Figure 2-5 Big Sandy (BS) survey region.

Table 2-5 HM, chronological affiliations of sites.

Component	Nonmound Sites	Mound Sites
Late Woodland only	49	0
Mississippian only	27	4
both Late Woodland and Mississippian	78	3
total Late Woodland and/or Mississippian sites	154	7

The 1978-1979 UMMA survey was not actually a survey, but rather entailed relocating previously recorded Mississippian sites in the valley from Tuscaloosa to Akron and conducting controlled surface collections (Bozeman 1982:3). As such, there are no survey bounds. Because there is no estimate of total surveyed area, the UMMA data cannot be used to generate quantitative information about site densities.

In the late 1970s, archaeologists surveyed the Big Sandy Bottoms between Route 69 and the Black Warrior River in Tuscaloosa County, looking for sites primarily in plowed fields. I could find no map of the bounds of the surveyed area, but given the text and figure in the BS report (Walthall and Coblentz 1977), I digitized the approximate boundaries of the survey. The total area I digitized (1386.76 acres; 561.204 hectares), conforms nicely with Hammerstedt's (1999) estimate of six square kilometers.

Some of the HM survey area overlaps the BS survey. Five sites that were identified in 1976 were revisited in 1999 by Scott Hammerstedt and his crew. In Chapter 3, I use the artifact counts from these revisited sites to generate an estimate of the rate of sherd decomposition.

There are 41 sites in the BS survey area, all of them nonmound sites. Thirty-four of these are Late Woodland and/or Mississippian (Table 2-6). Eight are Late Woodland only, and two are Mississippian only. Twenty-four of the sites in the BS survey have both a Late Woodland and a Mississippian component.

Table 2-6 BS survey, chronological affiliations of sites.

Component	Nonmound Sites	Mound Sites
Late Woodland only	8	0
Mississippian only	2	0
both Late Woodland and Mississippian	24	0
total Late Woodland and/or Mississippian sites	34	0

CHARACTERIZING THE LATE WOODLAND AND MISSISSPPIAN LANDSCAPES

In this and subsequent sections, I use the distribution of the 124 Late Woodland and/or Mississippian nonmound sites and six mound sites in the MCDF to make general statements about the relative importance of environmental and social characteristics that influenced site locations. I use the sites intersected by a well pad—i.e. sites within the actual (measurable) survey boundaries—to quantify site densities relative to environmental and social variables.

I use a site density index similar to the one used by Myer (2002). This index is a proxy for site or population density, but is a relative, not an absolute, measure. Thus indices can be interpreted only with respect to one other and cannot be translated directly into population. Myer calculated a site density index by counting the total number of sites within a stratum in the study transects, dividing this number by the surveyed area in that stratum (in hectares), then multiplying by 100. In contrast, I count the number of sites within the surveyed area in a stratum and divide this number by the surveyed area in that stratum (in hectares), then multiply by 100. Because this difference in calculation generates different numbers, I have recalculated the site density indices in Myer's (2002) thesis and present them here for comparative purposes. All areas and indices are rounded to the nearest tenth.

Topographic Zones.

For simplicity, I consider just two topographic zones: floodplain and uplands. I designated sites located at elevations of less than 50 m AMSL as floodplain, and sites 50 m and greater AMSL as upland. More than half of the surveyed area in the MCDF falls in the uplands, but 76% of sites are in the floodplain. When broken down by chronological period,

Table 2-7 shows that 82% of Late Woodland sites and 84% of Mississippian sites are located in the floodplain.

Despite the rarity of upland sites in general, the site-density index of Late Woodland sites in the MCDF is not as low as one might expect (Table 2-8). Two out of eight intersected Late Woodland sites are located in the uplands. In the HM surveyed areas, three of 113 sites fall in the uplands (Table 2-9). Because only 55 of the 1387 surveyed hectares are in the uplands, the site density index of Late Woodland components in the HM area is relatively high at 5.4. These results suggest that while people may have preferred floodplain sites, the uplands were not as barren as raw counts suggest. We need surveys of large contiguous areas of the uplands to resolve this issue.

The density indices of Mississippian components are lower for both upland and floodplain zones. In the MCDF, one of five intersected sites falls in the uplands (Table 2-10). In the HM transects, only two of 91intersected Mississippian sites are in the uplands (Table 2-11). Perhaps people preferred the floodplain more in the Mississippian period than in the preceding West Jefferson period, but without more survey of upland zones, we cannot reach a definitive conclusion.

Table 2-7 MCDF, sites stratified by topographic zone

Topographic Zone	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
floodplain	13836.6	78	72	4
uplands	12617.2	17	12	2

Table 2-8 MCDF, Late Woodland site densities stratified by topographic zone.

Topographic Zone	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
floodplain	125.0	6	4.8
uplands	171.5	2	1.2

Table 2-9 HM survey, Late Woodland site densities stratified by topographic zone.

Topographic Zone	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
floodplain	1332.1	110	8.3
uplands	55.1	3	5.4

Table 2-10 MCDF, Mississippian site densities stratified by topographic zone.

Topographic Zone	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
floodplain	125.0	4	3.2
uplands	171.5	1	0.6

Table 2-11 HM survey, Mississippian site densities stratified by topographic zone.

Topographic Zone	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
floodplain	1332.1	89	6.7
uplands	55.1	2	3.6

Distance to Major Waterway.

I identified three major waterways in the Black Warrior Valley: the Black Warrior River, Big Sandy Creek, and Elliots Creek (Figure 2-6). These waterways were sources of fish, shellfish, and water; they were also transportation routes. Following Myer (2002:42), I constructed buffers at 400 m intervals from these waterways (Figure 2-7) and calculated the total area and numbers of Late Woodland and Mississippian sites within each interval.

Table 2-12 shows the numbers of Late Woodland and Mississippian sites in the entire MCDF by distance to major waterway. People clearly preferred to live close to the water, as more than 70% of Late Woodland and Mississippian sites in the MCDF are within 400 m of a major waterway.

I calculated site density indices using only the Late Woodland and Mississippian sites that fell within the MCDF and HM surveyed areas. Five of eight intersected Late Woodland components in the MCDF are within 400 m of a major waterway, yielding a site density index of 6.9 (Table 2-13). The Late Woodland site density index for sites in the HM surveyed areas within 400 m of a major waterway is even higher, at 12.5 (Table 2-14). During the Mississippian period, people's preference for proximity to water was approximately the same as in the Late Woodland period, as the site density index for Mississippian sites within 400 m is 6.9 in the MCDF (Table 2-15) and 10.4 in the HM surveys (Table 2-16).

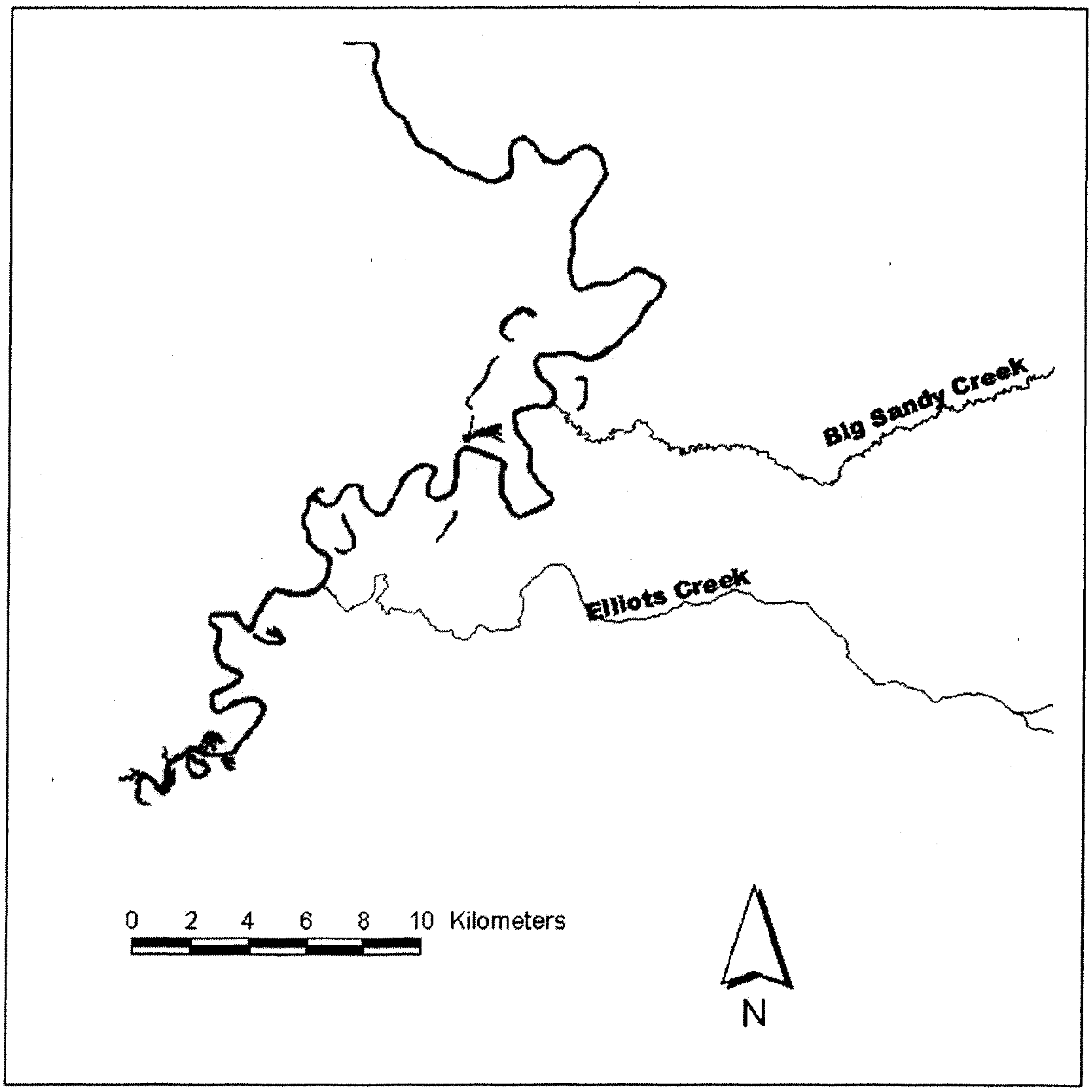


Figure 2-6 Major waterways in the study area.

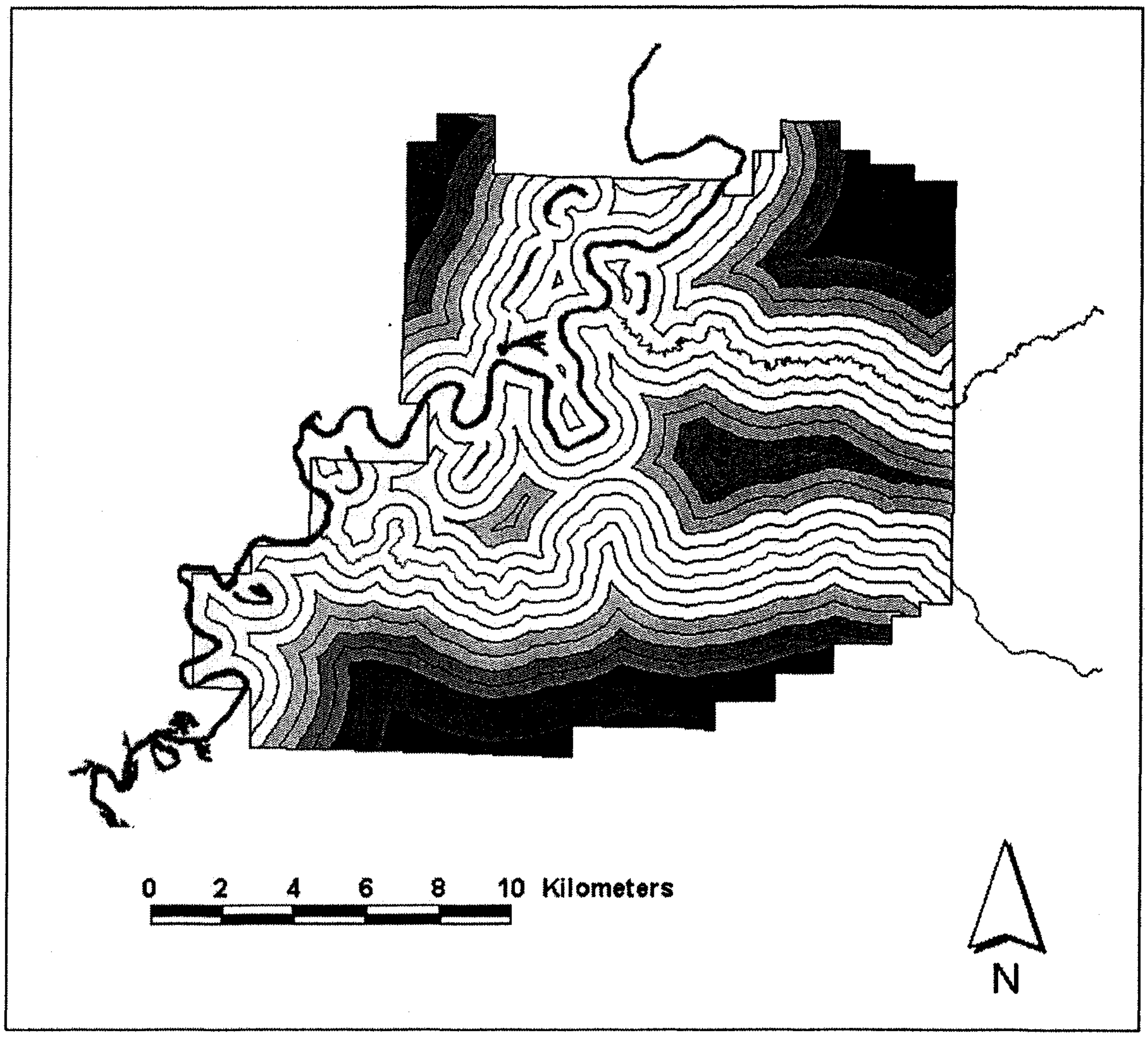


Figure 2-7 MCDF, 400 m intervals from major waterways.

Table 2-12 MCDF, sites stratified by distance to major waterways.

Distance to Major Waterway (m)	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
0-400	6593.5	65	65	4
400-800	4709.5	15	14	1
800-1200	3484.8	8	1	0
1200+	11666.1	7	4	1

Table 2-13 MCDF, Late Woodland site densities stratified by distance to major waterways.

Distance to Major Waterway (m)	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
0-400	72.3	5	6.9
400-800	51.8	1	1.9
800-1200	38.5	0	0.0
1200+	133.9	2	1.5

Table 2-14 HM survey, Late Woodland site densities stratified by distance to major waterways.

Distance to Major Waterway (m)	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
0-400	654.9	82	12.5
400-800	443.5	22	5.0
800-1200	168.9	8	4.7
1200+	119.7	1	0.8

Table 2-15 MCDF, Mississippian site densities stratified by distance to major waterways.

Distance to Major Waterway (m)	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
0-400	72.3	5	6.9
400-800	51.8	0	0.0
800-1200	38.5	0	0.0
1200+	133.9	0	0.0

Table 2-16 HM survey, Mississippian site densities stratified by distance to major waterways.

Distance to Major Waterway (m)	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
0-400	654.9	68	10.4
400-800	443.5	20	4.5
800-1200	168.9	3	1.8
1200+	119.7	0	0.0

Soil Zones.

There are five general soil units in the MCDF: Cahaba-Adaton-Ellisville, Bama-Smithdale-Shatta, Smithdale-Luverne-Maubila, Cahaba-Leaf-Alamuchee, and Lucedale-Greenville-Bama. As the compound names of each unit imply, these are generalized zones that include multiple soil series (Johnson 1981:5). The mapping scale for these soil units is 1:250,000; I use these soil units to understand the relationships between soil types and sites. Later in this section I examine the distribution of sites relative to the more precise county soil units, mapped at a 1:25,000 scale.

State soil zones. Of the five units in the MCDF, three units make up 95% of the field's area. These units correspond roughly to topographic zones; one unit represents the floodplain, while the other two are uplands soils.

Approximately 60% of the soils fall into the Cahaba-Adaton-Ellisville unit (Figure 2-8). The Cahaba-Adaton-Ellisville unit roughly corresponds to the USDA's Adaton-Ellisville-Dundee paper map unit. These soils are described as "deep, nearly level, poorly drained, well drained, and somewhat poorly drained soils that have a loamy subsoil; formed in fluvial deposits" (Johnson 1981:General Soil Map). The Cahaba-Adaton-Ellisville soils are the floodplain soils of the Black Warrior River and Big Sandy Creek. As the description indicates, this unit encompasses a wide range of soils with a diversity of drainage characteristics.

The second most plentiful soil unit is Smithdale-Luverne-Maubila, which comprises almost 23% of the MCDF. Smithdale-Luverne-Maublila corresponds to the USDA's

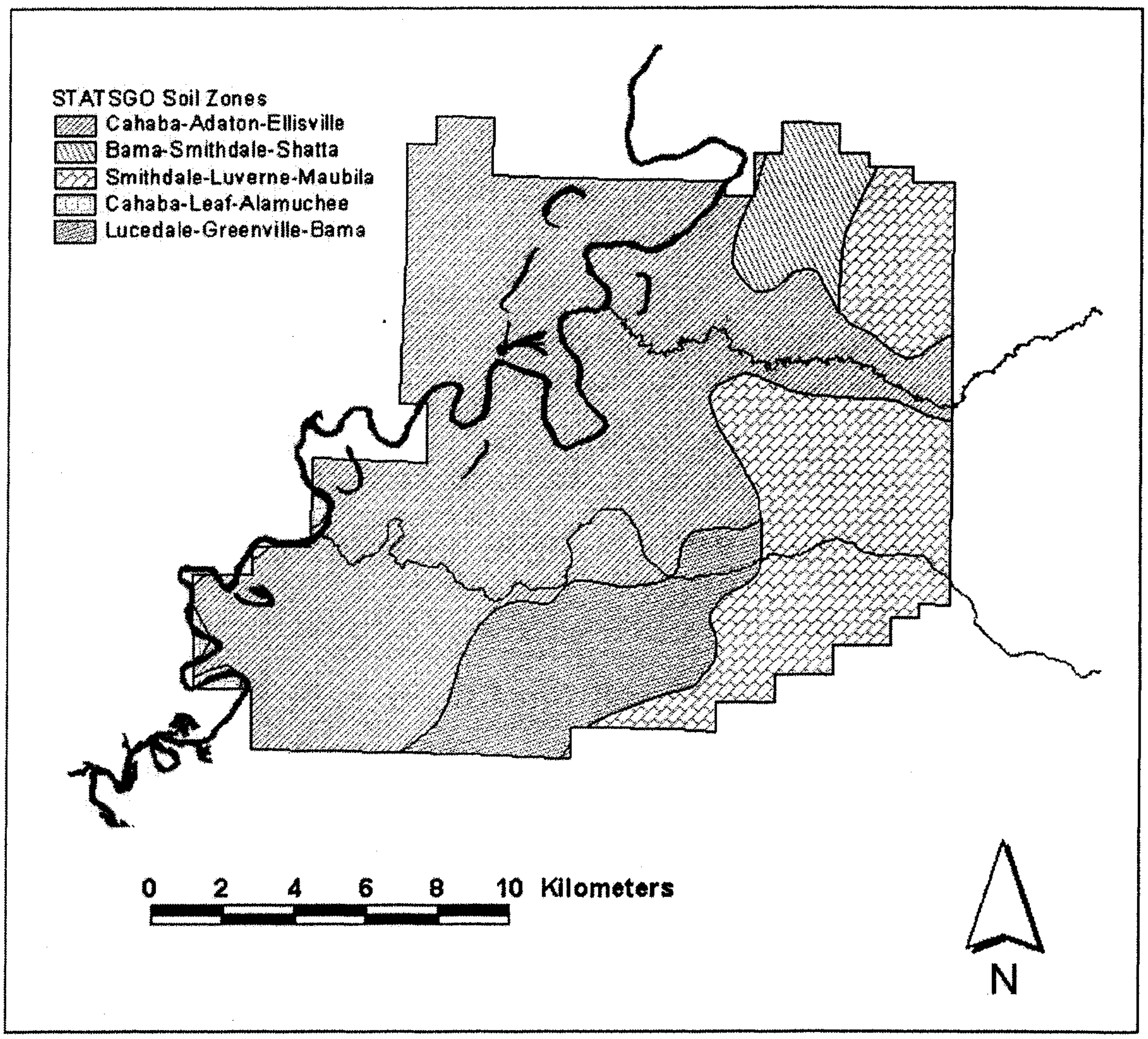


Figure 2-8 MCDF, STATSGO soil zones.

Smithdale-Luverne unit, described as "deep, sloping to steep, well drained soils that have a loamy or clayey subsoil; formed in marine sediments deposited as stratified sands, silts, and clays" (Johnson 1981:General Soil Map). Lucedale-Greenville-Bama soils make up almost 12% of the MCDF. The soils in this unit are deep, well drained, and moderately permeable, found in uplands or high stream or marine terraces (Soil Survey Division, Natural Resources Conservation Service [NRCS], United States Department of Agriculture [USDA], Official Soil Series Descriptions http://ortho.ftw.nrcs.usda.gov/osd/). The Bama-Smithdale-Shatta and Cahaba-Leaf-Alamuchee units comprise less than 5% and less than 1% of the MCDF, respectively. No Late Woodland or Mississippian sites are located in these units.

Table 2-17 shows the distribution of Late Woodland and Mississippian sites in the MCDF by general soil map units. During the Late Woodland period, people in the MCDF and the HM transects overwhelmingly preferred the Cahaba-Adaton-Ellisville unit (Table 2-18 and Table 2-19). All Late Woodland sites in these survey areas fall in this unit, yielding density indices of 5.2 in the MCDF and 8.2 in the HM area. The Late Woodland residents of the valley overwhelmingly preferred floodplain soils.

The same basic trend is maintained in the Mississippian period (Table 2-20 and Table 2-21), with a Cahaba-Adaton-Ellisville site density index of 2.6 in the MCDF and 6.6 in the HM transects. It is important to note that one of the five Mississippian sites in the MCDF is in the Lucedale-Greenville-Bama unit, yielding a density of 1.7. This map unit is found in uplands and high terraces and is not represented in the HM survey area. These

Table 2-17 MCDF, sites stratified by general soil map units.

Generalized Soil Map Unit	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Cahaba-Adaton-Ellisville	15993.6	87	77	6
Bama-Smithdale-Shatta	1228.9	0	1	0
Smithdale-Luverne-Maublia	6004.2	4	4	0
Cahaba-Leaf-Alamuchee	155.4	0	0	0
Lucedale-Greenville-Bama	3071.8	4	2	0

Table 2-18 MCDF, Late Woodland site densities stratified by general soil map units.

Generalized Soil Map Unit	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Cahaba-Adaton-Ellisville	154.9	8	5.2
Bama-Smithdale-Shatta	0.0	0	--
Smithdale-Luverne-Maublia	81.5	0	0.0
Cahaba-Leaf-Alamuchee	1.7	0	0.0
Lucedale-Greenville-Bama	58.5	0	0.0

Table 2-19 HM survey, Late Woodland site densities stratified by general soil map units.

Generalized Soil Map Unit	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Cahaba-Adaton-Ellisville	1373.9	113	8.2
Bama-Smithdale-Shatta	8.5	0	0.0
Smithdale-Luverne-Maublia	4.7	0	0.0
Cahaba-Leaf-Alamuchee	0.0	0	--
Lucedale-Greenville-Bama	0.0	0	--

Table 2-20 MCDF, Mississippian site densities stratified by general soil map units.

Generalized Soil Map Unit	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Cahaba-Adaton-Ellisville	154.9	4	2.6
Bama-Smithdale-Shatta	0.0	0	--
Smithdale-Luverne-Maublia	81.5	0	0.0
Cahaba-Leaf-Alamuchee	1.7	0	0.0
Lucedale-Greenville-Bama	58.5	1	1.7

Table 2-21 HM survey, Mississippian site densities stratified by general soil map units.

Generalized Soil Map Unit	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Cahaba-Adaton-Ellisville	1373.9	91	6.6
Bama-Smithdale-Shatta	8.5	0	0.0
Smithdale-Luverne-Maublia	4.7	0	0.0
Cahaba-Leaf-Alamuchee	0.0	0	--
Lucedale-Greenville-Bama	0.0	0	--

results suggest that factors other than soil productivity played a role in Mississippian site location, but the small number of sites intersected by well pads and the scale of these map units preclude any definitive conclusions about the relationships between soils and site locations. I now turn to the county soil map units to evaluate this relationship in great detail.

County soil zones. Figure 2-9 depicts the distribution of county soil survey units. I have not included a key on this figure, as there are 48 different map units that are virtually impossible to discern at the scale of the figure. Even without a key, it is obvious that the distribution of county soils is more diverse in uplands. Table 2-22 reports the number of Late Woodland and Mississippian sites found in each county soil unit. To ease interpretability and save space, I include only those soils on which sites were found; a complete list of all 48 county soil units in the MCDF can be found in Table C-1 in Appendix C.

The most abundant soil units in the MCDF are the Urbo-Moorville-Una complex (approximately 13%), Adaton silt loam (8%), Smithdale association (7%), Ellisville silt loam (6%), and Dundee silt loam (5%). Of these, all but the Smithdale association are floodplain soils. The Smithdale association is not listed in Table 2-22, as no sites in the MCDF have been recorded on these soils.

More sites in the MCDF are on Ellisville silt loam than any other soil unit. Thirty-two of 95 Late Woodland sites and 29 of 84 Mississippian sites are on Ellisville silt loam. Ellisville silt loam is deep, well-drained soil of high fertility found on floodplains and low terraces (Johnson 1981:20). The next most popular soil in the MCDF is Cahaba sandy

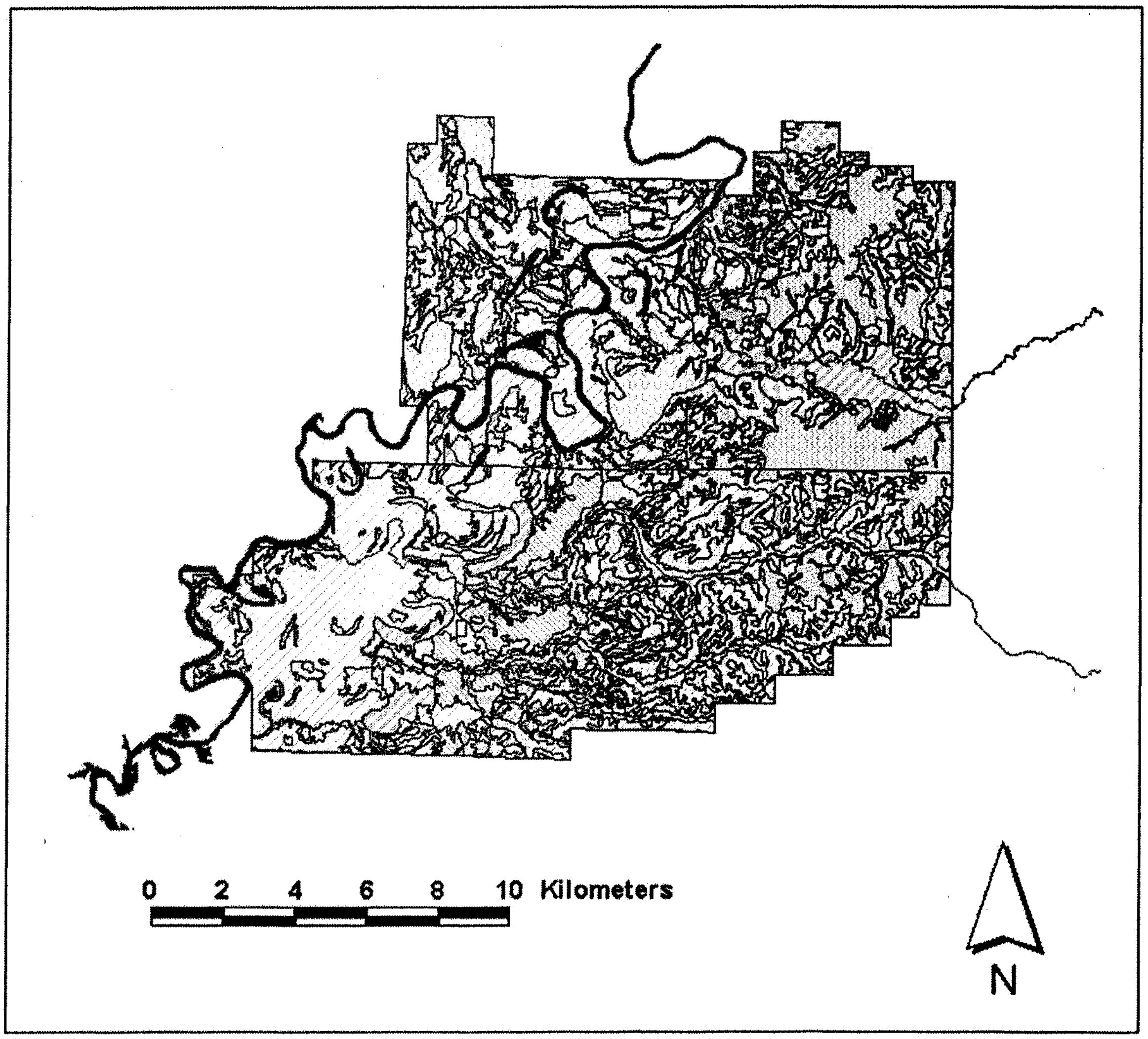


Figure 2-9 MCDF, county soil zones.

Table 2-22 MCDF, sites stratified by county soil series.

County Soil Series	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Tuscaloosa County				
Adaton silt loam	1995.6	2	3	0
Bama fine sandy loam, 0-2% slopes	453.4	0	1	0
Bama fine sandy loam, 2-6% slopes	626.5	2	0	1
Cahaba sandy loam	568.6	21	17	1
Choccolocco silt loam	593.6	10	7	1
Dundee silt loam	1283.9	2	0	0
Ellisville silt loam, frequently flooded	1460.5	32	29	0
Falkner silt loam	179.6	1	1	0
Iuka-Mantachie complex, frequently flooded	934.8	3	2	0
Pits	85.5	1	1	0
Ruston fine sandy loam, 0-2% slopes	63.1	0	1	0
Ruston fine sandy loam, 2-6% slopes	194.6	1	1	0
Shatta silt loam, 2-6% slopes	200.3	2	4	0
Smithdale fine sandy loam, 6-15% slopes	926.5	3	1	0
Hale County				
Bama fine sandy loam, 2-5% slopes	845.8	1	1	0
Cahaba fine sandy loam, 0-2% slopes	797.2	8	9	1
Cahaba fine sandy loam, 2-5% slopes, occasionally flooded	17.1	1	0	0

Table 2-22 MCDF, sites stratified by county soil series.

County Soil Series	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Guin soils (undifferentiated)	576.2	0	2	0
Mantachie-Iuka-Kinston soils, 0-1% slopes, frequently flooded	887.0	2	3	0
Mashulaville silt loam, ponded	100.8	1	0	0
Savannah fine sandy loam, 0-2% slopes	824.4	1	0	0
Savannah fine sandy loam, 2-5% slopes	472.0	1	0	1
Smithdale fine sandy loam, 5-15% slopes	822.5	0	0	1
Urbo-Moorville-Una complex, gently undulating, frequently flooded	3382.7	0	1	0

loam, with 30 Late Woodland sites and 28 Mississippian sites. Cahaba sandy loam is also deep and well-drained, found along large streams. Cahaba soils are low in natural fertility, but are used today for cultivated crops, particularly cotton (Johnson 1981:16). Choccolocco silt loam, with 10 Late Woodland sites and 8 Mississippian sites, ranks third in popularity. Choccolocco soils are deep and well-drained, located on high stream terraces. Fertility of Choccolocco soils is moderate, and like Ellisville and Cahaba soils, is well-suited to cultivated crops. These results mirror those of Hammerstedt's (2000:41) examination of the relationship between soils and site locations, where he found that sites in his study area were most often located on Ellisville silt loam, Choccolocco silt loam, and Cahaba sandy loam.

Table 2-23 and Table 2-24 present Late Woodland site density indices by county soil unit in the MCDF and HM survey areas respectively. Again, these tables only include those map units on which sites have been recorded (for a complete listing, see Table C-2 and Table C-3 in Appendix C). During the Late Woodland period, Ellisville silt loam, Choccolocco silt loam, Smithdale fine sandy loam, and Savannah fine sandy loam are the only soil units in the MCDF on which sites occur, with Ellisville being the most popular with a density index of 32.0. The density index for Choccolocco is 23.8, the index for Smithdale is 20.0, and the index for Savannah is 6.7.

Five of eight Late Woodland sites in the MCDF are located on the high to medium fertility Ellisville and Choccolocco silt loams of the floodplain and low stream terraces. The remaining three Late Woodland sites in the MCDF are on Smithdale and Savannah fine

Table 2-23 MCDF, Late Woodland site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Tuscaloosa County			
Choccolocco silt loam	4.2	1	23.8
Ellisville silt loam, frequently flooded	12.5	4	32.0
Smithdale fine sandy loam, 6-15% slopes	10.0	2	20.0
Hale County			
Savannah fine sandy loam, 0-2% slopes	15.0	1	6.7

Table 2-24 HM survey, Late Woodland site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Tuscaloosa County			
Adaton silt loam	166.8	1	0.6
Bama fine sandy loam, 2-6% slopes	14.9	1	6.7
Cahaba sandy loam	125.5	23	18.3
Choccolocco silt loam	301.6	34	11.3
Dundee silt loam	211.0	5	2.4
Ellisville silt loam, frequently flooded	421.6	47	11.1
Iuka-Mantachie complex, frequently flooded	19.5	1	5.1
Smithdale fine sandy loam, 6-15% slopes	28.5	1	3.5

sandy loams. Smithdale fine sandy loam is found on ridgetops and side slopes in the uplands. Much of this soil unit is now in woodlands, but some areas are cleared and under cultivation. Smithdale fine sandy loam is "fairly suited to cultivated crops," but "terraces, minimum tillage, and the use of cover crops" are recommended to control erosion and runoff (Johnson 1981:30). Savannah soils are found on fluvial terraces and in the uplands. These soils are moderately well drained and are used today for growing cotton, corn, soybeans, and small grains (Soil Survey Division, NRCS, USDA, Official Soil Series Descriptions, http://ortho.ftw.nrcs.usda.gov/osd/dat/S/SAVANNAH.html). Smithdale and Savannah soils are not the most fertile in the valley, but they are cultivable. Other factors must have come into play for the people who chose to live on these soils. But in the HM survey area, the fertile floodplain Cahaba, Choccolocco, and Ellisville triumvirate of soils have the largest number of Late Woodland sites in the HM area, with densities of 18.3, 11.3, and 11.1 respectively.

During the Mississippian period, Choccolocco silt loam, Ellisville silt loam, and Mantachie-Iuka-Kinston soils were the most popular in the MCDF, with site density indices of 23.8, 16.0, and 13.3 (Table 2-25). Soils in the Mantachie series are poorly drained soils found on alluvial floodplains and are thus subject to frequent flooding. Mantachie soils in the MCDF are located along Elliots Creek, Millians Creek, and Gabriel Creek in Hale County. Many areas in the Mantachie series are now under cultivation, though some are in bottomland hardwoods (Soil Survey Division, NRCS, USDA, Official Soil Series Descriptions, http://ortho.ftw.nrcs.usda.gov/osd/dat/M/MANTACHIE.html). People probably built homes on Mantachie soils to be close to water routes, but given the frequent nature of flooding, these sites may have been seasonal.

Table 2-25 MCDF, Mississippian site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Tuscaloosa County			
Choccolocco silt loam	4.2	1	23.8
Ellisville silt loam, frequently flooded	12.5	2	16.0
Hale County			
Mantachie-Iuka-Kinston soils, 0-1% slopes, frequently flooded	7.5	1	13.3
Urbo-Moorville-Una complex, gently undulating, frequently flooded	48.5	1	2.1

Table 2-26 HM survey, Mississippian site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Tuscaloosa County			
Adaton silt loam	166.8	2	1.2
Cahaba sandy loam	125.5	20	15.9
Choccolocco silt loam	301.6	30	9.9
Dundee silt loam	211.0	3	1.4
Ellisville silt loam, frequently flooded	421.6	33	7.8
Iuka-Mantachie complex, frequently flooded	19.5	1	5.1
Shatta silt loam, 2-6% slopes	8.3	1	12.0
Smithdale fine sandy loam, 6-15% slopes	28.5	1	3.5
Smithdale-Luverne complex, 15-35% slopes	2.3	0	0.0

In the HM survey area, people preferred to live on Cahaba sandy loam (15.9), Shatta silt loam (12.0), Choccolocco silt loam (9.9), and Ellisville silt loam (7.8) during the Mississippian period (Table 2-26 and Table C-5). Shatta silt loam, two to six percent slopes, are deep and moderately well drained, frequently occurring on slopes of high terraces and upland plateaus. Shatta silt loam is low in natural fertility but is well suited to cultivation if crop residue is returned to the soil to maintain tilth and if runoff and erosion are controlled (Johnson 1981:28). The site located in Shatta silt loam in the HM surveyed area is on a terrace near Big Sandy Creek. People probably chose this area to settle for its proximity to water and to other sites in the Hull Lake cluster.

Geologic Zones.

I also stratified sites by geologic formation (Figure 2-10). Four zones are represented in the MCDF: alluvial, coastal, and low terrace deposits; Coker Formation; Eutaw Formation; and Gordo Formation. These geologic formations roughly correspond to elevation, as the alluvial, coastal, and low terrace zone make up the floodplain, while the Coker, Gordo, and Eutaw Formations are upland zones. The Coker and Gordo Formations are part of the Upper Cretaceous Tuscaloosa Group. The Eutaw Formation also dates to the Upper Cretaceous but is much younger than the formations in the Tuscaloosa Group. Only 22 hectares of the MCDF fall into the Eutaw Formation, and none of the surveyed well pad areas are in this group.

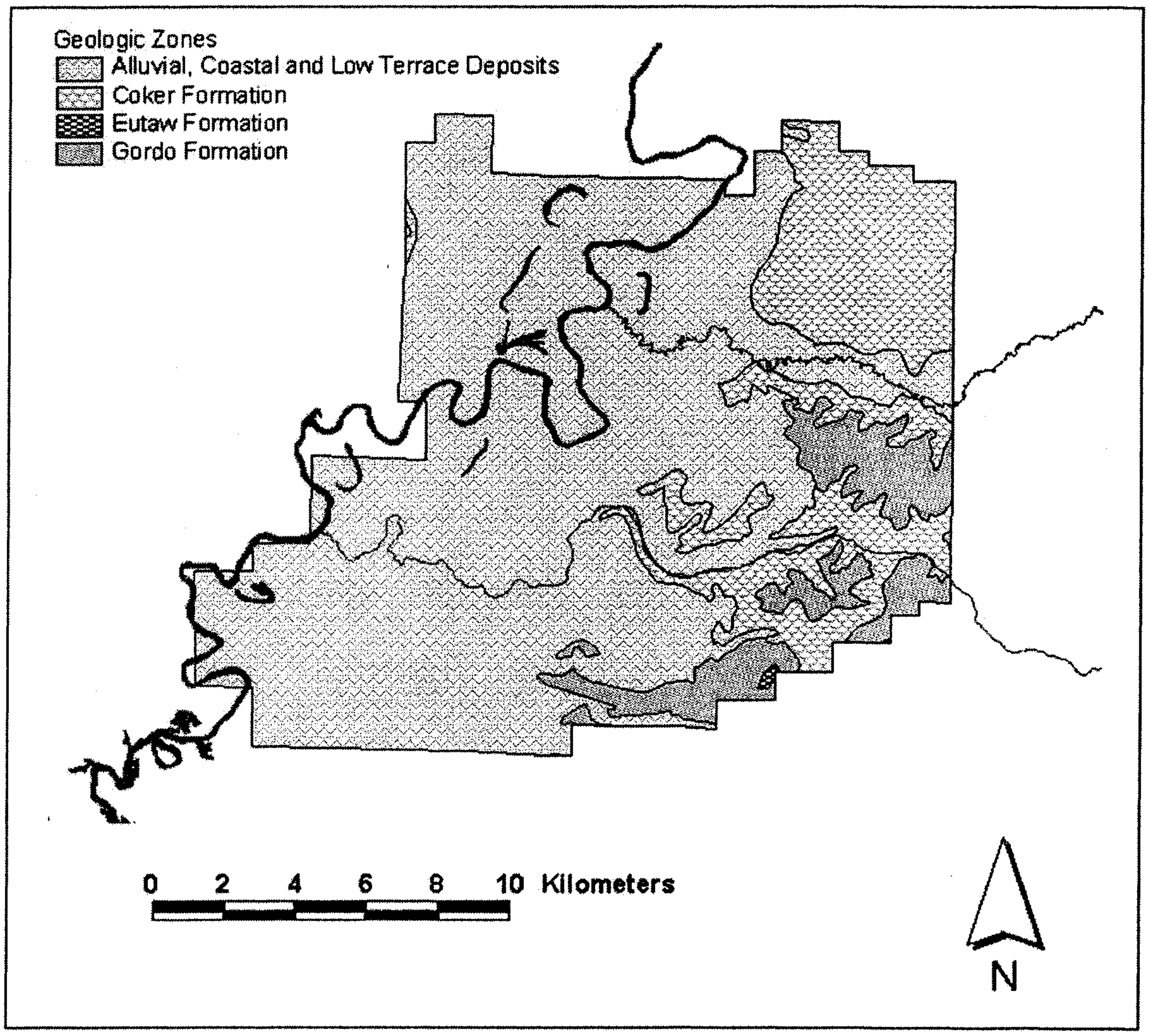


Figure 2-10 MCDF, geologic zones.

These formations bear some resemblance to the general soil units, as the alluvial, coastal, and low terrace deposits fall into the Cahaba-Adaton-Ellisville and Lucedale-Greenville-Bama units. The Coker Formation includes Bama-Smithdale-Shatta and Smithdale-Luverne-Maubila soils. The Gordo Formation includes Smithdale-Luverne-Maubila and Lucedale-Greenville-Bama.

Not surprisingly, most Late Woodland and Mississippian sites are located in the alluvial, coastal, and low terrace deposits (Table 2-27). All of the sites in both the gas well (Table 2-28 and Table 2-30) and Myer-Hammerstedt (Table 2-29 and Table 2-31) surveyed areas fall into this stratum. Because most surveyed well pads are in the Coker and Gordo Formations, this indicates a real preference for alluvial and terrace zones, and is not an artifact of sampling bias.

Distance to Single-Mound Sites.

Thus far, all of the factors I have considered that may have influenced site location are environmental. I move now to social factors, first looking at distance to single-mound centers. Archaeologists assume that single-mound sites are places where lesser elites lived, and that these sites served as district centers for administrative and religious activities. Did people in the countryside want to live near these centers or did they live away from these centers to maintain more autonomy?

Table 2-27 MCDF, sites stratified by geologic formation.

Geologic Formation	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Alluvial, Coastal and Low Terrace Deposits	19192.5	91	81	6
Coker	5053.9	4	2	0
Eutaw	21.5	0	0	0
Gordo	2186.0	0	1	0

Table 2-28 MCDF, Late Woodland site densities stratified by geologic formation.

Geologic Formation	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Alluvial, Coastal and Low Terrace Deposits	205.7	8	3.9
Coker	58.5	0	0.0
Eutaw	0.0	0	--
Gordo	34.3	0	0.0

Table 2-29 HM survey, Late Woodland site densities stratified by geologic formation.

Geologic Formation	Surveyed Area (ha)	Late Woodland Components	Late Woodland Density
Alluvial, Coastal and Low Terrace Deposits	1386.2	113	8.2
Coker	0.8	0	0.0
Eutaw	0.0	0	--
Gordo	0.0	0	--

Table 2-30 MCDF, Mississippian Site densities stratified by geologic formation.

Geologic Formation	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Alluvial, Coastal and Low Terrace Deposits	205.7	5	2.4
Coker	58.5	0	0.0
Eutaw	0.0	0	--
Gordo	34.3	0	0.0

Table 2-31 HM survey, Mississippian site densities stratified by geologic formation.

Geologic Formation	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Alluvial, Coastal and Low Terrace Deposits	1386.2	91	6.6
Coker	0.8	0	0.0
Eutaw	0.0	0	--
Gordo	0.0	0	--

The mounds at these single-mound sites in the Black Warrior Valley were built during the Mississippian period. It immediately makes sense to compare the locations of Mississippian nonmound sites relative to these mound sites, but one might choose not to look at the locations of Late Woodland sites relative to mound sites, since the mounds and Late Woodland nonmound sites are not contemporaneous. I decided, however, to look at the distribution of Late Woodland sites relative to single-mound sites to get a sense of whether the area immediately around where mounds were later built had high population densities prior to the Mississippian period and therefore may have held some importance during the Late Woodland period.

There are six single-mound sites in the MCDF and five in the HM survey transects. These totals include Moundville, which was a single-mound site early in the polity's history. Following Myer, I constructed buffers at 1-km intervals around each mound (Figure 2-11). There is no special significance to the length of the interval; one-kilometer intervals are a good compromise between precision and interpretability. I included mounds outside of the MCDF boundaries when constructing buffers, as some areas in the MCDF are closer to mounds outside the field than mounds inside the field's boundaries.

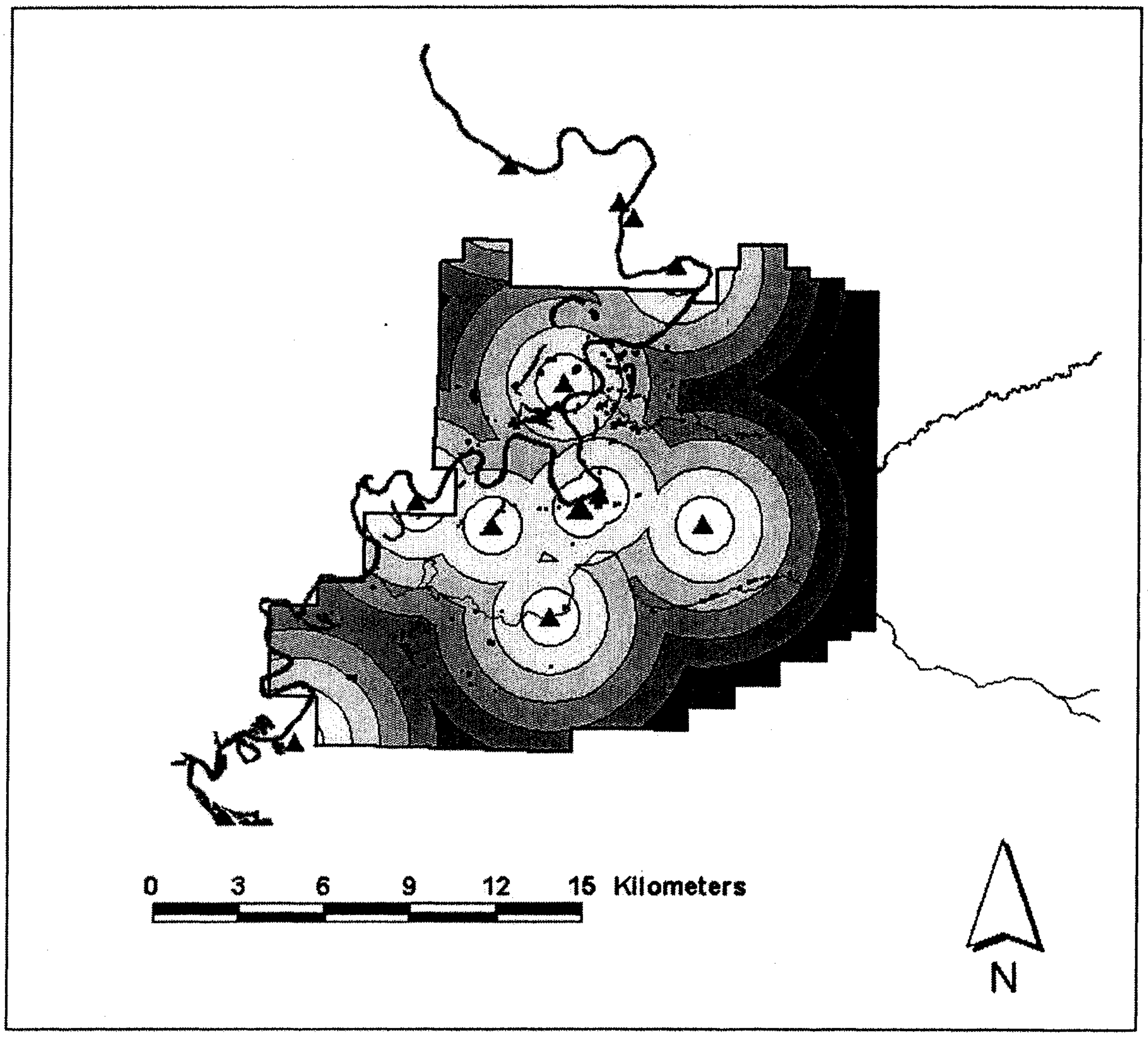


Figure 2-11 MCDF, 1 km intervals from single-mound sites.

In the MCDF, most Late Woodland sites (84%) and Mississippian nonmound sites (85%) are within 3 km of a mound (Table 2-32). During the Late Woodland period, the site densities in the 0-1 km, 1-2 km, and 2-3 km intervals in the MCDF—5.20 , 6.30, and 5.36, respectively—are comparable (Table 2-33). In the HM surveys, however, the site density in the 0-1 km interval (15.02) is more than twice the densities of the 1-2 km (6.62) and 2-3 km (6.89) intervals (Table 2-34). It would be reasonable to conclude that these (pre)mound spaces were important during the Late Woodland period.

This finding has some bearing on theories about the rise of the Moundville chiefdom, particularly the debate as to whether the chiefdom developed internally or was the product of outsiders who migrated into the valley. The results here support to the first of these theories, that mounds were constructed by residents of the valley in places that were easily accessible to them. It seems less likely, though certainly not impossible, that outsiders would plant themselves in the middle of existing populations and smoothly institute a new political and religious order (but see Jenkins 2003).

During the Mississippian period, there are no sites in the MCDF within 1 km of a mound site (Table 2-35). Most Mississippian sites are located between 1 and 3 km of a mound. But in the HM region (Table 2-36), almost half (49%) of Mississippian sites are located between 0 and 1 km of a mound, yielding a site density index of 13.51 for that interval. There are no sites in the HM surveyed areas beyond 5 km. Based on the MCDF data alone, one might think that people preferred to put a little distance, one to three kilometers, between themselves and a mound. But in the MCDF, there are only 19 hectares

Table 2-32 MCDF, sites stratified by distance to single-mound sites.

Distance to Mound (km)	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components
0-1	1707.5	18	17
1-2	4604.1	36	27
2-3	4619.6	26	27
3-4	4368.8	9	5
4-5	3839.7	4	7
5-6	3045.1	2	1
6+	4268.9	0	0

Table 2-33 MCDF, Late Woodland site densities stratified by distance to single-mound sites.

Distance to Mound (km)	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
0-1	19.2	1	5.2
1-2	47.7	3	6.3
2-3	56.0	3	5.4
3-4	50.2	1	2.0
4-5	51.0	0	0.0
5-6	38.5	0	0.0
6+	74.4	0	0.0

Table 2-34 HM survey, Late Woodland site densities stratified by distance to single-mound sites.

Distance to Mound (km)	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
0-1	333.0	50	15.0
1-2	589.5	39	6.6
2-3	333.7	23	6.9
3-4	102.2	1	1.0
4-5	27.8	0	0.0
5-6	0.9	0	0.0

Table 2-35 MCDF, Mississippian site densities stratified by distance to single-mound sites.

Distance to Mound (km)	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
0-1	19.2	0	0.0
1-2	47.7	2	4.2
2-3	56.0	2	3.6
3-4	50.2	0	0.0
4-5	51.0	1	2.0
5-6	38.5	0	0.0
6+	74.4	0	0.0

Table 2-36 HM survey, Mississippian site densities stratified by distance to single-mound sites.

Distance to Mound (km)	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
0-1	333.0	45	13.5
1-2	589.5	27	4.6
2-3	333.7	16	4.8
3-4	102.2	2	2.0
4-5	27.8	1	3.6
5-6	0.9	0	0.0

of surveyed area within one kilometer of a mound. I would thus place more weight on the HM data, which show that people preferred being within one kilometer and no more than three kilometers from a mound.

Being close to a mound made it easier and quicker for the valley's residents to travel there for political, religious, and social activities. Proximity to a mound may have given people a feeling of protection and a sense of community, and residents of the valley may have identified themselves through membership in a mound district, what archaeologists in the past have called towns. District or town membership likely figured prominently in one's identity, as these neighbors were the people interacted with most frequently beyond the household and extended family. I discuss this sense of community at length in Chapter 5 when I examine the ways in which neighbors formed and reinforced bonds with one another.

Distance to Moundville.

I next consider distance to Moundville, the valley's paramount center during the Mississippian period. Following Myer (2002), I constructed 2 km buffers around Moundville (Figure 2-12). Myer (2002:49) found larger intervals masked variation in density indices; two-kilometer intervals allow pattern recognition. As above, I consider both Late Woodland and Mississippian sites (Table 2-37). In the MCDF, the trend in both periods is roughly the same, with most people living between two and six kilometers from Moundville, most of those between four and six kilometers.

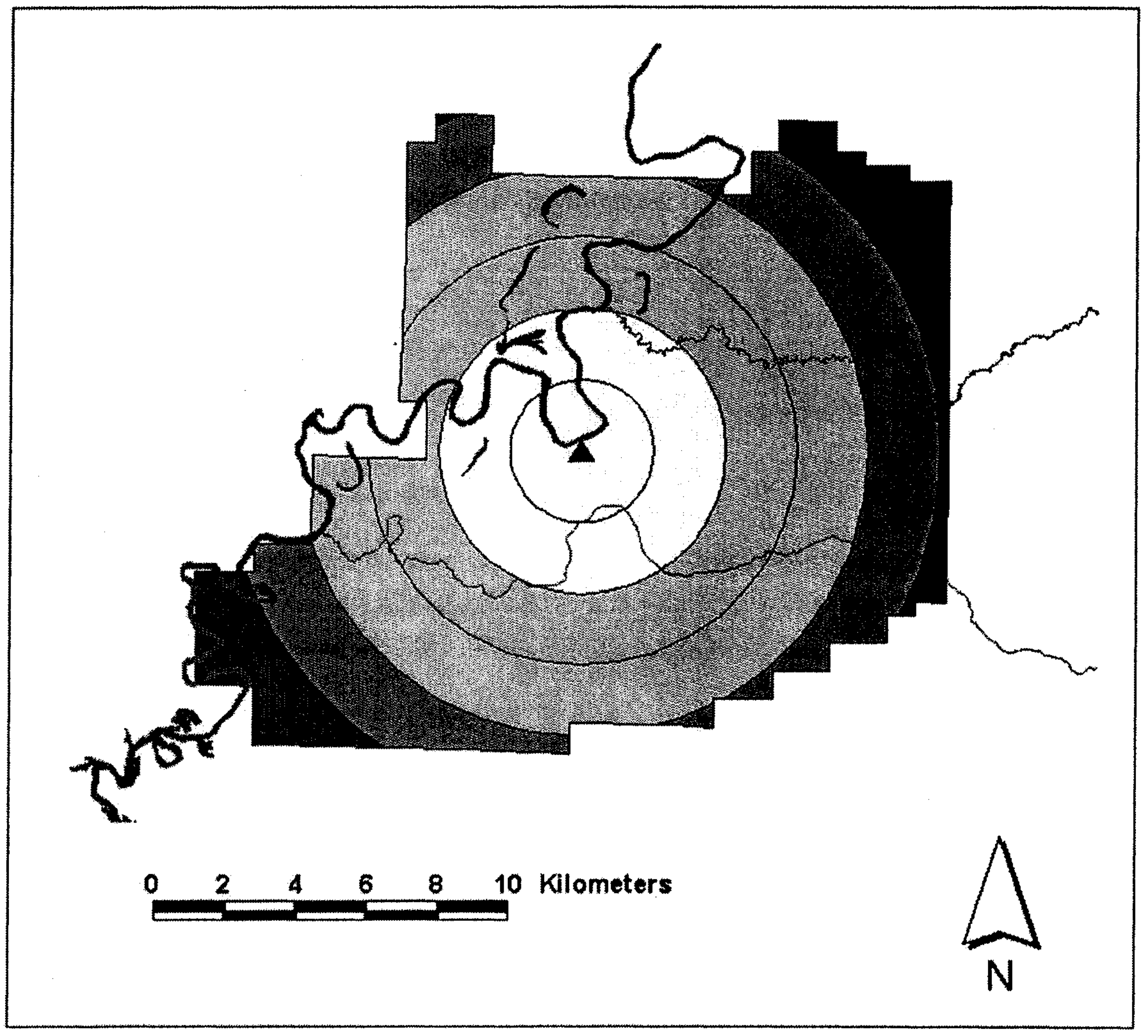


Figure 2-12 MCDF, 2 km intervals from Moundville.

Table 2-37 MCDF, sites stratified by distance to Moundville.

Distance to Moundville (km)	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
0-2	1250.3	11	6	1
2-4	3750.8	26	22	2
4-6	5921.0	44	44	2
6-8	7428.7	12	7	0
8-10	5418.5	2	5	0
10+	2684.6	0	0	0

The site density estimates help refine this observed trend. During the Late Woodland period, the biggest surprise is the large site density index—21.75—for the 0-2 kilometer interval in the MCDF (Table 2-38). This number can be interpreted in two ways. One, this index may reflect the importance of the area immediately around Moundville before Moundville became the polity's capital. Two, this number may not reflect reality, but rather the chance intersection of two Late Woodland sites in a small surveyed area. This second explanation seems the most likely, as the site density index for the same interval in the HM surveyed area (Table 2-39) is considerably lower—3.94.

Because the HM transects extend farther north than the MCDF, the HM site density indices speak to population beyond ten kilometers from Moundville. During the Late Woodland period, there is a spike at 2-6 kilometers from Moundville, as in the MCDF, and a second spike at 10-14 kilometers from Moundville (Table 2-39). The highest indices are at 4-6 kilometers and 10-12 kilometers. Obviously, the gap between six and ten kilometers is largely due to the gap in the two HM transects. There seems to be no relationship between the location of the Moundville site and pre-Moundville Late Woodland sites.

Interestingly, the same pattern holds for the Mississippian period. In the MCDF, the site density index peaks at the 4-6 kilometer intervals (Table 2-40), and in the HM transects, there are again spikes at 4-6 kilometers and 10-12 kilometers (Table 2-41). Did people deliberately choose not to live near Moundville?

I suggest that the distance to Moundville site density indices can be interpreted by again considering distance to single-mound sites. Proximity to single-mound sites was important to people when they decided where to live, not proximity to Moundville. This

Table 2-38 MCDF, Late Woodland site densities stratified by distance to Moundville.

Distance to Moundville (km)	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
0-2	9.2	2	21.7
2-4	43.5	1	2.3
4-6	67.7	4	5.9
6-8	81.9	1	1.2
8+	96.1	0	0.0

Table 2-39 HM survey, Late Woodland site densities stratified by distance to Moundville.

Distance to Moundville (km)	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
0-2	177.6	7	3.9
2-4	347.1	24	6.9
4-6	256.4	27	10.5
6-8	35.8	1	2.8
8-10	0.0	0	--
10-12	254.8	36	14.1
12-14	181.1	13	7.2
14-16	134.3	5	3.7

Table 2-40 MCDF, Mississippian site densities stratified by distance to Moundville.

Distance to Moundville (km)	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
0-2	9.2	0	0.0
2-4	43.5	1	2.3
4-6	67.7	3	4.4
6-8	81.9	0	0.0
8-10	77.7	1	1.3
10+	18.4	0	0.0

Table 2-41 HM survey, Mississippian site densities stratified by distance to Moundville.

Distance to Moundville (km)	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
0-2	177.6	4	2.3
2-4	347.1	20	5.8
4-6	256.4	28	10.9
6-8	35.8	0	0.0
8-10	0.0	0	--
10-12	254.8	28	11.0
12-14	181.1	9	5.0
14-16	134.3	2	1.5

may correspond to the interpretation of Moundville as a vacant ceremonial center after AD 1330. People did not live near Moundville, and perhaps most people did not even travel to Moundville on a regular basis. Single-mound sites may have played a larger role in people's day-to-day lives, perhaps hosting political, religious, and social events that people regularly attended.

Distance to nonmound sites.

The final social feature I consider is distance between nonmound sites. I measure the relative distance between sites to assess the importance people placed on living near each other. I define four buffers at 0.25 kilometer intervals around each site in the MCDF and the HM transects, creating separate maps for the Late Woodland (Figure 2-13 and Figure 2-14) and Mississippian periods (Figure 2-15 and Figure 2-16). Sites that are in the same first buffer zone are 0-0.5 kilometer apart; sites in the second buffer are 0.5-1 kilometer apart; sites in the third are 1-1.5 kilometers apart; and sites in the fourth buffer are 1.5-2 kilometers apart., Any site whose buffer zones do not overlap with those of another site is more than two kilometers from its nearest neighbor.

Eighty-five out of 95 Late Woodland sites in the MCDF are less than one kilometer from another site (Table 2-42). Only two sites are more than two kilometers from another site. One hundred twenty-six of 130 Late Woodland sites in the HM transects are less than one kilometer from another site; none are more than two kilometers from another site. In the combined HM-MCDF transects, 82% of Late Woodland sites are within 0.5 kilometers of another site; 93% are within one kilometer. The nearest neighbor R value for Late Woodland

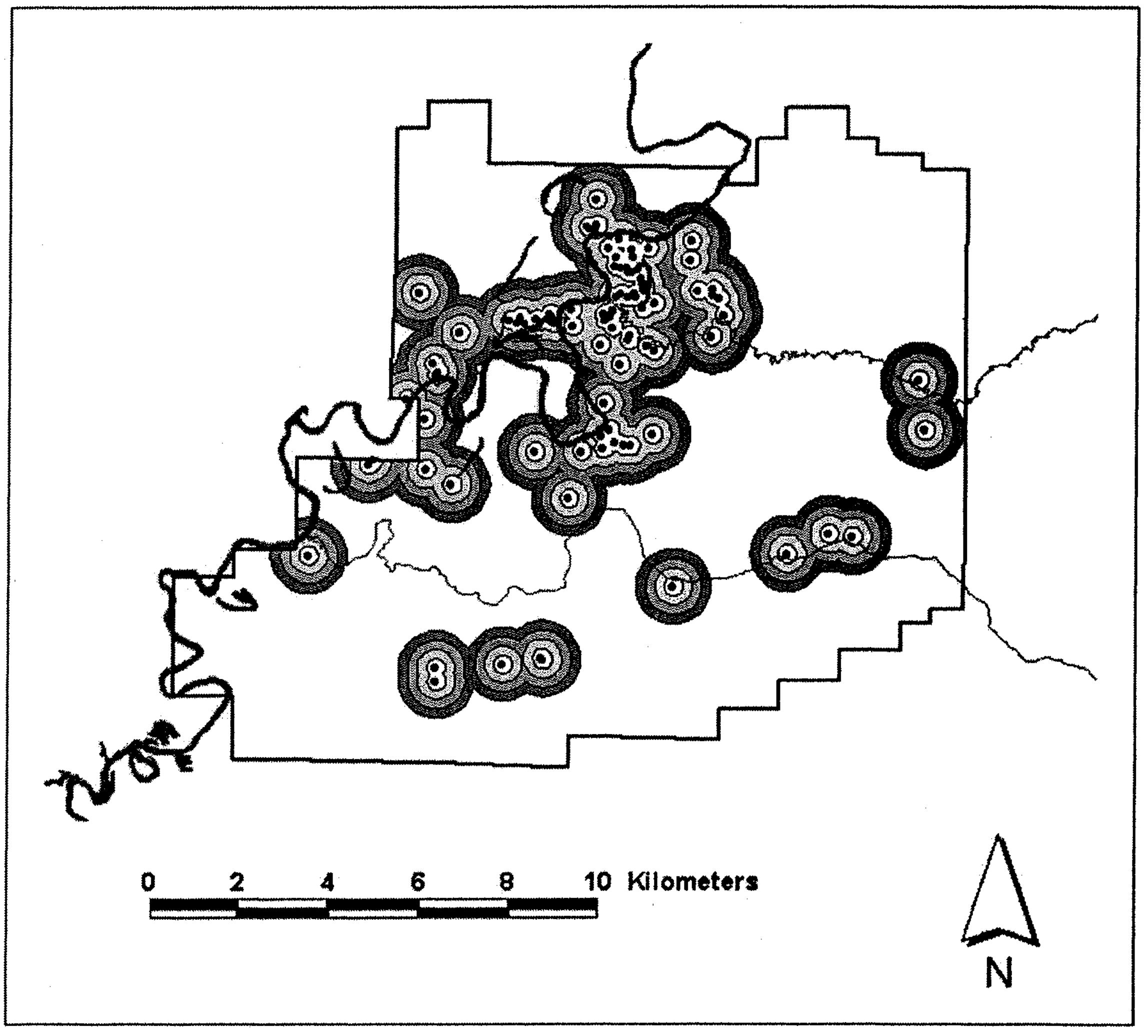


Figure 2-13 MCDF, 0.25 km buffers around Late Woodland sites.

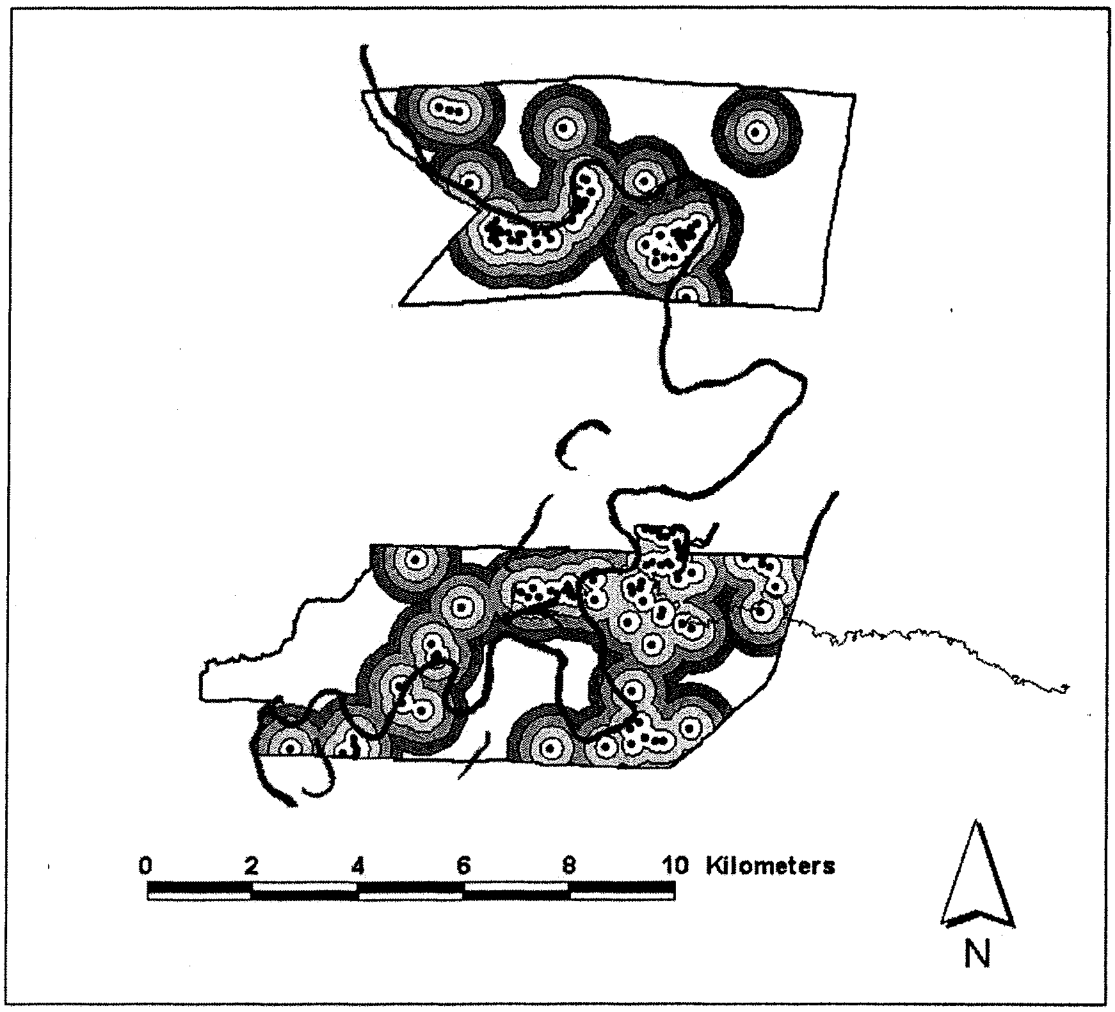


Figure 2-14 HM, 0.25 km buffers around Late Woodland sites.

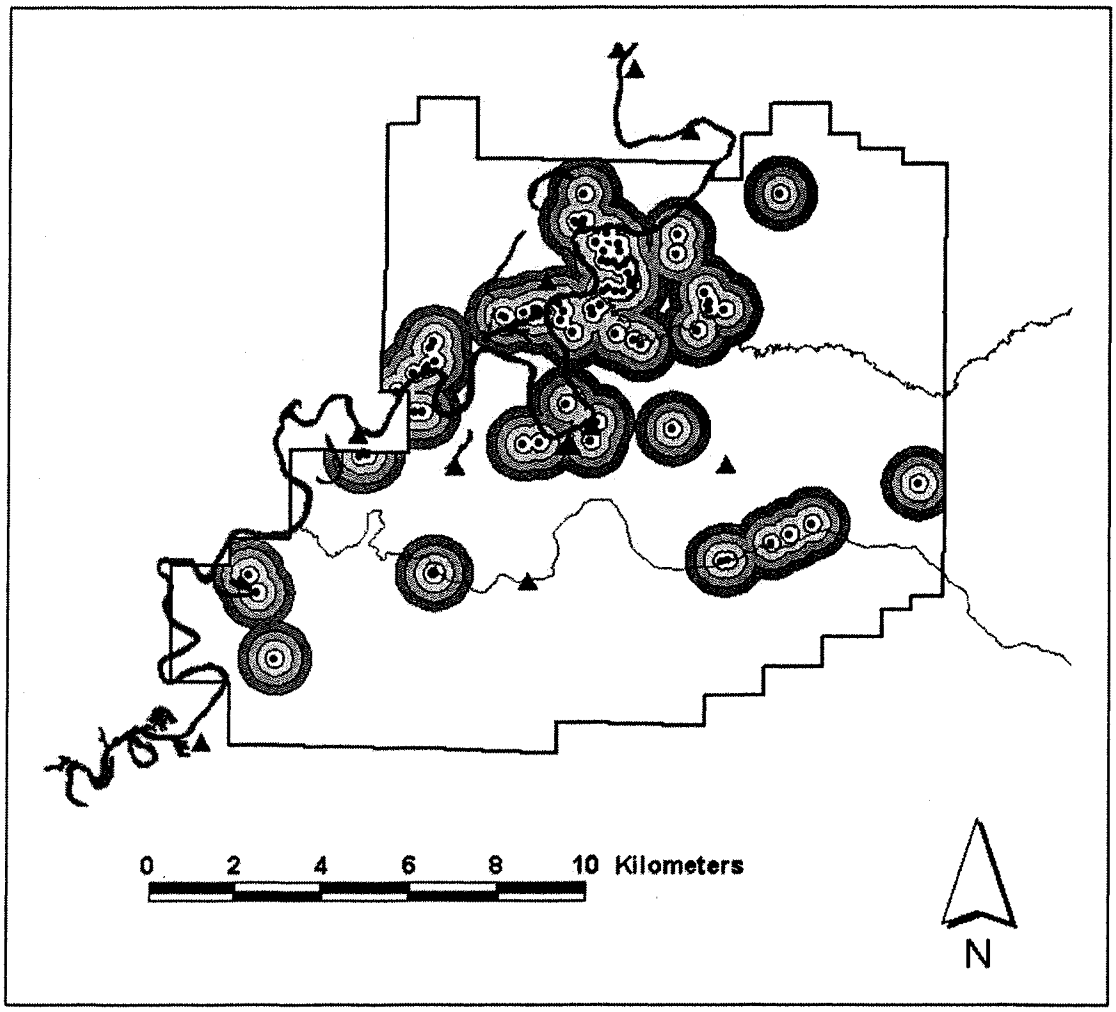


Figure 2-15 MCDF, 0.25 km buffers around Mississippian nonmound sites.

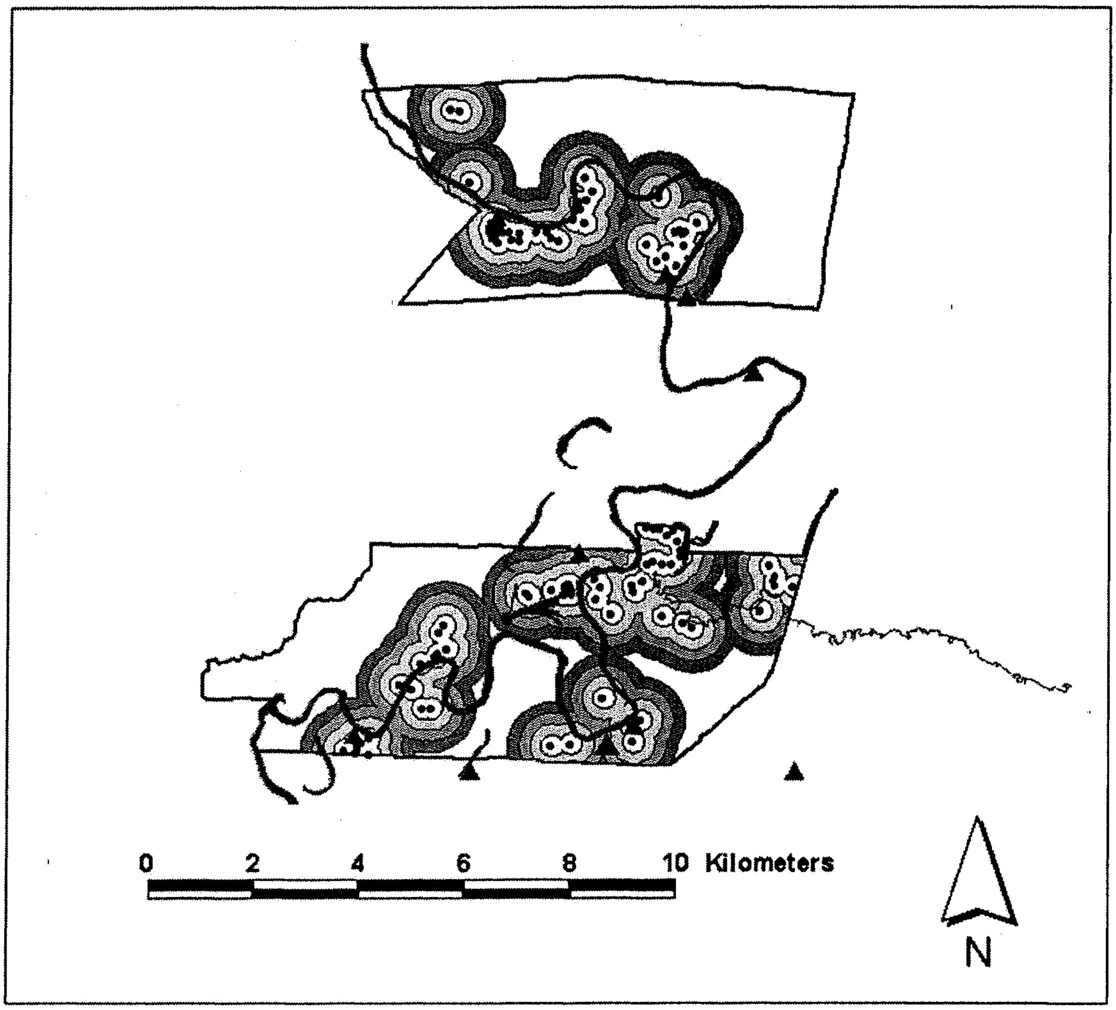


Figure 2-16 HM, 0.25 km buffers around Mississippian nonmound sites.

Table 2-42 West Jefferson sites, distance to nearest nonmound site.

Distance to Nearest Nonmound Site (km)	MCDF	HM	Combined HM-MCDF
0-0.5	72	115	131
0.5-1	13	11	18
1-1.5	7	3	8
1.5-2	1	1	1
2+	2	0	2

Table 2-43 Mississippian nonmound sites, distance to nearest nonmound site.

Distance to Nearest Nonmound Site (km)	MCDF	HM	Combined HM-MCDF
0-0.5	67	100	116
0.5-1	10	4	11
1-1.5	3	1	4
1.5-2	1	0	1
2+	3	0	3

sites in the combined HM-MDDF is 4.8 x 10^{-6}, a value very close to 0, indicating a strong tendency toward nonrandom distribution. One interpretation is that Late Woodland residents of the valley preferred to live near each other in clusters that likely constituted communities. One could also argue that by conflating the entire Late Woodland period, we are actually observing the movement of individual households through time rather than multiple contemporaneous households.

During the Mississippian period, 77 of 84 nonmound sites in the MCDF are less than one kilometer from another nonmound site; only three are more than two kilometers from their nearest neighbors (Table 2-43). In the HM transects, 104 out of 105 Mississippian sites are less than a kilometer from another site. People's preference for living close to one another is as strong or stronger in the Mississippian period as it is in the Late Woodland period, with approximately 86% of sites in the combined HM-MCDF transects within 0.5 kilometers of another site, and 94% of sites within one kilometer. The nearest neighbor statistic for Mississippian sites in the combined transects is 4.2 x 10^{-6}. Again, it is clear that Mississippian sites are not distributed randomly and that people chose to live in clusters or communities.

To this point, I have not addressed those nonmound sites that were not part of site clusters. These sites were certainly the exception in the combined HM-MCDF transects, but their numbers are not insignificant—6-7% of Late Woodland and Mississippian sites are more than 1 kilometer from another site. I suspect, however, that some of these sites actually were part of communities. Several of the seemingly isolated sites are significantly larger than most sites. This suggests that more people lived in these locales, whether or not each isolated site was one large site or multiple smaller ones. But some sites probably were isolated, likely for a combination of social (or antisocial) and environmental reasons.

I must also issue a caution that not all archaeological sites within a period are contemporaneous. The Late Woodland and Mississippian periods span hundreds of years, and it is not unlikely that my theoretical towns or communities could prove to be groups of sites that are completely unrelated in time. I find the argument for clusters elegant both in social and environmental terms, but it is one I expect to revise as we learn more about the phases these sites date to and what their relationships are to the mounds around them.

SUMMARY

In this chapter, I have explored four environmental and three social factors that influenced the decisions people made about where to live during the Late Woodland and Mississippian periods in the Black Warrior Valley. All were not equally important, and people did not make the same decisions about their relative value. Nevertheless, there are settlement trends, and some environmental and social features were clearly more significant than others. I summarize these trends here.

There was remarkable continuity in land-use patterns from the Late Woodland period through the Mississippian period (see also Hammerstedt 2000). In both the periods, people preferred to live on the floodplain and low terraces of major waterways, and more specifically, on the deepest, well-drained soils in alluvial and terrace deposits. Proximity to water seems to have been the most important factor, but people tempered this decision by avoiding frequently flooded soils. People did not necessarily live on the most fertile soils, often choosing less fertile soils if they were well-drained. These soils were arable, though probably not as productive.

There were only very slight differences in where people lived in the Late Woodland and Mississippian periods. In the Mississippian period, there were a few more sites on poorly drained soils on low terraces, and there were fewer sites in the uplands. This suggests that people considered factors other than environmental ones. In the Mississippian period, there was a pull toward single-mound sites, and this pull may have sometimes outweighed the desire to stay away from more frequently flooded soils.

People seem to have lived closer to one another in the Mississippian period, and following Hammerstedt and Myer (Hammerstedt 2000; Myer 2002), I have suggested that these clusters correspond to communities or districts, some of which were centered on single-mound sites (Figure 2-17). It appears that these Mississippian communities developed from communities of the Late Woodland period. I would characterize these communities as geographically loose—and probably mobile—but their persistence through time indicates that they were socially cohesive. People do not live close together without negotiating the use of space around them.

Why would Late Woodland and Mississippian people in the valley live in clusters? For social reasons or environmental ones? As I have demonstrated, people did not make their decisions about where to live based on any one factor. People took into account the distance to the nearest river, the ease of working the soil, how close the nearest mound was, how close their relatives were, etc. They also considered where their mothers and mothers'

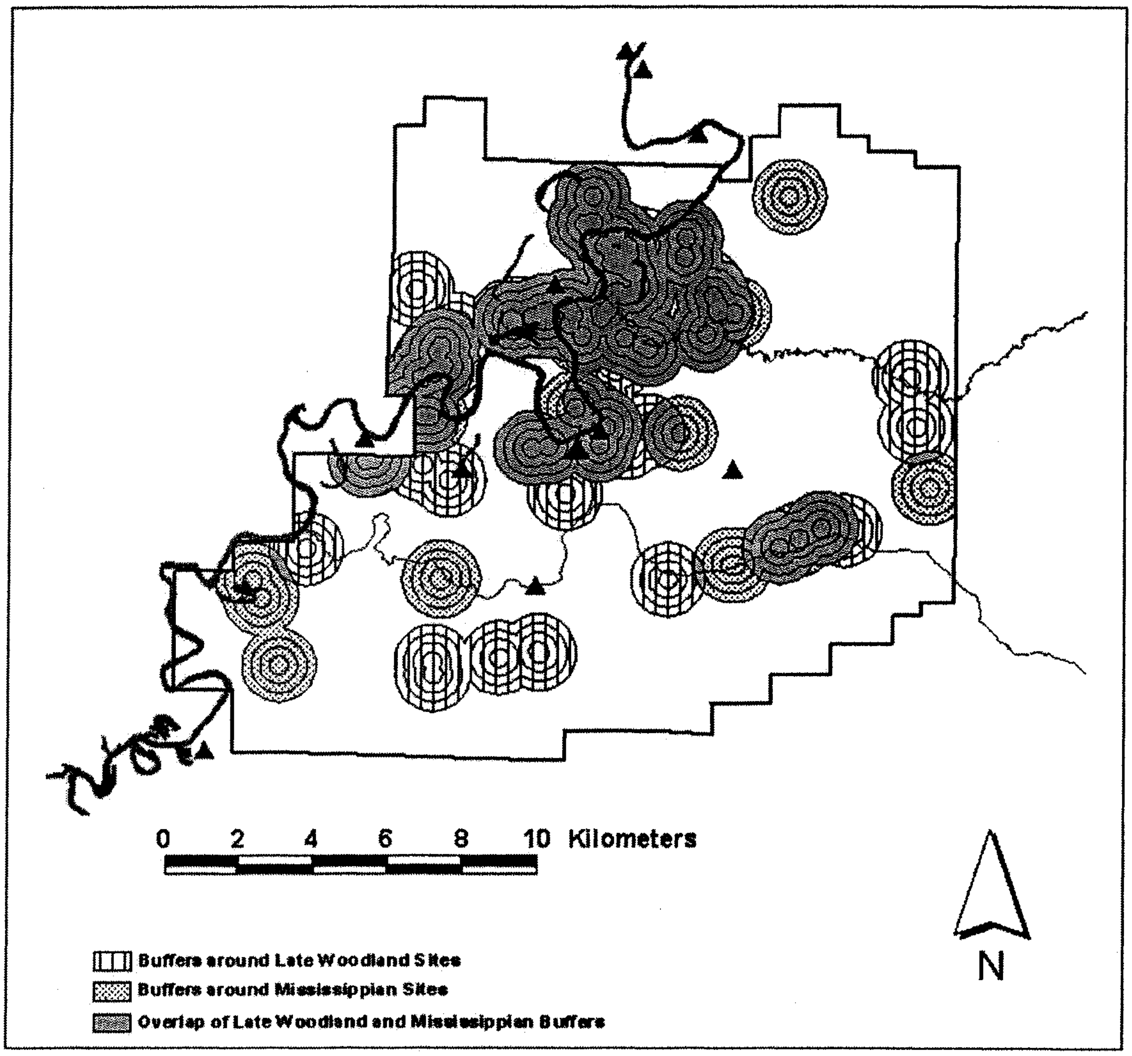


Figure 2-17 MCDF, overlap of Late Woodland and Mississippian buffers.

mothers lived, as people in the Mississippian Southeast were likely matrilineal (see Knight 1990). Land was more than political districts and a place to raise crops; it was also part of people's families and traditions.

Chapter 3: Population Trends in the Black Warrior Countryside

In the previous chapter, I assessed the relative importance of the social and environmental variables that people in the Black Warrior Valley considered when they decided where to live. In this chapter, I maintain a regional perspective but change the focus from issues of agency to the more concrete objective of counting the number of people in the valley. How many people lived in the Black Warrior Valley at Moundville's height? Before? After? I cannot answer these questions with absolute numbers, but I can and do estimate relative population change in the valley through time.

I use two general approaches to examine population trends. The first is to count the number of components in the study area per archaeological period—here, the Late Woodland and Mississippian periods. In the second approach, I consider shorter chronological units—archaeological phases instead of periods. I use two methods, least-squares regression and proportions of diagnostics, to estimate the number of sherds from study collections that date to individual phases. Both methods have biases, but because those biases are different, using multiple approaches allows me to evaluate the extent to which each is biased and better estimate changes in population in the valley through time.

PERIOD-BY-PERIOD POPULATION TRENDS

As I argued in Chapter 2, in order to make quantitative estimates of changes in site (population) densities, I must start with bounded survey regions. I again rely on the

Moundville Coal Degasification Field (MCDF) and Hammerstedt-Myer (HM) surveys, areas for which I have up-to-date information on sites and sherds.

I used a simple decision rule to assign sites to the Late Woodland and Mississippian periods: I designate sites with at least one grog-tempered sherd as Late Woodland, and sites with at least one shell-tempered sherd as Mississippian. Table 3-1 summarizes the chronological affiliations of all sites in the bounds of the MCDF, HM transects, and the combined HM-MCDF area. I take into account the geographic overlap of these areas and do not count a site more than once.

A simple count of sites dating to each period reveals that 160 sites in the study area date to the Late Woodland period and 135 date to the Mississippian period. In order to extrapolate these counts to population trends, one must take into account the lengths of these archaeological periods; sites were not occupied for the entire duration of a period. The Late Woodland period dates to AD 600-1120, a span of 520 years. The Mississippian period dates to AD 1120-1520, 400 years. If we assume that sites were occupied the same average length of time during the Late Woodland and Mississippian periods, dividing the number of sites by the span of the archaeological period gives us a very rough measure of relative site density. By this estimate, site densities were roughly equivalent during these periods, a conclusion one might intuit by examining the distributions of sites across the valley (Figure 3-1 and Figure 3-2). But this measure fails to take into account site size.

Table 3-1 Chronological designations of sites in study areas by archaeological period.

Study Area	Late Woodland	Mississippian Nonmound
MCDF	95	84
HM	130	105
Combined HM-MCDF Area	160	135

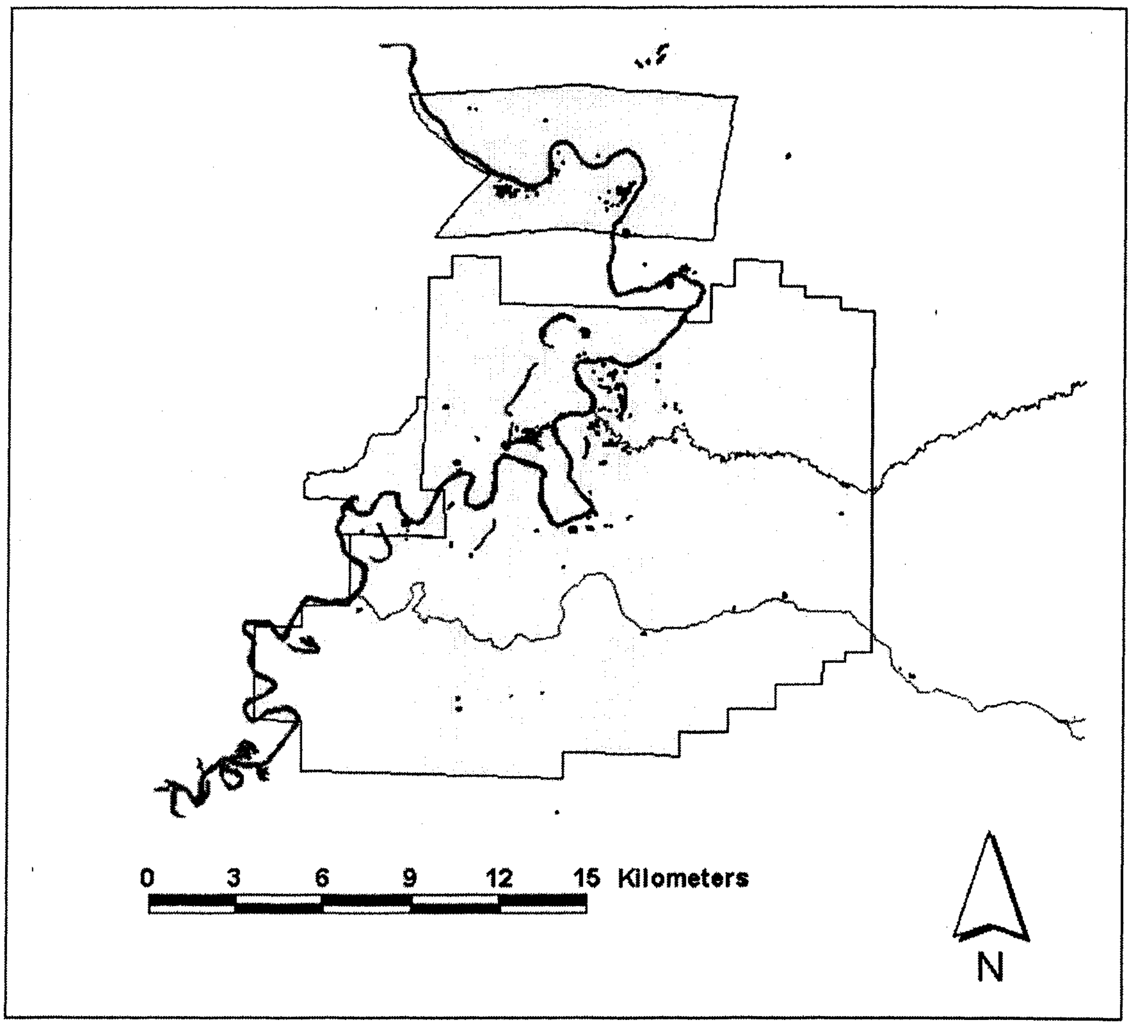


Figure 3-1 Late Woodland period sites in the combined HM-MCDF study area.

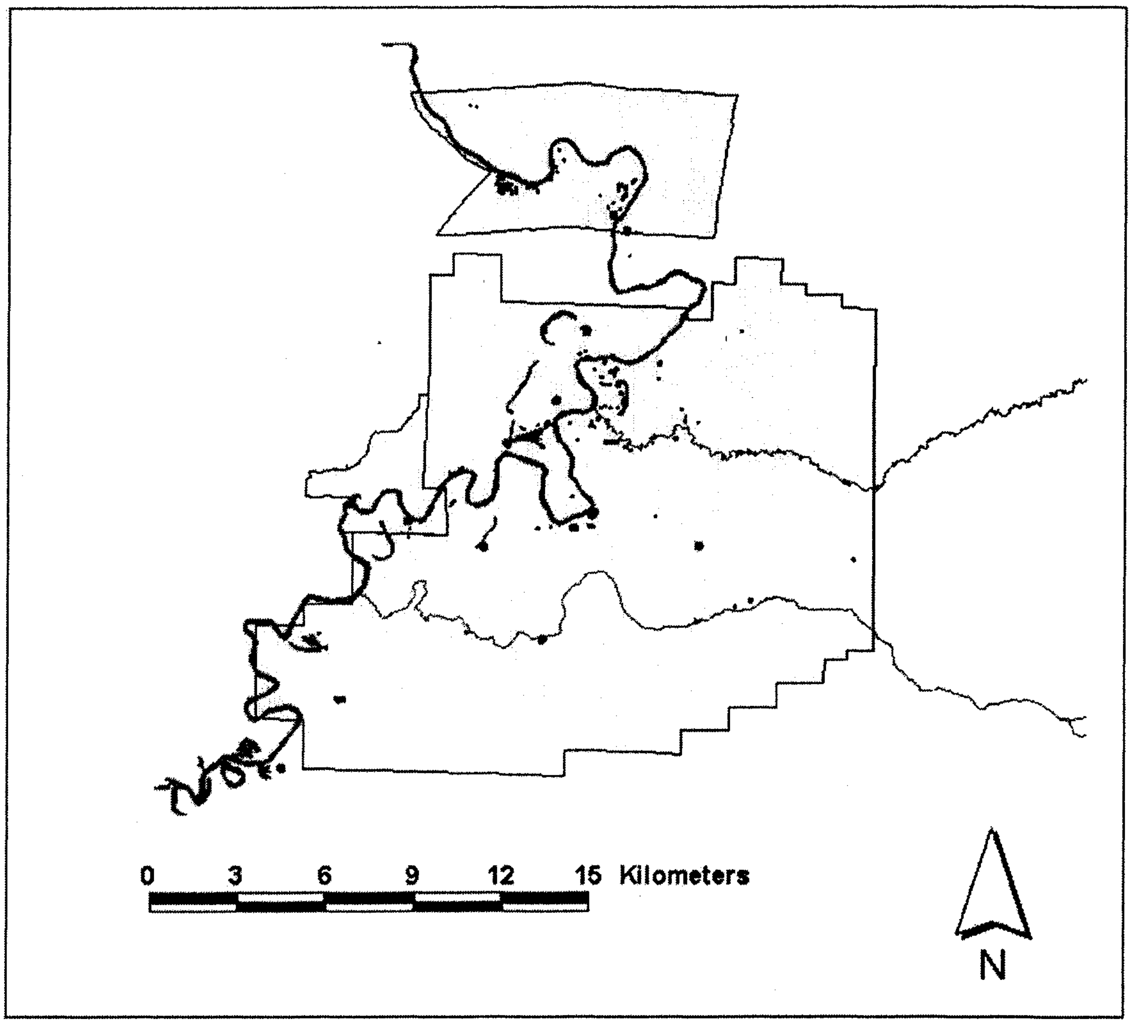


Figure 3-2 Mississippian period sites in the combined HM-MCDF study area.

Archaeologists have proposed that Late Woodland West Jefferson sites are larger, on average, than Mississippian sites. If site size varies in proportion to population (see Peebles 1978:408; cf. Schreiber and Kintigh 1996), more people lived at West Jefferson sites. Thus equal site densities from the Late Woodland and Mississippian periods would not translate to equal populations; with more people at each site, Late Woodland population would be much larger.

Are Late Woodland sites in fact larger than Mississippian sites? Black Warrior Valley archaeologists have made this argument by assertion rather than with numbers, based largely on the observation that plow zone scatters of grog-tempered pottery in the valley tend to be larger than scatters of shell-tempered pottery. The primary reason archaeologists have not made quantitative comparisons is that many sites have both Late Woodland and Mississippian components. Overlaying Mississippian sites may be smaller than earlier components, but there is only one official recorded size for each site.

In fact, many sites have no officially recorded site size. Approximately 1/3 of the sites in the combined HM-MCDF study area have a recorded size of zero. When I digitized sites in ArcView, I made them the same size and shape as archaeologists drew them on the ASSF quad maps. Although I have some doubt as to how representative those dimensions are of actual site size, the relative sizes of these sites on quad maps are the only size information I have for many of these sites.

The best way to compare site size for the two periods is to exclude all multicomponent sites. Within the HM-MCDF area, 63 sites are Late Woodland only. The mean size of these 63 sites is 0.56 ha. Forty-one sites are Mississippian only. The mean size of these Mississippian sites is 0.32 ha. Finally, we have quantitative confirmation of our intuitive assumption that Late Woodland sites are larger than Mississippian sites. Unfortunately, there are other issues that make this substantiation less firm than we would like. One, we have no way of differentiating palimpsests of sites that date to the same archaeological period. Two, grog-tempered sherds preserve much better than shell-tempered sherds, making site size comparisons based on surface scatters questionable at best. I return to this issue of preservation later in this chapter and in chapters to follow.

Thus period-to-period site counts offer only very limited information about population change in the valley through time. The distribution of sites indicates that the valley was not heavily populated in either the Late Woodland or Mississippian periods (Figure 3-1 and Figure 3-2). Site densities were roughly equal, but Late Woodland population was probably larger, as Late Woodland sites are on average larger than Mississippian sites. In order to examine population change on a finer chronological scale, I turn now to a second approach, one that examines population on a phase-by-phase basis.

PHASE-BY-PHASE POPULATION TRENDS

It is difficult to date sites to relatively short archaeological phases, especially when the number of diagnostics from any one site may be very low. Many nonmound sites are represented by only a handful of plain shell- and grog-tempered sherds. In this chapter, I pool the pottery assemblages from three surveys and consider population in the valley as a whole rather than on a site-by-site basis. I use two different methods to make population estimates by phase—the least-squares regression method and the proportion of diagnostics method. In the next sections, I explain each of these methods in detail and interpret the results they yield.

Method 1: Least-Squares Regression.

The first method I employ is derived from the Kohler and Blinman (1987) regression technique. This technique was designed to generate estimates of the proportions of diagnostic pottery from a multicomponent assemblage that date to individual phases. Using pottery type frequencies from "model" sites dating to each of the phases of interest, one can generate a least-squares regression equation that estimates the proportion of sherds that date to each phase within a mixed assemblage. One can then correct for variation in the length of phases by calculating deposition rates—the number of diagnostic sherds assigned to a phase divided by the length of that phase in years.

Steponaitis (1991:Figure 9.2; 1998:Table 2.1, Table 2.2) used this method to examine population trends at the Moundville site, generating estimates of the proportion of sherds from the Roadway assemblage that date to the West Jefferson phase, Moundville I phase, and Moundville II/III. Steponaitis combined the Moundville II and Moundville III phase counts because the assemblages from the two phases are very similar—collinear—and differences between the two cannot be teased out in the regression.

I used the Kohler-Blinman technique in a slightly different manner. Instead of estimating the proportion of sherds from one site that date to individual phases, I used regression to estimate the proportions of sherds from survey collections that date to individual phases. I consider three surveys—the UMMA survey, the HM transects, and the MCDF survey. I included all sites from these surveys with recorded sherd counts, using the nine pottery types used by Steponaitis (1998:Table 2.1): Alligator Incised, Baytown Plain, Bell Plain, Benson Punctated, Carthage Incised, Mississippi Plain, Moundville Engraved, Moundville Incised, and Mulberry Creek Cord Marked. Alligator Incised, Baytown Plain, Benson Punctated, and Mulberry Creek Cord Marked are grog-tempered; the rest are shell-tempered.

The total numbers of sherds from the HM transects (10,374) and the MCDF (6509) are relatively small when compared to the UMMA assemblage (56,504). Because there is considerable geographic overlap in the HM transects and the MCDF, the combined total of sherds from these two surveys is only 11,084. I therefore decided to pool the pottery assemblages from the UMMA surveys with the MCDF and the HM transects and consider the pottery from these surveys as one multicomponent assemblage (Table 3-2).

The frequencies of the nine pottery types in the model phase assemblages constitute the independent variables in the regression. I began by using the same model phase assemblages Steponaitis (1998:Table 2.1) used in his study of the Roadway assemblage (Table 3-3). For the West Jefferson phase (x_1), I used type counts from sites 1Je31, 1Je32, and 1Je33, West Jefferson sites in Jefferson County, Alabama. For the Moundville I phase (x_2), I used sherd counts from the Bessemer site, 1Je12, 1Je13, and 1Je14. For Moundville II/III (x_3), I used counts from the elite residential area north of Mound R (NR) at Moundville. The regression thus has three independent variables, and each pottery type represents a case or experimental unit.

Table 3-2 Sherd counts from the UMMA, HM, and MCDF assemblages.

Type	UMMA	HM-MCDF	UMMA-HM-MCDF
Shell-tempered			
Bell Plain	298	140	438
Bell Plain beaded rim	16	12	28
Carthage Incised	39	11	50
Mississippi Plain	9045	2084	11,129
Moundville Engraved	38	13	51
Moundville Incised	45	18	63
Grog-tempered			
Alligator Incised	49	3	52
Baytown Plain	46,675	8653	55,328
Benson Punctated	0	0	0
Mulberry Creek Cord Marked	299	150	449
Total	56,504	11,084	67,588

Table 3-3 Model phase assemblages, least-squares regression method (from Steponaitis 1998:31).

	West Jefferson (x_1)		Moundville I (x_2)		Moundville II/III (x_3)	
Type	n	%	n	%	n	%
Shell-tempered						
Bell Plain	0	0.00	59	4.52	1487	28.00
Carthage Incised	0	0.00	14	1.07	82	1.54
Mississippi Plain	94	1.12	1075	82.38	3500	65.91
Moundville Engraved	0	0.00	0	0.00	167	3.15
Moundville Incised	1	0.01	157	12.03	74	1.39
Grog-tempered						
Alligator Incised	4	0.05	0	0.00	0	0.00
Baytown Plain	8266	98.70	0	0.00	0	0.00
Benson Punctated	5	0.06	0	0.00	0	0.00
Mulberry Creek Cord Marked	5	0.06	0	0.00	0	0.00
Total	8375	100	1305	100	5310	99.99

The regression equation for the mixed UMMA-HM-MCDF assemblage is:

$$y = 56{,}060\ x_1 + 11{,}337\ x_2 + 1428\ x_3$$

where x_1 is West Jefferson, x_2 is Moundville I, and x_3 is Moundville II/III ($r^2 = 0.999$; $p > 0.001$). According to this equation, 81.5% of 68,825 estimated sherds from the mixed UMMA-HM-MCDF assemblage date to the West Jefferson phase, 16.5% to Moundville I, and 2.1% to Moundville II/III (Table 3-4). To control for the lengths of phases, I divided the number of sherds for each phase by that phase's duration. I use Knight's (1999) revised estimates of Black Warrior chronology to date the West Jefferson phase to AD 1020-1120, the Moundville I phase to AD 1120-1260, the Moundville II phase to AD 1260-1400, and the Moundville III phase to AD 1400-1520.

The rates of deposition for the mixed assemblage suggest that population in the valley decreased 86% from the West Jefferson phase to Moundville I, then decreased 93% from Moundville I to Moundville II/III. But before I interpret this pattern, I must consider the differential preservation of grog-tempered pottery compared to shell-tempered pottery. This differential preservation inflates the West Jefferson coefficient, and one must estimate the extent of this inflation in order to assess the magnitude of population change from the West Jefferson phase to the Mississippian period.

Table 3-4 Estimated rates of sherd deposition for mixed UMMA-HM-MCDF assemblage using least-squares technique.

Phase	Phase Duration (years)	Estimated Sherds in Assemblage		Estimated Rate of Deposition (sherds/year)
		n	%	
Moundville II/III	260	1428	2.1	5.5
Moundville I	140	11,337	16.5	81.0
West Jefferson	100	56,060	81.5	560.6
Total		68,825		

Differential sherd preservation. Soils in the Southeast are relatively acidic, and this acid leaches shell from shell-tempered pottery, leaving Mississippian sherds friable and more susceptible to destruction by plowing than Late Woodland grog-tempered sherds. Hammerstedt (2000:44) proposes that this differential destruction was exacerbated in the late 1970s when farmers in the valley turned from deep chisel plowing to more destructive disking (see also Milner 1998:105).

Because Late Woodland grog-tempered pottery is more likely to survive than Mississippian shell-tempered pottery, the two methods of the phase-by-phase approach overestimate West Jefferson population. I correct for this differential preservation by estimating a decomposition rate for shell-tempered sherds. I do this by comparing grog- and shell-tempered sherd counts from sites that were collected in the mid-1970s and were collected again in the late-1990s. In 1999, Scott Hammerstedt and crew revisited five of the sites that were originally identified during the 1976 BS survey—1TU330, 1TU335, 1TU337, 1TU338, and 1TU339.

In the Big Sandy (BS) report, Walthall and Coblentz (1977) list counts of grog- and shell-tempered pottery from each site they collected. Hammerstedt (2000) also presents total grog- and shell-tempered sherd counts by site. By subtracting the BS counts from the Hammerstedt totals for the five revisited sites, I separated 1976 from 1999 sherd counts (Table 3-5). I expected a decrease in the number of shell-tempered sherds relative to grog-tempered sherds, and this trend indeed bears out. The 1976 grog- to shell-tempered

Table 3-5 Revisited sites, grog- and shell-tempered sherd counts.

Site Number	1976 BS Survey[a]		1999 Hammerstedt Survey[b]		Total[c]	
	grog	shell	grog	shell	grog	shell
1TU330	11	44	476	12	487	56
1TU335	74	7	65	31	139	38
1TU337	2	15	18	62	20	77
1TU338	1	0	0	0	1	0
1TU339	55	7	27	-3	82	4
Total	143	73	586	102	729	175

[a] from Walthall and Coblentz (1977)
[b] calculated by subtracting 1976 BS sherd counts (Walthall and Coblentz 1977) from total counts (Hammerstedt 2000:Appendix B)
[c] from Hammerstedt (2000:Appendix B)

sherd ratio is 2.0:1; the 1999 grog- to shell-tempered sherd ratio is 5.7:1. If these five sites are representative of shell-tempered sherd decomposition over this 23 year span, there were approximately three times fewer shell-tempered sherds relative to grog-tempered sherds in the plow zone in 1999 than in 1976.

Thus for every three shell-tempered sherds in the plow zone in 1976, only one remained in 1999. This translates to a loss of roughly 5% (0.047) per year. So of three sherds in 1976, 2.86 remained in 1977, 2.73 remained in 1978, etc. This rate is what I call the "shell-decomposition rate." I apply this shell-decomposition rate to the shell-tempered sherds from the mixed UMMA-HM-MCDF assemblage in order to estimate what the sherd totals would have been in 1976.

Because archaeologists collected sherds from the sites in these three surveys in different years, I apply a different factor to each of the three assemblages. The UMMA sherds were collected in 1978-1979, the MCDF surveys were conducted in the late 1980s and early 1990s, and the HM surveys in 1999-2000. For simplicity, I consider the UMMA survey as 1978 (two years of decomposition), the MCDF surveys as 1990 (14 years), and the HM surveys as 1999 (23 years). Using a shell-decomposition rate of 4.7% per year, I multiplied UMMA shell-tempered sherd counts by 1.1, MCDF shell-tempered sherds by 1.9, and HM shell-tempered sherds by 3.0. The grog-tempered counts remain unchanged.

Applying the shell-decomposition rate to the UMMA sherd counts is straightforward. I multiply the counts of the shell-tempered types by 1.1 to get a total of 57,454 sherds (Table 3-6), up from an uncorrected total of 56,504. The HM and MCDF corrections are more difficult. Many of the sites in the MCDF are also in the HM transects, but there are no sherd counts from the earlier 1990 well pad surveys. Of the 6509 sherds from sites in the MCDF, 5799 are from sites collected in the HM surveys. I apply the 1999 shell-decomposition factor of 3.0 to these 5799 sherds and the remaining 4575 HM sherds, yielding a corrected total of 14,198. I apply the 1990 factor of 1.9 to the 710 sherds that were only in the MCDF to get a total of 1040 MCDF sherds. The grand total for the mixed assemblage adjusted for differential shell-tempered sherd destruction is 72,692.

I reran the least-squares regression on the corrected mixed UMMA-HM-MCDF assemblage and generated the following equation:

$$y = 56{,}061\, x_1 + 16{,}092\, x_2 + 2474\, x_3$$

Both the corrected and uncorrected least-squares equations estimate a high West Jefferson population followed by a sharp decrease to the Moundville I phase, followed by another population drop in the combined Moundville II/III phases. Again, I adjusted for phase length and calculate estimated sherd deposition per year (Table 3-7). The numbers are slightly different than the coefficients in the uncorrected least-squares equation, but the trend is the same (Figure 3-3). According to the least-squares regression method corrected for differential decomposition, population in the valley decreased approximately 80% from West Jefferson to Moundville and 92% from Moundville I to Moundville II/III.

Table 3-6 Sherd counts from the UMMA, HM, and MDCF assemblages, corrected for differential sherd decomposition.

Type	UMMA	HM	MCDF	UMMA-HM-MCDF
Shell-tempered				
Bell Plain	328	384	23	735
Bell Plain beaded rim	18	33	2	53
Carthage Incised	43	27	4	74
Mississippi Plain	9950	5232	646	15,828
Moundville Engraved	42	39	0	81
Moundville Incised	50	21	21	92
Grog-tempered				
Alligator Incised	49	3	0	52
Baytown Plain	46,675	8314	339	55,328
Benson Punctated	0	0	0	0
Mulberry Creek Cord Marked	299	145	5	449
Total	57,454	14,198	1040	72,692

Table 3-7 Estimated rates of sherd deposition for the mixed UMMA-HM-MCDF assemblage using least-squares regression, corrected for differential sherd decomposition.

Phase	Phase Duration (years)	Estimated Sherds in Assemblage		Estimated Rate of Deposition (sherds/year)
		n	%	
Moundville II/III	260	2474	3.3	9.5
Moundville I	140	16,092	21.6	114.9
West Jefferson	100	56,061	75.1	560.6
Total		74,627		

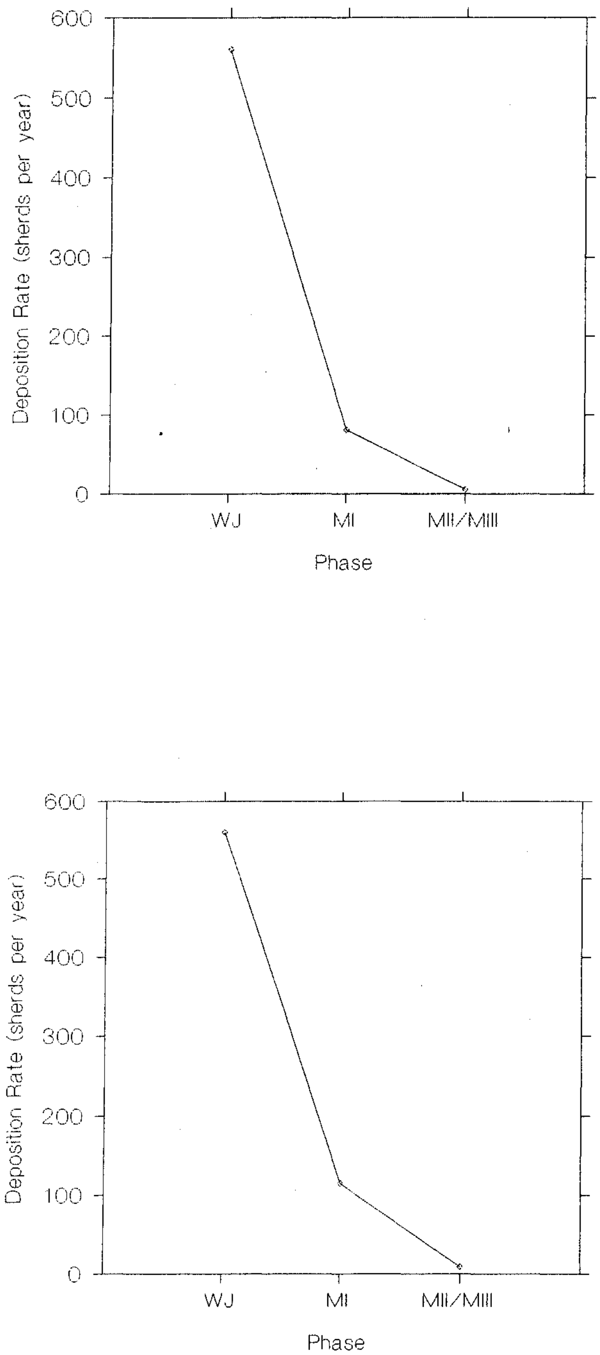


Figure 3-3 Estimated sherd deposition rates using the least-squares method, uncorrected (top) and corrected (bottom) for differential sherd preservation.

Interpretation. There are at least three ways to explain the coefficients I generated using the least-squares method. One, these results reflect a real pattern for the valley as a whole: a population decrease from West Jefferson to Moundville I and another population drop from Moundville II to Moundville III. Two, the regression results are accurate for the study area but not representative of the valley as a whole. The HM and MCDF surveys cover only a small percentage of the bounded survey regions, 14.2% and 1.1%, respectively. Further, these survey regions cover only a portion of the entire valley. It is possible that people lived in areas not covered by these transects.

A third explanation is that the model assemblages I used in the regression are not representative of West Jefferson, Moundville I, and Moundville II/III sites in the Black Warrior countryside. Recall that the model assemblages are from West Jefferson sites in Jefferson County, the Bessemer site, and the elite residential area north of Moundville's Mound R (NR). Ideally, I would have used model assemblages from rural sites within the bounds of the Moundville chiefdom, but unfortunately there are not many excavated rural sites to choose from.

To determine whether there is indeed a problem with the model assemblages, I reran the regression multiple ways. In one iteration, I used the Oliver site as the Moundville I model assemblage—a questionable choice, since Oliver dates to early Moundville I, but the best choice in the small set of excavated Moundville I sites. The least-squares regression using the Oliver site yielded negative coefficients, obviously an unsatisfactory result. The problem could be a low sample size; regardless, Oliver is unusable as a model assemblage.

I ran several other regressions; some experimental runs produced the same general results as above, while others generated negative coefficients, an issue related to collinearity

(Kohler and Blinman 1987). When I ran the regression changing only the frequency of burnished sherds in the NR Moundville II/III model assemblage, it became clear that serving wares, including Bell Plain and Moundville Engraved, are driving the regression. The relative proportion of serving relative to cooking north of Mound R is high (Welch and Scarry 1995), and this functional variation renders the NR assemblage unsuitable as a model assemblage for the countryside.

Thus the main problem with the regression equation is the Moundville II/III model assemblage. As of this writing, there are no published sherd counts from Moundville II/III contexts in the countryside to use as an alternate model assemblage. This does not mean that phase-to-phase population trends are unknowable; it simply means I must detect them using a different method.

Method 2: Proportions of Diagnostics.

The second method I use to examine phase-by-phase population change in the valley is by calculating proportions of diagnostic sherds. I use frequencies of sherds that are diagnostic of a phase as a measure of that phase's population. Unlike the least-squares method which takes the frequencies of multiple pottery types per phase into account, the diagnostic method considers only one key diagnostic type per phase.

For example, Bell Plain beaded rims are diagnostic markers of post AD 1350 Mississippian, the late Moundville II and Moundville III phases. The premise of the diagnostic method is that beaded rims represent a certain proportion of a late Moundville II/Moundville III assemblage. If one knows what this proportion is (in a model assemblage) and the number of beaded rims in a mixed collection, one can then estimate the percentage of that collection that dates to the late Moundville II/Moundville III phases. In simple mathematical terms, this relationship can be expressed as:

$$\frac{D_{model}}{N_{model}} = \frac{D_{mixed}}{N_{mixed}}$$

where the D_{model} = the number of beaded rims (diagnostics) in the model assemblage, N_{model} = the total number of late M2/M3 sherds in the model assemblage, D_{mixed} = the number of beaded rims in mixed assemblage, and N_{mixed} = the total number of late M2/M3 sherds in mixed assemblage. In this equation, the number of beaded rims in the model assemblage and the total number of late Moundville II/Moundville III sherds in the model assemblage are known. We also know the number of beaded rims in the mixed assemblage. The unknown is the number of sherds in the mixed assemblage that date to the late Moundville II/Moundville III phases.

Ideally, I would like to keep all phases separate and estimate the number of sherds in the study collection that date to each of the phases of interest. To do that, I would need unique phase markers that are abundant in both the model and mixed assemblages, something that just is not possible. I instead use the following analytical units: Carthage phase (AD 600-1020), West Jefferson phase (AD 1020-1120), Moundville I/early Moundville II (AD 1120-1330), and late Moundville II/Moundville III (AD 1330-1520). I am primarily interested in the West Jefferson through Moundville phases, but the diagnostics method affords me the opportunity to estimate pre-West Jefferson population, so I have added the Late Woodland Carthage phase to my analysis.

I use Mulberry Creek Cord Marked pottery as the Carthage-phase marker (Jenkins 2003). To estimate the number of Carthage-phase sherds in the mixed UMMA-HM-MCDF assemblage, I use the same equation as before. Here, D_{model} = the number of Mulberry Creek Cord Marked sherds (diagnostics) in the model assemblage, N_{model} = the total number of Carthage-phase sherds in the model assemblage, D_{mixed} = the number of Mulberry Creek Cord Marked sherds in the mixed assemblage, and N_{mixed} = the total number of Carthage-phase sherds in mixed assemblage.

There is no model Carthage phase assemblage from the Black Warrior Valley, so I am forced to improvise. Jenkins (2003:17) states that an ideal Carthage-phase assemblage should contain a maximum of 10-15% Mulberry Creek Cord Marked pottery. I use 10% in my equation, substituting 0.10 for D_{model}/N_{model}. Inserting the number of Mulberry Creek Cord Marked sherds from the mixed assemblage (449) (Table 3-2) yields an estimate of 4490 Carthage-phase sherds.

I estimate the number of West Jefferson sherds in the mixed assemblage using the proportion of Baytown Plain sherds as a proxy. I use the West Jefferson type sites as the model assemblage (Table 3-8). Substituting into equation where D_{model} = the number of Baytown Plain sherds (diagnostics) in the model assemblage, N_{model} = the total number of West Jefferson-phase sherds in the model assemblage, D_{mixed} = the number of Baytown Plain sherds in the mixed assemblage, and N_{mixed} = the total number of West Jefferson-phase sherds in mixed assemblage, I arrive at an estimate of 56,058 West Jefferson sherds in the mixed assemblage.

To determine the number of Moundville I/early Moundville II sherds in the UMMA-HM-MCDF assemblage, I use Moundville Incised as the Moundville I/early Moundville II marker (see Steponaitis 1983:108). Including sherds originally called Barton Incised, *variety Oliver* (commonly classified as Moundville Incised, *variety Oliver*), I arrive at a total of 63

Table 3-8 Sherd counts by type-variety for model phase assemblages, diagnostics method.

Type	Carthage Model Assemblage	West Jefferson Model Assemblage	MI/early MII Model Assemblage	late MII/MIII Model Assemblage
Shell-tempered				
Bell Plain		0	1384	1060
Bell Plain beaded rim		0	2	14
Carthage Incised		0	29	68
Mississippi Plain		94	2553	2572
Moundville Engraved		0	113	121
Moundville Incised		1	129	39
Grog-tempered				
Alligator Incised		4	0	1
Baytown Plain		8266	18	9
Benson Punctated		5	0	0
Mulberry Creek Cord Marked	1	5	1	0
Total	10	8375	4229	3884

Moundville Incised sherds in the mixed assemblage. To calculate the number of Moundville I/early Moundville II sherds in the mixed assemblage, I use the same equation as above. Using NR as the model Moundville I/early Moundville II assemblage, I arrive at an estimate of 2065 sherds that date to the combined Moundville I/II phases (Table 3-8).

Out of necessity, I use the NR collection as the model late Moundville II/Moundville III assemblage. Steponaitis (1983:90, Table A.5, Table A.6) counted 14 beaded rims out of 3884 total sherds in the late Moundville II/Moundville III levels north of Mound R (Table 3-8). There are 28 beaded rims in the mixed UMMA-HM-MCDF assemblage. Substituting this number into the equation I presented at the beginning of this section, I estimate that 7768 sherds in the mixed assemblage date to the Moundville III phase. This estimate is significantly larger than the 1428 sherds predicted by the least-squares regression (uncorrected). The difference in the estimates indicates that the number of Bell Plain beaded rims is not tied to the functional (serving vs. cooking) nature of the NR assemblage in the same way that the total number of Bell Plain and Moundville Engraved sherds are. If there were some bias, then this 7768 is an underestimate.

To summarize, the diagnostics method assigns the sherds from the mixed UMMA-HM-MCDF assemblage to phases as follows: 4490 Carthage, 56,058 West Jefferson, 2065 Moundville I/early Moundville II, and 7768 late Moundville II/Moundville III (Table 3-9). The diagnostics equation accounts for 70,381 sherds, a good fit with the actual total of 67,588.

The diagnostics method estimates that 6.4% of sherds from the mixed UMMA-HM-MCDF assemblage date to the Carthage phase, 79.6% to West Jefferson, 2.9% to Moundville I/early Moundville II, and 11.0% to late Moundville II/Moundville III (Table 3-9).

Controlling for phase length, I generate rates of deposition that indicate that population in the valley increased more than 5000% from the Carthage phase to the West Jefferson phase. From West Jefferson to Moundville I/early Moundville II, population decreased 98%. Population then increased by over 300% from Moundville I/early Moundville II to late Moundville II/Moundville III.

Differential sherd preservation. Because the number of grog-tempered sherds does not change with the shell-decomposition correction, the corrected Carthage and West Jefferson diagnostics estimates remain the same, 4490 and 56,058. To compute the corrected Moundville I/II and Moundville III estimates, I first apply the shell-decomposition factors to the counts of Moundville Incised sherds and beaded rims from the mixed assemblage. I arrive at corrected counts of 91 Moundville Incised sherds (up from an uncorrected total of 63) and 53 beaded rims (up from 28). I then plug the corrected counts into the equations derived earlier in this chapter, using the same model assemblages, to yield a corrected Moundville I/early Moundville II coefficient of 2983, and a late Moundville II/Moundville III coefficient of 14,704.

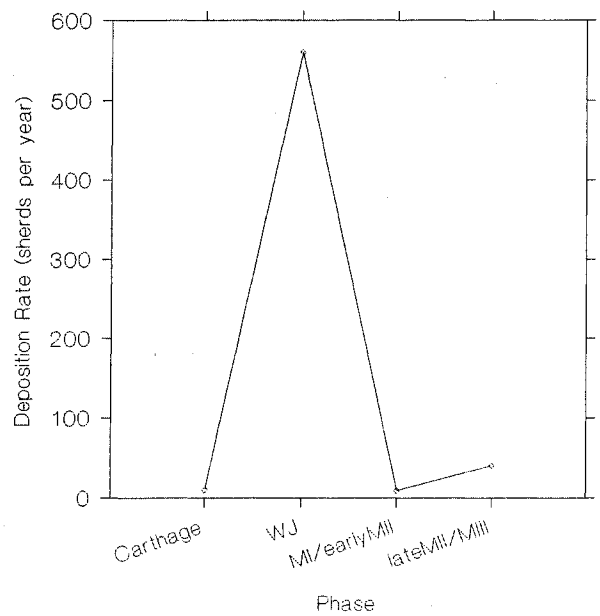
Adjusting for phase length allows me to evaluate the magnitude of change from one analytical period to the next (Table 3-10). As with the uncorrected equation, population increased 5000% from Carthage to West Jefferson. The magnitude of the decline from West Jefferson to Moundville I/early Moundville II is approximately the same as the uncorrected estimate at 97%. The plots in Figure 3-4 compare the diagnostics method's uncorrected estimates with the corrected ones. The major difference between the uncorrected and

Table 3-9 Estimated rates of sherd deposition for the mixed UMMA-HM-MCDF assemblage, diagnostics method.

Phase	Phase Duration (years)	Estimated Sherds in Assemblage		Estimated Rate of Deposition (sherds/year)
		n	%	
late Moundville II/ Moundville III	190	7768	11.0	40.9
Moundville I/ early Moundville II	210	2065	2.9	9.8
West Jefferson	100	56,058	79.6	560.6
Carthage	420	4490	6.4	10.7
Total		70,381		

Table 3-10 Estimated rates of sherd deposition for the UMMA-HM-MCDF mixed assemblage, diagnostics method, adjusted for differential sherd decomposition.

Phase	Phase Duration (years)	Estimated Sherds in Assemblage		Estimated Rate of Deposition (sherds/year)
		n	%	
late Moundville II/ Moundville III	190	14,704	18.8	77.4
Moundville I/ early Moundville II	210	2983	3.8	14.2
West Jefferson	100	56,058	71.7	560.6
Carthage	420	4490	5.7	10.7
Total		78,235		



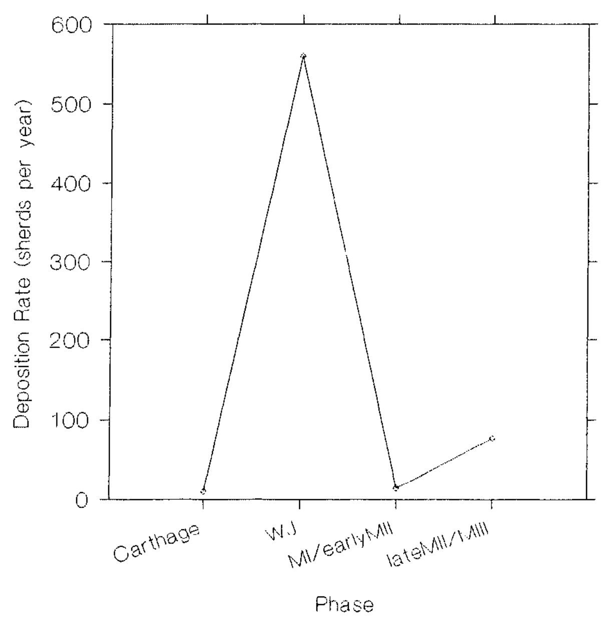


Figure 3-4 Estimated sherd deposition rates using the diagnostics method, uncorrected (top) and corrected (bottom) for differential sherd preservation.

corrected diagnostics estimates is the extent of the population rebound from Moundville I/early Moundville II to late Moundville II/Moundville III. The corrected numbers suggest an increase of more than 400%.

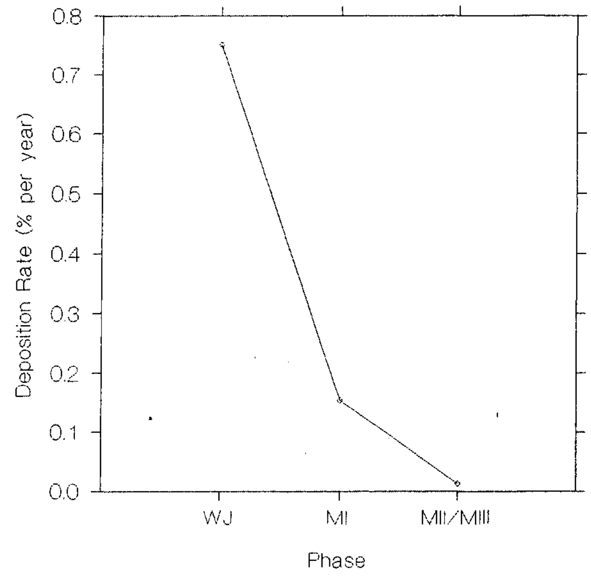
Interpretation. The diagnostics method adds another dimension to our understanding of population change in the Black Warrior Valley. By adding the Carthage phase to the analysis, we learn that population in the valley was scant in the early Late Woodland period relative to the terminal Late Woodland West Jefferson phase. Population in the valley was by no means dense during West Jefferson; a brief look at the distribution of sites in the valley clearly shows that the valley was not brimming with people (Figure 3-1). As I discussed in the previous chapter, West Jefferson residents of the valley lived on fertile land in the floodplain. The valley's natural resources were far from taxed. But, relative to earlier and later phases, it appears that the countryside's population was highest during this phase.

Both the least-squares regression and the diagnostic method estimate a drop from West Jefferson to early Mississippian, but they disagree on the magnitude of that decrease. The difference between the least-squares estimate and the diagnostics estimate is even more striking when one considers that the 11,337 from the least-squares equation is Moundville I only, while the 2065 from the diagnostics method includes both Moundville I and early Moundville II. I favor the diagnostics estimate, as it allows for a greater population increase in the countryside after early Moundville II. For the moment, suffice it to say that population dropped dramatically after West Jefferson, but we are not sure of the extent of that decrease.

Did people move out of the valley entirely? I doubt it. Because this population drop corresponds to the dramatic population influx at the Moundville center (Steponaitis 1998), it is reasonable to conclude that people moved from the countryside to Moundville. This population drop mirrors the population increase from the Carthage to West Jefferson phase (Figure 3-4). It follows that the Carthage to West Jefferson increase was an in-migration. This migration was almost certainly from outside the valley, perhaps from the neighboring Tombigbee Valley where population densities were high (Knight 1991).

This in-migration theory may sound similar to the one espoused by Jenkins (2001, 2003), but I propose that people moved into the valley prior to West Jefferson, not that West Jefferson and Mississippian people were distinct, coexisting ethnic groups (Jenkins 2003:42). An early West Jefferson influx is consistent with my argument in the previous chapter that there is continuity in land use from the West Jefferson phase through the Mississippian period. People moved into the valley sometime around AD 1020, and many of those people subsequently moved to Moundville.

After the Moundville I/early Moundville II phases, there is a slight population rebound in the valley. This makes much more sense than the population drop proposed by the least-squares method (see Figure 3-5), an estimate I rejected in the previous section because of problems with the model assemblage. I lend more credence to the results generated by the diagnostics method, that people moved to Moundville after the West Jefferson phase, then returned to the valley by late Moundville II/Moundville III.



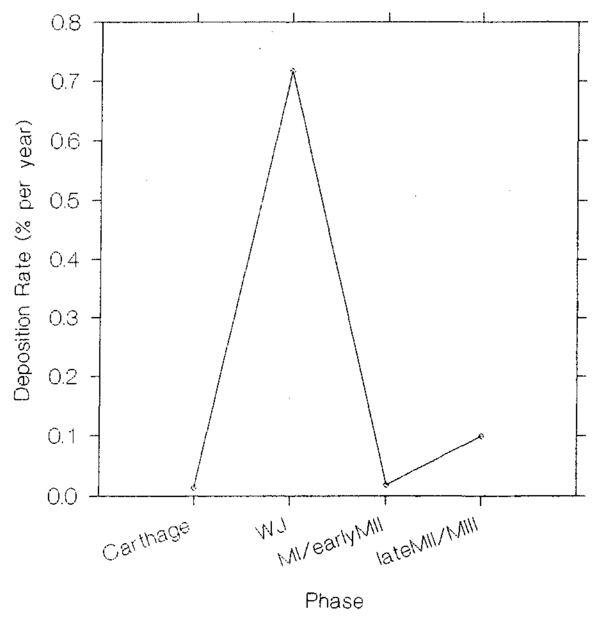


Figure 3-5 Estimated sherd deposition rates corrected for differential sherd preservation, using the least-squares method (top) and diagnostics method (bottom), expressed in % per year.

Why is the estimated sherd deposition in late Moundville II/Moundville III not equal to the rate of deposition in the West Jefferson phase? One possible explanation is that the shell-decomposition ratio may not be accurate. Though plowing techniques did change in the late 1970s, exacerbating differential shell and grog preservation, shell and grog did not preserve equally prior to this change in plowing. As mentioned above, the soils in the Southeast are acidic, and shell-tempering often leaches out of sherds. Shell-tempered sherds are thus more fragile, and it is likely that the grog-to-shell tempered pottery ratio in the 1976 BS survey does not reflect the original deposition ratio. Thus the Mississippian estimates should probably be larger.

A second way to explain the absence of a population rebound after Moundville I/early Moundville II is another migration, with people moving from Moundville to locations outside of the study area, but not necessarily outside of the valley. The two largest secondary mound centers in the valley during Moundville II/III are at the far northern and southern ends of the valley, outside of the MCDF-HM survey areas. The data from Chapter 2 support this hypothesis—there is a relationship between the locations of single-mound sites and nonmound sites, regardless of whether the people or the mounds were there first.

I suspect that both shell-tempered sherd decomposition and movement outside of the study area are significant confounders and that Moundville II/III population in the valley was higher than my estimate. I await more data from the countryside to resolve this and other population issues.

SUMMARY

Despite limitations with the current data, the population estimates presented in this chapter finally give archaeologists a concrete picture of basic population trends in the Black Warrior countryside. During the Carthage phase, the valley was sparsely populated. Population increased during the subsequent West Jefferson phase when people likely moved into the Black Warrior Valley from neighboring valleys. People began moving from the Black Warrior countryside to the Moundville center around AD 1120. Commoners and elites alike lived at Moundville, with commoners constructing the 20+ earthen mounds and palisade that define the site. Around AD 1200, some people moved out of the primary center and established three secondary mound centers north of Moundville. After the mounds at Moundville were complete, circa AD 1300, most commoners who were left at Moundville moved back into the countryside. Some people moved to secondary centers to build mounds and live in their environs, while others moved out of the valley entirely. By the late 1400s, people had abandoned most of these mounds, and population continued to decline into the DeSoto era.

Chapter 4: Local Landscape: The Grady Bobo Site

Archaeologists often describe the Mississippian countryside as composed of scattered farmsteads, but rarely do we question or expand on this depiction. Many archaeologists call every site that does not have a mound a farmstead. But the term farmstead implies a function—a farmstead is defined as one or two houses occupied by a nuclear or extended family engaged in agriculture and the other activities of everyday life (Knight and Solis 1983; Muller 1997; B. Smith 1995). To avoid implying site function, I will refer to these sites generically as nonmound sites or rural sites.

In earlier chapters, I examined the distribution of nonmound sites in the valley, but in order to better understand what daily life was like in the Mississippian countryside, I turn now to a detailed study of one small, nonmound site, the Grady Bobo site. In this chapter, I begin by placing the Bobo site in its spatial, environmental, and social contexts. I discuss where the site is and what is around it. I then go through the history of archaeology at the Bobo site. Unlike many other nonmound sites, archaeologists have visited this site repeatedly, and we know a lot about the distribution of artifacts on the surface and in the plow zone. I conclude Chapter 4 by considering how the Bobo site both fits with and departs from existing models of Moundville's political, economic, and social organization.

ENVIRONMENTAL AND SOCIAL CONTEXTS

The crescent-shaped Grady Bobo site, 1Tu66, is located approximately 19 km north of Moundville on a terrace of the Black Warrior River near Clement Bend (Figure 4-1). More specifically, the Grady Bobo site is in the USGS Coker 1:24,000 quadrangle, in Sections 27 and 34 of Township 21 South, Range 11 West (Figure 4-2). The site gets its name from Grady Bobo, Sr. and Grady Bobo, Jr., the present-day tenant farmers who grow cotton and corn on the site's fertile soils.

I begin by placing the Grady Bobo site within its environmental context. The site is within 400 m of the Black Warrior River and is located on alluvial, coastal, and low-terrace deposits. The site ranges in elevation from approximately 39 to 42 m AMSL; the west side of the site is on the lower portion of the old river terrace, while the east side is on the upper terrace. The Grady Bobo site is within the soil Cahaba-Adaton-Ellisville soil unit, specifically on Choccolocco silt loam. Choccolocco soils are part of the Cahaba-Choccolocco-Ellisville triumvirate, the three soil types on which the majority of West Jefferson and Mississippian sites are located. Choccolocco silt loam is deep, well drained, fertile, and well suited to cultivated crops.

To properly place the Bobo site in its social context, I must refer to contemporaneous sites. Based on the distribution of pottery on the surface of the Grady Bobo site, a 1978 UMMA crew identified Middle Woodland, West Jefferson, and Mississippian components (Bozeman 1982:84). There were two Mississippian occupations—one dates to the late Moundville I phase, the second to Moundville III/IV (Bozeman 1982:86; Maxham 1997). I

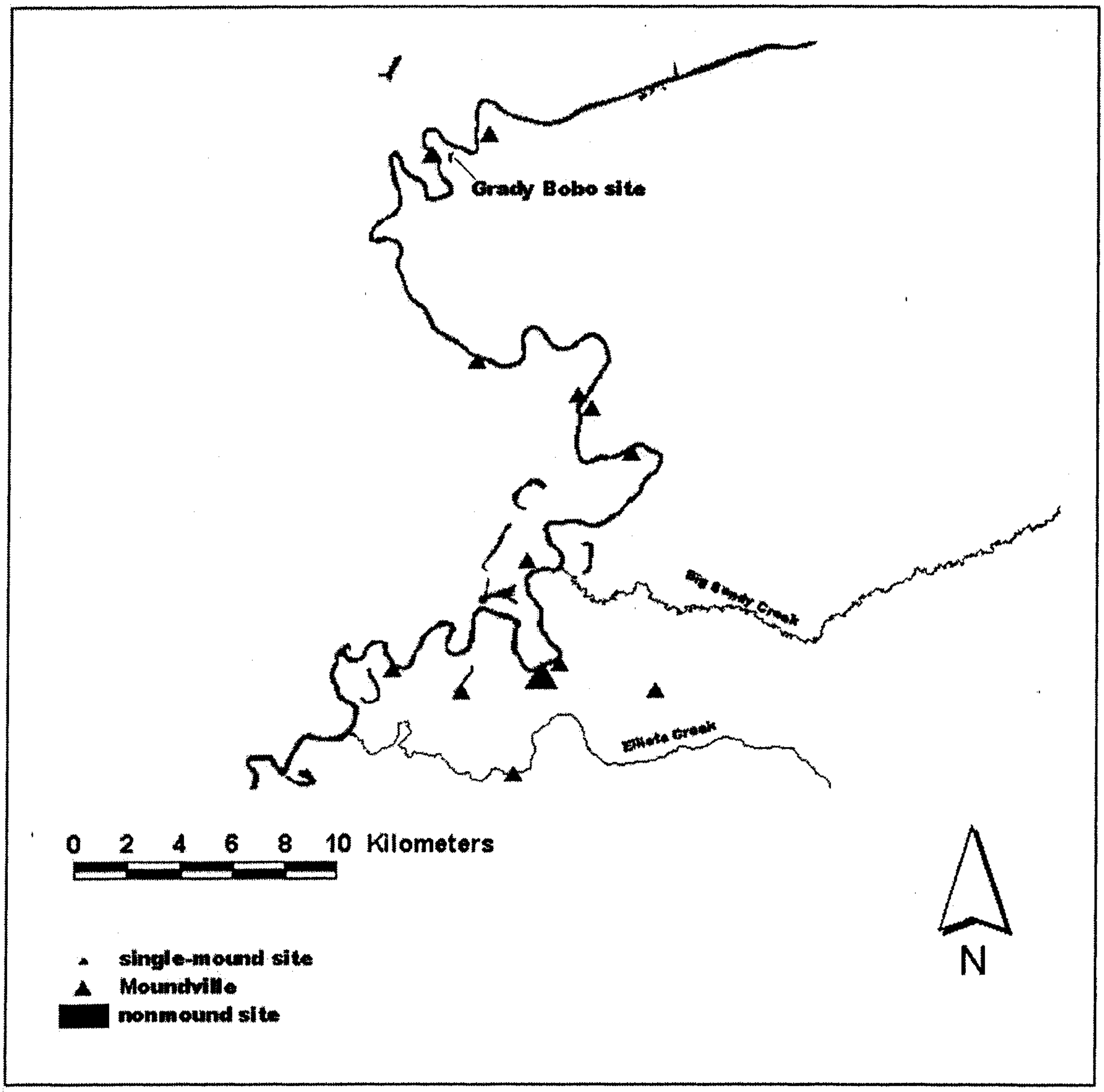


Figure 4-1 Location of the Grady Bobo site.

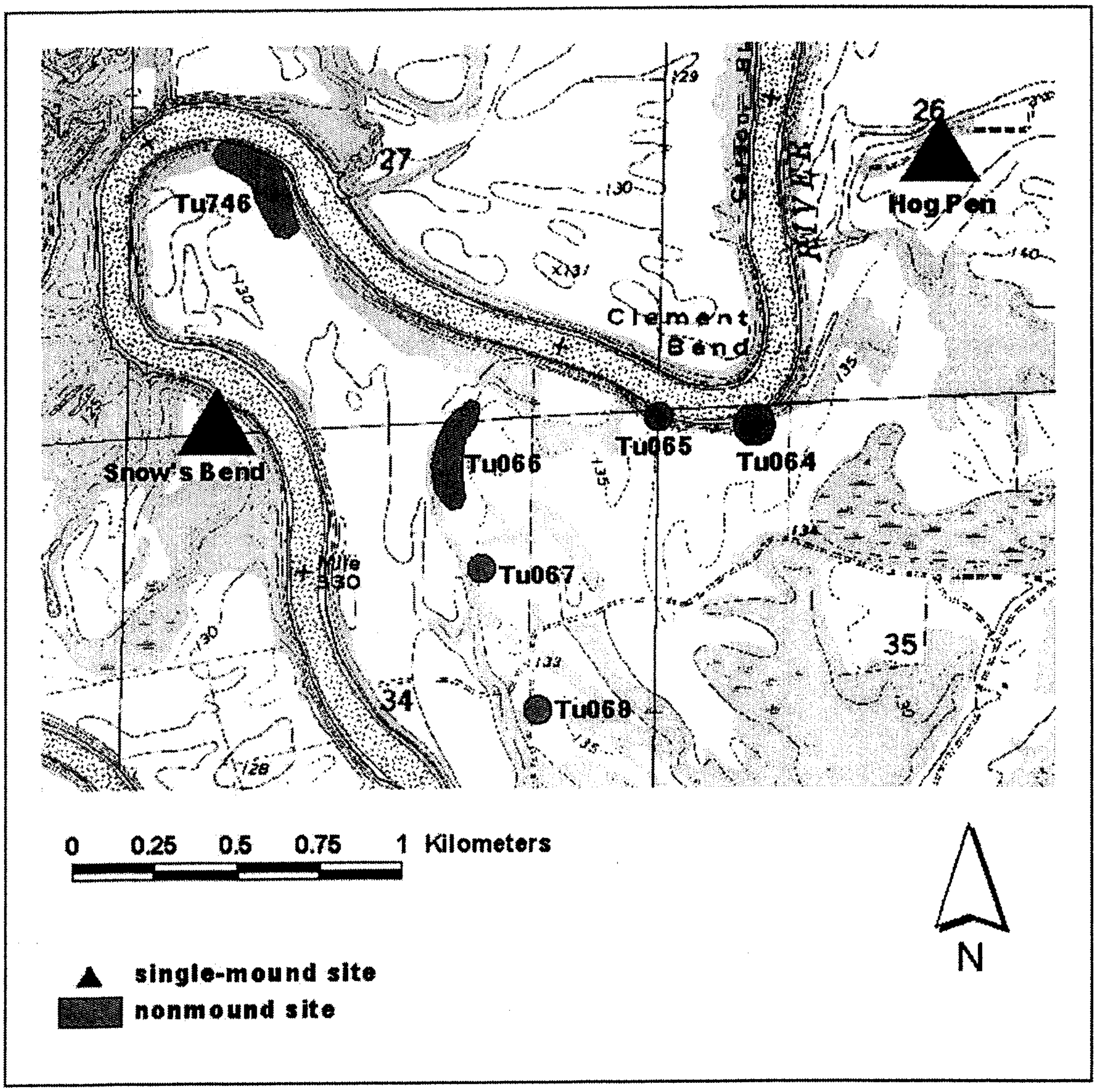


Figure 4-2 Archaeological sites in the immediate vicinity of the Grady Bobo site.

discuss Bozeman's data in detail later in the chapter. Several mound and nonmound sites are in the immediate vicinity of Tu66, and most of these were probably within the Bobo site's social landscape at some point during its several occupations.

There are two nearby single-mound sites, Snow's Bend and Hog Pen. The Snow's Bend (1Tu2/3) site is across the Black Warrior River, approximately 0.75 km to the west, and dates to late Moundville II through Moundville III. The late Moundville I/early Moundville II Hog Pen (1Tu56/57) site is 1.75 km from to the northeast. I address the possible relationship between Hog Pen and the Bobo site later in this chapter.

Six nonmound sites are within 1 kilometer of the Bobo site—Tu64, Tu65, Tu67, Tu68, Tu483 and Tu746. Tu64 is 0.95 km east of the Grady Bobo site. Tu65 is between Tu64 and Tu66, 0.65 km east of the Bobo site. The ASSF (Alabama State Site File) forms list Little Bear Creek, Swan Lake, and West Jefferson components for Tu64, and Elora, Little Bear Creek, Swan Lake, and West Jefferson components for Tu65. Tu64 and Tu65 were collected in the UMMA survey, and Bozeman (1982:76) indicates that both had shell-tempered pottery and were "probably the remains of Moundville phase farmsteads."

Tu67 is approximately 0.20 km southeast of the Bobo site. According to the ASSF, aboriginal pottery was found at the site, making it post-Archaic, but we have no more precise indication of its date. Tu68 is 0.70 km southeast of the Bobo site. Grit-tempered pottery collected at the site indicates that it dates to the Woodland period. Tu483 is about 1 km southwest of Tu66 and dates to the West Jefferson phase. Tu746, 0.90 km northwest of the Bobo site, has both West Jefferson and Mississippian components.

ARCHAEOLOGY AT THE GRADY BOBO SITE

The Grady Bobo site, until recently known in the literature only as 1Tu66, was recorded in 1933 by Walter Jones and John Dodd of the University of Alabama. On the state site form, they note that the pot sherd and flint-chip debris covered an area approximately 800 ft by 200 ft (1.9 ha). Tu66 has been revisited by archaeologists several times over the last 70 years, most notably in 1978, 1995, 1999, and 2000.

Before I summarize these investigations, I will briefly discuss the convention I use when presenting figures of the site. Field crews established separate grids for the 1978, 1995, and 1999-2000 seasons. All grids were referenced relative to a red oak tree at the south end of the upper terrace; for consistency and ease of interpretation, I calibrated the 1978 and 1995 grids with the 1999-2000 grid and use the 1999-2000 coordinate system in this dissertation. The 1995 grid is 4.5° west of 1999-2000 grid north, but for ease of comparability, I have rotated the 1995 grid to correspond to the 1999-2000 grid. I was able to tie these grids to their absolute locations using the farm road that divides the upper and lower terraces. In 1999 and 2000, John Scarry shot points along the road using a total station. I lined up those points with the road as it appears on the Coker digital orthophoto quadrangle (DOQ), a georeferenced aerial photo (Figure 4-3). I determined the site's boundaries in this and subsequent figures using the distribution of artifacts in the 1995 power auger tests.

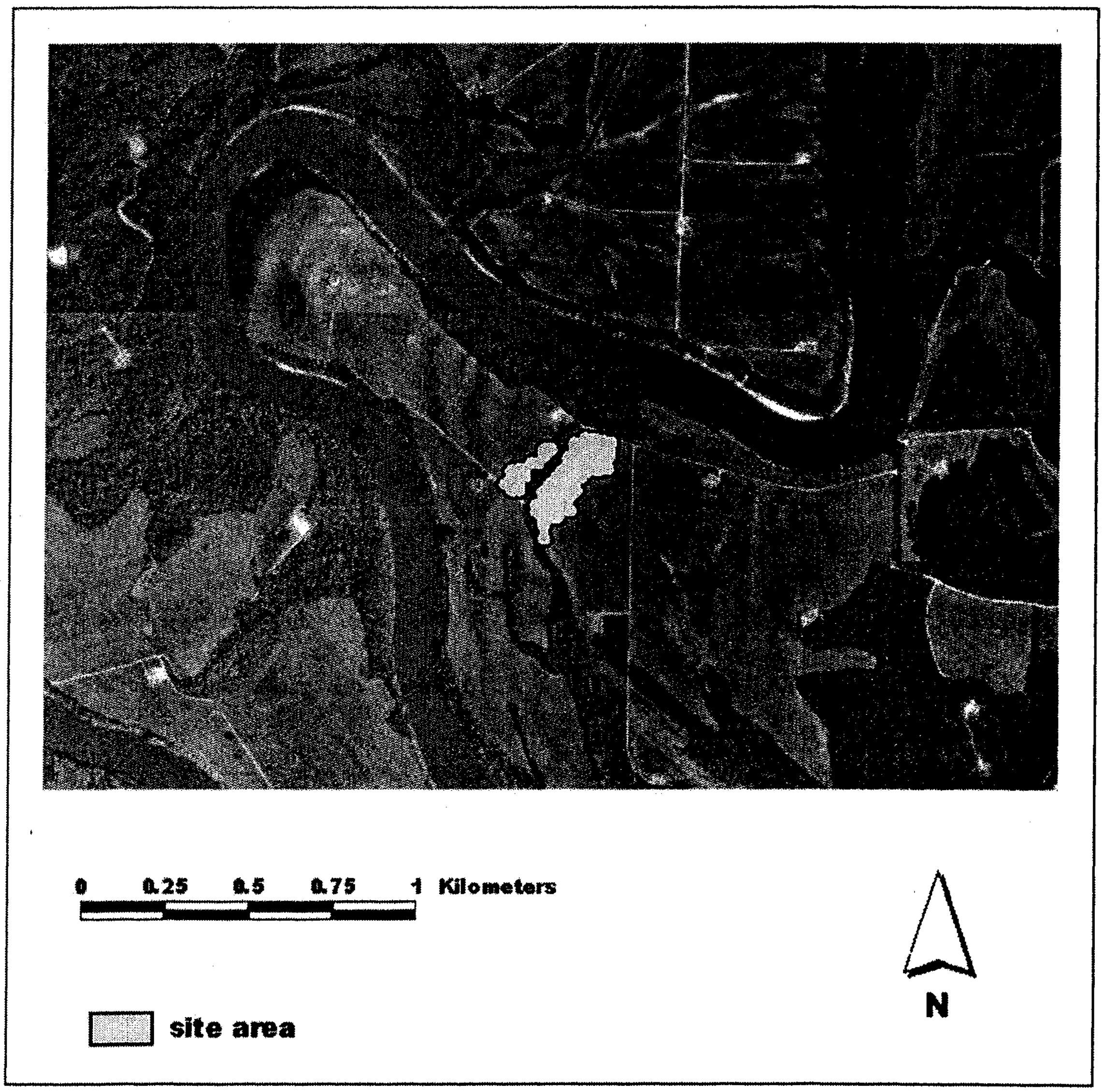


Figure 4-3 The Grady Bobo site.

In 1999, we established a permanent datum, a 2-ft rebar spike set in concrete, approximately 1 m north of the red oak tree landmark. In UTMs, the permanent datum is located at approximately E 437380, N 3671783 (Figure 4-4). In the 1999-2000 coordinate system, this datum is located at N 907.8 E 452.2 (Figure 4-5). Note that the 1999-2000 grid is oriented 2° east of magnetic north (making the 1995 grid 2.5° west of magnetic north).

1978 Surface Collections.

In 1978, a University of Michigan crew collected artifacts across the surface of the Grady Bobo site. They used cotton rows to guide the placement of 20-x-20-m grid squares (Tandy Bozeman, field notes, 1978) over 2.72 ha of the upper and lower terraces (Bozeman 1982:84). Bozeman created contour maps of the distribution of grog-tempered pottery, shell-tempered pottery, and stone artifacts (Bozeman 1982:Figures 17-19).

Using CorelDraw, John Scarry was able to tie the 1978 grid to grids created in subsequent field seasons, allowing us to see the spatial relationships between the 1978 surface densities and natural and built attributes of the area, such as the modern farm road, wooded areas, and elevation. I georeferenced Scarry's CorelDraw images into ArcView, generating Figure 4-6. This figure depicts the contours Bozeman created based on the distribution of shell-tempered pottery. Bozeman created these contour lines using sherd weight; each contour represents 10 grams. Bozeman (1982:85) interpreted this figure to indicate that there were three concentrations of Moundville phase pottery likely representing three separate farmsteads or hamlets.

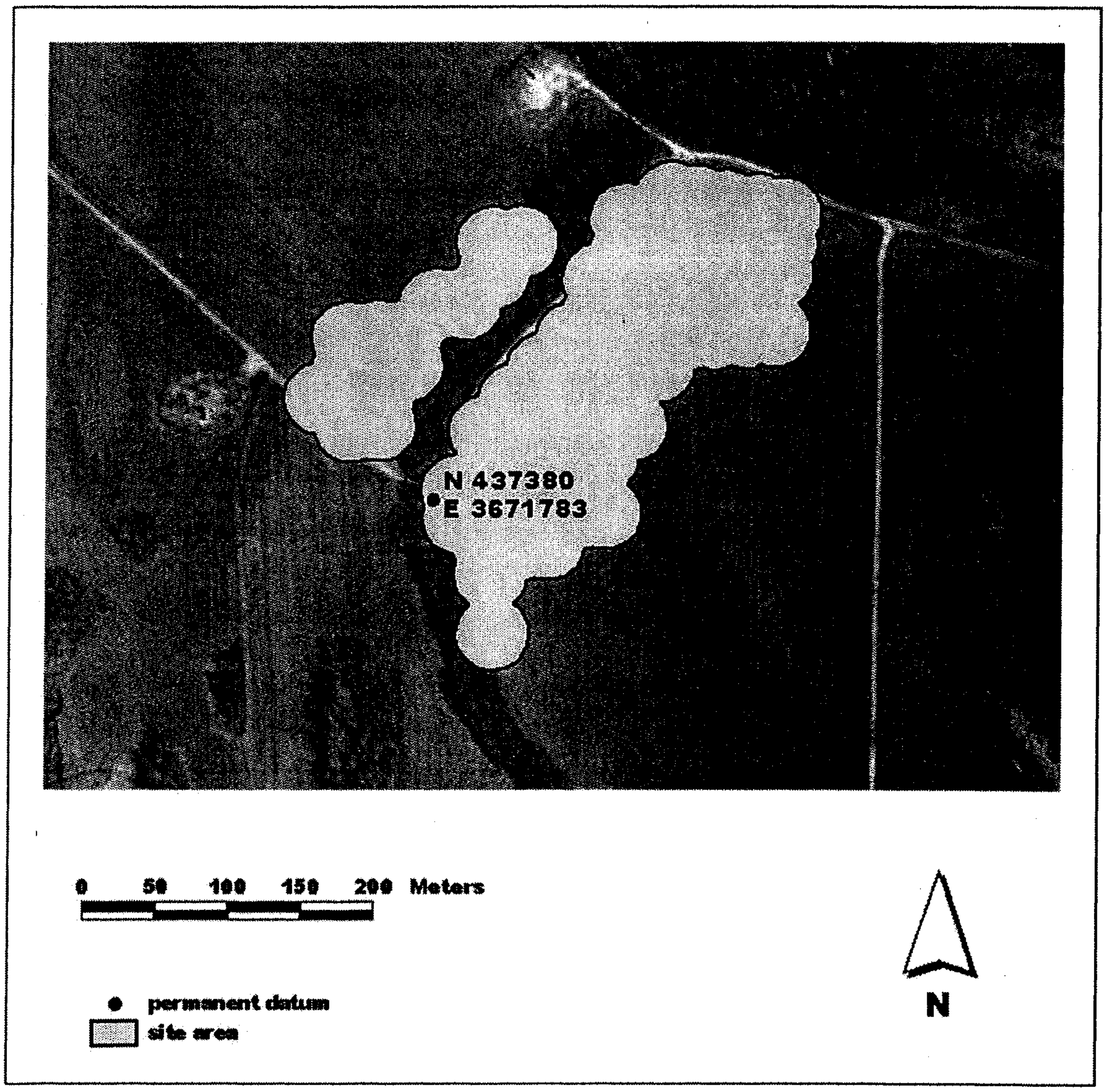


Figure 4-4 UTM coordinates of Grady Bobo site permanent datum.

Figure 4-5 1999-2000 grid, orientation 2° east of magnetic north.

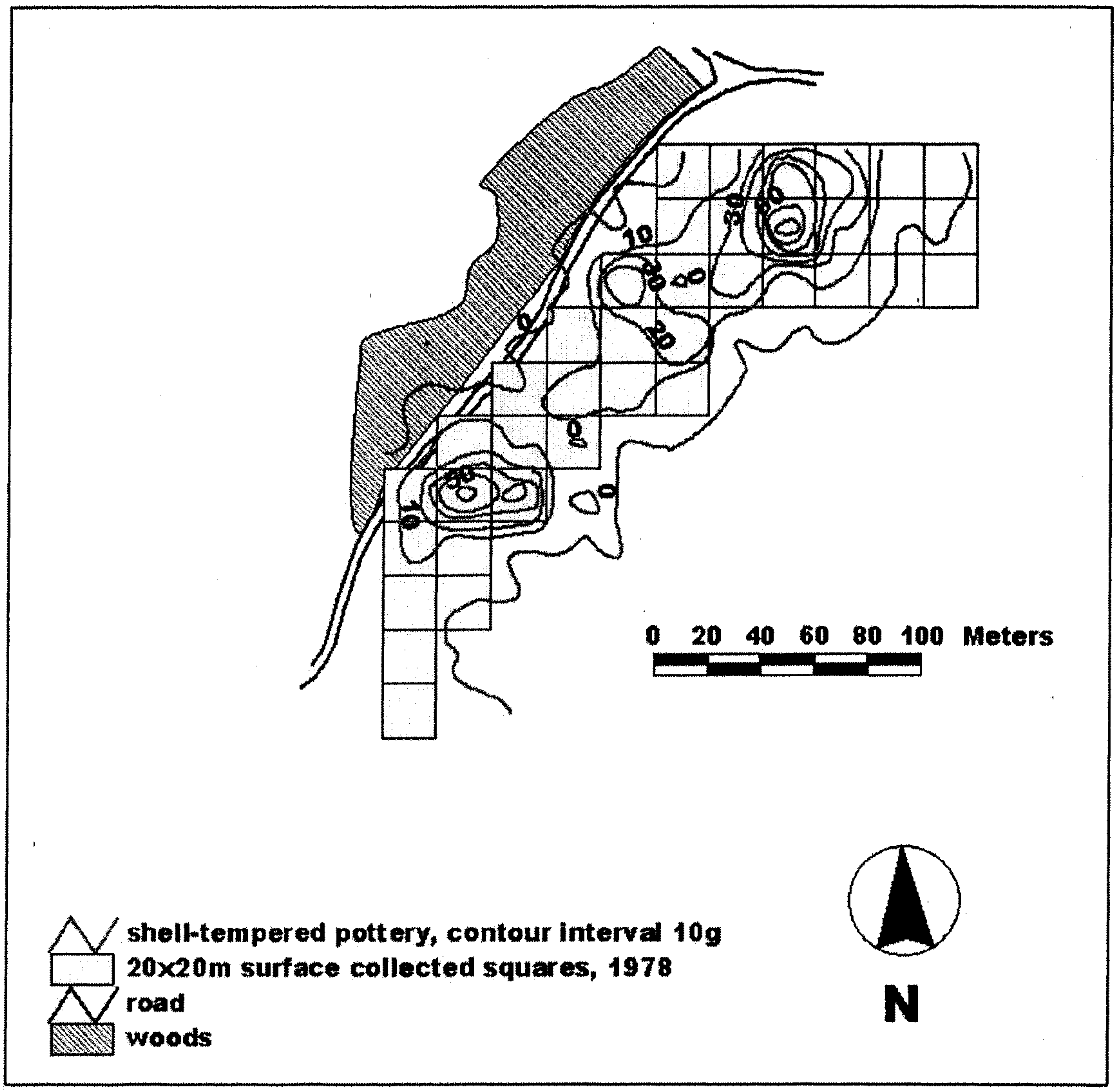


Figure 4-6 Distribution of shell-tempered pottery by weight on the surface of the Bobo site, 1978 (from Bozeman 1982).

In place of contour lines, I use circles of graduated sizes to represent the distribution of shell-tempered sherds per 20-m x 20-m square. The contour lines impart a false impression of smooth, gradual increases and decreases in densities when the reality is that we do not know what the distribution of pottery is within a 20 x 20 m square. Figure 4-7 is my rendering of the distribution of shell-tempered pottery by weight from the 1978 surface collection using graduated circles. I use 5 equal intervals; squares that do not contain a circle had no shell-tempered pottery. This figure suggests that there may be only two concentrations of Moundville-era pottery instead of three. The high spot in the middle of Bozeman's figure is not of the same magnitude as the other two concentrations (Figure 4-8). Note that the "hot spots" are only about 60-70 grams of shell-tempered pottery in a 20-x-20-m square.

Scarry and Scarry (1997:4-5) note that pottery distributions by weight can be biased by large and/or heavy sherds, so I have reexamined Bozeman's data using sherd counts instead of weights (Figure 4-9). Again, I use five equal intervals, beginning with 1. This figure confirms that there are two concentrations of shell-tempered pottery, not three. Bozeman (1982:85) assumed that all of the Moundville components date to Moundville III-IV. In the surface collections at the north end of the site, the crew recovered two beaded rims, a Moundville III diagnostic; one sherd of Carthage Incised, *variety Carthage,* a variety that dates to the Moundville III and Moundville IV phases (Steponaitis 1983:309); and three sherds of Alabama River Incised, a type characteristic of Moundville IV (Steponaitis 1983:82). There were no diagnostics in the southernmost concentration of shell-tempered sherds. All of the shell-tempered sherds collected in that area were plain. In 1995, we were able to date this concentration to Moundville I.

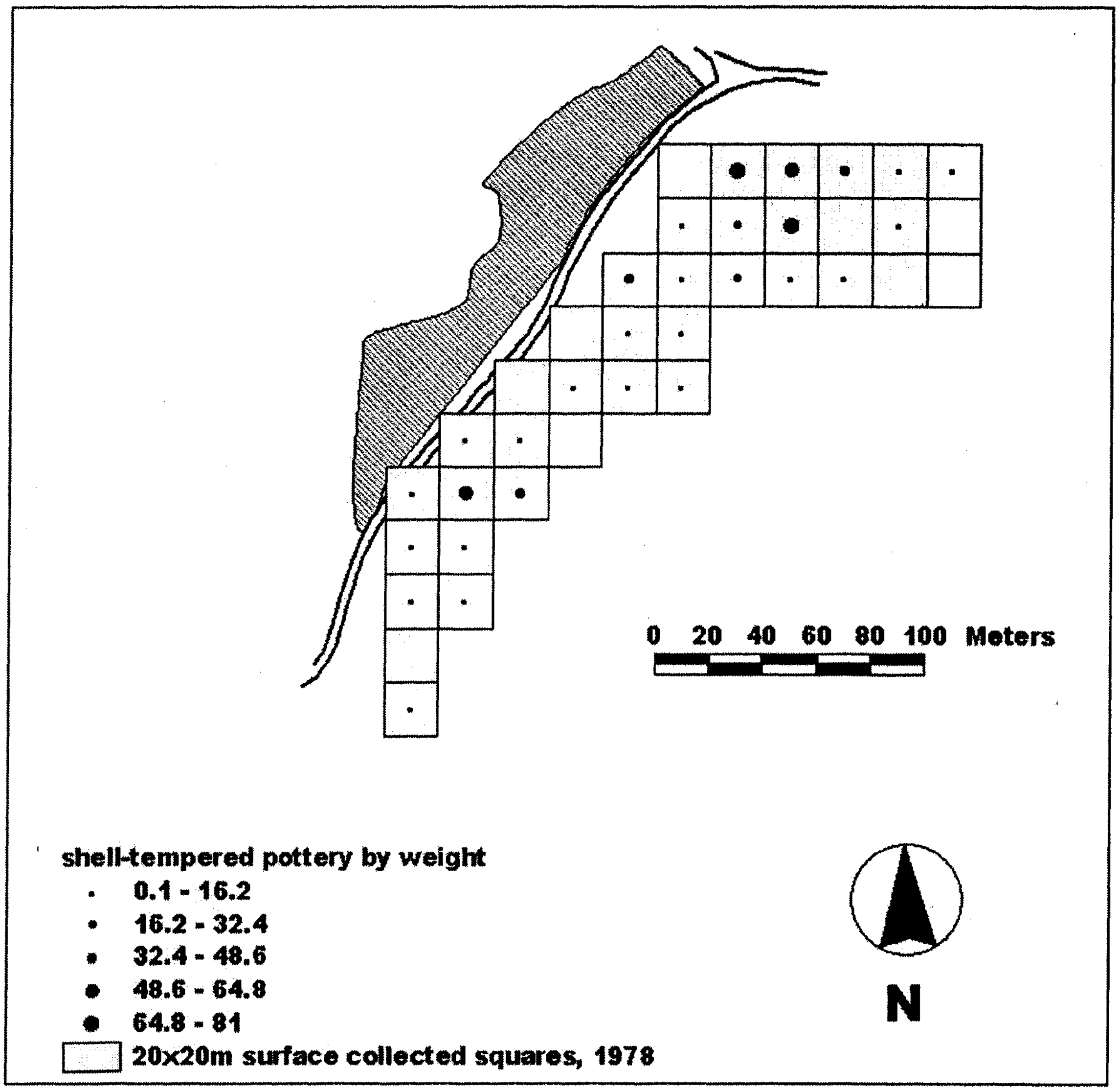


Figure 4-7 Distribution of shell-tempered pottery by weight on the surface of the Bobo site, 1978.

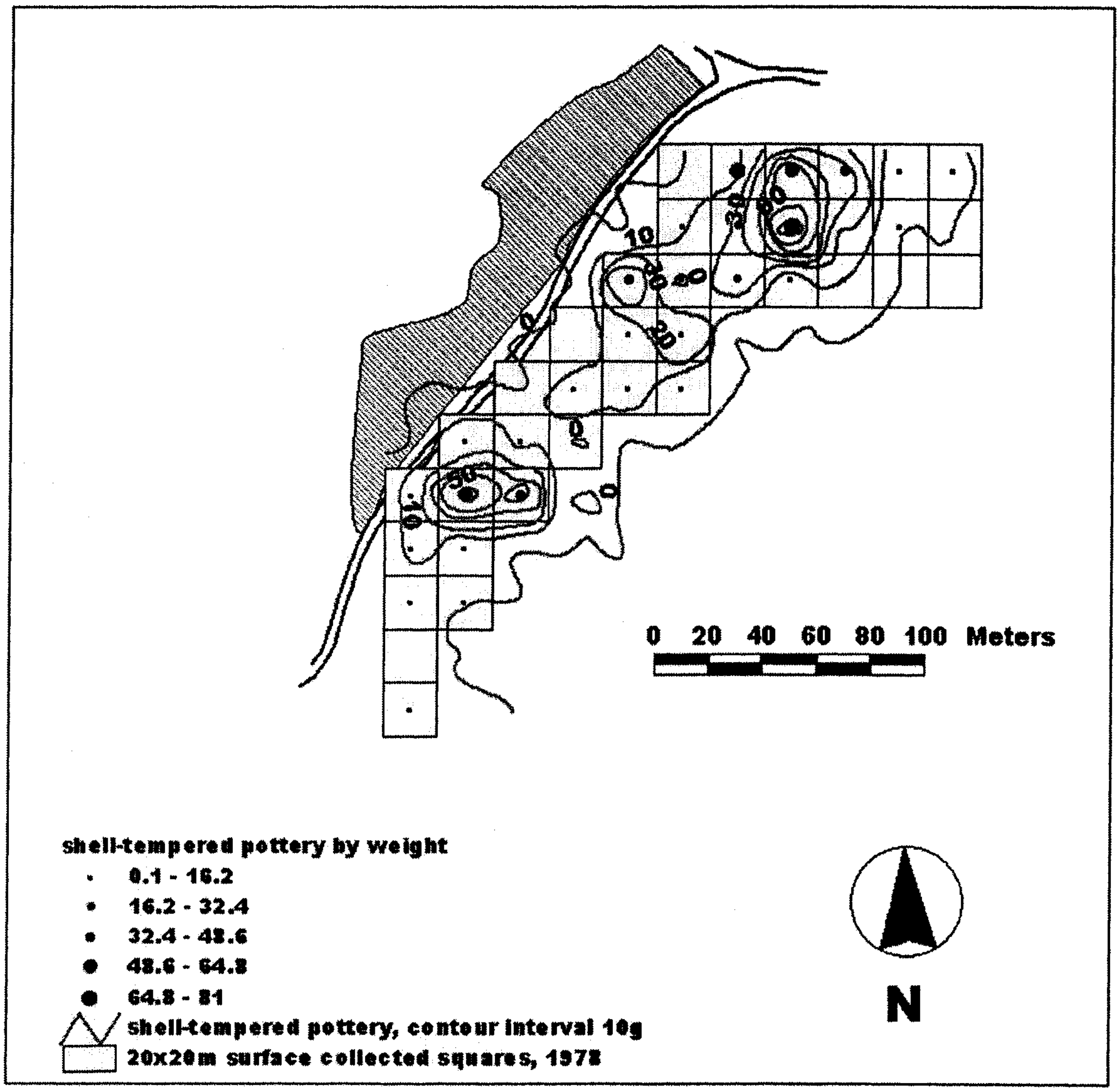


Figure 4-8 Comparison of the two methods of visualizing the distribution of shell-tempered pottery by weight.

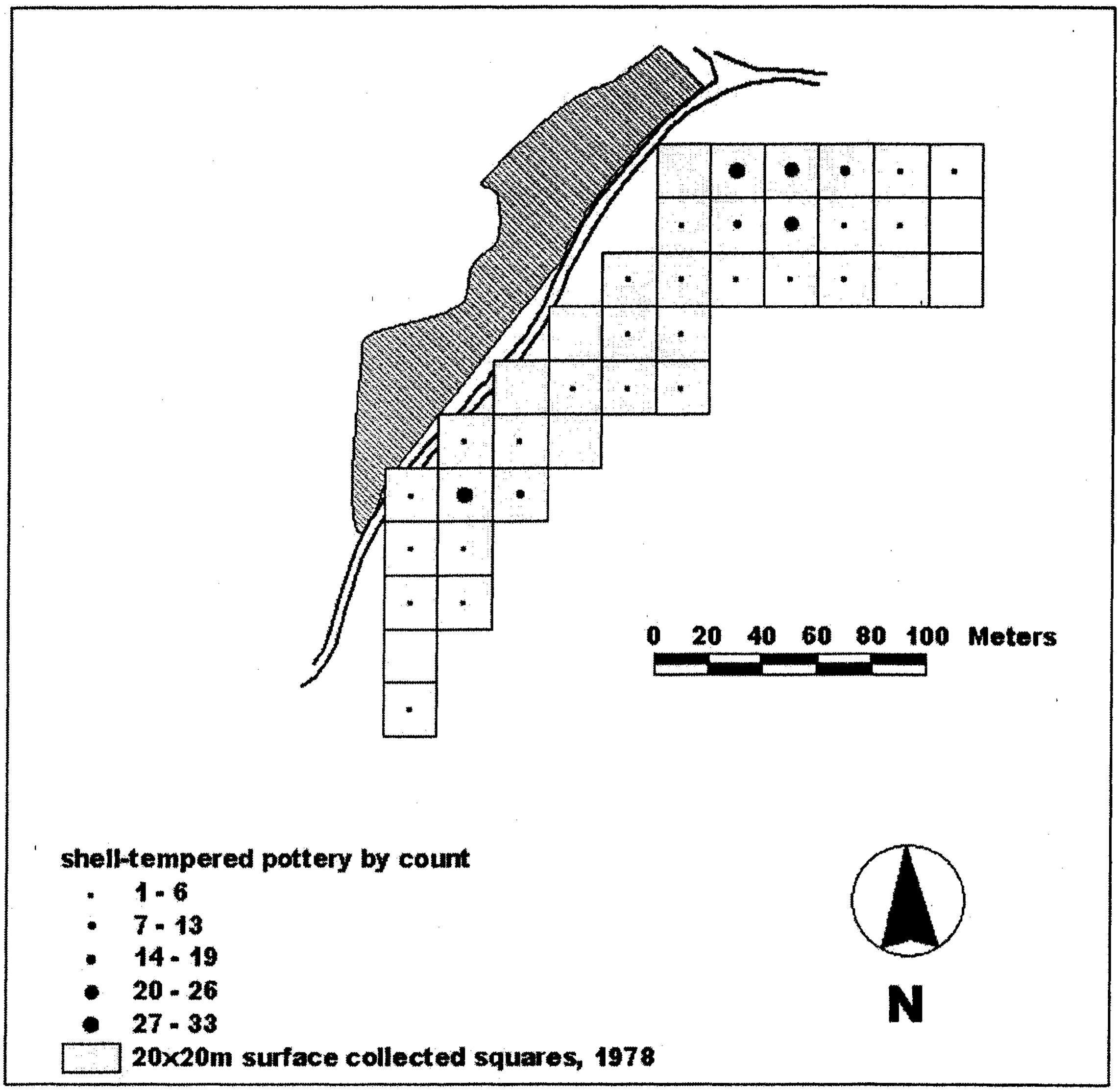


Figure 4-9 Distribution of shell-tempered pottery by count on the surface of the Bobo site, 1978.

It may be significant that the areas of high densities of shell-tempered pottery on the surface more or less coincide with the highest elevations (Figure 4-10). I refer back to this point later in this chapter when I discuss the post-depositional processes that influenced the formation of the Grady Bobo site.

1995 Auger Tests and Test Unit Excavations.

In 1995, Margaret and John Scarry began the University of North Carolina West Jefferson project, testing two sites in the Black Warrior Valley known to possess West Jefferson components. While the Scarrys' research interests center on the West Jefferson phase, in the course of investigations, the crew found and excavated Moundville-era pottery and features. One of the sites under study was the Grady Bobo site.

The 1995 testing at the Grady Bobo site took place in three stages. In the first, the Scarrys' crew of five students first dug a series of auger tests at 20 meter intervals on both the lower and upper terraces across the area identified as the distribution of grog-tempered pottery in the 1978 surface collections. Using a two person gasoline-powered post hole auger, we dug holes 30 cm in diameter. We used a wooden box with a hole in the center to collect the soil, which we then sifted through 0.5-inch hardware cloth. Steponaitis et al. (1994) call this method power augering to differentiate it from augering by hand.

We dug 38 power auger tests on the lower terrace and 86 on the upper terrace (Figure 4-11). Note that 14 power auger tests in the northwest quadrant of the site were oriented 10° west of 1995 grid north. Obvious gaps in the grid are transit stations or are due to compacted soil or proximity to a natural gas pipeline that prohibited drilling.

The most significant finding of the power auger tests was the discovery of intact West Jefferson-phase midden at the south end of the upper terrace. The other important contribution of the auger tests was to allow us to map the distribution of stone artifacts and

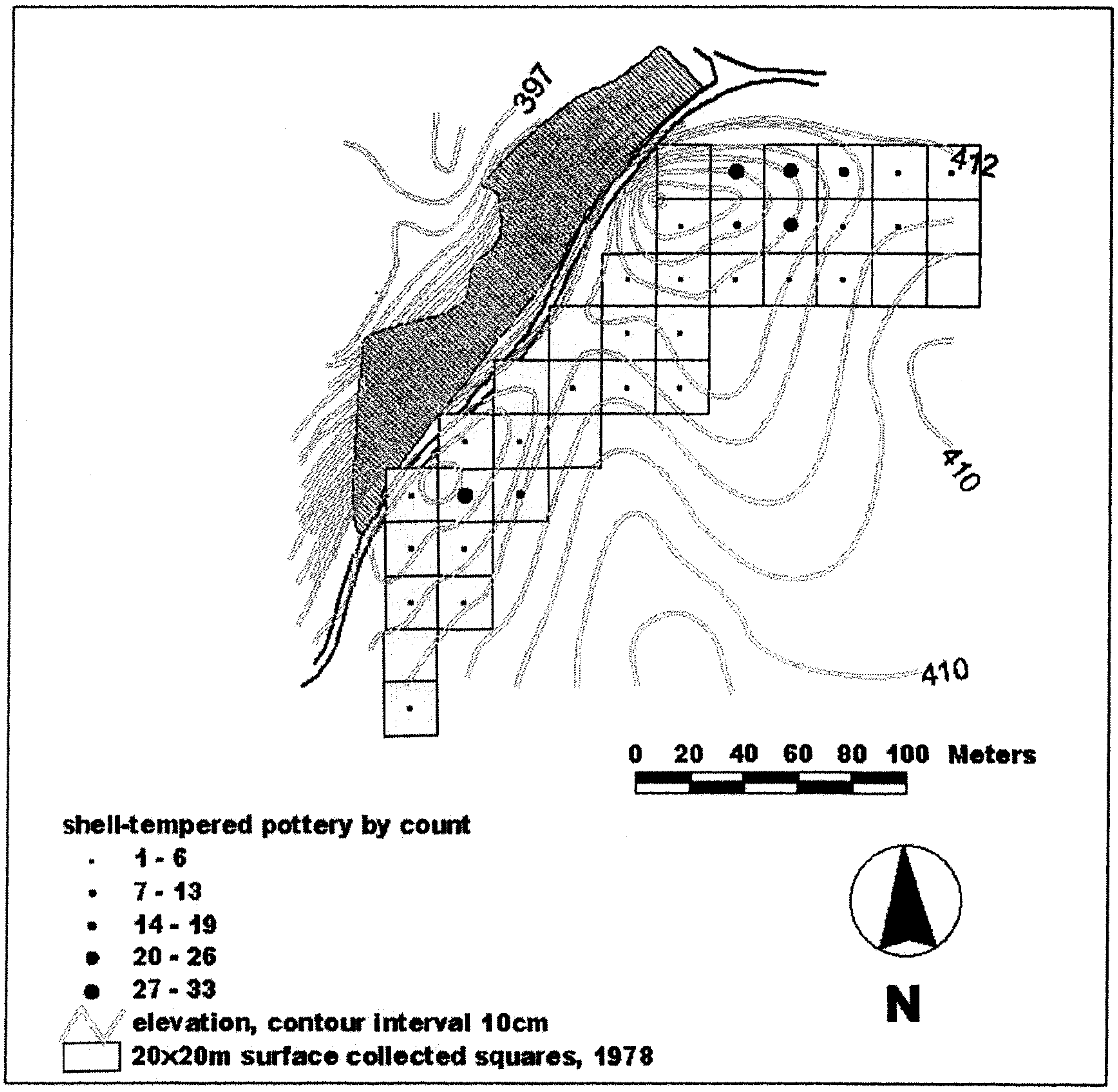


Figure 4-10 Relationship between elevation and distribution of shell-tempered pottery.

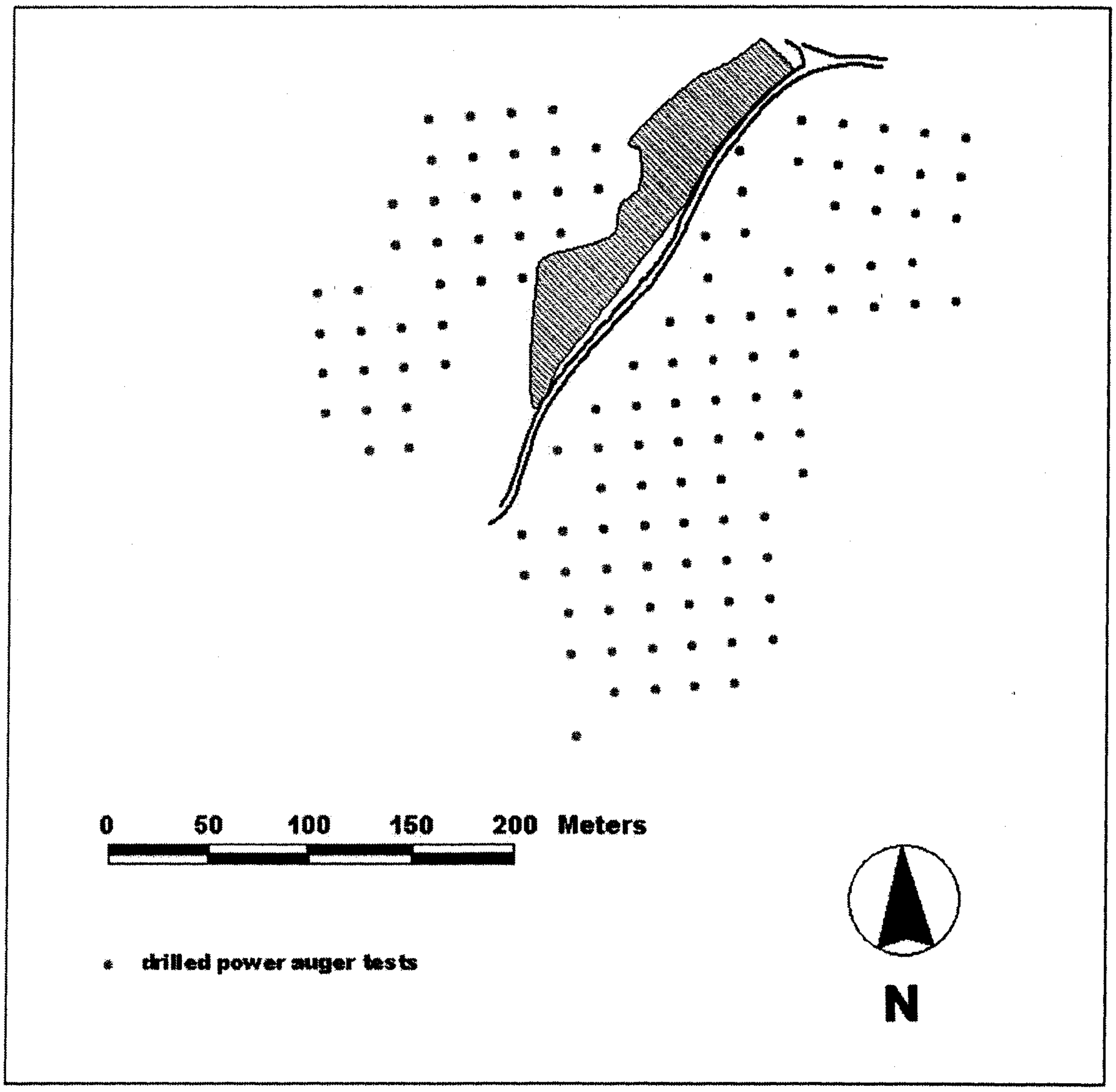


Figure 4-11 Power auger tests drilled at the Grady Bobo site, 1995.

pottery in the plow zone (Figure 4-12). Only three power auger tests had shell-tempered pottery (Figure 4-13); each of these contained two shell-tempered sherds.

Several key differences between the 1978 surface collections and the 1995 power auger tests affect the kind of information we can learn from their artifact distribution maps. First, the 1995 auger tests cover a larger area, allowing us to get a sense of the distribution of artifacts on the lower terrace as well as the upper terrace. Second, in 1995, "points" were sampled, not areas. And third, the power auger tests sample the distribution of artifacts in the plow zone, offering an opportunity to compare plow zone to surface distributions.

It may initially seem somewhat surprising that there were significantly fewer shell-tempered sherds in the auger tests than on the surface. But, as mentioned above, the 1995 tests were 30 cm in diameter; the 1978 collections covered 20 x 20 m areas. Further, the shell decomposition factor discussed in Chapter 3 probably also played a role. The power auger may have contributed to the destruction of the relatively brittle shell-tempered sherds. There is also a sampling issue to consider. In 1995 excavations, we used 0.5-inch mesh screen. In 1978, artifacts were not screened; all sherds were counted regardless of size.

During the second phase of the 1995 testing, we augered by hand. The hand auger brings up a core of soil 40 cm in length and 2 cm in diameter (see Steponaitis et al. 1994). The tube of the hand auger is open on one side, allowing a clear view of the soil profile. We placed a series of hand auger cores at 4-m intervals in eight 20-m x 20-m blocks deemed promising by the power auger tests—two blocks on the lower terrace and six blocks on the upper terrace (Figure 4-14). In the cores on the upper terrace, we noted the approximate southern boundary of the West Jefferson midden (Figure 4-15). The cores on the lower terrace revealed some dark soil that could potentially be midden or features.

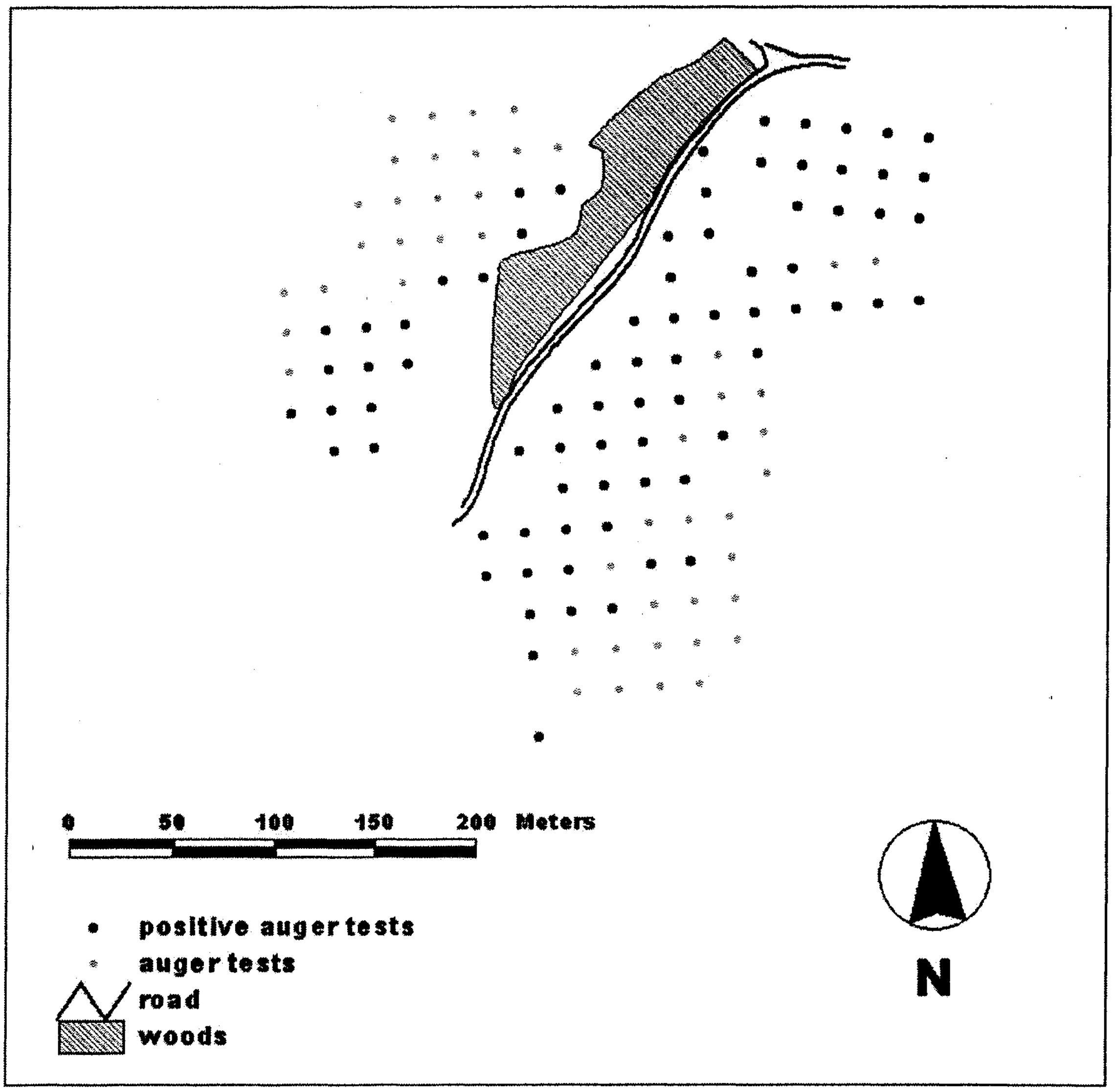


Figure 4-12 Positive power auger tests drilled at the Grady Bobo site, 1995.

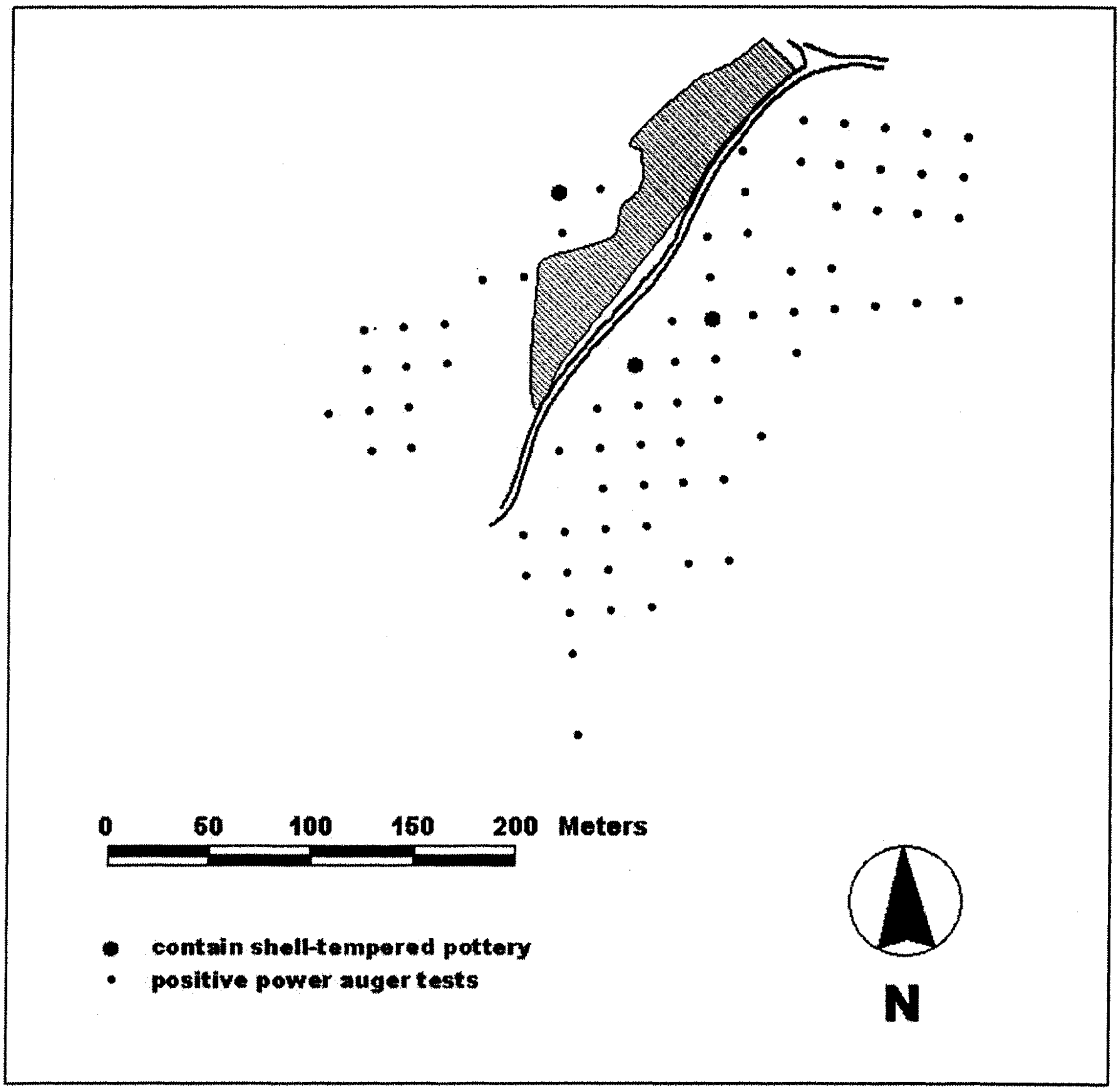


Figure 4-13 Power auger tests at the Grady Bobo site that contain shell-tempered pottery, 1995.

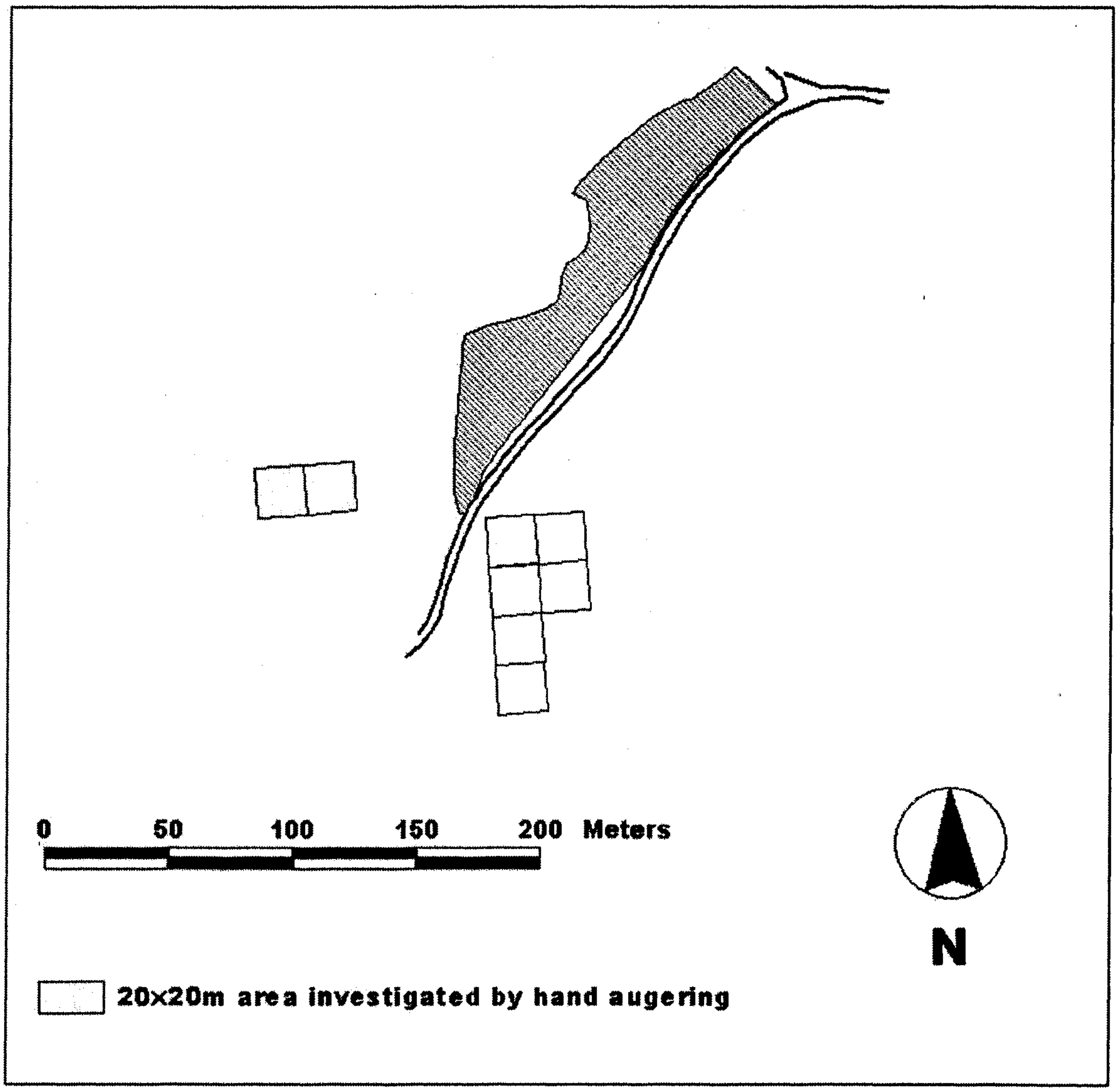


Figure 4-14 Areas investigated by hand auger, lower terrace to the west, upper terrace to the right.

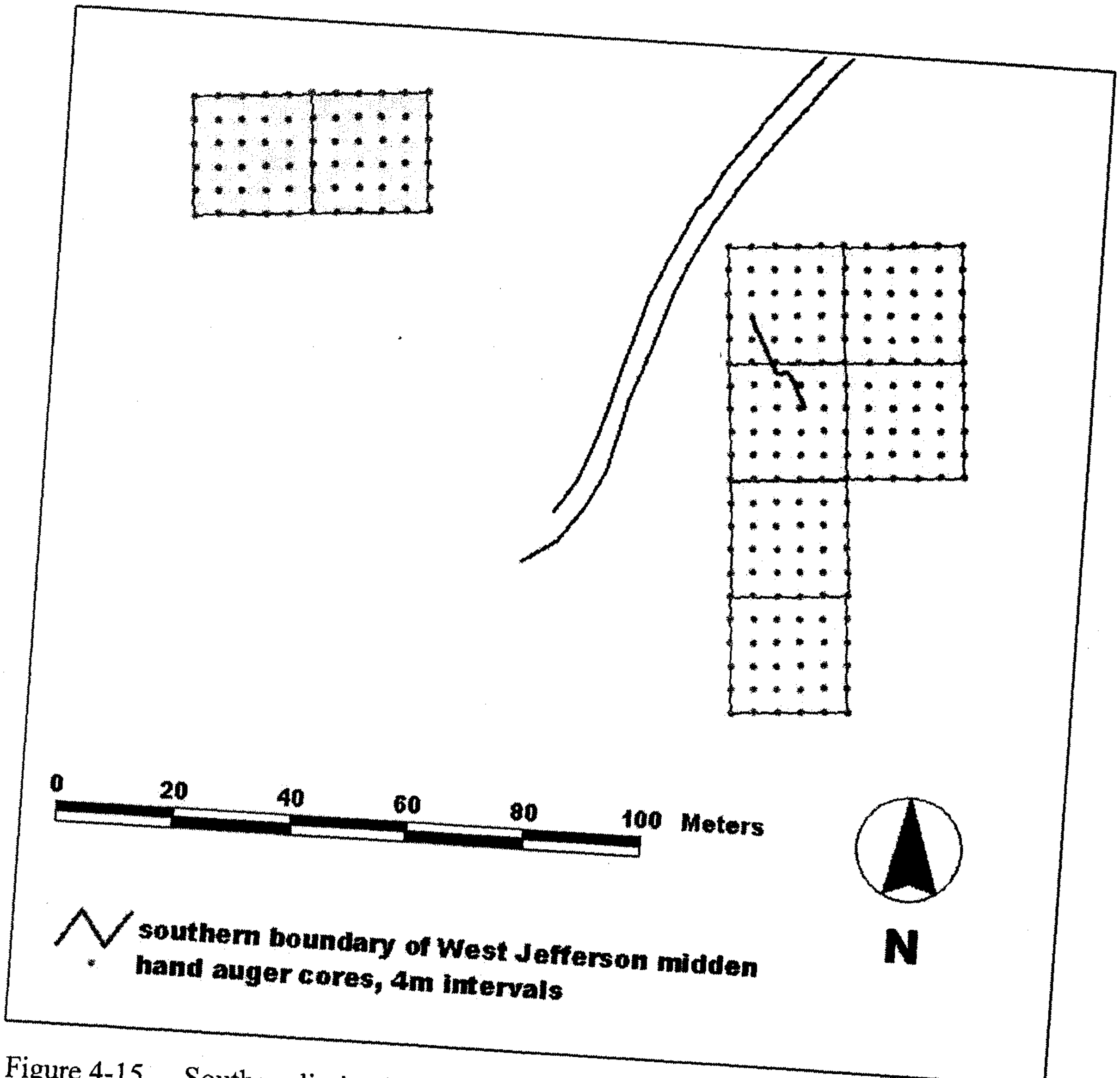


Figure 4-15 Southern limit of West Jefferson midden, determined by hand augering, 1995.

During the final stage of the 1995 season, we excavated seven 1-x-1-m test units. We dug four test units on the upper terrace—Test Units 1-4—and three test units on the lower terrace—Test Units 5-7 (Figure 4-16). The lower terrace units were placed to investigate areas where we found dark soil in the hand auger tests. We put in Test Units 1 and 2 on the upper terrace in the West Jefferson midden (Figure 4-17), and Test Units 3 and 4 near the southernmost shell-tempered pottery concentration (Figure 4-18). There was shell on the surface around Test Unit 4, and hand augering revealed feature soil in the area.

The test units on the lower terrace revealed the presence of deep lenses of soil likely resulting from alluvial and/or colluvial processes (Scarry and Scarry 1997:9). On the upper terrace, Test Units 3 and 4 are of particular interest here, as their locations were based on the presence of shell and shell-tempered pottery, indicating that these areas are Mississippian in date.

The vast majority of pottery (98%) from Test Unit 3 is Baytown Plain, *variety Roper*. Only one sherd is shell-tempered. Test Unit 4 proved more fruitful. In Test Unit 4, we hit a shallow basin filled with shell-tempered pottery, bone, and worked stone. Portions of the feature soil were water-screened and floated; the rest was dry-screened through 0.25-inch mesh. We excavated the feature in Test Unit 4 in 4 arbitrary levels, bottoming out at 52 cm below surface. The folded and folded-flattened rims and Moundville Incised, *variety Moundville* sherds in this feature date it to the late Moundville I phase (Figure 4-19).

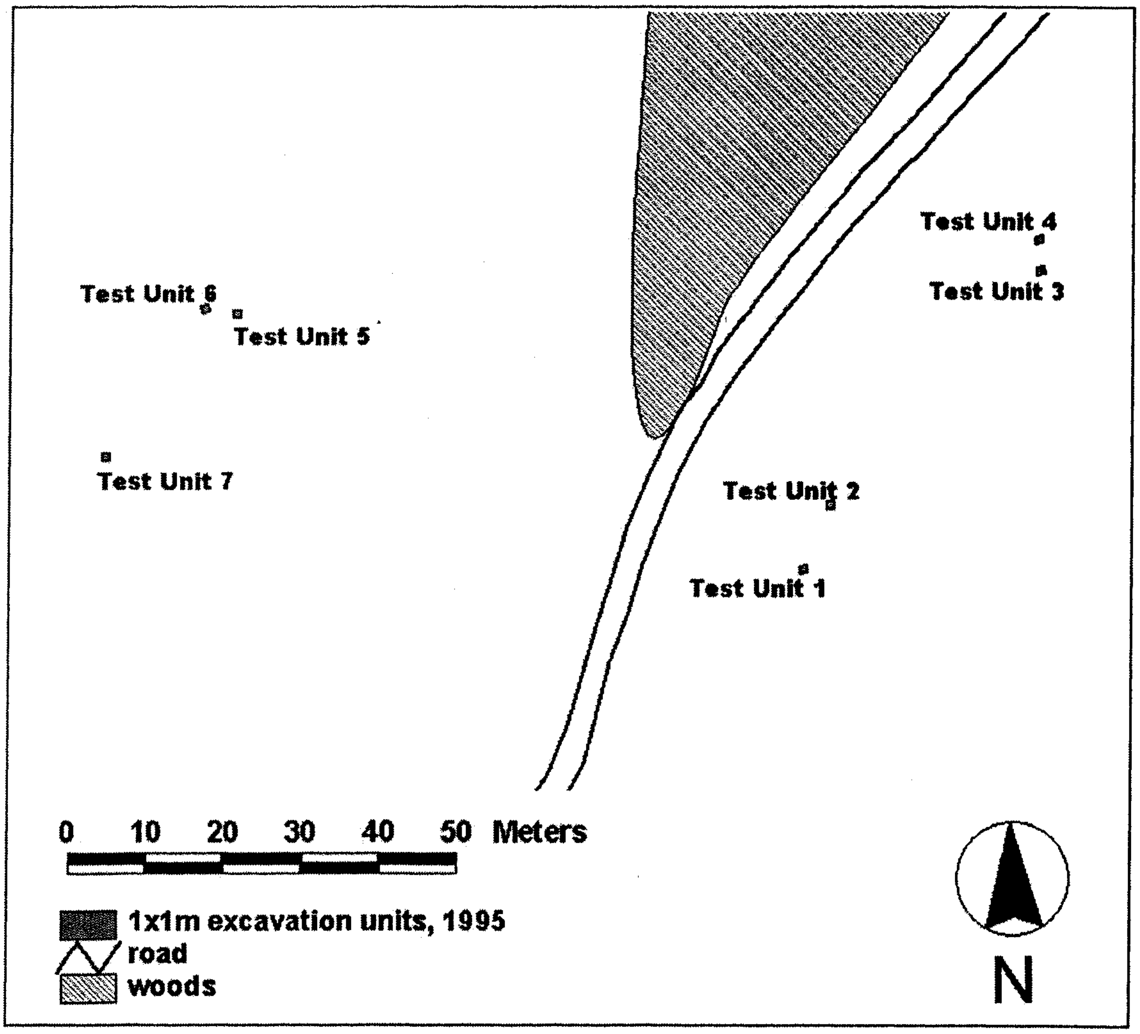


Figure 4-16 Test units, 1995.

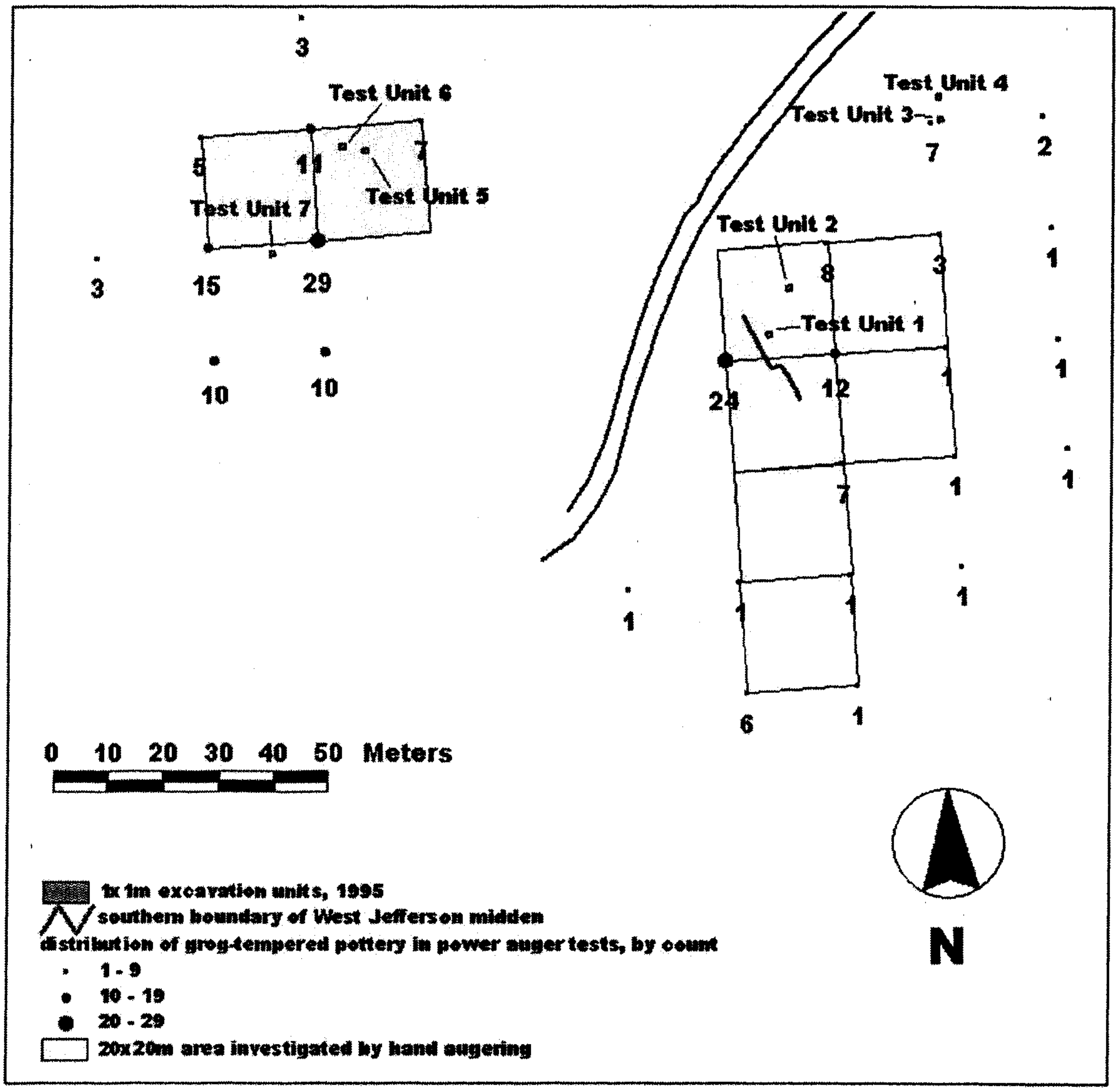


Figure 4-17 Grog-tempered pottery in vicinity of test units.

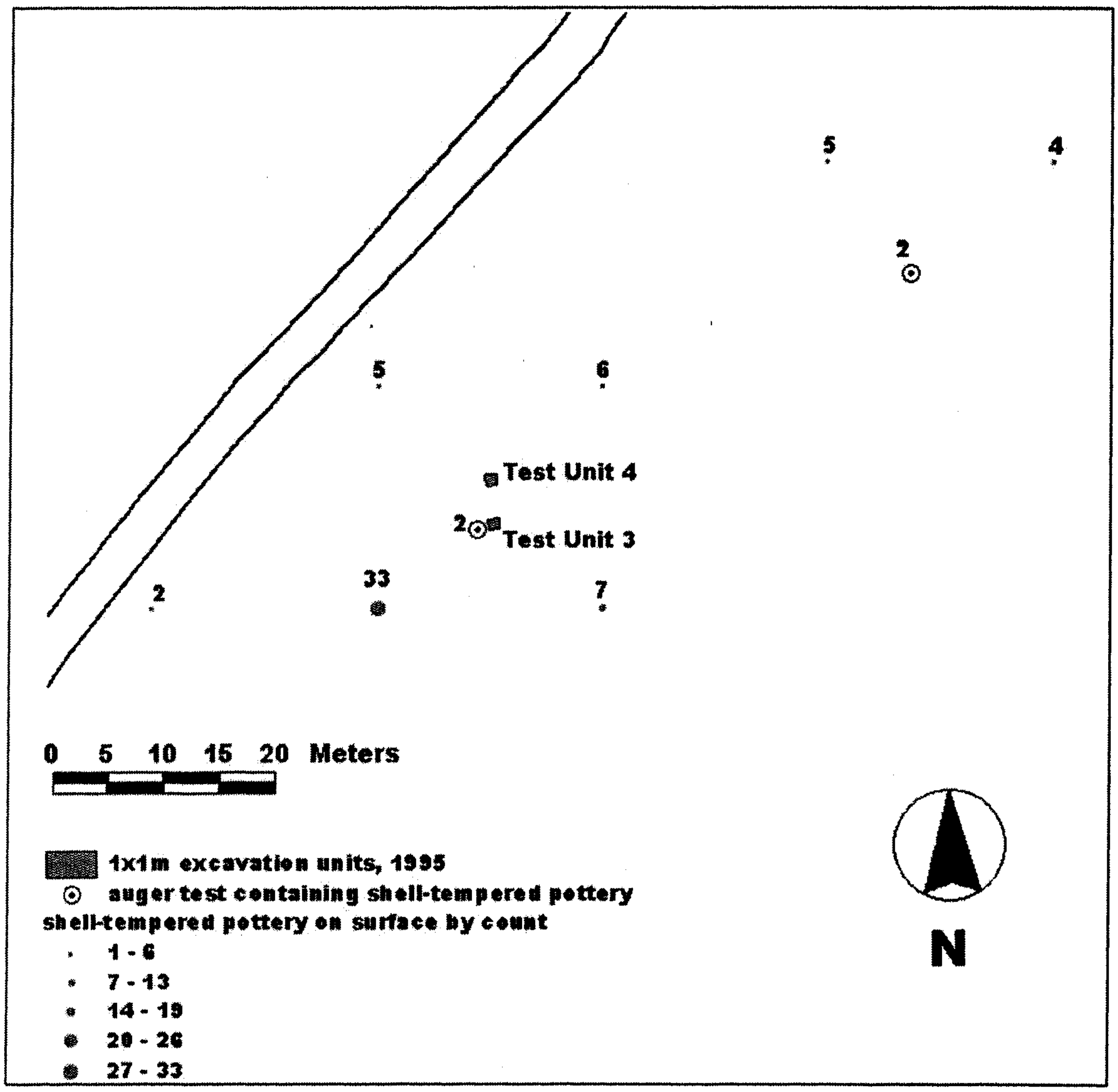


Figure 4-18 Shell-tempered pottery in vicinity of Test Units 3 and 4.

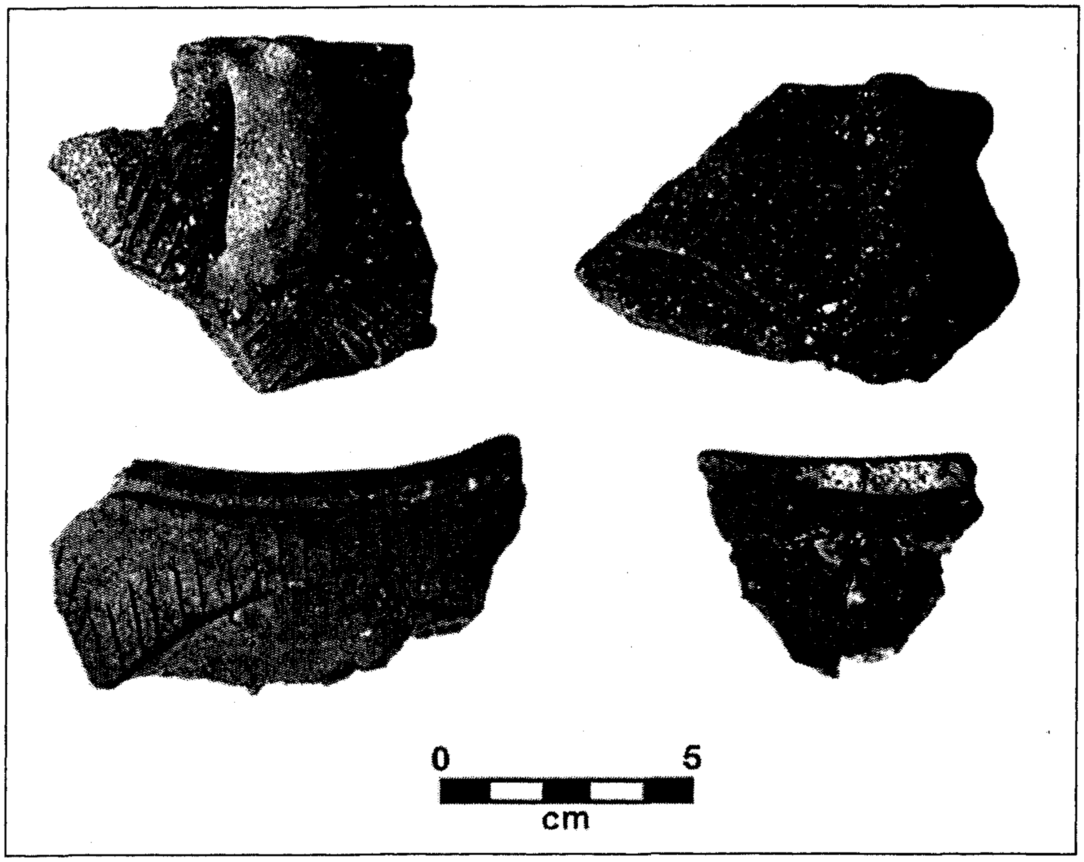


Figure 4-19 Moundville Incised, *variety Moundville* rim sherds from Test Unit 4.

Based on the analysis of pottery from this 1-x-1-m test unit through the feature, I hypothesized that this site was not a farmstead, but a public area where commoners gathered to share food and create a sense of community (Maxham 1997, 2000a). The ratio of burnished to unburnished sherds—a rough measure of the relative proportions of serving ware (e.g., Figure 4-20) to utility ware—is high. In fact, there are more serving vessels relative to cooking and storage vessels at the Bobo site than at every other excavated site in the Black Warrior Valley, including Moundville itself. One can safely conclude that serving was an important component of the event(s) that produced this feature and that the refuse in the feature is not day-to-day domestic trash. I discuss the pottery data and foodways at the Grady Bobo site in depth in Chapter 5.

1999 Excavations.

In 1999, we returned to the Grady Bobo site with a full crew of students from the University of North Carolina archaeological field school. Our goal for the 1999 season was to excavate and screen 3-x-3-m units to get a better sense of the distribution of artifacts in the plow zone and West Jefferson midden. Recovering this information was extremely important, as we planned to mechanically strip the plow zone the following season.

We excavated 16 3-x3-m squares during the 1999 season. Seven of these were at the south end of the upper terrace in the West Jefferson midden area, and nine were in the Moundville I area near 1995's Test Unit 4 (Figure 4-21). We selected the locations of two of

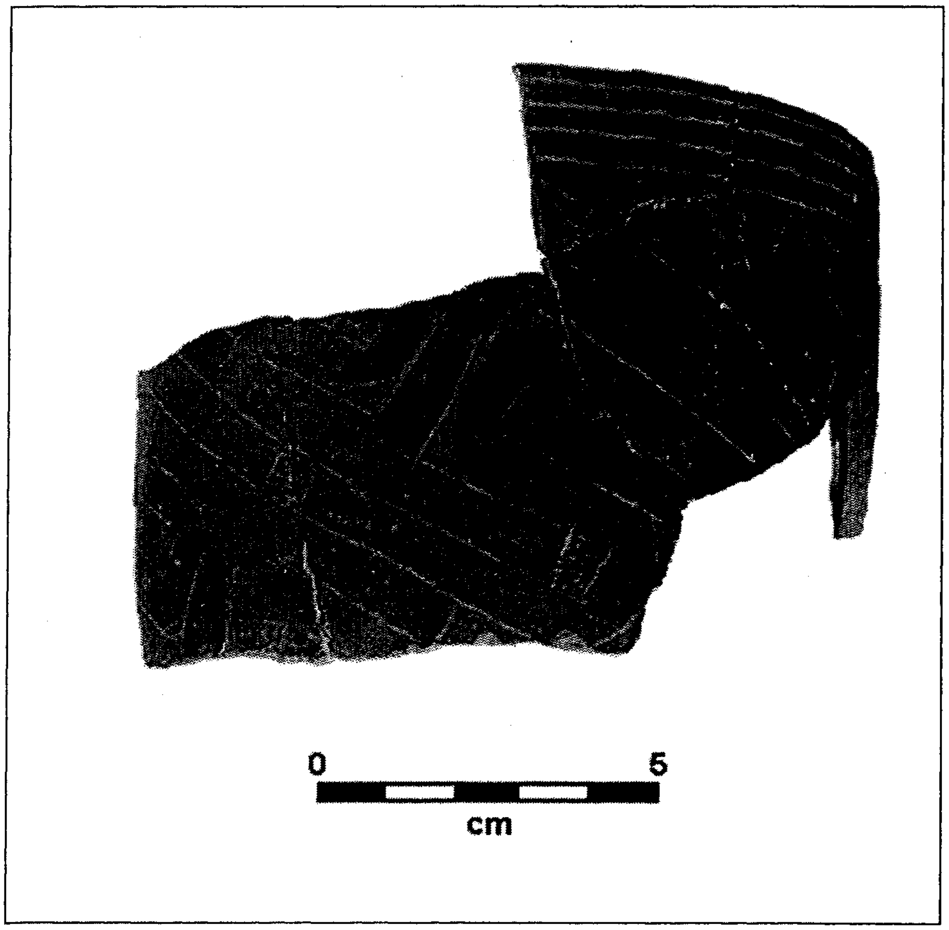


Figure 4-20 Engraved cup-shaped bowl from Test Unit 4.

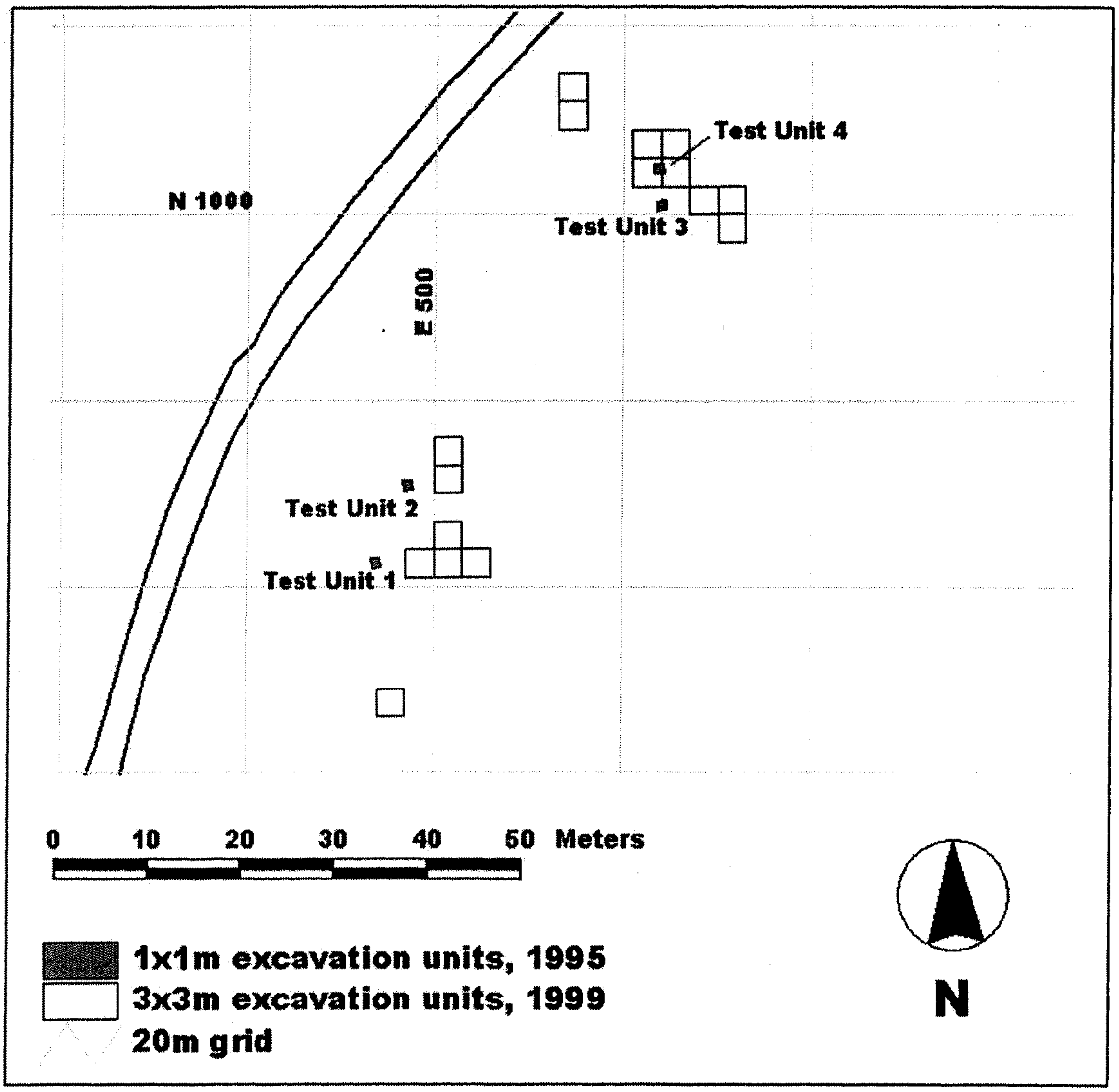


Figure 4-21 1999 grid and excavation units, relative to 1995 test units.

these units (N1012 E513 and N946 E494) based on the results of a magnetometer survey conducted by Tom Hargrove and Briece Edwards. They donated their time during the field season to look for magnetic anomalies that may indicate the presence of pits and fired clay or stone (see Hargrove and Beck 2001).

Hargrove and Edwards laid out two 20 m x 20 m squares, and within each square took readings with a fluxgate gradiometer along north-south transects spaced 50 cm apart. They took magnetometer readings every 25 cm along the transects, resulting in 3,200 data points per 20 m x 20 m square. John Scarry calibrated their data with our grid, and I incorporated this data into the Grady Bobo ArcView project file. Figure 4-22 depicts the locations of the area surveyed by the magnetometer relative to our grid and excavated squares.

Unfortunately, the squares we chose to excavate based on the magnetometer survey did not yield prehistoric features. The anomaly in square N946 E494 turned out to be a brick. The magnetic anomaly in northwest corner of the northernmost 20 x 20 m square was the natural gas pipeline.

The seven 3 x 3 m units to the east of the northern magnetometer square were all placed with the objective of relocating the basin feature from 1995's Test Unit 4 and excavating what remained of the feature. We had problems in the field calibrating the 1999 grid with the 1995 grid and did not find the feature until the end of the field season. Once we found the feature, it was obvious—the outline of our 1995 1 x 1 m test unit was clearly visible. In keeping with our 1999 numbering system, we named this feature Feature 10. It is worth noting that Features 1-9 turned out to be root and rodent disturbances. Feature 10 was the only real feature we found in 1999.

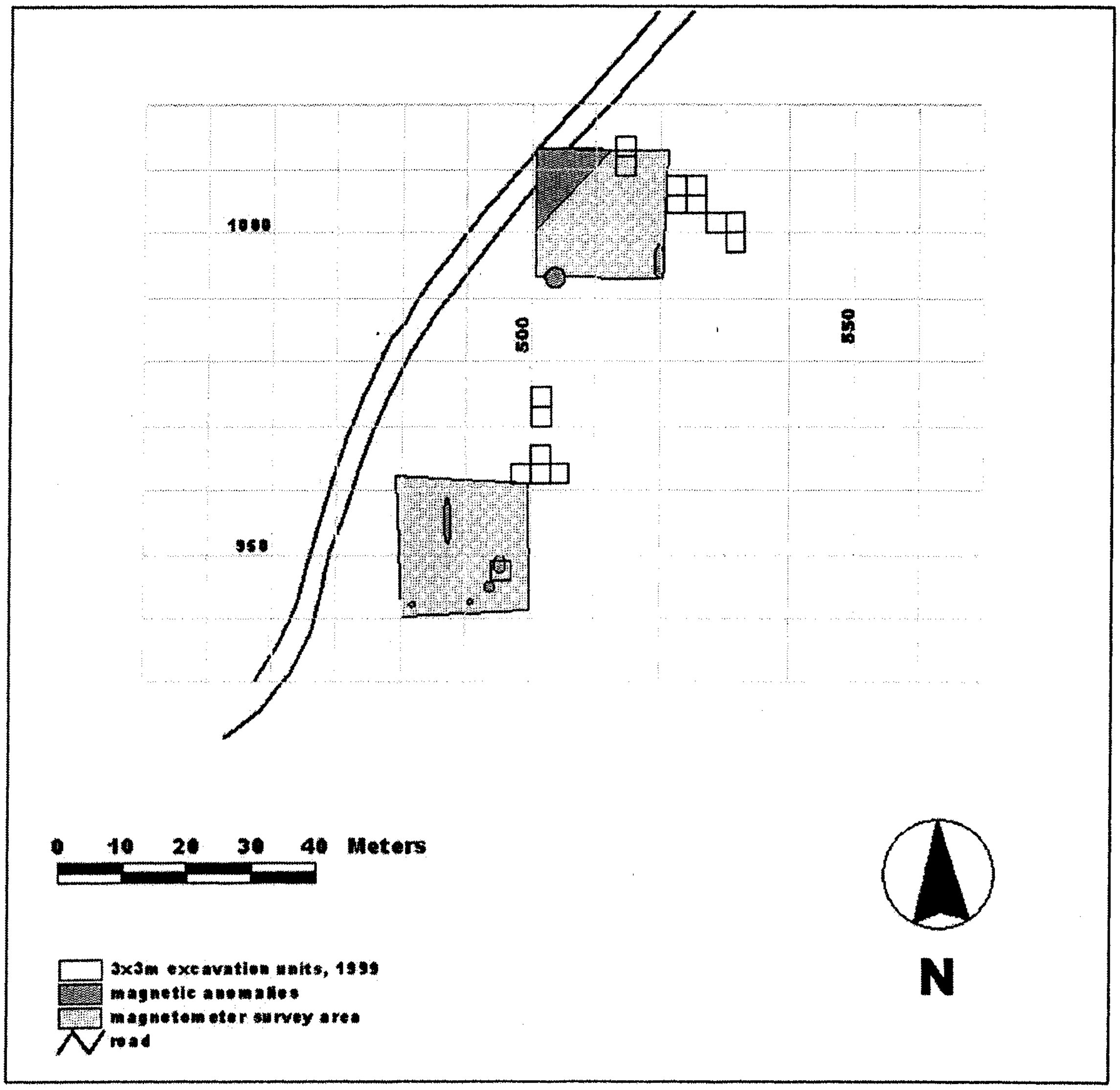


Figure 4-22 Area surveyed by magnetometer.

We excavated the plow zone in the four 3-x-3-m units that encompassed Feature 10 before we did any feature excavation (Figure 4-23). In plan, Feature 10 measured approximately 4 m north to south by 3 m east to west (Figure 4-24). Using GIS, I calculated its surface area as 9.34 m^2. After mapping the feature, we excavated the feature soil, keeping the soil from each excavation unit separate and giving each "quadrant" of the feature a unique field specimen (FS) number (Figure 4-25).

We noted several subtle changes in soil color within the feature (Figure 4-26) as we dug and gave two of these their own FS numbers (Figure 4-27). FS 33 was a darker area that encompassed parts of squares N1003 E521 and N1006 E521. FS 33 included the shell concentration we noted at the top of the feature.

As Figure 4-27 shows, some of this darker soil was excavated in 1995 in Test Unit 4. I suspect that more of Test Unit 4 was composed of the darker zone than this plan view suggests. We decided to give this zone a separate FS while in the process of Feature 10's excavation; the plan map thus indicates a smaller area of darker soil than was present higher up, especially given the conical shape of FS 33 once all of the soil from that zone was removed. Because we found pottery cross-mends between zones, we concluded that these color changes indicated different dumping episodes from the same event; FS 33 may have been the initial deposit. The fact that the darker lens of FS 33 was deeper than the rest of the feature confirms this. This is a significant point, one I return to in Chapter 5 when I discuss in depth the contents of Test Unit 4 and compare those artifacts to those from the rest of Feature 10.

Figure 4-23 Feature 10 in Square N1003 E524.

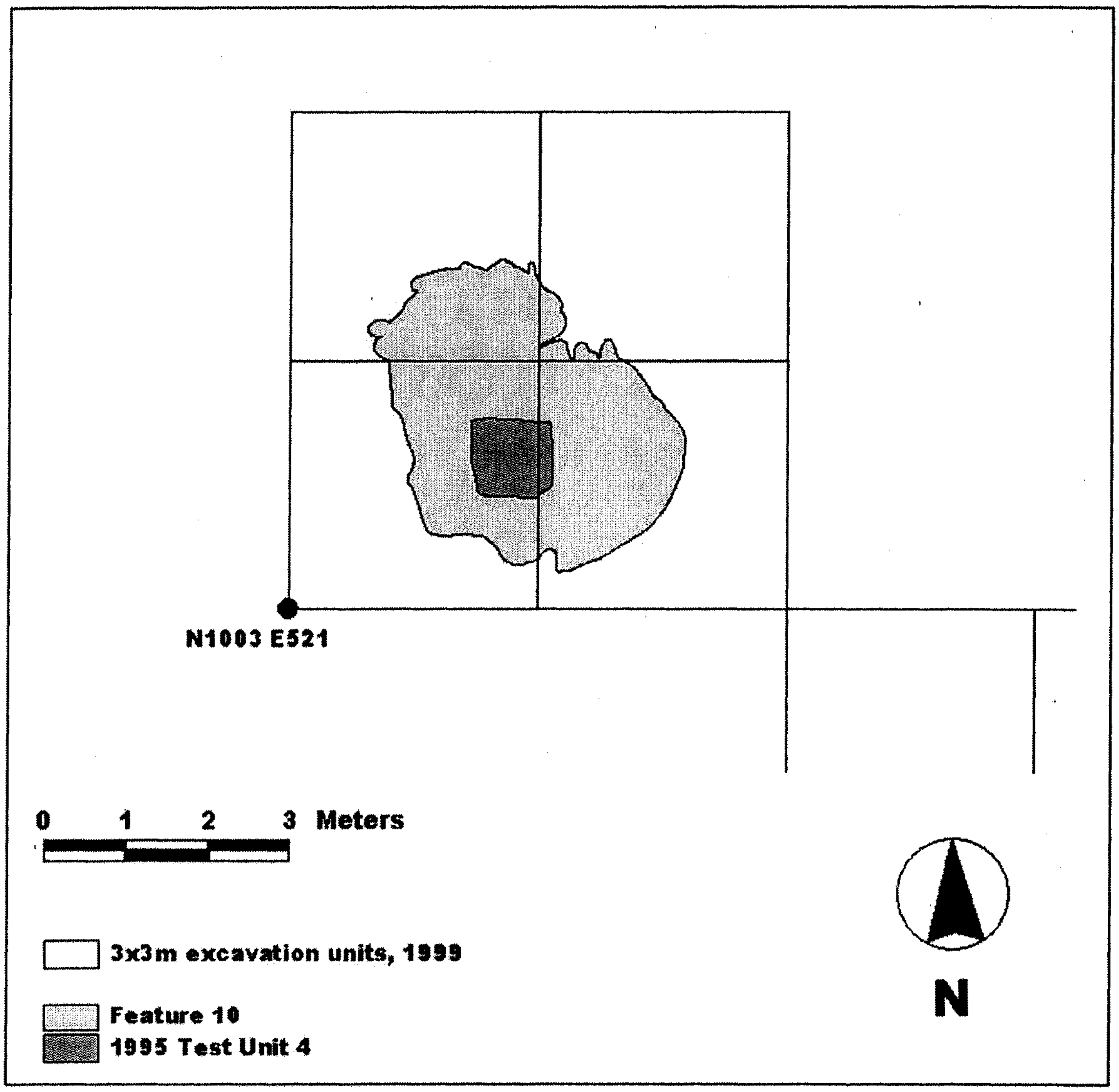


Figure 4-24 Feature 10 relative to excavated units.

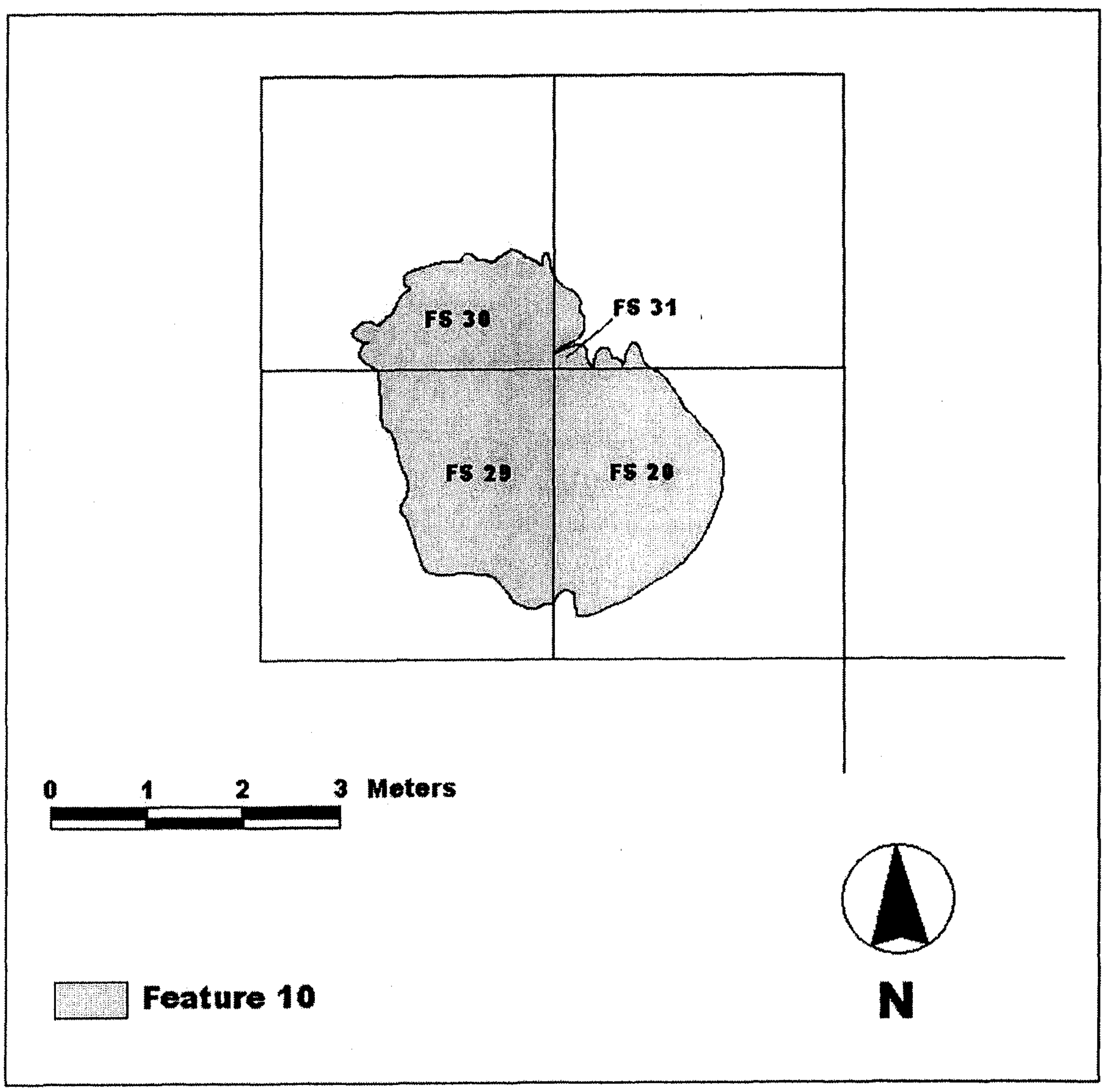


Figure 4-25 Field specimen (FS) numbers for "quadrants" of Feature 10.

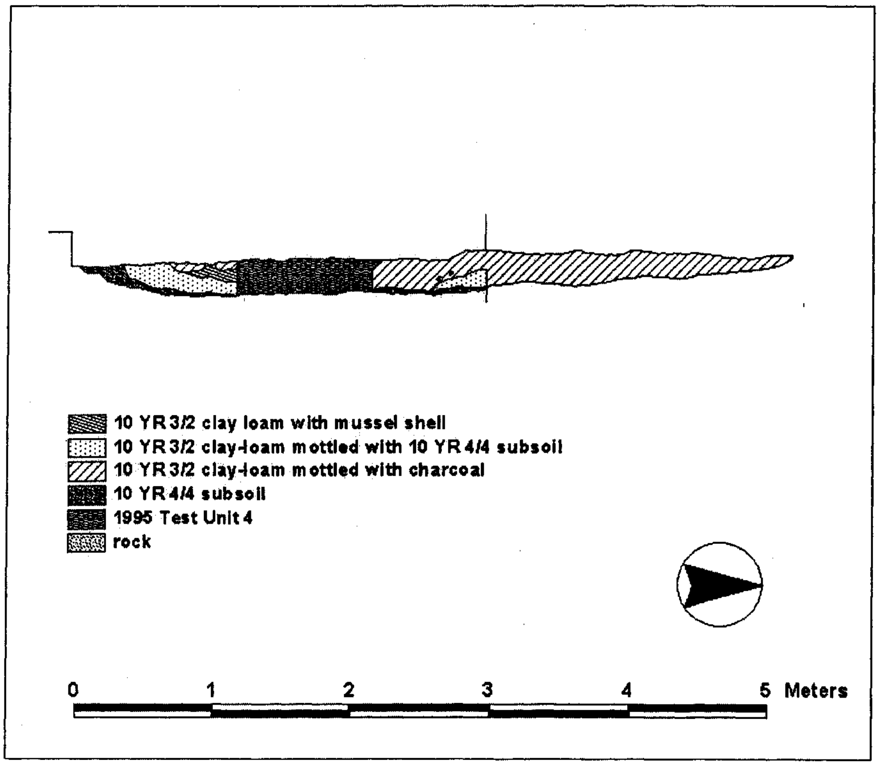


Figure 4-26 Profile drawing of Feature 10, facing west.

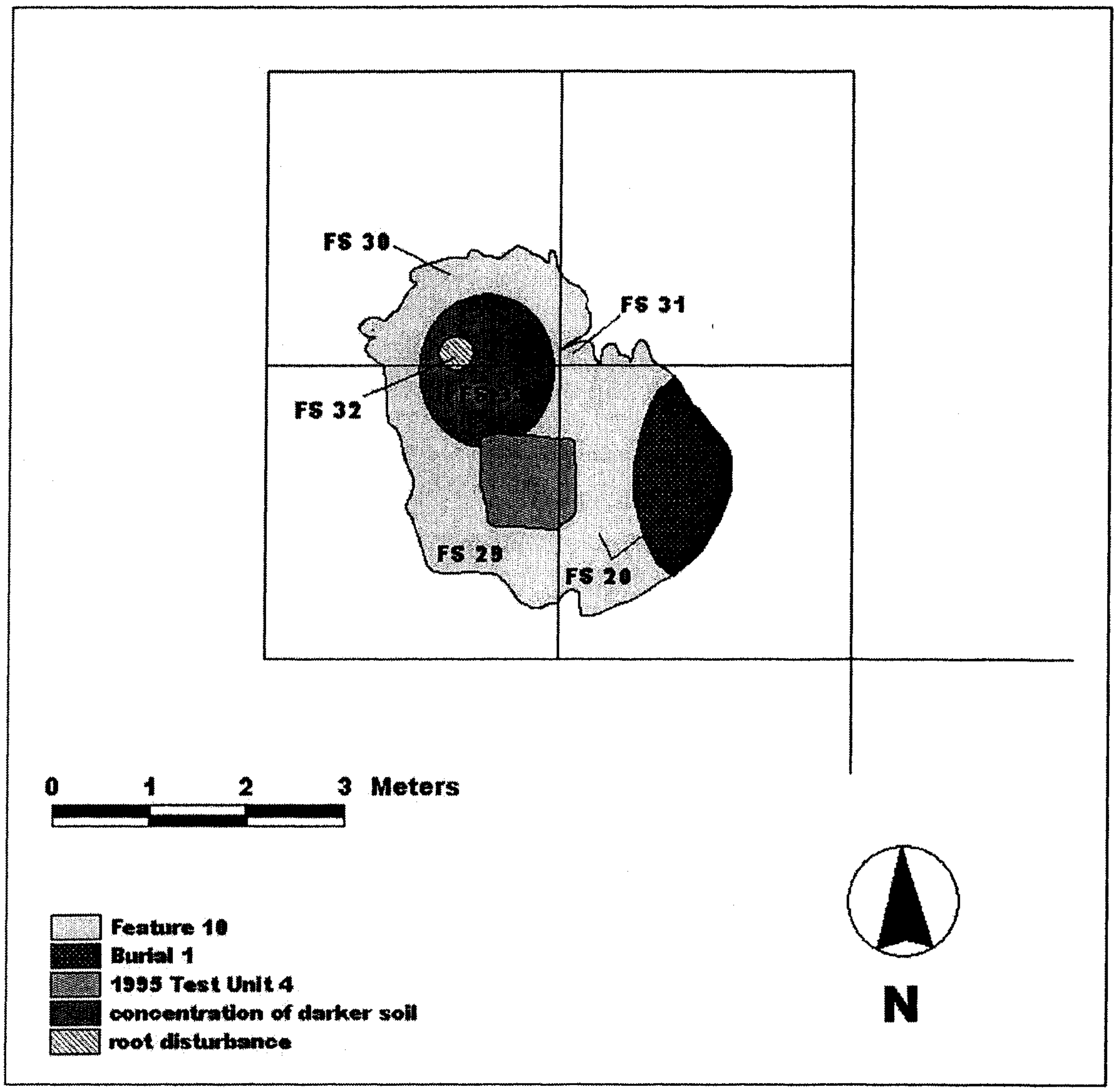


Figure 4-27 Excavation of Feature 10.

Burial 1 was the other significant feature we encountered while excavating Feature 10. We were never able to discern the shape of the burial pit, as the pit soil was virtually identical to the surrounding feature soil. For this reason, FS 20 was used for both N1003 E524 and Burial 1. I sketched in the approximate boundaries of Burial 1 in Figure 4-27 based on the location of human bone.

Because we could not differentiate the fill of Burial 1 from the fill of Feature 10 and there were no artifacts explicitly associated with the individual buried there, it is difficult to ascertain whether Burial 1 was earlier, later, or contemporaneous with the rest of the feature. I suspect that Burial 1 was part of the same event that produced Feature 10 for two reasons. First, I believe that our inability to differentiate Burial 1's edges is related to fact that it was filled at approximately the same time as Feature 10. Second, the outer boundary of the burial is consistent with what one would project to be the boundary of the feature; Burial 1 thus appears to have been deliberately placed within the pit.

Keith Jacobi, a bioarchaeologist affiliated with the University of Alabama at Tuscaloosa, came to the Bobo site to analyze the remains in Burial 1 in situ. The bones were extremely fragile and incomplete, but he was able to make some important observations. Based on the robusticity of the occipital and the circumference of the tibia, he concluded that the individual was probably male. He estimated age between 25 and 35 based on the eruption and wear of teeth, particularly a right maxillary third molar. There were no caries on any of the teeth and no signs of trauma. We left the bones in situ and covered them with soil immediately after the analysis was complete.

We bagged all feature soil, including burial fill, in 10-L bags. We set aside 34 10-L bags for flotation; the remainder of the soil was water screened. Because of time constraints, we did most of the water screening in Chapel Hill after the field season ended. We water screened a total of 225 10-L bags of soil from Feature 10 using three sets of hardware cloth of decreasing mesh size: 0.5-inch, 0.25-inch, and 0.0625-inch.

The total volume of floated and screened soil from Feature 10 was 2590 L, or 2.59 m^3. The average depth of the feature from the bottom of plow zone was approximately 28 cm, although the depth at the bottom of the feature varied greatly. As mentioned above, the dark soil of FS 33 corresponds the deepest part of the feature. We must also keep in mind that the top of this feature was truncated by the plow, and the feature was originally deeper than what we excavated. The plow zone above the feature ranged in depth from 16 to 23 cm. A reasonable estimate of the feature's original depth is 55 to 60 cm.

As Figure 4-28 shows, the bottom of the feature was not level or bell-shaped, but instead undulated. This odd shape points to the pit's original function. The feature's overall shallow depth and its shape are consistent with features that have been interpreted as daub-processing pits (Jim Knight, personal communication). If this hypothesis is correct, people dug this pit to extract clay for making daub—most likely to fill in the walls of a structure—then later filled it in with refuse related to some other event or events. This hypothesis is extremely important, as this is the only evidence (albeit by inference) that there were structures at this site.

Further, daub construction is not typical of Moundville I houses in the Black Warrior Valley. Our best sample of Moundville I houses is from the Riverbank excavations at Moundville. On the Riverbank, early Moundville I houses were constructed using single-set posts, sometimes set in a rectangular basin; late Moundville I houses tend to be wall trench

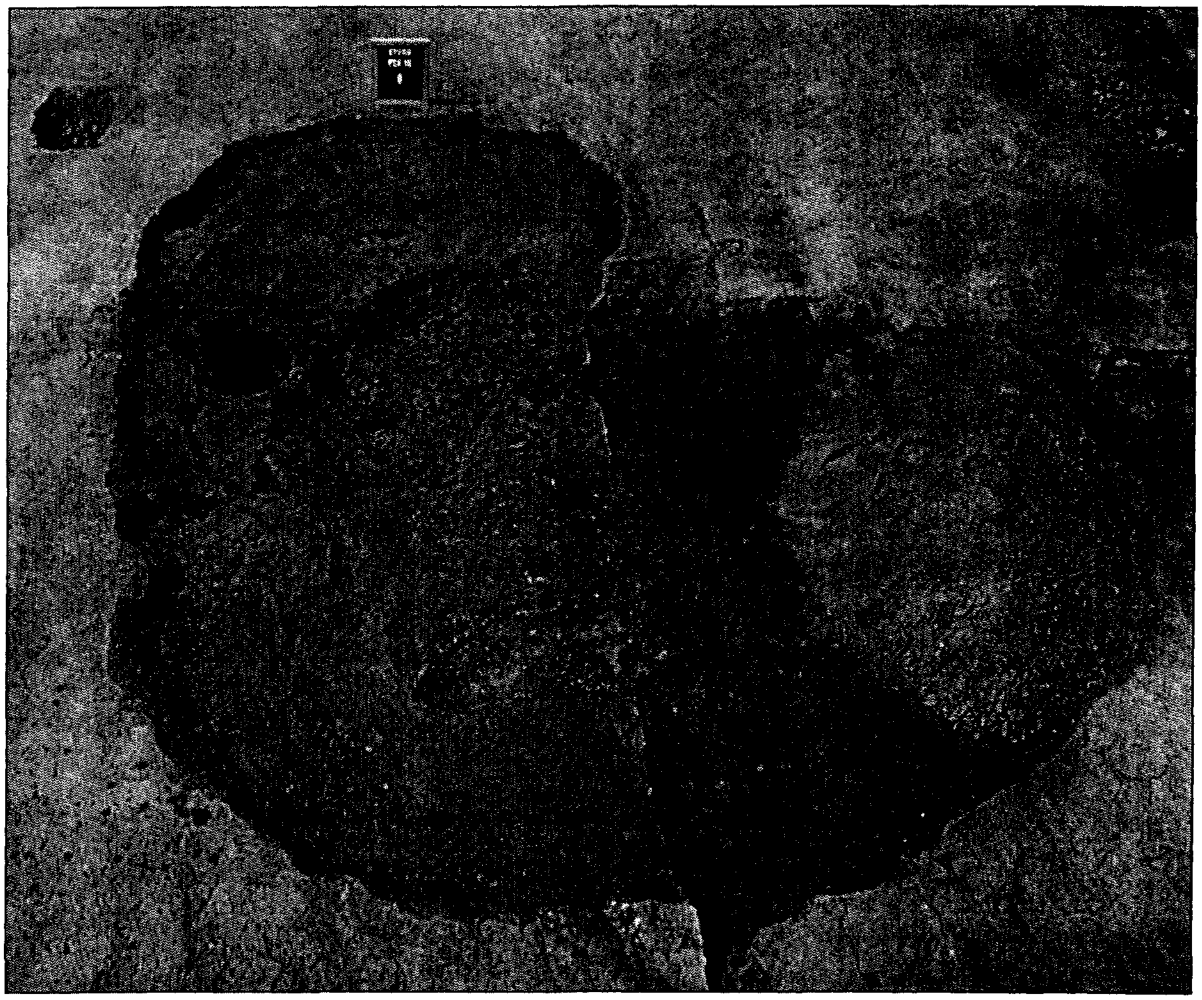


Figure 4-28 Feature 10, excavated. Note Burial 1 at eastern edge of feature, the outline of Test Unit 4 in the center, and FS 33 in northwestern quad.

(C. Scarry 1998). The single-set post and wall-trench structures on the Riverbank were rectilinear and did not have internal support posts, consistent with flexed pole construction (C. Scarry 1998:91; see also Ryba 1997). Ryba's survey of ethnohistoric descriptions of native building construction in the Southeast indicates that the walls of structures were commonly covered with palmetto thatch, grass thatch, bark, boards, and mats (Ryba 1997:26). Those plastered in daub tended to be winter houses or sweathouses that required insulation (Ryba 1997:25-26).

2000 Plow Zone Stripping and Excavations.

During the 2000 season, the Scarrys again brought a University of North Carolina field school to work at the Bobo site. The main objective of this season was to mechanically strip a large area of the site to define and excavate West Jefferson and Mississippian features. Armed with artifact distributions from the surface, plow zone, and West Jefferson midden from previous seasons at the Grady Bobo site, we selected an area in which to remove plow zone. We rented a trackhoe and operator for parts of six days, removing soil from an area measuring approximately 0.353 ha (Figure 4-29).

We were well aware of the low density of shell-tempered pottery on the surface of the site and in the samples of plow zone from 1995 and 1999, but did not foresee this to be a problem. It is well documented that the distribution of artifacts on the surface and in the plow zone is not always a good indicator of the location of sub-plow zone features (Binford et al. 1970; Boudreaux 2000; Hammerstedt 2000; Ward 1980; cf. Hatch 1995). In the Black

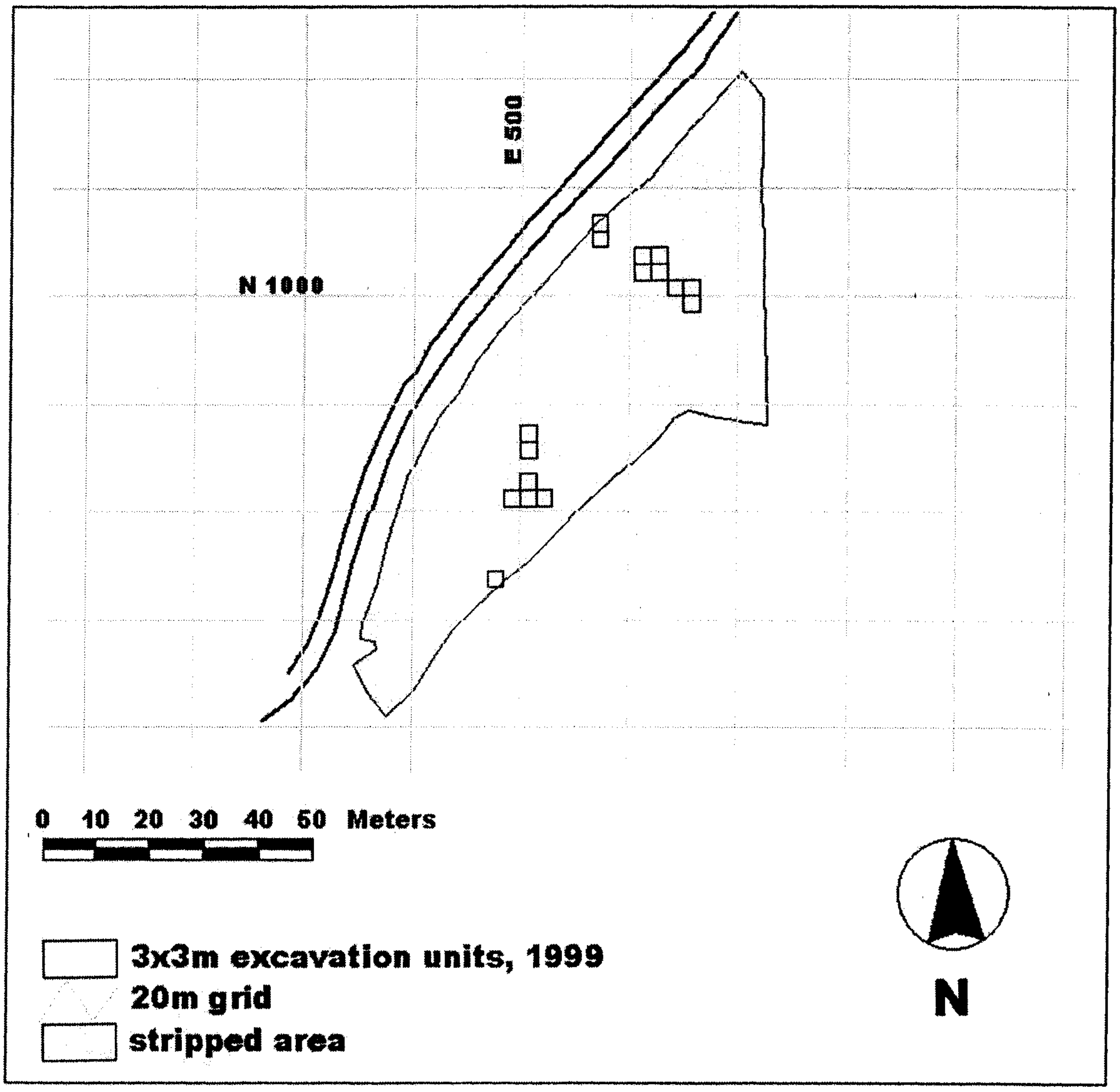


Figure 4-29 Area stripped by trackhoe, 2000.

Warrior Valley, for example, at the early Moundville I Oliver site, there were no shell-tempered sherds on the surface, but there were a number of intact Mississippian features beneath the plow zone (Hammerstedt 2000:27-28, 43).

The trackhoe revealed a number of promising stains in the soil but only seven of these turned out to be legitimate features (Figure 4-30)—two pits, one cluster of grog-tempered sherds, two burials, one possible burial, and one post hole. The two pits and the cluster of sherds (Features 106, 120, and 127) date to the West Jefferson phase. One burial is likely West Jefferson, and the second burial dates to the Mississippian period; the date of the possible burial is uncertain. I center my discussion on the three burials—Feature 113, Feature 122, and Feature 125 (Figure 4-31).

Feature 113/Burial 2 was identified when the trackhoe uncovered two greenstone celts. When we troweled the area off, we hit human bone, but were unable to truly define the burial's edge. We found only a small bundle of bone, which appeared to be burned. We found a third greenstone celt underneath one of the celts uncovered by the trackhoe. Elizabeth Monahan Driscoll, then a graduate student at the University of North Carolina, and Keith Jacobi analyzed the fragmented remains in situ, and confirmed that Burial 2 was a partially cremated bundle burial. Jacobi identified several burned cranial bones near where the celts were found. He concluded that this individual was an adult, but was unable to determine sex.

Greg Wilson analyzed the greenstone celts from Burial 2. He characterized one celt as a heavy-duty splitting tool; the other two were thin and showed evidence of repaired fractures. All had deep flake scars from production. The morphology of these celts differs

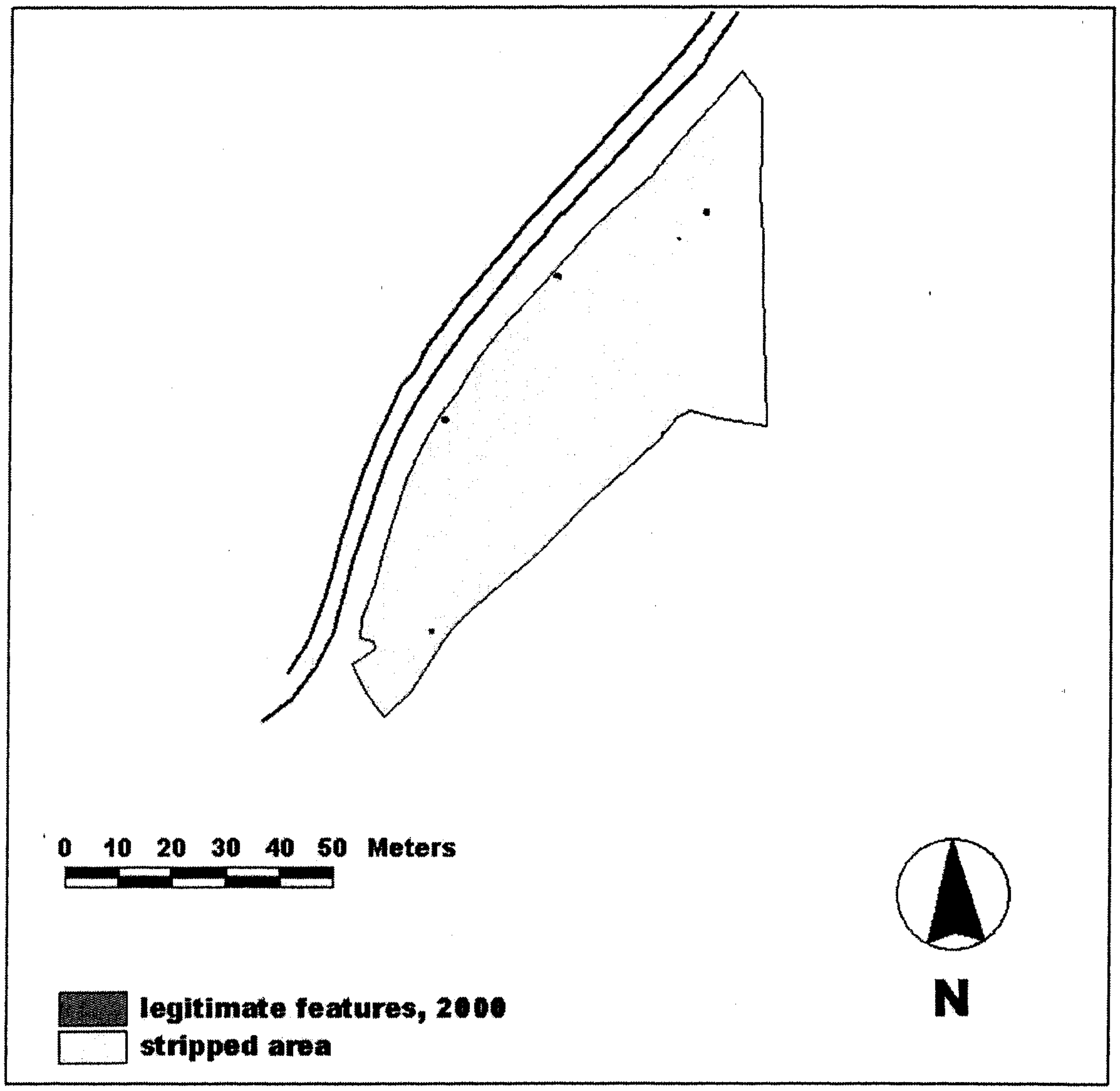


Figure 4-30 Features identified in plow zone stripping, 2000.

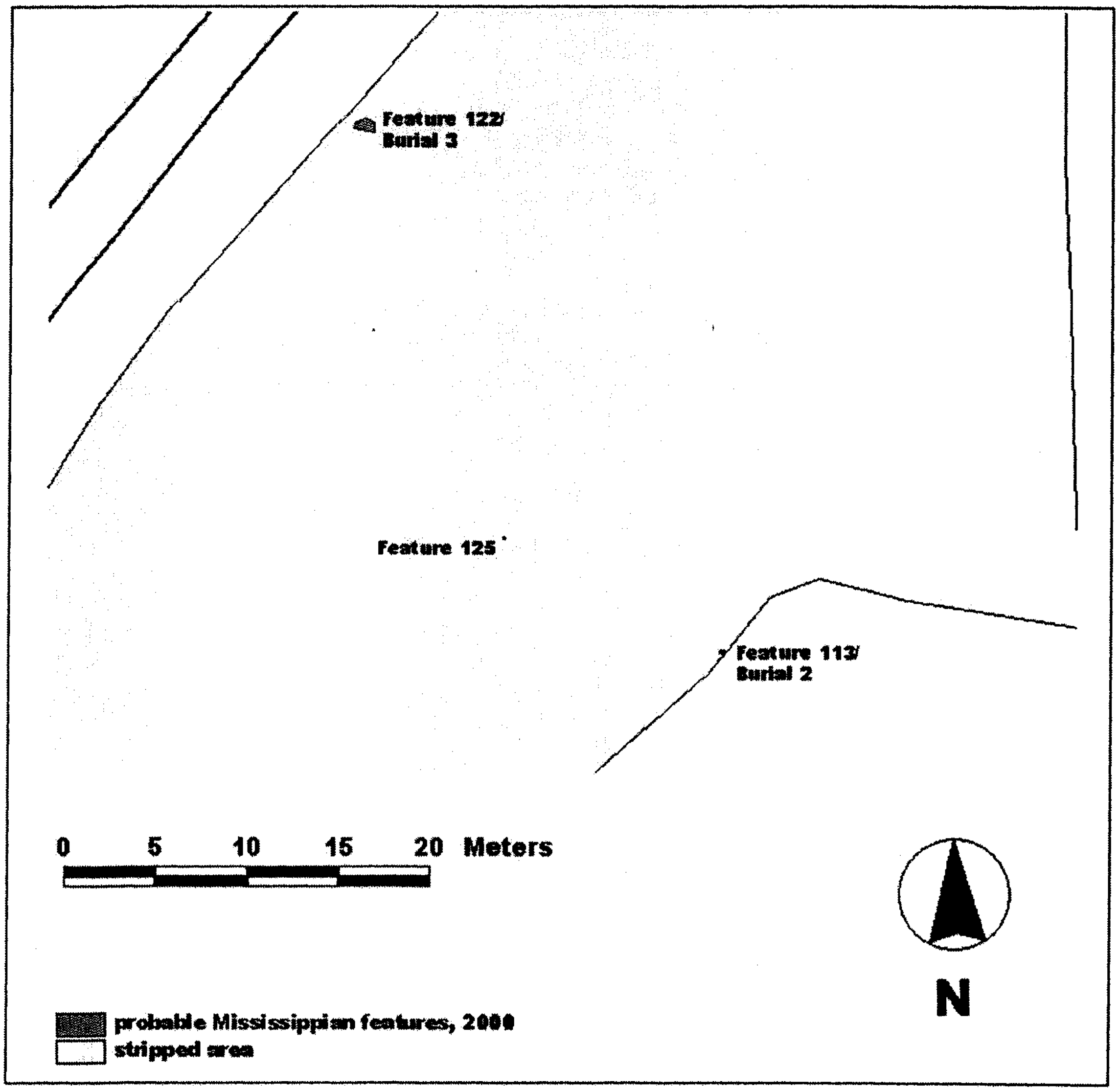


Figure 4-31 Burials in stripped area, 2000.

from other Moundville celts Wilson analyzed (2001), and he believes that they are West Jefferson in date (Wilson, personal communication, 2003).

Other evidence points toward a West Jefferson date for this burial, but this inference is far from definitive. There were only three pottery sherds in the fill of Burial 2, all of which were Baytown Plain. Further, this burial was cremated—a burial type rare during the Mississippian phase. Unfortunately, our sample of West Jefferson burials in the valley is far too small to make any comparisons.

Feature 122/Burial 3 was an oval-shaped stain at the bottom of plow zone. We did not know it was a burial until we hit human bone. Like the other burials at the Bobo site, the bone was heavily fragmented. Keith Jacobi again did the analysis, concluding that this individual was probably a male (based on right femur midshaft circumference) between the ages of 18 and 30 years (based on the eruption of the third molars). This burial is definitely Mississippian, as we recovered shell-tempered sherds in the fill—Mississippi Plain, *variety Warrior*; Mississippi Plain, *variety Oliver*; and Bell Plain, *variety Hale*.

We described Feature 125 as a possible burial. Feature 125 consisted of a diffuse soil stain surrounding a greenstone celt. We could not define the edges of the feature and did not find any human bone; we suspected this may have been a burial, as the only other feature (Feature 113/Burial 2) that contained greenstone celts was a burial. It's not that unusual to excavate a burial in the Southeast that no longer contains bone, as the soil is very acidic and bone does not preserve well in that environment. The bone we found in other burials at the Bobo site was highly fragmented and very fragile.

Greg Wilson (site records) concluded that the greenstone celt found in Feature 125 was very well-made, unlike those in Burial 2. This fact and its morphology tentatively suggest this feature is Mississippian, but as no pottery is associated with this feature, I designate its date as indeterminate.

Because of our poor luck in identifying features in the vicinity of the 1999 excavations, we decided to test the northern end of the Grady Bobo site during the remainder of the 2000 season. We excavated eight 2-x-2-m squares in the vicinity of the Moundville III concentration (Figure 4-32). Students walked the cotton rows in that area, and the Scarrys placed units in locations where students found shell, shell-tempered pottery, or greenstone flakes on the surface. It was not until after the field season when we calibrated the 1978 and 1995 grids with the 1999-2000 grid that we realized that these units were actually west of the highest concentrations of shell-tempered pottery on the surface and in auger tests.

The most surprising finding in the northern area of the Bobo site was the discovery of dark midden below plow zone in each of the eight units (Figure 4-33). I had assumed that this midden, like the midden to the south, was West Jefferson, but I now question that assumption. The ratio of grog to shell-tempered sherds in the excavated northern midden is 171:57, or 3:1. There were 49 Mississippi Plain and 8 Bell Plain sherds in the northern midden. In contrast, the grog to shell-tempered sherd ratio in the 1999 excavations of the southern midden is 2288:32, or 71.5:1. I feel comfortable attributing the shell-tempered sherds in the southern midden to post-depositional mixing, but I am not sure how to explain the northern midden. The features in the northern area offer no assistance. In the eight 2-x-2-m units, we found one post hole, one West Jefferson pit, one historic pit, and one pit feature of unknown date.

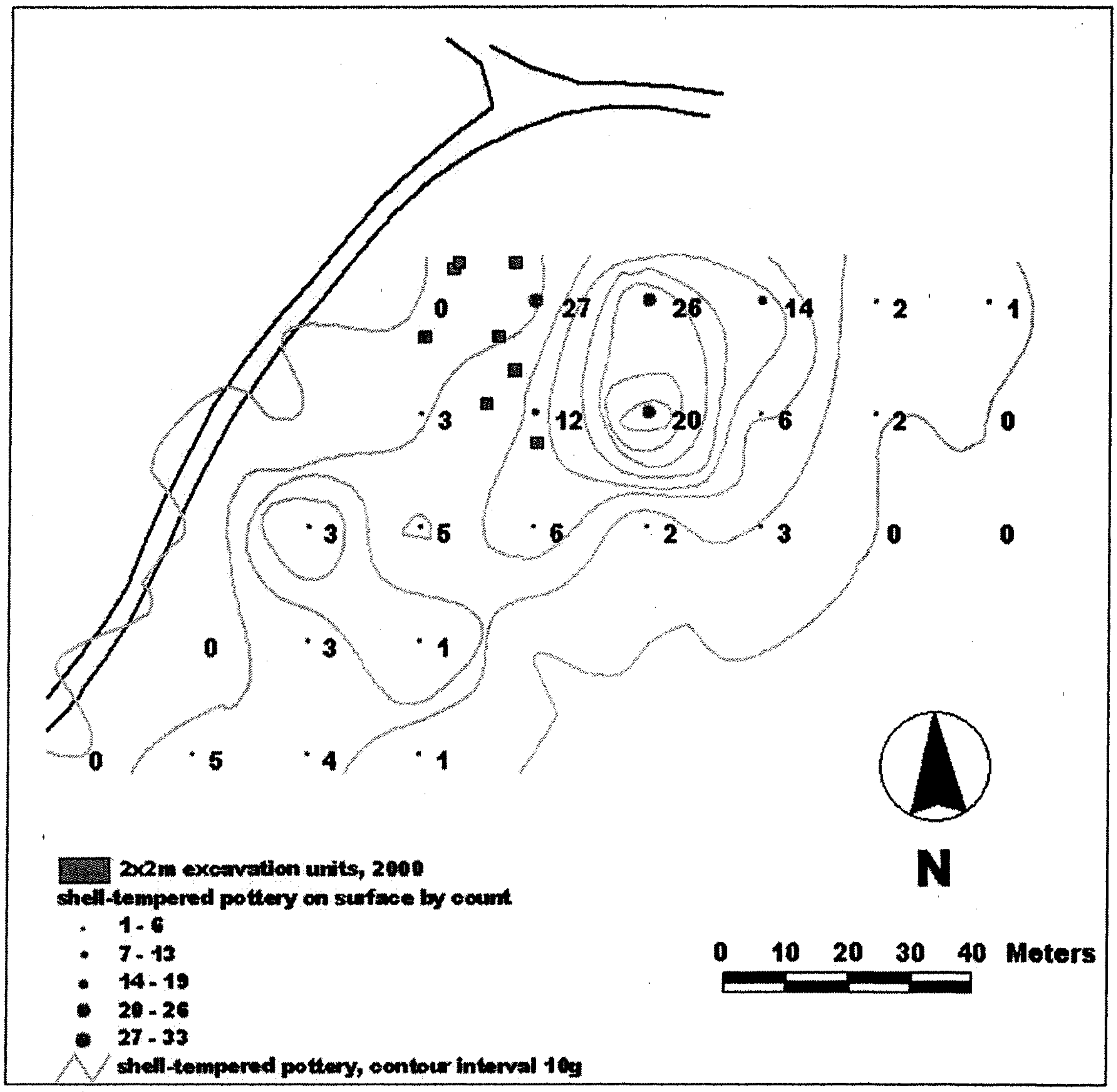


Figure 4-32 2x2 m excavation units, 2000.

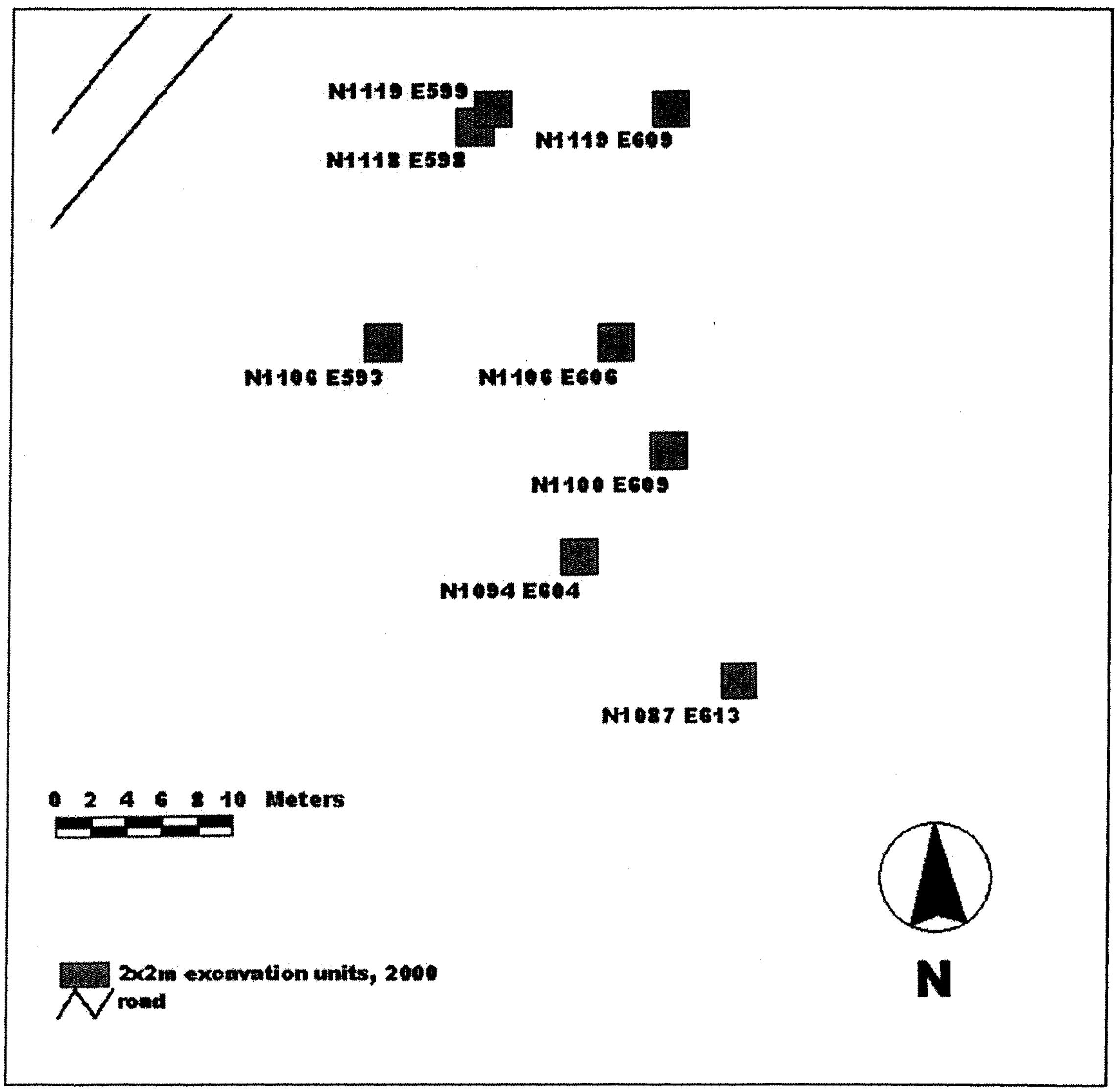


Figure 4-33 Coordinates of 2x2 m excavation units, 2000.

I am also puzzled by the fact that we did not detect the midden in the 1995 power auger tests. Looking at the map, it would seem that we should have hit midden in at least two of these auger tests (Figure 4-34). I feel confident that we did, but did not recognize the midden at the time. In 1995, the soil at the north end of the site was exceptionally dry and highly compact, and it was difficult to get the power auger through.

Unfortunately, then, the power auger test offer no assistance in determining the extent of the midden. I would recommend that any archaeologists who go back to the site hand auger the area, preferably in the spring when soil conditions are better. I would also suggest that they dig more test units to get a handle on the midden's date, especially before doing anything as damaging as stripping the area with heavy machinery.

SITE FORMATION PROCESSES

In order to interpret the archaeological data from the Grady Bobo site, a task I take on in Chapter 5, we must first understand how the site came to be. West Jefferson- and Mississippian-era people lived, worked, and/or gathered at the Grady Bobo site, leaving material traces of their activities. But processes that occurred in between deposition and excavation contributed to what archaeologists found. One must take care not to conclude that the absence of certain artifact classes and types of features in late 20th-century excavations means that these artifacts and features were never part of the Bobo site.

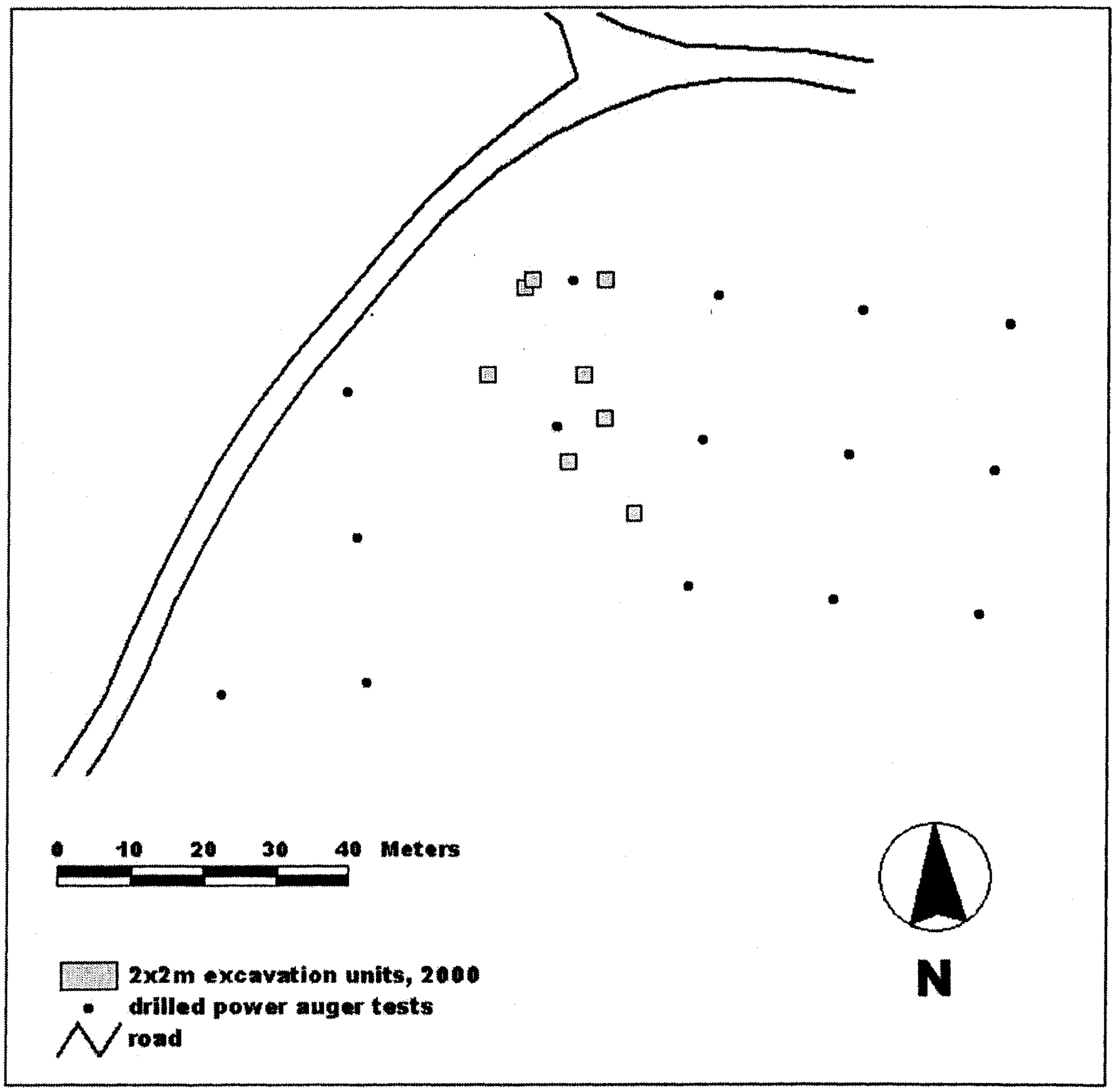


Figure 4-34 2000 excavation units relative to 1995 power auger tests.

The low numbers of features and shell-tempered pottery in the plow zone at the Grady Bobo site are striking. But this phenomenon is not unique to the Bobo site. It is in fact common at Mississippian sites across the Southeast and cannot be interpreted as an absence or low-level of Mississippian occupation. Hammerstedt (2000) relates the low densities of shell-tempered pottery on the surface and in the plow zone of Mississippian sites to current plowing techniques that churn the same soil over and over. Shell-tempered sherds are more prone to decomposition than the grog-tempered sherds of the West Jefferson phase. The shell leaches out through time, making the sherds friable and susceptible to destruction by plowing.

This explanation likely accounts for the low densities of shell-tempered sherds both on the surface and in the plow zone at the Bobo site. During the first two seasons we spent at the Grady Bobo site, we dug 124 power auger tests and excavated seven 1-x-1-m and 16 3-x-3-m squares, screening all soil through 0.5-inch mesh. In the plow zone immediately over Feature 10, we found 1193 sherds of shell-tempered pottery. We found only 188 sherds of shell-tempered pottery in all other plow zone contexts combined (Table 4-1). Interestingly, there is no correlation between the surface density of shell-tempered sherds and the location of Feature 10. In the 1978 surface collections, crews found only 11 shell-tempered sherds in the two 20-x-20-m squares that straddle Feature 10; other squares had higher surface densities, but no subsurface Mississippian features.

Were there once other Mississippian features at the Bobo site? This field has been plowed for many years, and plowing has certainly played some role in truncating features. But plowing alone cannot account for the missing features and post holes. Either they were never there or, more likely, erosion is responsible for the site's deflation.

Table 4-1 Grady Bobo site, shell-tempered pottery in surface and plow zone contexts.

Year	Provenience	Subprovenience	Provenience Type	n	Level	Count	Weight
1999	over Feature 10	upper terrace	3x3m test unit	4	plow zone	1121	3798
1995	Test Unit 4	upper terrace	1x1m test unit	1	plow zone	72	222
1978	over Feature 10	upper terrace	surface collection	2	surface	11	24.1
1999	all except over Feature 10	upper terrace	3x3m test unit	12	plow zone	169	382
1995	all	lower terrace	power auger test	38		2	2
1995	all	upper terrace	power auger test	86		4	8
1995	Test Units 5-7	lower terrace	1x1m test unit	3	plow zone	2	2
1995	Test Units 1-3	upper terrace	1x1m test unit	3	plow zone	11	15
1978	all except over Feature 10	upper terrace	surface collection	36	surface	201	559.8

There is a lot we will probably never know about the Grady Bobo site. But even with the limited data we have, we can make some reasonable inferences about some of the activities that took place at this site, and we can use this information to supplement what we know about outlying sites in general. At the Bobo site, we have at least two Mississippian burials and one large and very rich Mississippian pit feature. From this pit feature, originally a daub pit, we can infer the presence of a daub-covered structure. The contents of Feature 10 suggest that the activities that took place here were not typical of people's everyday activities. The analyses and interpretations that lead to this conclusion are the subject of the next chapter.

Chapter 5: Foodways at the Grady Bobo Site

Archaeologists classify the people who occupied the Mississippian period Black Warrior Valley as members of the Moundville chiefdom. But how did they classify themselves? They doubtless recognized distinctions between themselves and those who lived outside the chiefdom's boundaries; within the chiefdom, they most certainly self-identified along lines of gender, age, kinship, and social status. Moundville archaeologists tend to focus on only one dimension, status, characterizing people as either elites or commoners.

As I discussed in Chapter 1, these categories are legitimate, though the line between them is somewhat arbitrary, as social rank in Mississippian chiefdoms varied along several dimensions. For the purposes of this chapter, however, let us assume that everyone in the Moundville chiefdom was either an elite or a commoner (non-elite). Was this the most important component of a Moundville resident's identity? How did people make sense of their daily lives and the world around them, in other words, their habitus?

People signify membership in a social group by the way they talk, the way they dress, their possessions, who they interact with. People create identity through repeated, habitual routines, including daily domestic tasks like cooking and eating. Pottery, plant material, and animal bones are the material correlates of these processes, and these often survive in the archaeological record (Hastorf 1991; Welch and Scarry 1995).

The Grady Bobo site affords us the opportunity to examine a food-related event in the Moundville countryside in detail. Most of the artifacts in Feature 10 are directly associated with food processing and consumption (i.e., pottery, animal bone, and plant remains). Because the fill of Feature 10 is presumably from a single event (see Chapter 4), the rest of the artifacts (human remains, stone tools, and miscellaneous artifacts) can fill in the details on our understanding of what took place at the Bobo site.

I begin this chapter by discussing the relationship between artifacts and foodways, concentrating specifically on the social messages conveyed by pottery. Pottery sherds are abundant in Feature 10, and because of their interpretive potential, I use vessel analyses as the core of my interpretation. In the next section of the chapter, I consider the analyses of other artifact categories at the Grady Bobo site, bringing all the data together to decipher what happened at this site, who participated, and why these people came together. I conclude by putting the Bobo site into context, referring to the study of regional settlement presented in Chapters 2 and 3, to consider how this site relates functionally and socially to other rural sites. I propose a more fluid and less hierarchical scheme of Black Warrior Valley settlement than the traditional tripartite division between chiefdom capital, local centers, and farmsteads.

FOODWAYS

The term foodways is itself simple enough; it refers to the ways in which people used food. But the ways in which people use food are numerous and can be quite complex. In order to truly study foodways, we must consider more than the actual food people eat. The processes of getting food, preparing meals, and eating involve many types of material culture and reflect multiple dimensions of social relationships.

We know from experience that the foods people eat reflect availability, cost, nutritional content, social status, the importance of the occasion, and many other considerations. What we eat and how much we eat in turn influence the types of cooking pots and serving dishes we use. We use different pottery to cook soup than we use to serve beverages. We use big pots when we cook food for larger groups of people. The numbers, sizes, and types of cooking pots and serving dishes we use also depend on social variables. People have everyday dishes, and dishes they use only on special occasions.

We can use archaeological evidence to gauge some of these functional and social variables. Other social aspects of occasions when we eat food are more difficult, if not impossible, to see archaeologically. Who can eat together, where people sit, and who eats first are other variables that highlight different aspects of our identities, from social rank to age to gender and more. The material remains of a food event that took place in the eleventh century will not shed light on all the nuances of food preparation and consumption, but they can be used to better understand some of the decisions people made. I examine these decisions in the following discussion of the analysis of pottery and food remains from the Bobo site.

Pottery.

Archaeologists working in the Moundville countryside almost never find whole vessels. We find sherds, pieces of vessels that were broken by the people who used them or by post-depositional processes such as plowing. But even without whole vessels, we can still learn a great deal about the full vessel assemblage (the range of vessel shapes and size classes people used) from the sherds we recover. From qualitative and quantitative attributes of the sherds, archaeologists can characterize the vessel assemblage and make informed hypotheses about the contexts in which people used these vessels.

The relationship between vessel morphology and vessel function is well documented (see Braun 1983; Bronitsky 1986; Nelson 1985; Pauketat 1987, 1989; Rye 1981; Skibo 1992; M. F. Smith 1983, 1985; Steponaitis 1983), and Mississippian pottery is no exception. Mississippian vessel shapes are directly related to the types of foods people put in those vessels and how people manipulated those foods (Hally 1986).

People who lived in the Moundville polity generally ate the same range of foods as those elsewhere in the Mississippian world, depending on corn and nuts for the bulk of plant foods in their diets, and deer and fish as their primary meats (Welch and Scarry 1995:405). The vessel shapes Moundville's residents used to manipulate their foods are therefore very similar to those from other Mississippian polities (Figure 5-1) (Taft 1996; see also Hally 1986).

Mississippian jars served as general-purpose cooking and storage vessels. The rounded base of most standard jars indicates that they were not intended for transport (Taft 1996:49). Jar size varied directly with the quantities of foods they were intended to hold. Large vessels were required at public gatherings where large numbers of people consumed food, and also in residential contexts when people prepared and stored staple

Figure 5-1 Basic Mississippian vessel shapes.

foods in bulk. Small jars likely had a more limited range of uses (Hally 1986:271-272; see also Blitz 1993a, 1993b; Pauketat 1987; Shapiro 1984; Turner and Lofgren 1966).

Bowls were used primarily to manipulate and serve food. Flaring-rim bowls—shallow bowls with outflaring rims—were used to serve small quantities of solid foods. Bottles were used in serving, storing, and transporting liquids or grains (Hally 1986:285-290; see also Million 1980; Pauketat 1987).

Variation in the full vessel assemblage. Vessel assemblages from different contexts reflect variation in the types of activities in which people used pottery (see Welch and Scarry 1995:399; 403-404). This variation can be intersite, suggesting different "site types" where people did different things, or intrasite, suggesting activity areas within a site.

Welch and Scarry (1995:399; 403-404) argue that differences in the proportions of vessel shapes from sites where people ate the same range of foods reflect variation along two major dimensions: (1)-the types of activities in which vessels were used; and (2)-the status of the people using them. The first of these dimensions echoes the form-function relationship discussed above. The composition of vessel assemblage reflects the relative proportions of the activities in which people processed, cooked, stored, transported, and served food.

Differences along the public-private continuum are the most significant influences on this first dimension. They expect the vessel assemblage from a context where access was open and/or public, for example, to contain more flaring rim bowls than the vessel assemblage from a more restricted context where less emphasis was placed on food presentation (Welch and Scarry 1995:413-414). Contexts in which everyday food processing and consumption took place should have included a greater percentage of jars relative to serving vessels.

Welch and Scarry point to status as another major dimension that affects the composition of a vessel assemblage. They argue that high status Moundville households were provisioned by commoners; commoners were thus engaged in a disproportionate amount of food processing relative to what they consumed (Michals 1998; C. Scarry 1995b; Scarry and Steponaitis 1997; Welch 1991; Welch and Scarry 1995:408-410; see also Jackson and Scott 1995a; 1995b). One would then expect more vessels related to processing (jars) from sites in the countryside than from elite contexts. Elites presumably participated in more consuming than processing, and pottery from elite contexts should reflect more serving (bowls and bottles). We should question this assumption, as we simply do not know enough about variation in the types of activities in which commoners participated to assume a direct correlation between status and the composition of a vessel assemblage.

The key relationship really seems to be between types of activities and the vessel shapes and sizes those activities required. In this chapter, I therefore concentrate on interpreting the activities that produced the vessel assemblages from various Moundville contexts. Using my analysis of the Bobo site pottery and published vessel data from other Black Warrior Valley, I suggest specific relationships between vessel shapes, sizes, and the uses of food in the Moundville chiefdom.

Vessel shape. To characterize the vessel assemblage, the first measure I employ is the relative proportions of jars to bowls to bottles. I count flaring rim bowls separately from other bowls, following Welch and Scarry's (1995:412) contention that more than any other vessel shape, flaring rim bowls are designed primarily for presentation, maximizing the visibility of both decorations on the rim and the food inside.

It is straightforward to determine to which of the four major functional categories a rim sherd belongs, as the rims of Moundville-era vessel shapes are distinctive. To identify vessel shape for rim sherds from the Bobo site, I relied primarily on rim form and shape, presence or absence of handles, and neck shape (Steponaitis 1983).

I identified 111 rim sherds in the 1995 and 1999 collections from Feature 10. Of these, 81% were jars, 9% flaring rim bowls, 3% other bowls, and 7% bottles. These numbers are hard to interpret by themselves, but must be compared to vessel shape frequencies from other Moundville-era contexts, which I have done in Table 5-1. The most striking attributes of the Grady Bobo assemblage are the high percentages of flaring rim bowls and bottles and the low percentage of other bowls compared to the other two nonmound contexts.

There are in fact no flaring rim bowls or bottles from the nonmound Oliver and Gerald Wiggins sites. The context with the most similar percentages of flaring rim bowls and bottles is the elite residential area north of Mound R (NR). Welch and Scarry (1995:413-414) assert that the NR assemblage reflects small, kin-based gatherings in which serving was important, but did not require the elaborate presentations that occurred on mound summits. It is possible that the Grady Bobo site represents a similar gathering.

Table 5-1 Vessel shapes from excavated Moundville-era contexts.

Phase	Site	Context	Jars		Flaring-Rim Bowls		Other Bowls		Bottles		Misc/ Indeterminate	
			n	%	n	%	n	%	n	%	n	%
MIII	1HA8 [a]	White village	132	61	32	15	53	24	1	0	0	0
MII/III	1TU500 [b]	Moundville Mound G	97	61	17	11	20	13	24	15	0	0
	1TU500 [b]	Moundville Mound E	130	52	17	7	68	27	35	14	0	0
	1TU500 [b]	Moundville Mound Q	486	60	97	12	162	20	63	8	0	0
MI	1TU500 [c]	Moundville Riverbank	161	54	12	4	67	22	54	18	6	2
Late MI	1TU500 [d]	Moundville NR	75	45	16	10	38	23	13	8	25	15
	1TU56 [e]	Hog Pen mound	80	71	20	18	9	8	4	4	0	0
	1TU768	Gerald Wiggins nonmound	24	83	0	0	3	10	0	0	2	7
	1TU66	Grady Bobo nonmound	90	81	10	9	3	3	8	7	0	0
Early MI	1TU459 [f]	Oliver nonmound	24	69	0	0	11	31	0	0	0	0

[a] Holland (1995:Table 10).
[b] Taft (1996:Table 7).
[c] Tabulated from C. Scarry (Scarry 1995a:Table 4).
[d] Tabulated from Steponaitis (1983:Tables A.5, A.6).
[e] Holland (1995:Table 9).
[f] Only a portion of the vessel assemblage from 1TU459 was available for study.

The extremely low percentage (3%) of other bowls at the Grady Bobo site is unlike other excavated contexts. The only other Moundville context containing less than 10% other bowls is the nearby Hog Pen mound assemblage. Simple bowls were used for processing and serving food. Both of these activities were going on at the Grady Bobo site (see discussion of faunal and floral assemblages below), but for some reason people used different vessel types to fill these functions (i.e., jars and flaring rim bowls), used non-ceramic bowls, or used ceramic bowls but did not throw them in the pit after use. Because the contents of Feature 10 are the remains of a single event, I would tend toward the latter explanation, that they used ceramic bowls but did not discard them as they did jars, flaring rim bowls, and bottles.

This raises the issue of deposition. Can the distribution of vessel shapes by location within the pit help us shed light on the sequence of events in which this pit was filled? Was there a pattern to the way people put vessels in the pit, or is the distribution of vessel shapes random? Table 5-2 reveals no clear pattern, but it may be significant that the lowest ratios of jars to bowls and bottles are in FS 29 and FS 154. FS 29 is the southwest quadrant of the feature; FS 154 is also in the southwest quadrant and encompasses the bulk of the 1995 test unit. Based on observations in the field, much of FS 154 was likely the same soil as FS 33, the deepest and darkest soil in the feature. Some of FS 29 also belongs to this lens, as we did not create a separate provenience for this soil until after we were well into it. I suspect that this dark soil represents the initial dumping episode; when people filled the pit, they deposited more flaring-rim bowls and bottles in the first load.

Table 5-2 Grady Bobo site, vessel shapes by provenience.

Year	FS	Description	Jars	Flaring-Rim Bowls	Other Bowls	Bottles
1999	20	SE quad	17	0	3	1
	29	SW quad	21	0	5	3
	30	NW quad	29	0	2	1
	33	darker soil within NW and SW quads	10	0	0	1
1995	154	Test Unit 4, Level 2	11	3	0	1
	160	east wall	1	0	0	0
	179	Level 2	1	0	0	0
	182	Level 2	0	0	0	1

I use a second measure of vessel function to clarify and expand on the trends in vessel shape frequencies identified above. This measure, serving-to-cooking ratios, has the advantage of avoiding the sample size issues that come from considering only rim sherds, a special concern when dealing with small assemblages. Serving-to-cooking ratios take into account both rim and body sherds, providing a means to expand on findings from relative vessel shape frequencies. I begin with a brief explanation and justification of this measure, then follow with the data.

Mississippian pottery in the Black Warrior Valley can be divided into functional categories based on burnishing, an attribute that is easily recognizable on both body and rim sherds. Burnishing is a process in which a potter rubs a stone or other hard instrument across the dry surface of a pot, giving it a polished appearance. Potters most frequently burnished serving vessels, e.g. bowls and bottles (Steponaitis 1983:23-24); jars, used for cooking and storage, were typically unburnished. Thus the presence or absence of burnishing roughly corresponds to functional differences (Steponaitis 1983:69; Taft 1996:10-11; Welch and Scarry 1995:410-413).

As with vessel shape frequencies, a serving-to-cooking ratio from only one context is virtually meaningless; it is a relative measure. For example, a 1:1 serving-to-cooking ratio (1.0) from a site does not necessarily mean that serving and cooking/storage took place at that site in equal proportions. A ratio of 1.0 indicates that equal numbers of sherds were recovered from serving and cooking vessels. The number of sherds in an archaeological context depends on at least three factors: (1)-breakage rates, (2)-replacement rates, and (3)-primary vs. secondary deposition, and these are usually different for cooking and serving vessels (see Maxham 2000a for a more detailed discussion).

To compare and interpret serving-to-cooking ratios, we can either assume that the variables mentioned above affected each assemblage in roughly the same manner or we must correct for the differential influence of any of these variables. Because the collections considered in this study are from similar refuse contexts and were deposited over comparable time spans (i.e., over the course of a single archaeological phase), I will assume that they were subject to the same biases of disposal and that the serving-to-cooking ratios from these collections can be compared to one another.

After the 1995 season, I calculated the serving-to-cooking ratio for the 1-x-1-m test unit we had excavated in Feature 10, coming up with the surprisingly high ratio of 0.91, or 48% serving to 52% cooking (Maxham 2000a). This ratio is significantly higher than the ratios from every other excavated Moundville-era context, including Moundville itself. The next highest ratio is from NR, 0.61, or 38% serving to 62% cooking.

Only after we excavated the entire feature during the 1999 season could I evaluate whether the contents of the 1995 test unit were representative of the whole. The final serving-to-cooking ratio for Feature 10 is 697 burnished sherds to 1844 unburnished sherds, a ratio 0.38 (Table 5-3). This ratio is high relative to other sites, but so different from the 1995 ratio that I questioned my initial sorting of the sherds. To assess bias in the two analyses, I combined the 1995 sherds with the 1999 sherds and resorted the entire assemblage. I then tabulated the ratios by provenience (Table 5-4).

Table 5-3 Serving-to-cooking ratios from excavated Moundville-era contexts.

Phase	Site	Context	Serving n	Serving %	Cooking n	Cooking %	Serving-to-Cooking Ratio
M III	1HA8 [a]	White village	3304	20	13619	80	0.24
M II/III	1TU500 [b]	Moundville Mound G	1028	21	3970	79	0.26
	1TU500 [b]	Moundville Mound E	1188	24	3672	76	0.32
	1TU500 [b]	Moundville Mound Q	4388	25	13043	75	0.34
M I	1TU500 [c]	Moundville Riverbank	1309	20	5339	80	0.25
Late M I	1TU500 [c]	Moundville NR	1055	38	1731	62	0.61
	1TU56 [a]	Hog Pen mound	429	17	2133	83	0.20
	1TU768	Gerald Wiggins nonmound	17	4	382	96	0.04
	1TU66	Grady Bobo nonmound	697	27	1844	73	0.38
Early M I	1TU50 [d]	Asphalt Plant mound	94	15	513	85	0.18
	1TU552 [c]	Big Sandy nonmound	34	13	228	87	0.15
	1TU459 [e]	Oliver nonmound	167	16	863	84	0.19

[a] Holland (1995:Table 1).
[b] Taft (1996:Table 6).
[c] Welch and Scarry (1995:Table 3).
[d] Calculated from Steponaitis (1992:Table 2).
[e] Michals (1998:Table 8.7).

Table 5-4 Grady Bobo site, serving-to-cooking ratios by provenience.

Year	FS	Description	Serving		Cooking		Serving-to Cooking Ratio
			n	%	n	%	
1999	20	SE quad	80	20%	324	80%	0.25
	29	SW quad	185	22%	650	78%	0.28
	30	NW quad	176	28%	445	72%	0.40
	31	NE quad	5	38%	8	62%	0.63
	32	circular stain in SW quad	3	9%	29	91%	0.10
	33	darker soil within NW and SW quads	95	28%	244	72%	0.39
1995	154	Level 2	126	52%	117	48%	1.08
	155	Level 3	1	100%	0	0%	0.00
	157	wall and floor	5	56%	4	44%	1.25
	158	west wall	1	33%	2	67%	0.50
	159	north wall	2	67%	1	33%	2.00
	160	east wall	0	0%	3	100%	0.00
	161	wall slump	2	25%	6	75%	0.33
	179	Level 2	0	0%	1	100%	0.00
	182	Level 2	16	62%	10	38%	1.60

After resorting all of the sherds from Feature 10, I retabulated the serving-to-cooking ratio from the 1995 test unit. This ratio came to 1.05, reassuringly close to the initial ratio of 0.91. This clearly indicates that there is significant variation in serving-to-cooking ratios within the pit, presumably related to the sequence in which vessels were discarded. Assuming that most of the 1995 test unit was part of the initial dumping episode (an assumption based on depth and proximity to FS 33), this finding supports my contention that people deposited more bowls and bottles in the first load.

Vessel size. Vessel sizes must be considered in conjunction with vessel shapes in order to identify the classes of pots comprising the full vessel assemblage. Unfortunately, estimates of vessel size are limited to rim sherds that are large enough to measure. This creates obvious sample size problems, but these are the only sherds for which vessel size can be estimated with any reasonable confidence.

I defined a rim as measurable if it represented at least seven percent of the total vessel circumference (see Taft 1996:4). I measured orifice diameter (a proxy for vessel size) using the traditional curve-fitting method. Of 111 rims in Feature 10, 66 were too small to measure; 45 represented 7% or more of the vessel circumference. By shape, 30 of these rims were from jars, three from flaring-rim bowls, six from other bowls, and six from bottles. This does not means that there were 30 jars, etc.; it is likely that some rims within each shape class came from the same vessel.

Figure 5-2 depicts the distribution of jar sizes represented by measurable rims. There are two major size classes of jars at the Bobo site: 9 to 15 cm and 18 to 27 cm. Most jar rims fit into the medium size class, 13.7 to 25.5 cm in diameter, Taft (1996) defined for jars from the Moundville site. The three Grady Bobo site jar rims with orifice diameters of 5, 6, and 9 cm fall into the class she calls miniature jars. Miniature jars were probably used by individuals and are not likely candidates for domestic processing and consumption (Taft 1996:49). None of the measurable jar rims from the Bobo site are large jars, defined by Taft as 33.0 to 45.0 cm in diameter. Taft (1996:49-50) suggests that these large jars were used for storage, while medium size jars were used largely for cooking and reheating. As expected, the jar size class profile from the Grady Bobo site does not fit everyday domestic activities.

Figure 5-3 shows the orifice diameters of flaring-rim bowl rims. It is clear from this figure that all of the flaring-rim bowl rim sherds are probably from the same bowl, 27 to 28 cm in diameter. This bowl falls into the medium size class identified by Taft that was used for serving medium-sized groups of people.

The six measurable rims from other bowls break into two size classes: 9 to 15 cm and 24 to 27 cm (Figure 5-4). This is somewhat deceiving, as the category "other bowls" in Feature 10 encompasses tecomates (a.k.a. restricted bowls) (Taft 1996:32, Figure 13), hemispherical bowls (a.k.a. simple bowls), and cup-shaped bowls (Taft 1996:36-37).

Feature 10's tecomate rim measures 10 cm in diameter, smaller than the smallest tecomates Taft identified from Moundville's Mounds E, G, and Q (Taft 1996:35). It is not clear what this bowl would have been used for, as its small size precludes its use for the dry goods storage provided by larger tecomates. Given the restricted rim, the Bobo site tecomate

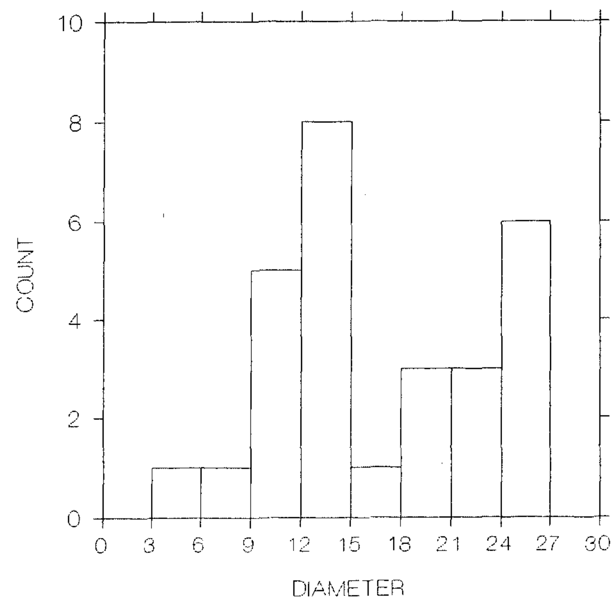


Figure 5-2 Orifice diameters of measurable jar rims in Feature 10.

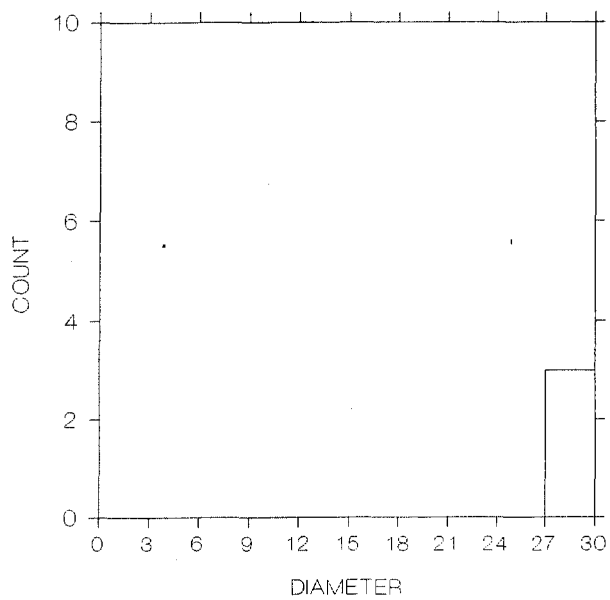


Figure 5-3 Orifice diameters of measurable rims from flaring-rim bowls in Feature 10.

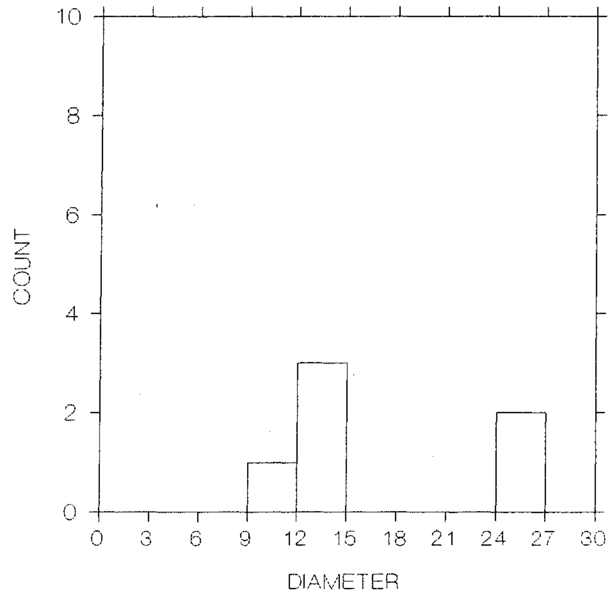


Figure 5-4 Orifice diameters of measurable rims from other bowls in Feature 10.

would have provided secure containment for whatever it contained and physically and visually limited access to it (Taft 1996:50). This bowl could have been used to hold food or other goods that were designated as exclusive or special.

The measurable hemispherical bowl rims from Feature 10 are 12, 24, and 26 cm in diameter. The 12 cm bowl is small, while the other two bowls fit into the medium size range. Medium size bowls were probably used for food preparation. The rim from the cup-shaped bowl is 13 cm in diameter. This cup-shaped bowl falls into Taft's small size class. She suggests this size class was used for individual serving and non-food related activities, including pigment processing (Taft 1996:51; see also Markin 1994:10-11).

Figure 5-5 suggests two size classes of bottles: 3-6 cm and 9-12 cm. I place little confidence that these are real size classes, as rim and neck orifice diameters have little to do with overall bottle size. In fact, bottle shape cannot be determined from rim sherds (Taft 1996:18-24). Based on cross-mends with body sherds, at least one of the bottles in the feature is a narrow neck bottle; I suspect that most of the other bottles were wide neck bottles. People probably used narrow neck bottles for serving liquids and wide neck bottles for both serving and storing liquids (Taft 1996:49).

Minimum Number of Vessels. Earlier in this chapter, I pointed out that the number of rims does not tell us how many vessels those rims represent. Some archaeologists use the concept of minimum number of vessels (MNV) to better estimate how many vessels are actually in an assemblage. For each rim, this method takes into account vessel shape, type and variety, orifice diameter, and the percentage of the rim circumference represented. MNV can be

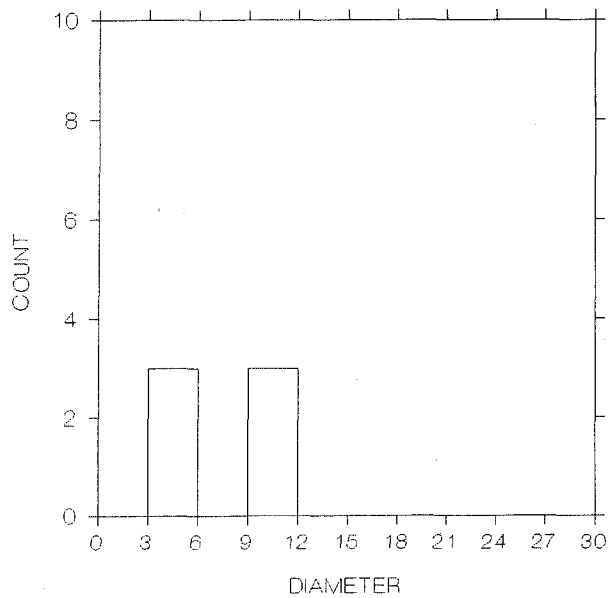


Figure 5-5 Orifice diameters of measurable bottle rims in Feature 10.

calculated simply by adding the percentages in each category—each unique combination of vessel shape, type and variety, and orifice diameter (see Egloff 1973). A sum of 100% or less translates to one MNV for that category, a sum of 101-200% translates to two MNV, etc.

I first constructed categories within each of the four shape classes using the recorded qualitative characteristics that would comprise a unique vessel. For example, Feature 10 contains many rim sherds from Mississippi Plain vessels. Some of these rims are folded, some are folded and flattened, and some are neither folded nor flattened. Obviously one rim that is folded and flattened and one that is only folded cannot be part of the same vessel.

Within each of the above categories, I then constructed size classes. In order to account for measurement error and the irregularity of vessel orifice shapes, I allowed a 3 cm range in orifice diameter for each shape class. Thus, for example, I count a Mississippi Plain folded, flattened rim with a diameter of 12 cm as potentially part of the same vessel as a Mississippi Plain folded, flattened rim with a diameter of 14 cm. I then add the percentages of the total circumference these rims represent to derive an estimate of the MNV per category, in this example a Mississippi Plain jar with a folded, flattened rim and a diameter of 12-14 cm.

I defined two categories of bottles, one category of flaring-rim bowls, four categories of other bowls, and 19 categories of jars (Table 5-5, Table 5-6, Table 5-7, and Table 5-8). In no category did the percent circumference exceed 100%; thus the number of categories is equal to the minimum number of vessels.

How do these numbers compare to the numbers of rims in each shape class presented in Table 5-1? In Table 5-1, I identified 90 jar rims, eight bottle rims, ten rims from flaring-rim bowls, and three rims from other bowls. Many of these rims were not measurable, but

Table 5-5 Grady Bobo site, minimum number of bottles.

Vessel #	Type	Orifice Diameter (cm)	Number of Rims	Total of % Circumference
1	Bell Plain	4-5	5	70
2	Bell Plain	9-10	3	63

Table 5-6 Grady Bobo site, minimum number of flaring-rim bowls.

Vessel #	Type	Rim Form	Orifice Diameter (cm)	Number of Rims	Total of % Circumference
1	Bell Plain	scalloped	27-28	3	26

Table 5-7 Grady Bobo site, minimum number of other bowls.

Vessel #	Type	Vessel Shape	Number of Rims	Orifice Diameter (cm)	Total of % Circumference
1	Bell Plain	tecomate	1	10	8
2	Moundville Engraved	cup-shaped bowl	1	13	7
3	grog-tempered, burnished	bowl	2	12	34
4	Mississippi Plain	bowl	2	24-26	24

Table 5-8 Grady Bobo site, minimum number of jars.

Vessel #	Type	Rim Form	Orifice Diameter (cm)	Number of Rims	Total of % Circumference
1	Bell Plain	folded-flattened	13	1	20
2	Mississippi Plain	folded	9	1	10
3	Mississippi Plain	folded	14	1	7
4	Mississippi Plain	folded	26	1	7
5	Mississippi Plain	folded-flattened	5	1	15
6	Mississippi Plain	folded-flattened	9	1	8
7	Mississippi Plain	folded-flattened	14-15	2	17
8	Mississippi Plain	folded-flattened	24	1	7
9	Mississippi Plain	standard	10-12	6	70
10	Moundville Incised	folded	11	1	7
11	Moundville Incised	folded	14	1	7
12	Moundville Incised	folded	19	1	12
13	Moundville Incised	folded	22	1	9
14	Moundville Incised	folded	25	1	8
15	Moundville Incised	folded	31	1	10
16	Moundville Incised	folded	36	1	8
17	Moundville Incised	folded-flattened	18-20	2	21
18	Moundville Incised	folded-flattened	22-24	5	39
19	Moundville Incised	standard	6	1	20

the MNV estimates indicate that some of them were part of the same vessels and should not be counted separately. Raw rim counts are biased toward jars, which is what we would expect since on average, Grady Bobo jars were significantly bigger than serving vessels, and each jar would be represented by more rim sherds.

The serving-to-cooking ratio for raw rim counts then, is biased toward cooking wares. How does the serving-to-cooking ratio calculated from burnished to unburnished rim and body sherds compare to the serving-to-cooking ratio derived from MNV estimates? The serving-to-cooking ratio calculated from the counts of rim and body sherds cited above is 0.38. The serving-to-cooking ratio from MNV counts is 19:7, or 0.37. The MNV estimates thus increase our confidence in the burnished-to-unburnished ratio and suggest that this ratio is a better measure of serving-to-cooking wares than ratios of vessel shapes from rim sherds alone.

MNV, however, is a conservative measure, and it probably underestimates the actual number of vessels in Feature 10. I suspect it also underestimates the completeness of those vessels. When I sorted the sherds from Feature 10, I separated them into groups of what I believed to be sherds from the same vessel and attempted to make as many crossmends as possible. My intuitive vessel estimates, however, are biased in favor of serving vessels, as it was much easier to identify vessels that had unusual or uncommon attributes. I counted 29 jars, one flaring-rim bowl, seven other bowls, and 19 bottles.

Bottle sherds were by far the easiest to separate into individual vessels. Among the 19 bottles I identified, one was engraved, one was gadrooned, one was white-filmed, one was clearly a slender ovoid bottle, another a cylindrical bottle, etc. Jars were much more difficult, as body sherds from plain jars are much less distinctive.

I assume my count of 27 serving vessels is much more accurate than the seven serving vessels projected using the MNV method, but my intuitive count probably represents the ceiling, a maximum number of serving vessels. If I were in doubt as to whether a sherd belonged in a particular group, I did not assign it to that group.

If the 0.38 serving-to-cooking ratio and my count of 27 serving vessels are accurate (or rather more accurate than other estimates), I arrive at an estimate of 71 jars in Feature 10. My best projection, then, is that Feature 10 contained 98 vessels, 71 of which were used for cooking and 27 of which were used for serving. Based on my sort and crossmending, most of the serving vessels were probably represented in their entirety. In other words, people threw whole serving vessels into Feature 10; they may or may not have been intact when deposited. I am less confident about jars, but I would guess that many of the jars in Feature 10 were also whole.

The vessel data tell us much about the event that took place when Feature 10 was filled. A group of people processed, cooked, and served food at the Bobo site, probably at the same time a person was buried along the edge of an old daub-mining pit. This event was not an everyday occasion—serving vessels were used in higher proportions than in domestic contexts. After the food was eaten, the participants then threw the vessels they used into the remainder of the daub pit.

There are many holes in this reconstruction of the Grady Bobo event. What kind of processing did people do here? What did they eat? In the next section, I consider the other two major artifact classes that relate directly to the processing and consumption of food at the Feature 10 event—plant and animal remains—and fill in some of the gaps in our knowledge of what happened here.

Plant and Animal Remains.

Margaret Scarry and her students are still in the process of finishing the analysis of the plant remains from the 1999 excavation of Feature 10. I rely here on Scarry's analysis and interpretation of plant remains from the 1995 1-x-1-m test unit (Scarry and Scarry 1997). In terms of the vessel assemblage, this test unit is not representative of the whole, but until the plant analysis is complete, I cannot assess the representativeness of this 1-x-1 in terms of the plants. I caution that the assessment of the plant remains presented here may change.

Scarry (Scarry and Scarry 1997:41-42) in fact found nothing remarkable in the botanical assemblage from Feature 10. The assemblage at the Grady Bobo site is very similar to plant assemblages from other contemporaneous nonmound sites in the valley. Scarry identified acorn and hickory shell, indicating that people shelled these nuts at the Bobo site. Corn is also present, in line with Scarry's contention that corn agriculture was in place by Moundville I.

Scarry found both corn cupules, byproducts of processing, and kernels, the consumable part of corn. The ratio of cupules to kernels at the Bobo site is similar to those from other nonmound sites. The ratios from nonmound sites are higher than the ratios from mound sites, meaning that excavated nonmound contexts have more processing debris. Scarry hypothesizes that this "extra" processing represents commoners processing corn to send to elites as tribute (Scarry and Scarry 1997; Scarry and Steponaitis 1997). I hesitate to make the leap connecting cupules at nonmound sites to kernels at mound sites, and instead take a more conservative view. I do not think it is possible to separate processing and eating in separate places at the same site from provisioning. Further, it is entirely possible that the corn at the Bobo site was brought by neighbors "on the cob," certainly a form of provisioning.

There is more to say about the animal remains from Feature 10 than the plant remains, both because all of the faunal remains from the whole feature have been analyzed and because the faunal assemblage is unusual for a nonmound site. In her analysis of the 1995 test unit, Holm (1997) was struck by the high percentage of bird bone in the sample. In a later analysis, Jackson was able to examine the contents of the feature in full—he analyzed the bone from the 1999 excavation and reanalyzed bone from the 1995 test unit. According to Jackson (2002:1-4), the assemblage from the whole feature contains slightly more large mammal and fish and slightly fewer small and medium mammals and birds than the test unit. But the overall profile is very similar, and Jackson also was struck by the high contribution of bird bones—25% of NISP and 11% by weight (Jackson 2002:4)—to the assemblage.

Most of the mammal bones in the feature are deer. The overall distribution of deer elements corresponds to what Jackson calls a "gourmet curve," meaning that the deer assemblage consists mainly of meat-bearing elements (Jackson 2003:8). Some have argued that this type of distribution corresponds to provisioning, but I tend to support the field butchering hypothesis—deer were minimally processed in the field, and hunters left the least desirable elements and brought back the meatiest ones.

The distal ends of deer long bones are over represented in the feature, something Jackson (2002:4-5; Figure 2) attributes to bone processing. He hypothesizes that people at the Bobo site broke deer long bones either to extract marrow or to make them fit into pots. This left most of the bone fragmented and unidentifiable, and more distal ends still intact. Clearly food processing was part of the Bobo site event.

Jackson (2002:5) describes the Grady Bobo bird assemblage as "unusual to say the least." The assemblage is diverse, containing turkey, duck, quail, swan, passenger pigeon, screech owl, cardinal, crow, flicker, robin, and a number of unidentifiable songbirds. Swan and screech owl, each represented at the Bobo site by a single element, are apparently unusual in archaeological assemblages from the Southeast, but there is some evidence that swans were used in funerals or other ceremonies (Jackson 2002:6). Passenger pigeons are more common in elite contexts (Jackson 2003).

Jackson was most surprised by the number of crow remains in the feature, with 85 identified crow (or crow family) elements. Crow and smaller birds were probably not captured primarily for their meat. The element distribution of crows leads Jackson to suggest that whole birds were processed at the Grady Bobo site, perhaps in order to collect feathers. Jackson notes that the most common worked bone tool in the assemblage is needles made from fish vertebrae, an uncommon finding. The number of needles suggests something other than domestic use, and Jackson raises the possibility of a connection between the abundance of small birds and needles (Jackson 2002, 2003). People at the Bobo site may have used the needles to sew feathers onto garments or ritual-related paraphernalia. People may have also used these needles to create tattoos.

INTERPRETATIONS

So what does the Grady Bobo site represent? A commoner farmstead? An elite outpost? A craft production center? An everyday meal? A ritual? There are many possible interpretations; how do we decide which one best describes the activities that took place at this site?

There is a lot we will never know about the Grady Bobo site, and we can blame some of this on the post-depositional processes that deflated the site. But on the other hand, we are fortunate to have the well-preserved contents of one extraordinary feature. We also have at least two contemporaneous burials.

We found no post holes, but it is reasonable to infer that daub was mined from Feature 10 to plaster the walls of a structure. Because the contents of the pit date to late Moundville I, we know that hypothetical structure dates to the late Moundville I phase or earlier. A daub-plastered structure is unusual for this period; it may have been a winter structure or a sweat lodge that needed daub for insulation.

Sometime after the daub was removed from the pit, an individual was buried along the pit's eastern edge. At approximately the same time, the rest of the pit was filled with refuse. The first dumping episodes contained very dark soil, a reflection of its high organic content. These first loads also contained proportionally more serving ware than later loads.

The contents of the feature reflect a wide range of activities. A group of people gathered here to process nuts, corn, deer and birds, to do needlework, to cook, to serve and eat food, and to bury the dead. People also worked local and non-local stone here, from early reduction to late stage fine-tuning (Maxham 2000a:Table 7).

I have argued that Feature 10 represents an event. This feature was rapidly filled; differences in soil color indicate multiple dumping episodes, but the large number of pottery crossmends clearly indicates that these episodes were related to the same event. But the word event should not be interpreted to mean a single meal or one afternoon. People gathered here to perform many tasks, and these tasks may have taken place over days if not weeks.

The reason for the gathering was likely the death of the individual buried in the edge of the pit. People came together to celebrate his life and to mourn his passing. Perhaps neighbors and relatives brought corn on the cob and nuts to share with the deceased's family and other mourners. Others brought meat, killing deer and bringing back the meatiest cuts. Once at the Bobo site, some people started processing and cooking the food that neighbors brought to share. Some worked stone, others plucked feathers from songbirds, while still others sewed those feathers onto clothes, perhaps even burial garments.

Over the course of days, neighbors came and went, helping to process, cook, and eat the food that accumulated. Perhaps there was a final ceremony in which bottles and bowls played a prominent role. After this ceremony, the bottles and bowls were deposited in the pit first—perhaps ritually "killed"—followed by the debris from the last few days.

This scenario is, of course, hypothetical, but it does fit the archaeological evidence. It is also possible that the Grady Bobo event was elite-sponsored; the debris in Feature 10 is not typical of rural Moundville households. But to conclude that elites lived there and led the activities that took place there based solely on the fact that Feature 10 is "different" is circular reasoning. Certainly institutionalized social hierarchy is not a necessary prerequisite for ritual (see Boudreaux 2000; Eastman 1996; Ward 1993).

I am not arguing that the Bobo site was a commoner homestead. I am in fact arguing that Feature 10 does not represent commoners' domestic trash. I see the point of difference as activity-related (i.e. domestic vs. ritual) rather than status-related. It seems unlikely that elites would choose the Grady Bobo site as an elite outpost and/or ceremonial area when the contemporaneous Hog Pen mound (Welch 1998:150-153) was less than 2 km away. Single-mound sites are believed to be places where lesser elites lived and administered some degree of political, economic, and religious control over the commoners who lived around them (Hammerstedt 2000; Welch 1998; see also Lindauer and Blitz 1997). If the purpose of the Grady Bobo ceremony was to reinforce the new social hierarchy, then surely this funeral would have taken place at a mound.

The Grady Bobo event was about integration, not differentiation. This event was special but hardly ostentatious. The Grady Bobo site represents something that took place outside of the elite-commoner hierarchy. People at the Bobo site ate the same foods they did everyday and sat around and cooked, sewed, and made tools together. This event was inclusive, not exclusive. The Bobo site event emphasized shared identity and reinforced ties of kinship and community.

THE GRADY BOBO SITE IN CONTEXT

The Grady Bobo site should change the way we think about rural sites and the relationships commoners had with each other. The Grady Bobo site does not fit into the existing multiple mound-single mound-farmstead model of Mississippian settlement. This model is inadequate, and archaeologists are only beginning to realize how far we are from having a handle on the range or degree of variation in Mississippian rural sites. What then should we do with settlement models and how should we describe relationships among commoners?

Rural communities.

Among rural sites in the Black Warrior Valley, the Grady Bobo site is not alone in its departure from the traditional Mississippian settlement site model. Hunter Johnson (1999) has proposed that the Moundville III Pride Place site may be a nodal point similar to the ones described by Mehrer and Collins (1995) in the American Bottom. They define nodal sites as gathering places that served to integrate people in neighboring households (Mehrer and Collins 1995:57). Local leaders lived at these sites and presided over community ritual (Mehrer 1995:166; B. D. Smith 1995:242). Hammerstedt (2000:61) suggests that it is possible that Moundville farmsteads are clustered around nonmound nodal sites.

Mississippian archaeologists have used the term nodal site to describe rural sites that do not fit the farmstead mold. While I agree that some of these nonmound sites probably served as places where neighbors gathered, I hesitate to use the word "nodal" to describe them. First, I believe creating another type is counterproductive given our limited understanding of the ways in which rural Mississippian people constructed their landscapes. Second, the term nodal has been used in different ways in Mississippian literature and its meaning is far from clear (see Emerson 1997b, Emerson 1997c, Emerson 1997d; Mehrer 1988, Mehrer 1995; Mehrer and Collins 1995). To avoid the ambiguities associated with the term "nodal," I simply call the Bobo site a community gathering place.

But it is not enough to fit sites into functional categories. I do not suggest that we tack "community gathering place" onto our list of Mississippian site types. We must instead turn our attention to understanding more about the lives of people in the countryside and how those people related to one another and to elites. We need to consider the nature of the communities (plural) in the Mississippian countryside and seek to describe both the lateral and hierarchical ties that bound Moundvillians together (see Crumley 1979). In other words, we need to explore the identities and associated roles of the many groups of people who lived in Mississippian polities.

Life in the Moundville I countryside.

The Moundville I phase was a time of major sociopolitical reorganization in the valley. Institutionalized hierarchy was new; during this phase, elites planned the sizes and locations of mounds at Moundville and enlisted commoners to construct them (Knight 1998). Many people moved from the Black Warrior countryside to the center at Moundville. Some people remained in the countryside; among them were the people responsible for creating the Bobo site.

I argue in Chapter 2 that rural Mississippian communities developed from the communities of the West Jefferson period. People forged close relationships with the land they and their families farmed, and these land-kinship relationships persisted through time. Many people may have moved to Moundville during Moundville I times, but their social networks in the countryside probably remained intact. Land was a fundamental part of these networks and therefore fundamental to people's identities. It is impossible to separate land from kinship ties; it is these social networks that I call communities.

People had lived in and around the vicinity of the Bobo site for centuries. The presence of West Jefferson phase burials at the site suggest that this particular piece of land may have held a position of special importance in the social memories of the people who lived nearby. Sometime during the 12th century, one of their own passed away and neighbors came together at the Bobo site to eat, drink, and celebrate his life.

The Grady Bobo site is just one site, essentially just one feature. This site alone is not going to resolve the debate about the social, economic, and political organization of Moundville's countryside. But the Bobo site has helped us realize that the range of organizational possibilities is much wider than we thought ten years ago. The Grady Bobo site, while small, has much to contribute to our understanding of the early Mississippian Black Warrior Valley.

Chapter 6: Summary and Conclusions

What elements comprised the landscapes of the people who lived in the Black Warrior Valley during the Late Woodland and Mississippian periods? The standard description of the countryside as "commoners who lived in scattered farmsteads" is inaccurate and insufficient. By writing off the countryside, archaeologists ignore rich landscapes created by people whose lives consisted of much more than building houses and farming.

In the next section, I review Chapters 2 through 5, describing the composition of the valley's landscapes and the changes people made to those landscapes through time. I then compare these observations to my initial hypotheses. In some respects, the traditional model hits the mark; in others, it misses entirely. I then suggest a new way of thinking about life in the Moundville countryside, one that takes into account the value of modeling while also considering the landscape as the product of the actions of individuals. Settlement patterns did not just appear. People created them.

SETTLEMENT AND POPULATION TRENDS

I begin with a brief explanation of the analytical units I used to partition the Late Woodland and Mississippian periods. Unfortunately, I was not able to maintain the chronological units I used to outline my hypotheses, the units defined by Knight and Steponaitis (1998:10-24) that correspond to major cultural shifts in the valley: Intensification of Local Production (West Jefferson phase), Initial Centralization (early Moundville I phase), Regional Consolidation (late Moundville I-early Moundville II), the Paramountcy Entrenched (Late Moundville II-Early Moundville III), and Collapse and Reorganization (Late Moundville III-Moundville IV).

I ran into problems with both the Late Woodland and Mississippian periods. Archaeologists in the valley have conflated the Late Woodland period and the West Jefferson phase (a.k.a. Terminal Late Woodland) on site forms. It is virtually impossible to date an assemblage consisting of a handful of surface-collected plain, grog-tempered sherds more precisely than the general category Late Woodland. Further, I was forced to combine Mississippian phases. Nevertheless, I was able to observe some trends.

Late Woodland period (AD 600-1120).

Back in Chapter 1, I proposed that population in the terminal Late Woodland Period Black Warrior Valley was low—relative to the high population density in the nearby Tombigbee Valley during the same time period (Knight 1991) and relative to population in the valley during Mississippian times. This hypothesis seems to have been only half right. Population in the valley was low during the West Jefferson phase, but was probably even lower during the Mississippian period (see Chapter 3). I return to this issue when I discuss Mississippian population in the next section.

I also predicted that I would find more sites in the uplands during the West Jefferson period than in the subsequent Mississippian period. In Chapter 2, I calculated site density indices for upland and floodplain zones in both the Late Woodland and Mississippian periods. It seems that people overwhelmingly preferred the floodplain in both periods, a likely indicator of the importance of fertile soils for farming. As predicted, the density indices for upland West Jefferson sites are higher than the density indices for upland Mississippian sites. More upland surveys are necessary to quantify the magnitude of that difference with any degree of confidence.

Based on earlier site surveys and general impressions, I hypothesized that West Jefferson sites consisted of both nucleated villages and smaller, single-family farmsteads. In Chapter 3, I argued that there are no data to back up the assertion that West Jefferson sites were larger on average than later Mississippian sites. It is just as easily possible that what archaeologists have perceived as West Jefferson villages are multiple, superimposed small sites (Scarry and Scarry 1997:18-19). I await excavations and analyses of West Jefferson sites to resolve this issue.

Mississippian Period (AD 1120-1520).

I predicted three basic settlement trends for the Mississippian period. One, I hypothesized that the number of sites in the countryside would decrease at the onset of the Mississippian period as people moved to the from the valley to the Moundville center. Two, I believed that the population remaining in the valley shifted more heavily toward the floodplain, with people living in small, dispersed homesteads. Three, I hypothesized increasing population in the valley during Moundville II and III as people moved out of the Moundville center back into the valley.

The site density indices in Chapter 2 suggest that population did decrease overall from the Late Woodland period to the Mississippian period; in Chapter 3, I refine this trend, demonstrating a clear population decrease from the West Jefferson phase to the Moundville I phase. Presumably many commoners moved to Moundville to build mounds, a palisade, and otherwise sculpt the impressive landscape under elite direction. Population at Moundville was highest during this initial phase of the chiefdom's development, numbering around 1700 people (Steponaitis 1998:39-43).

Around the same time, people started building mounds in the valley. During the last half of the Moundville I phase, people built three single-mound sites. It is likely that only a few people, most of whom were elites, actually lived at these sites. The people who were not living at a mound center lived in loose clusters on the floodplain near these single mounds. People preferred to live near one another and did not space themselves out evenly across the valley. As I discussed in the previous section, the floodplain did have a stronger pull on people during the Mississippian period than in the Late Woodland period, though the difference is only slight.

Population at Moundville declined significantly during the Moundville II phase. Knight and Steponaitis (1998:18) propose that the remaining resident population at Moundville consisted of elites and their retainers. It is logical to assume that the people who moved out of Moundville moved into the valley. But the population in the valley did not rebound in the Moundville II and III phases to the extent I predicted. The diagnostics technique, which I believe to be the most accurate of the two methods I used to examine population in Chapter 3, reveals a shockingly low population for the combined Moundville I-Moundville II analytical unit. Population in the valley did increase in the Moundville III phase, but never reached the level of the West Jefferson phase.

THE MISSISSIPPIAN COMMUNITY

In Chapters 2 and 3, I considered landscape at the regional scale and treated all nonmound sites as equivalent. I made this oversimplification because the only data available for most sites in the study area are sherd counts from surface collections and/or shovel tests—certainly not enough information to differentiate site function. In Chapters 4 and 5, I addressed this shortcoming, focusing on landscape at the local scale. I described excavations at the nonmound Grady Bobo site and presented the argument that this site was not a farmstead. Instead, I contend that the Bobo site is a place where commoners gathered for a special event, likely a funeral. This finding significantly alters our understanding of the Mississippian community.

The Grady Bobo site demonstrates that the local landscape was composed of more than clusters of undifferentiated farmsteads. We can now imagine a more nuanced landscape, one that included places where people gathered to express solidarity, kinship, and shared beliefs. People had relationships with their neighbors and kin that existed quite apart from the Moundville political hierarchy. The Grady Bobo site is one place where people gathered to express these ties with each other.

But we must not let the Grady Bobo site overshadow the importance of farming and farmsteads in everyday commoner life. Chapter 2 details the value of deep, well-drained soils to both Late Woodland and Mississippian farmers in the Black Warrior Valley. People not only preferred the same kind of soils through time, but they actually preferred the very same locations. I suggest that this continuity in land use was the result of both environmental and social factors. People chose to live on the same land their ancestors had farmed.

These site clusters are analogous to what archaeologists have called towns. I prefer the term community, as it implies both social and geographic ties. Perhaps these communities represent groups of people related by descent and marriage. Communities may represent social relationships among kin and between kin groups and land in a manner akin to the elite social order expressed in the arrangement of mounds at Moundville (Knight 1998:52-53), albeit certainly less formally and less obviously.

Relationships within and among communities, between communities and mound sites, and between sites and environmental features constitute landscapes. These landscapes were the result of conscious and unconscious decisions made by the valley's residents. But the overall character of the countryside did not change remarkably from the Late Woodland period through the Mississippian period, a significant observation, as I had expected that the landscapes would have been very different, reflecting changes in the valley's overall social and political order (see Marquardt and Crumley 1987). If landscapes reflect identity, then the similarities in rural landscapes in the valley through time suggest that people did not change the fundamental ways they defined themselves, even in the face of chiefdom consolidation.

The landscape was not static; mounds were a significant addition to the Black Warrior Valley landscape. During the Mississippian period, people lived in communities in the vicinity of single-mound sites. Interestingly, it looks like the mounds came to the people; people did not come to them. People lived in the same areas they lived in during the preceding West Jefferson phase. People then built these mounds. Did the same people who lived in the surrounding community build the mounds? Who planned and organized mound building? These issues suggest that like nonmound sites, single-mound sites are not well-understood and deserve more study.

The goal of this project was to propose a new way of looking at the Moundville countryside and the people who lived there. This research has implications that reach beyond descriptions of the people and sites in the Black Warrior Valley. By acknowledging variation in the types of sites in the Moundville countryside, I expose landscapes that were more complicated than archaeologists were aware. More importantly, I recognize that these landscapes were not unchanging entities, but rather the dynamic results of the decisions and actions of "ordinary" people. The archaeological record bears witness to the depth and diversity of the everyday lives of the people who comprise the base of the sociopolitical pyramid. Commoners are not only part of the landscape, they are its foundation.

Appendix A: Information Coded for Archaeological Sites

Table A-1 Fields recorded in GIS database.

Field	Field Type	Explanation
Site Number	Text	
Site Name	Text	
County	Text	"Hale" or "Tuscaloosa"
Easting	Number	UTM coordinate from ASSF
Northing	Number	UTM coordinate from ASSF
X	Number	x-coordinate in decimal degrees; generated by ArcView
Y	Number	y-coordinate in decimal degrees; generated by ArcView
USGS Topo	Text	name of 7.5 minute-topographic quad
Township	Text	24N, e.g.
Range	Text	5E, e.g.
Section	Number	
Major Axis	Number	distance in meters; from ASSF
Minor Axis	Number	distance in meters; from ASSF
Perimeter Meters	Number	perimeter in meters; generated by ArcView
Area Meters	Number	area in square meters; generated by ArcView
Acres	Number	area in acres; generated by ArcView
Hectares	Number	area in hectares; generated by ArcView
Elev	Text	"below 50 m" or "50 m and above"
Elevation	Number	elevation in feet as recorded in ASSF
Topographic Zone	Text	from ASSF
Physiographic Zone	Text	from ASSF
Nearest Water	Text	"major", "swamp", "first", etc.; from ASSF
Distance to Water	Number	distance to nearest water in m as recorded in ASSF
Geo Form	Number	number corresponding to geological formation
County Soil	Number	number corresponding to county soil series

Field	Field Type	Explanation
State Soil	Number	number corresponding to state soil series
Water	Number	number corresponding to 400 m interval from major waterways
Mounds	Number	number corresponding to 1 km interval from mound sites
Moundville	Number	number corresponding to 2 km interval from Moundville
Gas Field	True/False	true = within bounds of MCDF
Myer	True/False	true = within bounds of HM transects
Big Sandy	True/False	true = within bounds of BS survey
Bozeman	True/False	true = reported in Bozeman 1982 (UMMA)
Well Intersect	Text	ID numbers of well pads that intersect with site
Myer Intersect	True/False	true = within HM surveyed areas
At OAR	True/False	collections from site at OAR
Artifact Count	True/False	artifact counts available
Grog	Number	number of grog-tempered sherds
Shell	Number	number of shell-tempered sherds
Late Woodland	True/False	has Late Woodland component
Mississippian	True/False	has Mississippian component
Mound	True/False	true= site contains one or more mounds; false = nonmound site
Components 1-5	Text	name of cultural components recorded in ASSF; separate field for each component
Sponsor	Text	name of organization, individual sponsoring survey; e.g., "Metfuel", "Basin Pipeline"
Notes	Text	

Appendix B: GIS Database

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Ha001/002	Cook	Hale	445360	3651580	-87.59	33.00	Englewood	23N	05E	4
Ha003		Hale	437420	3649640	-87.67	32.98	Moundville West	23N	04E	15
Ha004		Hale	437500	3648680	-87.67	32.98	Moundville West	23N	04E	15
Ha005		Hale	437460	3648720	-87.67	32.98	Moundville West	23N	04E	15
Ha006		Hale	437380	3648620	-87.67	32.98	Moundville West	23N	04E	15
Ha007/008	White	Hale	431060	3643740	-87.74	32.93	Moundville West	23N	03E	34
Ha009/010		Hale	440060	3648420	-87.64	32.97	Moundville West	23N	04E	13
Ha011		Hale	437460	3648620	-87.67	32.98	Moundville West	23N	04E	15
Ha012		Hale	0	0	-87.62	33.00	Englewood	23N	05E	6
Ha014/015	Touson's Lake (Taylor)	Hale	438000	3651660	-87.66	33.00	Fosters	23N	04E	3
Ha035		Hale	431360	3647340	-87.75	32.96	Moundville West	23N	03E	13
Ha036		Hale	433980	3650140	-87.71	32.99	Moundville West	23N	04E	8
Ha039		Hale	436640	3546720	-87.69	32.96	Moundville West	23N	04E	21
Ha040		Hale	436220	3647040	-87.69	32.96	Moundville West	23N	04E	21
Ha068		Hale	440750	3650945	-87.63	33.00	Moundville West	23N	04E	1
Ha069		Hale	440600	3642580	-87.64	32.92	Moundville West	23N	04E	36
Ha070	Seaborn	Hale	440280	3642300	-87.64	32.92	Moundville West	23N	04E	36
Ha071		Hale	452250	3647450	-87.51	32.97	Moundville East	23N	06E	18
Ha073		Hale	447700	3650010	-87.56	32.99	Moundville East	23N	05E	10
Ha074		Hale	447810	3649890	-87.56	32.99	Moundville East	23N	05E	10
Ha075		Hale	443560	3648640	-87.60	32.98	Moundville East	23N	05E	8
Ha076		Hale	440080	3647430	-87.64	32.97	Moundville West	23N	04E	13
Ha077		Hale	438130	3645870	-87.66	32.95	Moundville West	23N	04E	22
Ha078		Hale	436600	3648370	-87.68	32.97	Moundville West	23N	04E	16
Ha079		Hale	438140	3645860	-87.66	32.95	Moundville West	23N	04E	22
Ha080		Hale	435210	3647020	-87.69	32.96	Moundville West	23N	04E	16
Ha081		Hale	439000	3547500	-87.65	32.97	Moundville West	23N	04E	14
Ha082		Hale	437080	3645520	-87.67	32.95	Moundville West	23N	04E	22
Ha083		Hale	0	0	-87.72	32.97	Moundville West	23N	04E	18
Ha084		Hale	450580	3651110	-87.53	33.00	Moundville East	23N	05E	1
Ha085		Hale	448350	3649960	-87.55	32.99	Moundville East	23N	05E	11
Ha091		Hale	432660	3648120	-87.72	32.97	Moundville West	23N	04E	18
Ha092	Taylor 2	Hale	433160	3646340	-87.72	32.95	Moundville West	23N	04E	19
Ha095		Hale	446580	3649480	-87.57	32.98	Moundville East	23N	05E	10
Ha099		Hale	452250	3647170	-87.51	32.96	Moundville East	23N	06E	18

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Ha001/002	61	121	801.5	51125.2	12.6	5.1	50 m and above	340	?	coastal	river
Ha003	24	34	68.3	2533.4	0.1	0.0	below 50 m	0	?	coastal	river
Ha004	49	67	68.3	293.4	0.1	0.0	below 50 m	0	?	coastal	river
Ha005	68	85	84.8	369.5	0.1	0.1	below 50 m	0	?	coastal	?
Ha006	37	189	84.8	367.7	0.1	0.1	below 50 m	0	?	coastal	?
Ha007/008	34	39	801.5	51125.2	12.6	5.1	below 50 m	0	?	coastal	oxbow
Ha009/010	6	6	801.5	51125.2	12.6	5.1	below 50 m	0	?	coastal	?
Ha011	39	248	121.3	514.1	0.3	0.1	below 50 m	0	?	coastal	?
Ha012	45	45	134.3	4136.1	0.4	0.1	50 m and above	0	?	coastal	?
Ha014/015	30	90	801.5	51125.2	12.6	5.1	below 50 m	0	?	coastal	oxbow
Ha035	0	0	156.8	3166.8	0.4	0.1	below 50 m	0	?	coastal	river
Ha036	0	0	148.0	2076.1	0.4	0.2	below 50 m	0	?	coastal	river
Ha039	0	0	208.3	2280.1	0.9	0.3	below 50 m	0	?	coastal	spring
Ha040	0	0	186.2	939.3	0.6	0.2	below 50 m	0	?	coastal	?
Ha068	20	25	126.2	1266.7	0.3	0.1	50 m and above	160	?	coastal	first
Ha069	0	0	178.4	2533.4	0.6	0.3	50 m and above	190	upland slope	coastal	first
Ha070	0	0	214.9	3673.5	0.9	0.4	50 m and above	290	upland crest	coastal	first
Ha071	40	40	242.7	4686.8	1.2	0.5	50 m and above	260	upland slope	coastal	?
Ha073	20	30	71.9	3930.2	0.1	0.0	50 m and above	240	terrace	Cumberland	first
Ha074	30	100	349.1	11585.9	1.6	0.7	50 m and above	220	terrace	Cumberland	second
Ha075	0	0	357.7	2897.0	1.6	0.7	50 m and above	180	terrace	Cumberland	second
Ha076	20	202	114.3	2684.3	0.2	0.1	50 m and above	160	terrace	Cumberland	second
Ha077	50	50	166.0	5477.0	0.4	0.2	below 50 m	125	terrace	Cumberland	second
Ha078	40	40	144.3	379.9	0.4	0.2	below 50 m	115	terrace	Cumberland	swamp
Ha079	40	40	153.2	20882.0	0.5	0.2	below 50 m	130	terrace	Cumberland	second
Ha080	0	0	160.8	1013.4	0.5	0.2	below 50 m	0	terrace	Cumberland	swamp
Ha081	50	50	100.0	2947.4	0.2	0.1	50 m and above	150	terrace	coastal	first
Ha082	40	50	130.5	3820.2	0.3	0.1	below 50 m	120	terrace	Cumberland	lake
Ha083	50	75	188.8	3216.3	0.7	0.3	below 50 m	110	terrace	Cumberland	swamp
Ha084	15	30	243.1	468.8	1.0	0.4	50 m and above	440	upland slope	Cumberland	first
Ha085	75	100	391.6	2985.5	2.8	1.1	50 m and above	220	terrace	Cumberland	first
Ha091	75	100	378.1	4835.4	2.4	1.0	below 50 m	115	terrace	coastal	oxbow
Ha092	200	400	960.9	2677.2	12.3	5.0	below 50 m	200	terrace	coastal	?
Ha095	0	0	251.6	4488.5	1.2	0.5	50 m and above	200	terrace	coastal	third
Ha099	0	0	407.7	9294.4	2.3	0.9	50 m and above	260	terrace	coastal	third

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Ha001/002	758	1	H33D	AL106	6	0	3	TRUE		TRUE			
Ha003	182	1	H35A	AL106	1	3	3	TRUE					
Ha004	61	1	H35A	AL106	1	3	3	TRUE		TRUE			
Ha005	61	1	H35A	AL106	1	3	3	TRUE		TRUE			
Ha006	182	1	H35A	AL106	1	3	3	TRUE		TRUE			
Ha007/008	1	1	H186A	AL106	1	1	7			TRUE			
Ha009/010	-9	1	H44B	AL106	1	0	2	TRUE					
Ha011	121	1	H35A	AL106	1	3	3	TRUE					TRUE
Ha012	242	1	H33D	AL106	3	1	1	TRUE	TRUE				
Ha014/015	61	1	H35A	AL106	1	0	2	TRUE		TRUE			
Ha035	1	1	H186A	AL110	1	4	6	TRUE					
Ha036	1	1	H186A	AL106	1	3	4	TRUE					
Ha039	485	1	H120	AL106	7	5	4	TRUE			398		TRUE
Ha040	1	1	H137A	AL106	6	6	4	TRUE					TRUE
Ha068	400	1	H44B	AL106	3	2	1	TRUE					TRUE
Ha069	180	4	H61E	AL109	15	6	5						
Ha070	550	1	H61D	AL109	16	7	5						
Ha071	50	2	H80A	AL109	1	9	7						TRUE
Ha073	100	2	H80A	AL109	1	3	4	TRUE					TRUE
Ha074	50	1	H31B	AL109	1	4	4	TRUE					TRUE
Ha075	100	2	H35A	AL142	1	4	3	TRUE					TRUE
Ha076	450	1	H44A	AL142	3	1	3	TRUE			470		TRUE
Ha077	100	1	H44A	AL142	6	4	4	TRUE					TRUE
Ha078	25	1	H186A	AL106	2	4	3	TRUE					TRUE
Ha079	50	1	H44A	AL142	6	4	4	TRUE					TRUE
Ha080	20	1	H137A	AL106	5	5	4	TRUE					
Ha081	100	1	H44A	AL142	2	2	3	TRUE					TRUE
Ha082	75	1	H44A	AL106	8	5	4	TRUE					TRUE
Ha083	125	1	H186A	AL106	1	5	5	TRUE					TRUE
Ha084	125	4	H62E	AL109	5	6	5	TRUE					TRUE
Ha085	10	2	H80A	AL109	1	4	4	TRUE					TRUE
Ha091	61	1	H35A	AL106	1	5	5	TRUE					TRUE
Ha092	61	1	H35A	AL106	4	4	5	TRUE					TRUE
Ha095	100	1	H31B	AL109	1	3	4	TRUE					TRUE
Ha099	225	2	H70D	AL109	1	9	7						

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Ha001/002		0	0		TRUE	TRUE	Moundville II		
Ha003		0	0		TRUE		Moundville II		
Ha004		0	0		TRUE		Miller III	Moundville II	
Ha005		0	0		TRUE		Miller III	Moundville II	
Ha006		0	0				post-pottery		
Ha007/008		0	0		TRUE		Miller III	Moundville II	
Ha009/010		0	0		TRUE	TRUE	Mississippian		
Ha011		0	0		TRUE		Miller III	Mississippian	
Ha012		0	0				unknown aboriginal		
Ha014/015		0	0		TRUE	TRUE	Miller III	Moundville II	
Ha035		0	0				no pottery		
Ha036		0	0				Miller III		
Ha039		0	0				unknown aboriginal		
Ha040		0	0				Miller III		
Ha068		0	0	TRUE			West Jefferson	historic	
Ha069		0	0	TRUE			White Springs	Saltillo Fabric Impressed	West Jefferson
Ha070		0	0				Archaic	historic	
Ha071		0	0	TRUE			West Jefferson		
Ha073		0	0	TRUE	TRUE		West Jefferson	Mississippian	
Ha074		0	0				no pottery		
Ha075		0	0	TRUE			West Jefferson		
Ha076		0	0				historic		
Ha077		0	0				Big Sandy		
Ha078		0	0				Gary		
Ha079		0	0				Benton		
Ha080		0	0				post-pottery		
Ha081		0	0				historic		
Ha082		0	0				Wheeler		
Ha083		0	0				unknown aboriginal		
Ha084		0	0		TRUE		Mississippian		
Ha085		0	0	TRUE			West Jefferson		
Ha091		0	0		TRUE		Miller III	Moundville II/III	
Ha092		0	0		TRUE		Kirk Corner Notched	Broken Pumpkin Creek	Henson Springs
Ha095		0	0	TRUE	TRUE		Kirk Corner Notched	Gary	Miller III
Ha099		0	0	TRUE			Wheeler Plain	Alexander	West Jefferson

Site Number	Component 4	Component 5	Sponsor	Notes
Ha001/002			UAL	
Ha003			UAL	
Ha004			UAL	
Ha005			UAL	
Ha006			UAL	
Ha007/008			UAL	
Ha009/010			UAL	
Ha011			UAL	
Ha012			UAL	
Ha014/015			UAL	
Ha035			AHC	
Ha036			AHC	
Ha039			UAL	
Ha040			unavailable	
Ha068			E Lloyd Wood	
Ha069			unavailable	
Ha070			unavailable	
Ha071			unavailable	
Ha073			Metfuel	
Ha074			Forest	
Ha075			unavailable	
Ha076			unavailable	
Ha077			unavailable	
Ha078			unavailable	
Ha079			Metfuel	
Ha080			volunteer	
Ha081			Basin Pipeline	
Ha082			unavailable	
Ha083			unavailable	
Ha084			Metfuel	
Ha085			Metfuel	
Ha091			unavailable	
Ha092	Miller III	Moundville III	UMICH	
Ha095	West Jefferson	Mississippian	volunteer	sand-tempered sherds; cord-marked sherds
Ha099			volunteer	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Ha105		Hale	452670	3645540	-87.51	32.95	Moundville East	23N	06E	19
Ha106		Hale	451700	3646380	-87.52	32.95	Moundville East	23N	06E	19
Ha109		Hale	445240	3648980	-87.59	32.98	Moundville East	23N	05E	9
Ha110		Hale	445340	3649000	-87.58	32.98	Moundville East	23N	05E	9
Ha111		Hale	445560	3649160	-87.58	32.98	Moundville East	23N	05E	9
Ha112		Hale	445740	3649200	-87.58	32.98	Moundville East	23N	05E	9
Ha113		Hale	446880	3649700	-87.57	32.99	Moundville East	23N	05E	10
Ha114		Hale	447540	3649840	-87.56	32.99	Moundville East	23N	05E	10
Ha115		Hale	447140	3649720	-87.57	32.99	Moundville East	23N	05E	10
Ha116		Hale	447300	3649760	-87.56	32.99	Moundville East	23N	05E	10
Ha117		Hale	438000	3647500	-87.66	32.97	Moundville West	23N	04E	15
Ha120		Hale	438330	3648640	-87.66	32.98	Moundville West	23N	04E	15
Ha121		Hale	434900	3647850	-87.70	32.97	Moundville West	23N	04E	17
Ha122		Hale	436980	3646580	-87.67	32.96	Moundville West	23N	04E	22
Ha123		Hale	444750	3646500	-87.59	32.96	Moundville East	23N	05E	20
Ha124		Hale	444940	3646580	-87.59	32.96	Moundville East	23N	05E	21
Ha125		Hale	434770	3646190	-87.70	32.95	Moundville West	23N	04E	20
Ha126		Hale	440500	3648750	-87.64	32.98	Moundville West	23N	04E	12
Ha127		Hale	437690	3646520	-87.67	32.96	Moundville West	23N	04E	22
Ha128		Hale	433860	3649450	-87.71	32.98	Moundville West	23N	04E	8
Ha129		Hale	432380	3648580	-87.72	32.98	Moundville West	23N	04E	18
Ha130		Hale	437200	3646080	-87.67	32.95	Moundville West	23N	04E	22
Ha131		Hale	437210	3646450	-87.67	32.96	Moundville West	23N	04E	22
Ha132		Hale	439250	3645880	-87.65	32.95	Moundville West	23N	04E	23
Ha133		Hale	439020	3646520	-87.65	32.96	Moundville West	23N	04E	23
Ha134		Hale	439270	3646620	-87.65	32.96	Moundville West	23N	04E	23
Ha135		Hale	440080	3646600	-87.64	32.96	Moundville West	23N	04E	24
Ha136		Hale	440040	3646700	-87.64	32.96	Moundville West	23N	04E	24
Ha137		Hale	439350	3646800	-87.65	32.96	Moundville West	23N	04E	23
Ha138		Hale	439990	3648230	-87.64	32.97	Moundville West	23N	04E	14
Ha139		Hale	437600	3646730	-87.67	32.96	Moundville West	23N	04E	22
Ha140		Hale	440270	3649370	-87.64	32.98	Moundville West	23N	04E	12
Ha141		Hale	444760	3650890	-87.59	33.00	Moundville East	23N	05E	5
Ha156		Hale	452200	3650780	-87.51	33.00	Moundville East	23N	06E	6
Ha157		Hale	452170	3650760	-87.51	33.00	Moundville East	23N	06E	6

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Ha105	0	0	106.9	908.8	0.2	0.1	50 m and above	0	?	coastal	?
Ha106	0	0	164.5	2153.4	0.5	0.2	50 m and above	0	?	coastal	?
Ha109	0	0	277.4	2715.2	1.0	0.4	50 m and above	185	?	coastal	?
Ha110	0	0	332.3	2192.4	1.6	0.7	50 m and above	190	?	coastal	?
Ha111	0	0	278.1	22047.6	1.3	0.5	50 m and above	200	?	coastal	?
Ha112	0	0	388.6	10197.4	2.6	1.1	50 m and above	200	?	coastal	?
Ha113	0	0	476.5	7124.6	3.2	1.3	50 m and above	230	?	coastal	?
Ha114	0	0	291.7	2844.5	1.2	0.5	50 m and above	220	?	coastal	?
Ha115	0	0	271.3	568.4	1.4	0.6	50 m and above	230	?	coastal	?
Ha116	0	0	263.1	6145.3	1.1	0.5	50 m and above	200	?	coastal	?
Ha117	125	200	677.0	355.1	6.2	2.5	below 50 m	140	terrace	Cumberland	first
Ha120	0	0	90.6	1253.6	0.2	0.1	below 50 m	0	?	coastal	spring
Ha121	0	0	835.1	5180.7	5.0	2.0	below 50 m	0	floodplain	coastal	spring
Ha122	20	20	185.8	1854.1	0.6	0.3	below 50 m	110	terrace	Cumberland	second
Ha123	50	75	348.0	20662.2	1.6	0.7	50 m and above	200	terrace	Cumberland	second
Ha124	25	25	207.9	496.7	0.6	0.2	50 m and above	200	floodplain	Cumberland	second
Ha125	0	0	147.3	2727.2	0.3	0.1	below 50 m	110	terrace	Cumberland	first
Ha126	75	125	398.5	1588.9	2.2	0.9	below 50 m	130	?	Cumberland	third
Ha127	15	15	158.2	1072.6	0.5	0.2	below 50 m	130	terrace	Cumberland	second
Ha128	150	200	444.0	4278.1	3.2	1.3	below 50 m	115	terrace	Cumberland	oxbow
Ha129	100	100	236.9	3216.3	1.0	0.4	below 50 m	115	terrace	Cumberland	oxbow
Ha130	150	200	369.7	4582.7	2.6	1.0	below 50 m	125	terrace	Cumberland	second
Ha131	150	150	457.6	346.7	3.0	1.2	below 50 m	120	terrace	Cumberland	second
Ha132	30	30	98.1	462.4	0.2	0.1	50 m and above	150	?	Cumberland	first
Ha133	40	100	125.6	462.4	0.3	0.1	50 m and above	140	terrace	Cumberland	second
Ha134	30	30	185.1	5237.0	0.7	0.3	50 m and above	150	terrace	Cumberland	second
Ha135	80	100	143.8	64005.5	0.3	0.1	50 m and above	140	terrace	Cumberland	second
Ha136	50	100	133.4	1266.7	0.3	0.1	50 m and above	150	terrace	Cumberland	second
Ha137	30	30	55.5	3649.9	0.1	0.0	50 m and above	155	terrace	Cumberland	second
Ha138	0	0	87.7	702.2	0.2	0.1	50 m and above	150	terrace	Cumberland	second
Ha139	20	20	70.7	562.3	0.1	0.0	below 50 m	130	terrace	Cumberland	second
Ha140	20	20	58.3	13970.4	0.1	0.0	50 m and above	150	?	Cumberland	first
Ha141	20	20	118.0	6170.7	0.2	0.1	50 m and above	260	upland crest	coastal	first
Ha156	22	80	128.0	1123.2	0.3	0.1	50 m and above	260	upland slope	coastal	first
Ha157	10	50	172.1	1731.8	0.4	0.2	50 m and above	280	terrace	coastal	first

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Ha105	0	4	H64C	AL109	3	10	7						
Ha106	0	4	H64C	AL109	3	9	7						
Ha109	30	1	H80A	AL142	1	3	3	TRUE					TRUE
Ha110	0	1	H80A	AL142	1	3	3	TRUE			390		
Ha111	91	1	H35A	AL142	1	3	3	TRUE					
Ha112	61	1	H80A	AL142	1	3	3	TRUE					
Ha113	242	1	H31B	AL109	1	3	4	TRUE					
Ha114	152	1	H35B	AL109	1	3	4	TRUE					
Ha115	242	1	H62D	AL109	1	3	4	TRUE					
Ha116	182	1	H35B	AL109	1	3	4	TRUE					
Ha117	250	1	H44B	AL106	3	3	3	TRUE					TRUE
Ha120	0	1	H35A	AL106	1	2	3	TRUE					TRUE
Ha121	20	1	H186A	AL106	4	5	4	TRUE					TRUE
Ha122	250	1	H44A	AL106	6	4	4	TRUE			378		TRUE
Ha123	20	1	H80A	AL109	6	6	4	TRUE					TRUE
Ha124	20	1	H80A	AL109	6	6	4	TRUE			460		
Ha125	75	1	H35A	AL106	8	5	5	TRUE					TRUE
Ha126	75	1	H44A	AL106	1	1	2	TRUE					TRUE
Ha127	250	1	H44A	AL106	5	4	4	TRUE			497		TRUE
Ha128	25	1	H35A	AL106	1	4	4	TRUE					TRUE
Ha129	100	1	H186A	AL106	1	5	5	TRUE			86		TRUE
Ha130	150	1	H44A	AL106	7	4	4	TRUE			34		TRUE
Ha131	50	1	H35A	AL106	6	4	4	TRUE					TRUE
Ha132	150	1	H44B	AL142	6	3	4	TRUE					TRUE
Ha133	100	1	H81A	AL142	5	3	4	TRUE					TRUE
Ha134	100	1	H81A	AL142	4	2	3	TRUE					TRUE
Ha135	100	1	H35B	AL142	5	2	3	TRUE					TRUE
Ha136	125	1	H35A	AL142	5	2	3	TRUE					TRUE
Ha137	275	1	H44B	AL142	4	2	3	TRUE					TRUE
Ha138	250	1	H33D	AL106	1	1	3	TRUE					TRUE
Ha139	500	1	H44A	AL106	5	3	4	TRUE					TRUE
Ha140	100	1	H44A	AL106	2	1	2	TRUE					TRUE
Ha141	100	1	H31B	AL106	5	1	2	TRUE					TRUE
Ha156	40	4	H62D	AL109	6	7	6						
Ha157	70	4	H64E	AL109	6	7	6						

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Ha105		0	0				historic		
Ha106		0	0				historic		
Ha109		0	0		TRUE		Miller III	Moundville II/III	
Ha110		0	0		TRUE		Kirk Corner Notched	Broken Pumpkin Creek	Henson Springs
Ha111		0	0				unknown aboriginal		
Ha112		0	0				post-pottery		
Ha113		0	0				unknown aboriginal		
Ha114		0	0				unknown aboriginal		
Ha115		0	0		TRUE		Miller III	Mississippian	
Ha116		0	0				unknown aboriginal		
Ha117		0	0				Decatur	Baldwin Plain	
Ha120		0	0				no pottery		
Ha121		0	0				post-pottery		
Ha122		0	0				sand-tempered sherds	historic	
Ha123		0	0				unknown aboriginal		
Ha124		0	0				unknown aboriginal		
Ha125		0	0				unknown aboriginal		
Ha126		0	0				no pottery		
Ha127		0	0				no pottery	historic	
Ha128		0	0	TRUE			West Jefferson		
Ha129		0	0		TRUE		Mississippian		
Ha130		0	0	TRUE			West Jefferson		
Ha131		0	0	TRUE			sand-tempered sherds	West Jefferson	
Ha132		0	0				historic		
Ha133		0	0	TRUE			West Jefferson		
Ha134		0	0				historic		
Ha135		0	0	TRUE			West Jefferson		
Ha136		0	0	TRUE			West Jefferson		
Ha137		0	0				historic		
Ha138		0	0				historic		
Ha139		0	0				historic		
Ha140		0	0				historic		
Ha141		0	0				no pottery	historic	
Ha156		0	0				Miller II	Miller III	
Ha157		0	0				unknown aboriginal		

Site Number	Component 4	Component 5	Sponsor	Notes
Ha105			Forest	
Ha106			Forest	
Ha109			unavailable	
Ha110	Miller III	Moundville III	unavailable	
Ha111			unavailable	
Ha112			unavailable	
Ha113			unavailable	
Ha114			unavailable	
Ha115			unavailable	
Ha116			unavailable	
Ha117			unavailable	
Ha120			Basin Pipeline	
Ha121			Basin Pipeline	
Ha122			Metfuel	
Ha123			unavailable	
Ha124			unavailable	
Ha125			unavailable	
Ha126			unavailable	
Ha127			unavailable	
Ha128			Metfuel	
Ha129			Metfuel	
Ha130			Metfuel	
Ha131			Metfuel	
Ha132			Metfuel	
Ha133			Metfuel	
Ha134			Metfuel	
Ha135			Metfuel	
Ha136			Metfuel	
Ha137			Metfuel	
Ha138			unavailable	
Ha139			Metfuel	
Ha140			unavailable	
Ha141			Metfuel	
Ha156			Forest	
Ha157			Forest	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Ha158		Hale	452280	3650580	-87.51	32.99	Moundville East	23N	06E	6
Ha159		Hale	452360	3650590	-87.51	32.99	Moundville East	23N	06E	6
Ha160		Hale	451600	3651180	-87.52	33.00	Moundville East	23N	06E	6
Ha185		Hale	451840	3648350	-87.52	32.98	Moundville East	23N	06E	7
Ha186		Hale	451860	3648640	-87.52	32.97	Moundville East	23N	06E	18
Ha187		Hale	452400	3649500	-87.51	32.98	Moundville East	23N	06E	7
Ha188		Hale	452560	3649340	-87.51	32.98	Moundville East	23N	06E	7
Ha189		Hale	451980	3649040	-87.51	32.98	Moundville East	23N	06E	7
Ha191		Hale	452860	3649660	-87.50	32.99	Moundville East	23N	06E	8
Ha192		Hale	452220	3649720	-87.51	32.99	Moundville East	23N	06E	7
Ha193		Hale	452250	3649560	-87.51	32.99	Moundville East	23N	06E	7
Ha194		Hale	452080	3649560	-87.51	32.99	Moundville East	23N	06E	7
Ha195		Hale	451580	3650660	-87.52	33.00	Moundville East	23N	06E	6
Ha196		Hale	452920	3650520	-87.50	32.99	Moundville East	23N	06E	5
Ha197		Hale	452140	3649960	-87.51	32.99	Moundville East	23N	06E	7
Ha198		Hale	452160	3649900	-87.51	32.99	Moundville East	23N	06E	7
Ha199		Hale	452820	3649940	-87.51	32.99	Moundville East	23N	06E	7
Ha208		Hale	441680	3649620	-87.62	32.98	Moundville East	23N	05E	7
Ha231		Hale	436860	3651560	-87.68	33.00	Fosters	23N	04E	3
Ha232		Hale	436940	3651480	-87.67	33.00	Fosters	23N	04E	3
Ha233		Hale	436940	3651670	-87.68	33.00	Fosters	23N	04E	3
Ha234		Hale	437600	3651330	-87.67	33.00	Fosters	23N	04E	3
Ha240		Hale	435580	3653000	-87.69	33.01	Fosters	23N	04E	4
Ha241		Hale	435440	3652840	-87.69	33.01	Fosters	23N	04E	4
Ha242		Hale	435580	3651880	-87.69	33.01	Fosters	23N	04E	4
Ha243		Hale	444566	3646448	-87.59	32.96	Moundville East	23N	05E	20
Landbridge	Landbridge (Foster's Ferry rem	Tuscaloosa	0	0	-87.66	33.12	Fosters	22S	11W	23
Tu002	Snows Bend	Tuscaloosa	436720	3671960	-87.68	33.19	Coker	21S	11W	27
Tu005	Lon Robertson	Tuscaloosa	442040	3662200	-87.62	33.10	Englewood	22S	10W	31
Tu006		Tuscaloosa	441880	3661760	-87.62	33.09	Englewood	22S	10W	31
Tu007		Tuscaloosa	442940	3657560	-87.61	33.06	Englewood	24N	05E	18
Tu008		Tuscaloosa	441860	3657560	-87.62	33.06	Englewood	24N	05E	18
Tu009		Tuscaloosa	442740	3656040	-87.61	33.04	Englewood	24N	05E	19
Tu034		Tuscaloosa	442840	3657660	-87.61	33.06	Englewood	24N	05E	18
Tu035		Tuscaloosa	442460	3657660	-87.62	33.06	Englewood	24N	05E	18

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Ha158	3	5	126.2	1266.7	0.3	0.1	50 m and above	420	upland crest	coastal	first
Ha159	3	5	89.2	633.4	0.2	0.1	50 m and above	420	upland crest	coastal	first
Ha160	6	25	99.7	791.7	0.2	0.1	50 m and above	260	terrace	coastal	first
Ha185	5	25	121.3	1171.7	0.3	0.1	50 m and above	260	terrace	coastal	first
Ha186	15	60	121.3	1171.7	0.3	0.1	50 m and above	280	?	coastal	first
Ha187	5	15	143.9	1646.7	0.4	0.2	50 m and above	260	terrace	coastal	first
Ha188	10	35	112.8	1013.4	0.3	0.1	50 m and above	360	upland crest	coastal	first
Ha189	10	10	160.8	2058.4	0.5	0.2	50 m and above	360	upland crest	coastal	first
Ha191	10	10	112.8	1013.4	0.3	0.1	50 m and above	320	terrace	coastal	first
Ha192	10	25	145.2	1678.4	0.4	0.2	50 m and above	320	?	coastal	first
Ha193	20	20	121.3	1171.7	0.3	0.1	50 m and above	260	terrace	coastal	first
Ha194	10	20	145.2	1678.4	0.4	0.2	50 m and above	240	floodplain	coastal	first
Ha195	5	15	141.1	1583.4	0.4	0.2	50 m and above	360	?	coastal	first
Ha196	20	23	160.8	2056.9	0.5	0.2	50 m and above	460	upland crest	coastal	well
Ha197	5	10	141.1	1583.4	0.4	0.2	50 m and above	260	floodplain	coastal	first
Ha198	5	18	141.1	1583.4	0.4	0.2	50 m and above	280	terrace	coastal	first
Ha199	10	10	112.8	1013.4	0.3	0.1	50 m and above	360	upland slope	coastal	first
Ha208	15	20	87.7	2093.0	0.2	0.1	50 m and above	0	?	coastal	first
Ha231	22	24	112.8	6170.5	0.3	0.1	below 50 m	120	terrace	coastal	swamp
Ha232	12	36	112.8	7502.9	0.3	0.1	below 50 m	120	terrace	coastal	swamp
Ha233	25	71	328.4	6170.5	1.3	0.5	below 50 m	110	terrace	coastal	swamp
Ha234	28	38	219.2	1583.4	0.9	0.4	below 50 m	120	terrace	coastal	swamp
Ha240	15	15	76.2	2355.6	0.1	0.0	below 50 m	105	terrace	coastal	swamp
Ha241	15	15	76.2	2533.4	0.1	0.0	below 50 m	105	terrace	coastal	swamp
Ha242	0	0	76.2	462.4	0.1	0.0	below 50 m	105	terrace	coastal	swamp
Ha243	50	50	101.7	2142.4	0.2	0.1	50 m and above	210	terrace	coastal	first
Landbridge	0	0	791.0	49792.7	12.3	5.0	below 50 m	0			
Tu002	0	0	785.3	49075.6	12.1	4.9	below 50 m	130	floodplain	coastal	river
Tu005	0	0	223.7	3099.4	0.8	0.3	below 50 m	130	terrace	coastal	river
Tu006	45	106	218.6	3003.2	0.7	0.3	below 50 m	130	terrace	coastal	river
Tu007	143	291	201.0	1901.1	0.8	0.3	below 50 m	125	terrace	coastal	river
Tu008	23	23	201.0	4686.8	0.8	0.3	below 50 m	120	floodplain	coastal	oxbow
Tu009	71	127	238.6	4247.8	1.0	0.4	below 50 m	120	floodplain	coastal	oxbow
Tu034	21	36	201.0	3896.8	0.8	0.3	below 50 m	125	floodplain	coastal	river
Tu035	109	380	847.2	7719.1	9.3	3.8	below 50 m	125	floodplain	coastal	oxbow

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Ha158	130	4	H33C	AL109	6	8	6						
Ha159	130	4	H33C	AL109	6	8	6						
Ha160	30	4	H64E	AL109	6	7	6						
Ha185	35	4	H62D	AL109	2	8	6						
Ha186	160	2	H62D	AL109	1	8	6						
Ha187	20	4	H62D	AL109	4	8	6						
Ha188	240	4	H62D	AL109	4	8	6						
Ha189	300	4	H33C	AL109	3	8	6						
Ha191	60	4	H62D	AL109	5	8	7						
Ha192	280	2	H62D	AL109	4	8	6						
Ha193	5	2	H62D	AL109	4	8	6						
Ha194	60	2	H62D	AL109	4	8	6						
Ha195	360	2	H62E	AL109	5	7	6						
Ha196	13	4	H62D	AL109	7	8	6						
Ha197	60	2	H62D	AL109	4	8	6						
Ha198	90	2	H62D	AL109	4	8	6						
Ha199	160	2	H62D	AL109	6	8	6						
Ha208	400	1	H34A	AL106	3	3	2	TRUE					
Ha231	160	1	H186A	AL106	3	2	3	TRUE					
Ha232	90	1	H35A	AL106	2	2	3	TRUE					
Ha233	70	1	H35A	AL106	3	2	3	TRUE					
Ha234	60	1	H35A	AL106	1	1	2	TRUE					
Ha240	320	1	H35A	AL106	2	1	3	TRUE					
Ha241	280	1	H35A	AL106	2	1	3	TRUE					
Ha242	220	1	H35A	AL106	2	1	3	TRUE					
Ha243	100	1	H80A	AL142	6	5	4	TRUE					
Landbridge		1	T14	AL106	1	0	7		TRUE			TRUE	
Tu002	61	1	T17	AL109	1	1	11			TRUE			TRUE
Tu005	242	1	T18	AL106	1	1	6						
Tu006	455	1	T16	AL106	2	2	5						TRUE
Tu007	242	1	T16	AL106	1	3	3	TRUE					
Tu008	30	1	T17	AL106	1	2	3	TRUE					
Tu009	61	1	T17	AL106	1	3	3	TRUE	TRUE		293, 562		TRUE
Tu034	152	1	T13	AL106	1	3	3	TRUE					TRUE
Tu035	61	1	T14	AL106	1	3	3	TRUE			456		TRUE

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Ha158		0	0				Archaic		
Ha159		0	0				unknown aboriginal		
Ha160		0	0				Henson Springs		
Ha185		0	0				unknown aboriginal		
Ha186		0	0	TRUE			West Jefferson		
Ha187		0	0				post-pottery		
Ha188		0	0				unknown aboriginal		
Ha189		0	0				unknown aboriginal		
Ha191		0	0				unknown aboriginal		
Ha192		0	0				Late Archaic		
Ha193		0	0				historic		
Ha194		0	0				unknown aboriginal		
Ha195		0	0				unknown aboriginal		
Ha196		0	0				historic		
Ha197		0	0	TRUE			West Jefferson		
Ha198		0	0				unknown aboriginal		
Ha199		0	0				historic		
Ha208		0	0				historic		
Ha231	TRUE	0	0				unknown aboriginal		
Ha232	TRUE	0	0				unknown aboriginal		
Ha233	TRUE	14	0	TRUE			West Jefferson	historic	
Ha234	TRUE	14	0	TRUE			West Jefferson		
Ha240	TRUE	3	5	TRUE	TRUE		West Jefferson	Mississippian	
Ha241		0	0	TRUE	TRUE		West Jefferson	Mississippian	
Ha242	TRUE	0	14		TRUE		Mississippian		
Ha243		0	0				unknown aboriginal		
Landbridge		0	0		TRUE	TRUE	Mississippian		
Tu002		0	0	TRUE	TRUE	TRUE	West Jefferson	Moundville II	Moundville III
Tu005		0	0				protohistoric		
Tu006		0	0				post-pottery		
Tu007		0	0				post-pottery		
Tu008		0	0				unknown aboriginal		
Tu009	TRUE	3	0	TRUE			West Jefferson		
Tu034	TRUE	19	0	TRUE			West Jefferson		
Tu035	TRUE	17	3	TRUE	TRUE		West Jefferson	Mississippian	

Site Number	Component 4	Component 5	Sponsor	Notes
Ha158			Forest	
Ha159			Forest	
Ha160			Forest	
Ha185			Forest	
Ha186			Forest	
Ha187			Forest	quartzite-tempered sherd
Ha188			Forest	
Ha189			Forest	
Ha191			Forest	
Ha192			Forest	
Ha193			Forest	
Ha194			Forest	
Ha195			Forest	
Ha196			Forest	
Ha197			Forest	
Ha198			Forest	
Ha199			Forest	
Ha208			Almon Associates	
Ha231			unavailable	
Ha232			unavailable	
Ha233			unavailable	
Ha234			unavailable	
Ha240			unavailable	aka Ha107, Tu41 (HAM14)
Ha241			unavailable	aka Ha107, Tu41 (HAM13)
Ha242			unavailable	aka Ha107, Tu41 (HAM11)
Ha243			unavailable	
Landbridge				
Tu002			UAL	
Tu005			UAL	
Tu006			UAL	
Tu007			UAL	
Tu008			UAL	
Tu009			UAL	
Tu034			UAL	
Tu035			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu036		Tuscaloosa	441760	3657640	-87.62	33.06	Englewood	24N	04E	13
Tu041	Gray's Landing	Tuscaloosa	435500	3652360	-87.69	33.01	Fosters	24N	04E	33
Tu042/043	Foster's Landing (Moon Lake)	Tuscaloosa	440480	3656580	-87.64	33.05	Fosters	24N	04E	24
Tu044/045	Jones Ferry	Tuscaloosa	444370	3660740	-87.60	33.08	Englewood	24N	05E	5
Tu046/047	Hill's Gin Landing	Tuscaloosa	442320	3662800	-87.62	33.10	Englewood	22S	10W	30
Tu048		Tuscaloosa	438520	3664040	-87.66	33.12	Fosters	22S	11W	23
Tu049	Baker	Tuscaloosa	437920	3664920	-87.67	33.12	Fosters	22S	11W	23
Tu050	Asphalt Plant	Tuscaloosa	441700	3652660	-87.62	33.01	Englewood	24N	05E	31
Tu051		Tuscaloosa	441620	3652640	-87.63	33.01	Fosters	24N	04E	36
Tu052		Tuscaloosa	441760	3652800	-87.62	33.01	Englewood	24N	05E	31
Tu053		Tuscaloosa	438760	3652340	-87.66	33.01	Fosters	24N	04E	35
Tu054		Tuscaloosa	438380	3652100	-87.66	33.01	Fosters	24N	04E	35
Tu055		Tuscaloosa	436940	3653100	-87.68	33.02	Fosters	24N	04E	34
Tu064		Tuscaloosa	438300	3671940	-87.66	33.19	Coker	21S	11W	35
Tu065		Tuscaloosa	438060	3671940	-87.66	33.19	Coker	21S	11W	35
Tu066	Grady Bobo	Tuscaloosa	437460	3671800	-87.67	33.18	Coker	21S	11W	34
Tu067		Tuscaloosa	437500	3671580	-87.67	33.18	Coker	21S	11W	34
Tu068		Tuscaloosa	437700	3671140	-87.67	33.18	Coker	21S	11W	34
Tu071		Tuscaloosa	436340	3667760	-87.68	33.15	Coker	22S	11W	9
Tu072		Tuscaloosa	437020	3666980	-87.67	33.14	Coker	22S	11W	15
Tu073		Tuscaloosa	437240	3666680	-87.67	33.14	Coker	22S	11W	15
Tu074		Tuscaloosa	437760	3666600	-87.67	33.14	Coker	22S	11W	15
Tu075		Tuscaloosa	441880	3664980	-87.62	33.12	Englewood	22S	10W	19
Tu076		Tuscaloosa	443140	3661720	-87.61	33.09	Englewood	22S	10W	32
Tu077		Tuscaloosa	445200	3661460	-87.59	33.09	Englewood	22S	10W	33
Tu078		Tuscaloosa	445060	3660360	-87.59	33.09	Englewood	24N	05E	4
Tu079		Tuscaloosa	445380	3661660	-87.59	33.09	Englewood	22S	10W	33
Tu080		Tuscaloosa	444740	3661760	-87.59	33.09	Englewood	22S	10W	33
Tu081		Tuscaloosa	444540	3661760	-87.59	33.09	Englewood	22S	10W	33
Tu082		Tuscaloosa	445720	3660360	-87.58	33.08	Englewood	24N	05E	4
Tu083		Tuscaloosa	445580	3660160	-87.58	33.08	Englewood	24N	05E	4
Tu084		Tuscaloosa	445560	3659980	-87.58	33.08	Englewood	24N	05E	4
Tu085		Tuscaloosa	445370	3659840	-87.59	33.08	Englewood	24N	05E	4
Tu086		Tuscaloosa	445180	3659690	-87.59	33.08	Englewood	24N	05E	9
Tu087		Tuscaloosa	444000	3657860	-87.60	33.06	Englewood	24N	05E	17

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu036	15	83	201.0	9294.4	0.8	0.3	below 50 m	120	floodplain	coastal	oxbow
Tu041	0	0	798.1	50686.4	12.5	5.1	below 50 m	110	terrace	coastal	river
Tu042/043	27	32	777.4	48087.7	11.9	4.8	below 50 m	120	terrace	coastal	oxbow
Tu044/045	0	0	775.0	47800.6	11.8	4.8	below 50 m	130	floodplain	coastal	river
Tu046/047	30	40	791.0	49792.7	12.3	5.0	below 50 m	125	floodplain	coastal	river
Tu048	68	182	175.5	2450.6	0.6	0.2	below 50 m	130	terrace	coastal	river
Tu049	61	61	86.7	568.4	0.1	0.1	below 50 m	140	terrace	coastal	river
Tu050	11	11	801.5	51125.2	12.6	5.1	50 m and above	150	upland crest	coastal	river
Tu051	103	136	199.5	2450.6	0.8	0.3	50 m and above	170	upland slope	coastal	river
Tu052	91	136	343.2	2919.8	1.9	0.8	50 m and above	150	upland crest	coastal	river
Tu053	21	21	151.7	1013.4	0.5	0.2	below 50 m	120	terrace	coastal	first
Tu054	15	15	151.7	6371.0	0.5	0.2	below 50 m	120	terrace	coastal	oxbow
Tu055	30	212	567.3	3663.7	2.0	0.8	below 50 m	110	terrace	coastal	swamp
Tu064	30	158	383.2	11683.0	2.9	1.2	below 50 m	135	floodplain	coastal	river
Tu065	30	37	262.9	5497.9	1.4	0.6	below 50 m	135	floodplain	coastal	river
Tu066	76	242	812.4	22607.6	5.6	2.3	below 50 m	135	terrace	coastal	river
Tu067	61	159	262.9	5497.9	1.4	0.6	below 50 m	135	floodplain	coastal	river
Tu068	23	106	262.9	5497.9	1.4	0.6	below 50 m	130	terrace	coastal	river
Tu071	33	43	260.7	5407.4	1.3	0.5	below 50 m	135	terrace	coastal	first
Tu072	45	45	160.8	1885.3	0.5	0.2	below 50 m	135	terrace	coastal	swamp
Tu073	30	53	54.0	212.3	0.1	0.0	below 50 m	135	terrace	coastal	swamp
Tu074	76	167	267.7	3820.2	0.9	0.4	below 50 m	135	terrace	coastal	swamp
Tu075	67	67	219.2	3663.7	0.9	0.4	below 50 m	120	floodplain	coastal	river
Tu076	15	49	177.9	2518.6	0.6	0.3	below 50 m	125	floodplain	coastal	river
Tu077	12	15	128.9	1321.5	0.3	0.1	below 50 m	120	terrace	coastal	swamp
Tu078	64	159	288.2	6607.6	1.6	0.7	below 50 m	120	terrace	coastal	swamp
Tu079	73	168	493.1	14076.4	3.5	1.4	below 50 m	120	terrace	coastal	swamp
Tu080	23	379	409.3	8858.5	2.2	0.9	below 50 m	120	terrace	coastal	third
Tu081	30	121	269.3	4062.5	1.0	0.4	below 50 m	120	terrace	coastal	third
Tu082	30	30	247.8	4574.7	1.1	0.5	50 m and above	150	upland slope	coastal	first
Tu083	12	83	265.2	4815.2	1.2	0.5	50 m and above	160	floodplain	coastal	river
Tu084	27	159	464.2	11138.9	2.8	1.1	50 m and above	160	upland crest	coastal	river
Tu085	20	76	243.9	4455.9	1.1	0.4	50 m and above	160	upland slope	coastal	river
Tu086	21	37	243.9	4455.9	1.1	0.4	50 m and above	150	floodplain	coastal	river
Tu087	77	212	468.7	23247.8	3.8	1.6	50 m and above	190	upland slope	coastal	river

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu036	61	1	T17	AL106	1	2	3	TRUE					TRUE
Tu041	121	1	T14	AL106	1	0	3		TRUE			TRUE	
Tu042/043	15	1	T13	AL106	2	0	3	TRUE	TRUE	TRUE			
Tu044/045	1	1	T17	AL106	1	0	5						TRUE
Tu046/047	152	1	T17	AL106	1	0	6		TRUE	TRUE			
Tu048	152	1	T14	AL106	1	1	7		TRUE			TRUE	TRUE
Tu049	130	1	T14	AL106	1	2	7		TRUE				
Tu050	121	1	T6	AL106	1	0	1	TRUE	TRUE	TRUE		TRUE	
Tu051	91	1	T17	AL106	1	1	1	TRUE	TRUE			TRUE	
Tu052	91	1	T17	AL106	1	1	1	TRUE	TRUE			TRUE	TRUE
Tu053	61	1	T16	AL106	1	2	2	TRUE	TRUE				
Tu054	91	1	T16	AL106	1	1	2	TRUE	TRUE				
Tu055	61	1	T19	AL106	2	2	3	TRUE	TRUE			TRUE	TRUE
Tu064	30	1	T17	AL106	1	2	10			TRUE			TRUE
Tu065	61	1	T17	AL106	1	2	11			TRUE			TRUE
Tu066	303	1	T14	AL106	1	1	10			TRUE			TRUE
Tu067	424	1	T17	AL106	2	1	10						
Tu068	364	1	T14	AL106	1	1	10						
Tu071	333	1	T18	AL106	3	4	9						
Tu072	152	1	T2	AL106	3	4	8		TRUE			TRUE	
Tu073	364	1	T13	AL106	3	3	8		TRUE			TRUE	
Tu074	300	1	T13	AL106	3	3	8		TRUE			TRUE	
Tu075	303	1	T17	AL106	1	3	7		TRUE				
Tu076	697	1	T17	AL106	2	1	5						
Tu077	1	1	T2	AL106	2	2	6						TRUE
Tu078	30	1	T2	AL106	2	2	5						
Tu079	30	1	T2	AL106	3	2	6						
Tu080	1	1	T14	AL106	2	2	6						
Tu081	91	1	T16	AL106	2	2	6						
Tu082	152	1	T35	AL106	1	2	5						
Tu083	121	1	T33	AL106	1	2	5						
Tu084	121	1	T33	AL106	1	2	5						
Tu085	121	1	T33	AL106	1	2	5						
Tu086	121	1	T35	AL106	1	2	5						
Tu087	424	1	T28	AL106	2	3	4	TRUE					TRUE

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu036	TRUE	9	2	TRUE	TRUE		West Jefferson	Mississippian	
Tu041	TRUE	169	343	TRUE	TRUE	TRUE	West Jefferson	Mississippian	
Tu042/043		0	0		TRUE	TRUE	Mississippian	protohistoric	
Tu044/045		0	0	TRUE		TRUE	West Jefferson		
Tu046/047		0	0		TRUE	TRUE	Moundville II	Moundville III	
Tu048	TRUE	94	0	TRUE			West Jefferson		
Tu049	TRUE	245	59	TRUE	TRUE		West Jefferson	Mississippian	protohistoric
Tu050		0	0		TRUE	TRUE	Moundville I		
Tu051	TRUE	145	20	TRUE	TRUE		West Jefferson	Mississippian	
Tu052	TRUE	16	10	TRUE	TRUE		West Jefferson	Mississippian	protohistoric
Tu053	TRUE	0	0				unknown aboriginal		
Tu054	TRUE	0	0				unknown aboriginal		
Tu055	TRUE	72	33	TRUE	TRUE		West Jefferson	Mississippian	
Tu064		0	0	TRUE			Little Bear Creek	Swan Lake	West Jefferson
Tu065		0	0	TRUE			Elora	Little Bear Creek	Swan Lake
Tu066	TRUE	0	0	TRUE	TRUE		Archaic	West Jefferson	Mississippian
Tu067		0	0				post-pottery		
Tu068		0	0				grit-tempered pottery		
Tu071		0	0				protohistoric		
Tu072	TRUE	0	0				unknown aboriginal		
Tu073	TRUE	0	0	TRUE			West Jefferson		
Tu074	TRUE	83	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu075	TRUE	365	0	TRUE			West Jefferson		
Tu076		0	0				post-pottery		
Tu077		0	0				post-pottery		
Tu078		0	0				post-pottery		
Tu079		0	0				post-pottery		
Tu080		0	0				post-pottery		
Tu081		0	0				post-pottery		
Tu082		0	0				post-pottery		
Tu083		0	0				unknown aboriginal		
Tu084		0	0				post-pottery		
Tu085		0	0				post-pottery		
Tu086		0	0				post-pottery		
Tu087	TRUE	18	8	TRUE	TRUE		West Jefferson	Mississippian	

Site Number	Component 4	Component 5	Sponsor	Notes
Tu036			UAL	
Tu041			UAL	aka Ha107 (HAM8)
Tu042/043			UAL	
Tu044/045				
Tu046/047			UAL	
Tu048			UAL	
Tu049			UAL	
Tu050			UAL	
Tu051			UAL	
Tu052			UAL	
Tu053			UAL	
Tu054			UAL	
Tu055			UAL	
Tu064			UAL	see Bozeman
Tu065	West Jefferson		UAL	
Tu066			UAL	
Tu067			UAL	
Tu068			UAL	
Tu071			UAL	
Tu072			UAL	
Tu073			UAL	
Tu074			UAL	
Tu075			UAL	
Tu076			UAL	
Tu077			UAL	mound, 3.5-7 feet high
Tu078			UAL	
Tu079			UAL	
Tu080			UAL	
Tu081			UAL	
Tu082			UAL	
Tu083			UAL	
Tu084			UAL	
Tu085			UAL	
Tu086			UAL	
Tu087			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu088		Tuscaloosa	440680	3664740	-87.64	33.12	Fosters	22S	11W	24
Tu089		Tuscaloosa	442200	3664640	-87.62	33.12	Englewood	22S	10W	19
Tu090		Tuscaloosa	442360	3664820	-87.62	33.12	Englewood	22S	10W	19
Tu091		Tuscaloosa	442840	3664340	-87.61	33.12	Englewood	22S	10W	19
Tu092		Tuscaloosa	442100	3663800	-87.62	33.11	Englewood	22S	10W	30
Tu093		Tuscaloosa	441960	3661940	-87.62	33.10	Englewood	22S	10W	31
Tu094		Tuscaloosa	441440	3661640	-87.63	33.09	Fosters	22S	10W	31
Tu095		Tuscaloosa	444800	3660700	-87.59	33.09	Englewood	24N	05E	5
Tu096		Tuscaloosa	439400	3663800	-87.65	33.11	Fosters	22S	11W	26
Tu097		Tuscaloosa	439860	3663840	-87.65	33.11	Fosters	22S	11W	25
Tu098		Tuscaloosa	440260	3664040	-87.64	33.12	Fosters	22S	11W	25
Tu099		Tuscaloosa	442740	3663520	-87.61	33.11	Englewood	22S	10W	30
Tu100		Tuscaloosa	443080	3664020	-87.61	33.12	Englewood	22S	10W	20
Tu101		Tuscaloosa	442820	3663900	-87.61	33.11	Englewood	22S	10W	19
Tu104		Tuscaloosa	440280	3652560	-87.64	33.01	Fosters	24N	04E	36
Tu235		Tuscaloosa	444860	3656060	-87.59	33.04	Englewood	24N	05E	20
Tu236		Tuscaloosa	439900	3652200	-87.64	33.01	Fosters	24N	04E	35
Tu240		Tuscaloosa	436440	3653600	-87.68	33.02	Fosters	24N	04E	33
Tu241		Tuscaloosa	437460	3653700	-87.67	33.02	Fosters	24N	04E	27
Tu250		Tuscaloosa	440120	3652520	-87.64	33.01	Fosters	24N	04E	36
Tu251		Tuscaloosa	442580	3668360	-87.62	33.15	Tuscaloosa	22S	10W	7
Tu252	Barnes	Tuscaloosa	441040	332360	-87.63	33.10	Fosters	22S	11W	36
Tu253		Tuscaloosa	443360	3668720	-87.61	33.16	Tuscaloosa	22S	10W	8
Tu254	Wiggins-Big Lake	Tuscaloosa	439660	3656000	-87.65	33.05	Fosters	24N	04E	14
Tu255	Barton	Tuscaloosa	437340	3656300	-87.67	33.04	Fosters	24N	04E	22
Tu256	Hemphill Fuller House	Tuscaloosa	437800	3655360	-87.67	33.04	Fosters	24N	04E	22
Tu257	Wiggins Lake Field	Tuscaloosa	440860	3657040	-87.63	33.05	Fosters	24N	04E	13
Tu258	Phillips	Tuscaloosa	437120	3654540	-87.67	33.03	Fosters	24N	04E	27
Tu259	Ford	Tuscaloosa	441500	3658940	-87.63	33.07	Fosters	24N	04E	12
Tu260	Hemphill Snag Lake	Tuscaloosa	438640	3655240	-87.66	33.04	Fosters	24N	04E	23
Tu261	Hemphill Big Lake	Tuscaloosa	438780	3656460	-87.66	33.05	Fosters	24N	04E	23
Tu262		Tuscaloosa	443570	3668160	-87.61	33.15	Tuscaloosa	22S	10W	8
Tu263		Tuscaloosa	-9	-9	-87.65	33.04	Fosters	24N	04E	-9
Tu269		Tuscaloosa	446800	3658940	-87.57	33.07	Englewood	24N	05E	10
Tu273	Tomato Field	Tuscaloosa	440000	3657400	-87.64	33.06	Fosters	24N	04E	14

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu088	91	212	250.1	4488.5	1.1	0.4	below 50 m	120	floodplain	coastal	river
Tu089	23	45	193.4	1762.1	0.4	0.2	below 50 m	125	floodplain	coastal	river
Tu090	15	30	299.4	5149.7	1.3	0.5	below 50 m	125	floodplain	coastal	river
Tu091	30	182	343.2	7393.5	1.8	0.7	below 50 m	120	floodplain	coastal	river
Tu092	37	152	284.3	6432.5	1.6	0.6	below 50 m	120	floodplain	coastal	first
Tu093	15	15	183.6	2681.8	0.7	0.3	below 50 m	130	terrace	coastal	river
Tu094	170	303	419.7	12049.5	3.0	1.2	below 50 m	130	terrace	coastal	first
Tu095	21	21	392.5	8959.5	2.2	0.9	below 50 m	130	floodplain	coastal	river
Tu096	91	189	340.6	7124.6	1.8	0.7	below 50 m	130	terrace	coastal	river
Tu097	91	96	354.9	6145.3	1.5	0.6	below 50 m	120	terrace	coastal	river
Tu098	40	83	221.0	2844.5	0.7	0.3	below 50 m	120	terrace	coastal	river
Tu099	30	485	668.9	22047.6	5.4	2.2	below 50 m	125	floodplain	coastal	river
Tu100	15	212	440.0	10197.4	2.5	1.0	below 50 m	125	floodplain	coastal	river
Tu101	15	212	673.2	11392.1	2.8	1.1	below 50 m	125	floodplain	coastal	river
Tu104	0	0	295.0	24092.8	1.3	0.5	below 50 m	120	terrace	coastal	river
Tu235	0	0	185.5	4440.3	0.6	0.2	below 50 m	140	terrace	coastal	major
Tu236	45	121	234.2	11392.1	0.8	0.3	below 50 m	120	terrace	coastal	first
Tu240	0	0	319.8	2800.0	1.4	0.5	below 50 m	110	floodplain	coastal	river
Tu241	0	0	255.5	4030.1	1.1	0.4	below 50 m	110	floodplain	coastal	river
Tu250	0	0	183.5	12195.5	0.6	0.2	below 50 m	120	terrace	coastal	first
Tu251	0	0	401.0	12793.8	3.2	1.3	below 50 m	130	terrace	coastal	swamp
Tu252	0	0	286.9	5622.9	1.4	0.6	below 50 m	125	terrace	coastal	swamp
Tu253	0	0	279.3	6206.9	1.5	0.6	below 50 m	130	terrace	coastal	swamp
Tu254	0	0	571.3	5035.4	6.1	2.5	below 50 m	120	terrace	coastal	oxbow
Tu255	0	0	1884.2	2395.4	30.2	12.2	below 50 m	120	terrace	coastal	first
Tu256	0	0	248.9	1171.7	1.1	0.4	below 50 m	120	terrace	coastal	first
Tu257	0	0	831.6	1335.4	12.3	5.0	below 50 m	120	floodplain	coastal	oxbow
Tu258	0	0	519.4	11473.1	5.2	2.1	below 50 m	110	terrace	coastal	river
Tu259	0	0	1071.4	64005.5	15.8	6.4	below 50 m	120	terrrace	coastal	oxbow
Tu260	0	0	880.6	11683.0	8.1	3.3	below 50 m	120	terrace	coastal	oxbow
Tu261	0	0	730.3	3084.3	9.3	3.8	below 50 m	125	terrace	coastal	oxbow
Tu262	0	0	317.7	6612.4	1.6	0.7	below 50 m	131	terrace	coastal	first
Tu263	-9	-9	773.0	411.7	9.3	3.8	below 50 m	-9	--	--	--
Tu269	0	0	157.3	1969.7	0.5	0.2	50 m and above	230	upland base	coastal	first
Tu273	0	0	760.9	6517.6	8.4	3.4	below 50 m	130	terrace	coastal	oxbow

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu088	364	1	T17	AL106	2	3	7		TRUE			TRUE	
Tu089	1	1	T17	AL106	1	2	7		TRUE				
Tu090	1	1	T17	AL106	1	2	7		TRUE				
Tu091	545	1	T17	AL106	2	2	7		TRUE				
Tu092	200	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu093	364	1	T16	AL106	1	1	5						
Tu094	121	1	T2	AL106	3	2	5						TRUE
Tu095	30	1	T17	AL106	1	1	5						
Tu096	15	1	T16	AL106	1	1	6		TRUE			TRUE	
Tu097	1	1	T17	AL106	1	2	6		TRUE			TRUE	TRUE
Tu098	30	1	T17	AL106	1	2	6		TRUE			TRUE	
Tu099	212	1	T17	AL106	1	1	6		TRUE			TRUE	
Tu100	242	1	T17	AL106	1	2	6		TRUE				
Tu101	424	1	T17	AL106	1	2	6		TRUE			TRUE	
Tu104	1	1	T2	AL106	1	1	1	TRUE	TRUE				
Tu235	364	1	T30	AL106	1	5	3	TRUE	TRUE				
Tu236	242	1	T14	AL106	2	2	1	TRUE	TRUE			TRUE	TRUE
Tu240	1	1	T17	AL106	1	2	3	TRUE	TRUE				TRUE
Tu241	1	1	T17	AL106	1	3	2	TRUE	TRUE				
Tu250	121	1	T2	AL106	1	1	1	TRUE	TRUE				
Tu251	364	1	T13	AL106	9	6	9						
Tu252	200	1	T13	AL106	4	2	6						
Tu253	30	1	T13	AL106	10	6	9						
Tu254	303	1	T2	AL106	1	1	3	TRUE					
Tu255	30	1	T13	AL106	4	4	3	TRUE	TRUE			TRUE	TRUE
Tu256	30	1	T13	AL106	3	3	3	TRUE	TRUE			TRUE	
Tu257	91	1	T17	AL106	1	1	3	TRUE					
Tu258	303	1	T13	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu259	545	1	T2	AL106	2	3	4	TRUE		TRUE			TRUE
Tu260	1	1	T14	AL106	1	3	2	TRUE	TRUE				
Tu261	1	1	T13	AL106	1	2	3	TRUE	TRUE				
Tu262	273	1	T13	AL106	8	6	9						TRUE
Tu263	-9	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	TRUE
Tu269	348	2	T27	AL107	5	3	5	TRUE					
Tu273	424	1	T13	AL106	1	1	3	TRUE					

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu088	TRUE	257	18	TRUE	TRUE		West Jefferson	Mississippian	
Tu089	TRUE	0	0		TRUE		Mississippian		
Tu090		0	0				post-pottery		
Tu091		0	0				post-pottery		
Tu092	TRUE	0	0				post-pottery		
Tu093		0	0				protohistoric		
Tu094		0	0				post-pottery		
Tu095		0	0				unknown aboriginal		
Tu096	TRUE	5	2	TRUE	TRUE		West Jefferson	Mississippian	
Tu097	TRUE	189	61	TRUE	TRUE		West Jefferson	Mississippian	
Tu098	TRUE	63	7	TRUE	TRUE		West Jefferson	Mississippian	
Tu099	TRUE	130	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu100	TRUE	45	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu101	TRUE	71	0	TRUE			West Jefferson		
Tu104		0	0				unknown aboriginal		
Tu235		0	0		TRUE		protohistoric		
Tu236	TRUE	840	24	TRUE	TRUE		West Jefferson	Mississippian	
Tu240		0	0	TRUE	TRUE		West Jefferson	Mississippian	protohistoric
Tu241		0	0				unknown aboriginal		
Tu250		0	0				unknown aboriginal		
Tu251		0	0				unknown aboriginal		
Tu252		0	0				unknown aboriginal		
Tu253		0	0				unknown aboriginal		
Tu254		0	0				Clovis		
Tu255		0	0				unknown aboriginal		
Tu256		0	0	TRUE			Dalton	Big Sandy	West Jefferson
Tu257		0	0				unknown aboriginal		
Tu258		0	0	TRUE			Late Woodland	protohistoric	
Tu259		0	0	TRUE	TRUE		Middle Woodland	West Jefferson	Moundville III
Tu260		0	0				unknown aboriginal		
Tu261		0	0				unknown aboriginal		
Tu262	TRUE	422	0	TRUE			West Jefferson		
Tu263	TRUE	3	0	TRUE			unknown aboriginal		
Tu269		0	0		TRUE		Mississippian		
Tu273		0	0				unknown aboriginal		

Site Number	Component 4	Component 5	Sponsor	Notes
Tu088			UAL	
Tu089			UAL	
Tu090			UAL	
Tu091			UAL	
Tu092			UAL	
Tu093			UAL	
Tu094			UAL	
Tu095				mound
Tu096			UAL	
Tu097			UAL	
Tu098			UAL	
Tu099			UAL	
Tu100			UAL	
Tu101			UAL	
Tu104			UAL	
Tu235			UAL	
Tu236			UAL	
Tu240			UAL	
Tu241			UAL	
Tu250			UAL	
Tu251			volunteer	
Tu252			volunteer	
Tu253			volunteer	
Tu254			volunteer	
Tu255			volunteer	
Tu256			volunteer	
Tu257			volunteer	
Tu258			volunteer	aka Tu387, Tu388; 2 mounds; grit, clay-temp sherds
Tu259			volunteer	got component info from Bozeman diss
Tu260			volunteer	
Tu261			volunteer	
Tu262			volunteer	
Tu263			--	renumbered Tu954-Tu957
Tu269			UAL	
Tu273			unavailable	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu274	Gerrick	Tuscaloosa	445380	3663640	-87.59	33.11	Englewood	22S	10W	28
Tu277		Tuscaloosa	437220	3654220	-87.67	33.03	Fosters	24N	04E	27
Tu278	Poellnitz	Tuscaloosa	442750	3662340	-87.61	33.10	Englewood	22S	10W	30
Tu279	Patton	Tuscaloosa	441560	3655000	-87.63	33.03	Fosters	24N	04E	25
Tu291		Tuscaloosa	437140	3653100	-87.67	33.02	Fosters	24N	04E	34
Tu296		Tuscaloosa	442940	3657620	-87.61	33.06	Englewood	24N	05E	18
Tu303		Tuscaloosa	442700	3652280	-87.62	33.01	Englewood	24N	05E	31
Tu304		Tuscaloosa	442300	3655120	-87.62	33.04	Englewood	24N	05E	19
Tu309		Tuscaloosa	444360	3668900	-87.60	33.16	Tuscaloosa	22S	10W	5
Tu310		Tuscaloosa	444180	3668660	-87.60	33.16	Tuscaloosa	22S	10W	8
Tu311		Tuscaloosa	443880	3668380	-87.60	33.16	Tuscaloosa	22S	10W	8
Tu312		Tuscaloosa	443320	3668040	-87.61	33.15	Tuscaloosa	22S	10W	8
Tu313		Tuscaloosa	445140	3667040	-87.59	33.14	Tuscaloosa	22S	10W	16
Tu316		Tuscaloosa	448380	3664900	-87.55	33.12	Englewood	22S	10W	23
Tu317		Tuscaloosa	442800	3654980	-87.61	33.03	Englewood	24N	05E	19
Tu318		Tuscaloosa	441720	3655740	-87.62	33.04	Englewood	24N	04E	19
Tu319		Tuscaloosa	441900	3655500	-87.62	33.04	Englewood	24N	05E	19
Tu320		Tuscaloosa	442060	3566680	-87.62	33.04	Englewood	24N	05E	19
Tu321		Tuscaloosa	442960	3654880	-87.61	33.03	Englewood	24N	05E	30
Tu322		Tuscaloosa	444580	3655260	-87.59	33.04	Englewood	24N	05E	20
Tu323		Tuscaloosa	442860	3656100	-87.61	33.04	Englewood	24N	05E	19
Tu324		Tuscaloosa	443000	3656120	-87.61	33.04	Englewood	24N	05E	19
Tu325		Tuscaloosa	443200	3656040	-87.61	33.04	Englewood	24N	05E	19
Tu326		Tuscaloosa	443260	3655980	-87.61	33.04	Englewood	24N	05E	19
Tu327		Tuscaloosa	443300	3655800	-87.61	33.04	Englewood	24N	05E	20
Tu328		Tuscaloosa	441960	3656330	-87.62	33.05	Englewood	24N	05E	19
Tu329		Tuscaloosa	442120	3656340	-87.62	33.05	Englewood	24N	05E	19
Tu330		Tuscaloosa	442300	3656280	-87.62	33.05	Englewood	24N	05E	19
Tu331		Tuscaloosa	442500	3656320	-87.62	33.05	Englewood	24N	05E	19
Tu332		Tuscaloosa	441920	3657380	-87.62	33.06	Englewood	24N	05E	18
Tu333		Tuscaloosa	442400	3657400	-87.62	33.06	Englewood	24N	05E	18
Tu334		Tuscaloosa	441920	3657140	-87.62	33.05	Englewood	24N	05E	18
Tu335		Tuscaloosa	442640	3656820	-87.61	33.05	Englewood	24N	05E	18
Tu336		Tuscaloosa	442560	3657060	-87.62	33.05	Englewood	24N	05E	18
Tu337		Tuscaloosa	442240	3657100	-87.62	33.05	Englewood	24N	05E	18

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu274	0	0	372.6	11047.3	2.7	1.1	below 50 m	130	terrace	coastal	second
Tu277	0	0	309.5	1815.3	1.0	0.4	below 50 m	130	terrace	coastal	river
Tu278	100	200	791.0	49792.7	12.3	5.0	below 50 m	110	floodplain	coastal	river
Tu279	0	0	1596.7	11410.0	12.3	5.0	below 50 m	115	terrace	coastal	first
Tu291	20	20	96.6	799.7	0.2	0.1	below 50 m	115	terrace	coastal	river
Tu296	0	0	201.0	34851.3	0.8	0.3	below 50 m	125	terrace	coastal	river
Tu303	0	0	615.9	10915.3	5.7	2.3	below 50 m	150	upland crest	coastal	river
Tu304	0	0	1142.3	2447.1	11.5	4.6	below 50 m	120	terrace	coastal	major
Tu309	0	0	359.4	6197.3	1.5	0.6	below 50 m	130	terrace	coastal	first
Tu310	0	0	364.1	7516.9	1.9	0.8	below 50 m	130	terrace	coastal	first
Tu311	0	0	256.5	4182.7	1.0	0.4	below 50 m	130	terrace	coastal	first
Tu312	0	0	339.6	6371.0	1.6	0.6	below 50 m	130	terrace	coastal	first
Tu313	0	0	380.7	9354.6	2.3	0.9	below 50 m	125	terrace	coastal	second
Tu316	0	0	367.9	10768.5	2.7	1.1	50 m and above	210	floodplain	coastal	first
Tu317	0	0	308.1	3624.4	1.4	0.6	below 50 m	120	terrace	coastal	major
Tu318	0	0	582.9	2850.8	3.3	1.3	below 50 m	120	terrace	coastal	major
Tu319	0	0	346.4	3447.8	2.4	1.0	below 50 m	120	terrace	coastal	major
Tu320	0	0	256.7	2152.8	1.3	0.5	below 50 m	130	terrace	coastal	major
Tu321	0	0	324.3	13029.1	1.7	0.7	below 50 m	130	terrace	coastal	major
Tu322	0	0	396.6	49621.0	2.7	1.1	below 50 m	120	terrace	coastal	major
Tu323	0	0	216.1	2670.4	0.8	0.3	below 50 m	120	terrace	coastal	swamp
Tu324	0	0	261.3	6612.4	1.2	0.5	below 50 m	120	terrace	coastal	swamp
Tu325	0	0	158.6	3296.4	0.4	0.2	below 50 m	120	terrace	coastal	swamp
Tu326	0	0	261.4	15549.9	1.0	0.4	below 50 m	120	terrace	coastal	swamp
Tu327	0	0	254.6	7458.9	1.1	0.4	below 50 m	120	terrace	coastal	swamp
Tu328	0	0	219.5	4103.7	0.9	0.3	below 50 m	120	floodplain	coastal	major
Tu329	0	0	181.0	46385.7	0.5	0.2	below 50 m	120	floodplain	coastal	major
Tu330	0	0	201.3	5629.3	0.7	0.3	below 50 m	120	floodplain	coastal	oxbow
Tu331	0	0	214.0	2884.4	0.8	0.3	below 50 m	120	floodplain	coastal	oxbow
Tu332	0	0	278.7	1682.3	1.0	0.4	below 50 m	130	floodplain	coastal	oxbow
Tu333	0	0	237.8	5586.6	0.8	0.3	below 50 m	130	floodplain	coastal	oxbow
Tu334	0	0	227.9	6654.8	0.9	0.4	below 50 m	130	floodplain	coastal	swamp
Tu335	0	0	320.7	1277.1	1.8	0.7	below 50 m	130	floodplain	coastal	oxbow
Tu336	0	0	358.6	1255.5	2.2	0.9	below 50 m	130	floodplain	coastal	oxbow
Tu337	0	0	278.9	12242.8	1.3	0.5	below 50 m	130	terrace	coastal	oxbow

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu274	91	1	T2	AL106	5	3	7		TRUE				
Tu277	1	1	T13	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu278	364	1	T17	AL106	1	0	6		TRUE			TRUE	
Tu279	15	1	T16	AL106	2	2	2	TRUE	TRUE			TRUE	TRUE
Tu291	242	1	T14	AL106	1	2	3	TRUE	TRUE				
Tu296	121	1	T13	AL106	1	3	3	TRUE					
Tu303	500	1	T33	AL106	1	1	1	TRUE	TRUE			TRUE	TRUE
Tu304	91	1	T14	AL106	1	3	2	TRUE	TRUE			TRUE	
Tu309	61	1	T13	AL106	10	7	9						TRUE
Tu310	61	1	T13	AL106	10	7	9						TRUE
Tu311	121	1	T13	AL106	9	6	9						
Tu312	424	1	T13	AL106	8	6	9						
Tu313	303	1	T13	AL106	8	5	8		TRUE			TRUE	
Tu316	550	1	T27	AL107	13	6	8						TRUE
Tu317	61	1	T13	AL106	1	3	2	TRUE	TRUE			TRUE	TRUE
Tu318	394	1	T14	AL106	2	2	2	TRUE	TRUE			TRUE	TRUE
Tu319	303	1	T14	AL106	1	2	2	TRUE	TRUE			TRUE	TRUE
Tu320	121	1	T14	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu321	121	1	T13	AL106	1	3	2	TRUE	TRUE				TRUE
Tu322	152	1	T14	AL106	1	4	3	TRUE	TRUE				TRUE
Tu323	1	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu324	91	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	TRUE
Tu325	91	1	T17	AL106	2	3	3	TRUE	TRUE				
Tu326	61	1	T17	AL106	2	3	3	TRUE	TRUE			TRUE	
Tu327	15	1	T2	AL106	2	3	3	TRUE	TRUE			TRUE	TRUE
Tu328	150	1	T17	AL106	1	2	3	TRUE	TRUE		366	TRUE	TRUE
Tu329	303	1	T17	AL106	1	2	3	TRUE	TRUE			TRUE	TRUE
Tu330	364	1	T17	AL106	1	2	3	TRUE	TRUE			TRUE	TRUE
Tu331	182	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	TRUE
Tu332	152	1	T17	AL106	2	2	3	TRUE					TRUE
Tu333	121	1	T17	AL106	1	3	3	TRUE					TRUE
Tu334	30	1	T17	AL106	1	2	3	TRUE	TRUE			TRUE	TRUE
Tu335	152	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	TRUE
Tu336	61	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	TRUE
Tu337	242	1	T17	AL106	1	2	3	TRUE	TRUE			TRUE	TRUE

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu274		0	0				unknown aboriginal		
Tu277		0	0	TRUE	TRUE		West Jefferson	Mississippian	protohistoric
Tu278		0	0	TRUE	TRUE	TRUE	West Jefferson	Moundville II	Moundville III
Tu279	TRUE	5	0	TRUE			Dalton	West Jefferson	
Tu291		0	0		TRUE		Mississippian		
Tu296		0	0				post-pottery		
Tu303	TRUE	1030	92	TRUE	TRUE		West Jefferson	Mississippian	
Tu304	TRUE	331	3	TRUE	TRUE		Miller III	West Jefferson	Mississippian
Tu309		0	0				Morrow Mountain	historic	
Tu310		0	0	TRUE			West Jefferson		
Tu311		0	0	TRUE			Archaic	West Jefferson	
Tu312	TRUE	1	0	TRUE			West Jefferson		
Tu313		0	0				post-pottery		
Tu316	TRUE	26	0	TRUE			Dalton	West Jefferson	
Tu317	TRUE	5	1	TRUE	TRUE		Miller III	West Jefferson	Mississippian
Tu318	TRUE	70	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu319	TRUE	41	0	TRUE			West Jefferson		
Tu320	TRUE	0	0				Archaic		
Tu321	TRUE	2	20	TRUE	TRUE		West Jefferson	Mississippian	
Tu322	TRUE	24	4	TRUE	TRUE		Archaic	West Jefferson	Mississippian
Tu323	TRUE	0	0				Archaic		
Tu324	TRUE	6	0	TRUE			Withers Fabric Marked	West Jefferson	
Tu325	TRUE	0	0				Archaic		
Tu326	TRUE	0	0				Archaic		
Tu327	TRUE	0	0				Archaic		
Tu328	TRUE	178	6	TRUE	TRUE		West Jefferson	Mississippian	
Tu329	TRUE	28	32	TRUE	TRUE		West Jefferson	Mississippian	
Tu330	TRUE	487	56	TRUE	TRUE		Middle Woodland	West Jefferson	Mississippian
Tu331	TRUE	67	7	TRUE	TRUE		West Jefferson	Mississippian	
Tu332	TRUE	11	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu333	TRUE	17	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu334	TRUE	12	68	TRUE	TRUE		West Jefferson	Mississippian	
Tu335	TRUE	139	38	TRUE	TRUE		West Jefferson	Mississippian	
Tu336	TRUE	511	91	TRUE	TRUE		West Jefferson	Mississippian	
Tu337	TRUE	20	77	TRUE	TRUE		West Jefferson	Mississippian	

Site Number	Component 4	Component 5	Sponsor	Notes
Tu274			unavailable	
Tu277			unavailable	
Tu278			NSF	aka Tu398 (also Tu345)
Tu279			unavailable	
Tu291			NSF	aka Ha108
Tu296			volunteer	
Tu303			unavailable	
Tu304			UAL	
Tu309			unavailable	
Tu310			unavailable	
Tu311			unavailable	
Tu312			unavailable	
Tu313			unavailable	
Tu316			unavailable	
Tu317			UAL	
Tu318			UAL	
Tu319			UAL	
Tu320			UAL	
Tu321			UAL	
Tu322			UAL	
Tu323			UAL	
Tu324			UAL	
Tu325			UAL	
Tu326			UAL	
Tu327			UAL	
Tu328			UAL	
Tu329			UAL	
Tu330			UAL	
Tu331			UAL	
Tu332			UAL	
Tu333			UAL	
Tu334			UAL	
Tu335			UAL	
Tu336			UAL	
Tu337			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu338		Tuscaloosa	441180	3656980	-87.62	33.05	Englewood	24N	05E	18
Tu339		Tuscaloosa	441920	3657140	-87.61	33.05	Englewood	24N	05E	18
Tu340		Tuscaloosa	442100	3657100	-87.62	33.05	Englewood	24N	05E	18
Tu341		Tuscaloosa	442060	3657860	-87.62	33.06	Englewood	24N	05E	18
Tu342		Tuscaloosa	443000	3656120	-87.59	33.04	Englewood	24N	05E	20
Tu343		Tuscaloosa	444820	3655960	-87.59	33.04	Englewood	24N	05E	20
Tu344		Tuscaloosa	444720	3656280	-87.59	33.05	Englewood	24N	05E	20
Tu345		Tuscaloosa	443960	3657320	-87.60	33.05	Englewood	24N	05E	17
Tu347		Tuscaloosa	444080	3656140	-87.60	33.04	Englewood	24N	05E	20
Tu348		Tuscaloosa	444440	3656420	-87.60	33.05	Englewood	24N	05E	20
Tu349		Tuscaloosa	444560	3656520	-87.59	33.05	Englewood	24N	05E	20
Tu350		Tuscaloosa	444560	3656380	-87.59	33.05	Englewood	24N	05E	20
Tu351		Tuscaloosa	445280	3655820	-87.59	33.04	Englewood	24N	05E	21
Tu352		Tuscaloosa	444160	3656500	-87.60	33.05	Englewood	24N	05E	20
Tu386		Tuscaloosa	443940	3668550	-87.60	33.16	Tuscaloosa	22S	10W	8
Tu389		Tuscaloosa	436900	3654120	-87.68	33.03	Fosters	24N	04E	27
Tu390		Tuscaloosa	437260	3654280	-87.67	33.03	Fosters	24N	04E	27
Tu391		Tuscaloosa	437480	3654420	-87.67	33.03	Fosters	24N	04E	27
Tu392		Tuscaloosa	437320	3654800	-87.67	33.03	Fosters	24N	04E	27
Tu393		Tuscaloosa	437400	3654960	-87.67	33.03	Fosters	24N	04E	27
Tu483		Tuscaloosa	437340	3670780	-87.67	33.18	Coker	21S	11W	34
Tu484		Tuscaloosa	436820	3670760	-87.68	33.18	Coker	21S	11W	34
Tu493		Tuscaloosa	442380	3652360	-87.62	33.01	Englewood	24N	05E	31
Tu500	Moundville	Tuscaloosa	441000	3652000	-87.63	33.01	Fosters	24N	04E	36
Tu516		Tuscaloosa	441900	3655930	-87.62	33.04	Englewood	24N	05E	19
Tu517		Tuscaloosa	442080	3654520	-87.62	33.03	Englewood	24N	05E	30
Tu518		Tuscaloosa	440900	3655790	-87.63	33.04	Fosters	24N	04E	24
Tu519		Tuscaloosa	440800	3656600	-87.63	33.04	Fosters	24N	04E	24
Tu520		Tuscaloosa	442160	3655000	-87.62	33.03	Englewood	24N	05E	19
Tu521		Tuscaloosa	441210	3655210	-87.63	33.04	Fosters	24N	04E	24
Tu522		Tuscaloosa	441710	3655800	-87.62	33.04	Englewood	24N	05E	19
Tu526		Tuscaloosa	452250	3655000	-87.51	33.03	Englewood	24N	06E	19
Tu530		Tuscaloosa	442220	3652380	-87.62	33.01	Englewood	24N	05E	31
Tu542		Tuscaloosa	440810	3655590	-87.63	33.04	Fosters	24N	04E	24
Tu544		Tuscaloosa	436720	3656450	-87.68	33.05	Fosters	24N	04E	21

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu338	0	0	247.2	10400.5	1.1	0.4	below 50 m	130	floodplain	coastal	oxbow
Tu339	0	0	239.8	11105.9	1.1	0.4	below 50 m	130	floodplain	coastal	swamp
Tu340	0	0	264.6	12901.2	1.1	0.5	below 50 m	130	floodplain	coastal	swamp
Tu341	0	0	327.4	832.3	1.8	0.7	below 50 m	130	floodplain	coastal	river
Tu342	0	0	191.7	7406.8	0.7	0.3	below 50 m	120	terrace	coastal	swamp
Tu343	0	0	168.8	8787.7	0.5	0.2	below 50 m	140	terrace	coastal	major
Tu344	0	0	229.4	5098.1	0.9	0.4	below 50 m	150	terrace	coastal	major
Tu345	0	0	217.1	4182.4	0.8	0.3	50 m and above	190	upland crest	coastal	river
Tu347	0	0	263.4	3315.8	1.2	0.5	below 50 m	120	terrace	coastal	major
Tu348	0	0	178.7	4005.4	0.5	0.2	below 50 m	140	terrace	coastal	major
Tu349	0	0	189.9	3503.1	0.6	0.2	below 50 m	150	terrace	coastal	major
Tu350	0	0	161.3	4532.9	0.4	0.2	below 50 m	150	terrace	coastal	major
Tu351	0	0	196.6	12913.5	0.6	0.3	below 50 m	140	terrace	coastal	major
Tu352	0	0	311.4	37513.9	1.6	0.7	below 50 m	150	upland slope	coastal	major
Tu386	40	100	449.6	12195.5	3.0	1.2	below 50 m	135	terrace	coastal	first
Tu389	0	0	433.1	428.6	1.7	0.7	below 50 m	120	terrace	coastal	river
Tu390	0	0	203.5	348.3	0.5	0.2	below 50 m	120	terrace	coastal	river
Tu391	0	0	130.2	360.5	0.3	0.1	below 50 m	120	terrace	coastal	river
Tu392	0	0	122.3	914.2	0.3	0.1	below 50 m	120	terrace	coastal	swamp
Tu393	0	0	90.3	4766.8	0.2	0.1	below 50 m	120	terrace	coastal	swamp
Tu483	30	30	239.7	3552.9	0.9	0.4	below 50 m	130	floodplain	coastal	river
Tu484	20	50	292.7	4219.2	1.0	0.4	below 50 m	125	terrace	Cumberland	river
Tu493	0	0	145.4	3360.4	0.4	0.2	50 m and above	210	upland crest	coastal	swamp
Tu500	1000	1200	786.2	49181.8	12.2	4.9	below 50 m	170	terrace	coastal	river
Tu516	0	0	260.3	3279.6	1.3	0.5	below 50 m	120	floodplain	coastal	major
Tu517	50	50	547.8	6801.1	3.2	1.3	below 50 m	120	floodplain	coastal	swamp
Tu518	40	75	230.8	3018.3	0.9	0.4	below 50 m	110	floodplain	coastal	swamp
Tu519	20	30	131.6	9549.8	0.3	0.1	below 50 m	110	floodplain	coastal	river
Tu520	40	150	338.4	6601.3	1.5	0.6	below 50 m	120	terrace	coastal	swamp
Tu521	20	20	141.1	5393.4	0.4	0.1	below 50 m	100	floodplain	coastal	first
Tu522	40	75	556.5	2332.4	3.3	1.3	below 50 m	125	terrace	coastal	major
Tu526	25	100	1054.8	79509.5	19.6	8.0	50 m and above	150	floodplain	coastal	fourth
Tu530	50	150	289.1	1231.0	1.4	0.6	50 m and above	200	upland crest	coastal	first
Tu542	20	30	146.5	1181.3	0.3	0.1	below 50 m	110	floodplain	coastal	river
Tu544	0	0	420.9	1153.7	2.7	1.1	below 50 m	120	terrace	coastal	swamp

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu338	303	1	T17	AL106	1	2	3	TRUE	TRUE			TRUE	TRUE
Tu339	30	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	TRUE
Tu340	212	1	T17	AL106	2	2	3	TRUE	TRUE			TRUE	TRUE
Tu341	91	1	T17	AL106	1	3	3	TRUE					TRUE
Tu342	91	1	T19	AL106	1	5	3	TRUE	TRUE				TRUE
Tu343	242	1	T30	AL106	1	5	3	TRUE	TRUE				TRUE
Tu344	515	1	T30	AL106	2	5	3	TRUE	TRUE				TRUE
Tu345	788	1	T26	AL106	3	4	3	TRUE					TRUE
Tu347	697	1	T2	AL106	2	4	3	TRUE	TRUE				TRUE
Tu348	667	1	T13	AL106	2	4	3	TRUE	TRUE				
Tu349	775	1	T18	AL106	2	5	3	TRUE	TRUE				TRUE
Tu350	636	1	T30	AL106	2	5	3	TRUE	TRUE				TRUE
Tu351	409	1	T30	AL106	1	5	3	TRUE	TRUE			TRUE	TRUE
Tu352	700	1	T2	AL106	3	4	3	TRUE	TRUE				
Tu386	152	1	T13	AL106	10	6	9						TRUE
Tu389	15	1	T2	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu390	61	1	T13	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu391	212	1	T13	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu392	61	1	T2	AL106	2	4	3	TRUE	TRUE			TRUE	
Tu393	61	1	T13	AL106	2	4	3	TRUE	TRUE			TRUE	
Tu483	15	1	T17	AL109	1	1	10						TRUE
Tu484	250	1	T14	AL109	1	1	10						TRUE
Tu493	300	1	T6	AL106	3	1	1	TRUE	TRUE				TRUE
Tu500	1	1	T14	AL106	1	0	0	TRUE	TRUE			TRUE	TRUE
Tu516	30	1	T17	AL106	1	2	2	TRUE	TRUE			TRUE	TRUE
Tu517	30	1	T13	AL106	3	2	2	TRUE	TRUE			TRUE	TRUE
Tu518	35	1	T17	AL106	1	1	2	TRUE	TRUE			TRUE	TRUE
Tu519	30	1	T17	AL106	1	1	2	TRUE	TRUE			TRUE	TRUE
Tu520	400	1	T16	AL106	2	3	2	TRUE	TRUE			TRUE	TRUE
Tu521	250	1	T17	AL106	2	2	2	TRUE	TRUE			TRUE	TRUE
Tu522	60	1	T14	AL106	1	2	2	TRUE	TRUE			TRUE	TRUE
Tu526	250	1	T19	AL106	2	8	6						TRUE
Tu530	600	1	T33	AL106	2	1	1	TRUE	TRUE		363		TRUE
Tu542	200	1	T17	AL106	1	2	2	TRUE	TRUE		375	TRUE	TRUE
Tu544	1	1	T13	AL106	6	4	4	TRUE	TRUE				TRUE

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu338	TRUE	1	0	TRUE			Archaic	West Jefferson	
Tu339	TRUE	82	4	TRUE	TRUE		West Jefferson	Mississippian	
Tu340	TRUE	6	13	TRUE	TRUE		West Jefferson	Mississippian	
Tu341	TRUE	3	4	TRUE	TRUE		West Jefferson	Mississippian	
Tu342	TRUE	3	81	TRUE	TRUE		Withers Fabric Marked	West Jefferson	Mississippian
Tu343	TRUE	0	28		TRUE		Mississippian		
Tu344	TRUE	4	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu345	TRUE	18	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu347	TRUE	0	0				Archaic		
Tu348	TRUE	0	0				Archaic		
Tu349	TRUE	27	0	TRUE			West Jefferson		
Tu350	TRUE	2	0	TRUE			West Jefferson		
Tu351	TRUE	0	3		TRUE		Mississippian		
Tu352	TRUE	0	0	TRUE			Miller III	West Jefferson	
Tu386		0	0	TRUE			West Jefferson		
Tu389		0	0		TRUE		Mississippian	historic aboriginal	
Tu390	TRUE	34	78	TRUE	TRUE		West Jefferson	Mississippian	historic aboriginal
Tu391	TRUE	0	0		TRUE		Mississippian		
Tu392	TRUE	0	0		TRUE		Mississippian		
Tu393	TRUE	0	0		TRUE		Mississippian		
Tu483		0	0	TRUE			West Jefferson		
Tu484		0	0	TRUE			West Jefferson		
Tu493	TRUE	3	0	TRUE			West Jefferson		
Tu500		0	0	TRUE	TRUE	TRUE	West Jefferson	Moundville I	Moundville II
Tu516	TRUE	31	28	TRUE	TRUE		Miller II	Miller III	West Jefferson
Tu517	TRUE	0	0	TRUE			Miller III	Miller III	West Jefferson
Tu518	TRUE	0	4		TRUE		Mississippian		
Tu519	TRUE	3	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu520		0	0				historic		
Tu521	TRUE	0	1		TRUE		Mississippian		
Tu522	TRUE	6	0	TRUE			West Jefferson		
Tu526		0	0				Miller II	Miller III	
Tu530	TRUE	18	0	TRUE			West Jefferson		
Tu542	TRUE	10	1	TRUE	TRUE		Middle Woodland	West Jefferson	Mississippian
Tu544	TRUE	4	0	TRUE			West Jefferson		

Site Number	Component 4	Component 5	Sponsor	Notes
Tu338			UAL	
Tu339			UAL	
Tu340			UAL	
Tu341			UAL	
Tu342			UAL	
Tu343			UAL	
Tu344			UAL	
Tu345			UAL	
Tu347			UAL	
Tu348			UAL	
Tu349			UAL	
Tu350			UAL	
Tu351			UAL	
Tu352			UAL	
Tu386			ALDOT	
Tu389			NSF	
Tu390			NSF	sherd counts combined Tu390-393
Tu391			NSF	sherd counts combined Tu390-393
Tu392			NSF	sherd counts combined Tu390-393
Tu393			NSF	sherd counts combined Tu390-393
Tu483			Richard M. Snow	associated with Tu153
Tu484			Richard M. Snow	prob. associated with Tu153
Tu493			unavailable	
Tu500	Moundville III	protohistoric		
Tu516	Mississippian		unavailable	
Tu517			unavailable	
Tu518			unavailable	
Tu519				
Tu520			unavailable	
Tu521			unavailable	
Tu522			unavailable	
Tu526			unavailable	
Tu530			unavailable	
Tu542			unavailable	
Tu544			unavailable	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu545		Tuscaloosa	440130	3655760	-87.64	33.04	Fosters	24N	04E	24
Tu546		Tuscaloosa	440380	3655540	-87.64	33.04	Fosters	24N	04E	24
Tu549		Tuscaloosa	443000	3652690	-87.61	33.01	Englewood	24N	05E	31
Tu552		Tuscaloosa	441620	3661280	-87.63	33.04	Fosters	24N	04E	24
Tu562		Tuscaloosa	444710	3666190	-87.59	33.13	Tuscaloosa	22S	10W	16
Tu566		Tuscaloosa	441620	3660680	-87.63	33.09	Fosters	24N	04E	1
Tu567		Tuscaloosa	441850	3660500	-87.62	33.08	Englewood	24N	05E	6
Tu568		Tuscaloosa	441210	3661210	-87.63	33.09	Fosters	24N	04E	1
Tu569		Tuscaloosa	441750	3661100	-87.62	33.09	Englewood	24N	04E	1
Tu570		Tuscaloosa	444850	3661150	-87.59	33.09	Englewood	24N	05E	5
Tu571		Tuscaloosa	445190	3661030	-87.59	33.09	Englewood	24N	05E	4
Tu572		Tuscaloosa	445000	3663740	-87.59	33.11	Englewood	22S	10W	28
Tu584		Tuscaloosa	444510	3655720	-87.59	33.04	Englewood	24N	05E	20
Tu586		Tuscaloosa	444050	3668790	-87.60	33.16	Tuscaloosa	22S	10W	5
Tu587		Tuscaloosa	442350	3655290	-87.62	33.04	Englewood	24N	05E	19
Tu588		Tuscaloosa	450060	3654100	-87.53	33.03	Englewood	24N	05E	25
Tu589		Tuscaloosa	450820	3653160	-87.53	33.02	Englewood	24N	05E	36
Tu590		Tuscaloosa	450200	3652790	-87.53	33.01	Englewood	24N	05E	36
Tu603		Tuscaloosa	443880	3652600	-87.60	33.01	Englewood	24N	05E	32
Tu620		Tuscaloosa	443430	3661280	-87.61	33.09	Englewood	24N	05E	5
Tu631		Tuscaloosa	444660	3668950	-87.59	33.16	Tuscaloosa	22S	10W	4
Tu659		Tuscaloosa	440290	3652270	-87.64	33.01	Fosters	24N	04E	36
Tu668		Tuscaloosa	441690	3653500	-87.62	33.02	Englewood	24N	04E	25
Tu669		Tuscaloosa	441990	3652490	-87.62	33.01	Englewood	24N	05E	31
Tu746		Tuscaloosa	436850	3672700	-87.68	33.19	Coker	21S	11W	27
Tu754		Tuscaloosa	442820	3652080	-87.61	33.01	Englewood	24N	05E	31
Tu755		Tuscaloosa	443390	3652630	-87.61	33.01	Englewood	24N	05E	32
Tu756		Tuscaloosa	446920	3659100	-87.57	33.07	Englewood	24N	05E	10
Tu768	Gerald Wiggins	Tuscaloosa	442961	3661500	-87.61	33.09	Englewood	22S	10W	32
Tu805		Tuscaloosa	444050	3668250	-87.60	33.15	Tuscaloosa	22S	10W	8
Tu820		Tuscaloosa	444380	3668680	-87.60	33.16	Tuscaloosa	22S	10W	8
Tu821		Tuscaloosa	444300	3668600	-87.60	33.16	Tuscaloosa	22S	10W	8
Tu842		Tuscaloosa	0	0	-87.68	33.02	Fosters	24N	04E	33
Tu843		Tuscaloosa	0	0	-87.68	33.02	Fosters	24N	04E	33
Tu858		Tuscaloosa	437480	3666560	-87.67	33.14	Coker	22S	11W	15

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu545	0	0	380.0	10478.0	2.6	1.0	below 50 m	120	terrace	coastal	river
Tu546	0	0	249.9	1315.2	1.1	0.5	below 50 m	120	floodplain	coastal	river
Tu549	50	200	470.9	865.0	1.6	0.7	50 m and above	240	upland slope	coastal	first
Tu552	50	100	194.8	13427.8	0.7	0.3	below 50 m	125	floodplain	coastal	oxbow
Tu562	20	30	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	second
Tu566	25	50	226.0	3549.8	0.9	0.4	below 50 m	125	terrace	coastal	first
Tu567	20	50	204.5	2623.1	0.6	0.3	below 50 m	125	terrace	coastal	swamp
Tu568	30	100	260.0	3441.6	0.9	0.3	below 50 m	125	terrace	coastal	?
Tu569	30	100	692.5	15982.0	3.9	1.6	below 50 m	125	terrace	coastal	swamp
Tu570	150	304	1094.5	34851.3	8.6	3.5	below 50 m	120	terrace	coastal	river
Tu571	25	60	172.1	1901.1	0.5	0.2	below 50 m	110	terrace	coastal	major
Tu572	10	10	165.5	1738.4	0.4	0.2	below 50 m	120	terrace	coastal	first
Tu584	50	50	169.6	37559.9	0.4	0.2	below 50 m	120	terrace	coastal	major
Tu586	50	100	232.3	3849.2	1.0	0.4	below 50 m	130	terrace	coastal	first
Tu587	50	200	246.3	1717.1	0.7	0.3	below 50 m	120	terrace	coastal	major
Tu588	100	100	130.5	2006.0	0.3	0.1	below 50 m	140	floodplain	coastal	major
Tu589	20	20	130.5	1378.8	0.3	0.1	50 m and above	170	upland slope	coastal	first
Tu590	75	200	245.0	456.4	0.7	0.3	50 m and above	220	upland base	coastal	first
Tu603	10	20	141.1	3252.0	0.4	0.2	50 m and above	260	upland base	coastal	first
Tu620	0	0	221.3	3896.8	1.0	0.4	below 50 m	120	floodplain	coastal	river
Tu631	0	0	296.2	5315.0	1.3	0.5	below 50 m	130	terrace	coastal	first
Tu659	0	0	126.4	1583.4	0.3	0.1	below 50 m	120	terrace	coastal	river
Tu668	70	100	287.5	13174.5	1.0	0.4	below 50 m	120	floodplain	coastal	swamp
Tu669	10	10	102.3	1356.0	0.2	0.1	50 m and above	180	upland crest	coastal	swamp
Tu746	0	0	864.7	33520.1	8.3	3.4	below 50 m	130	floodplain	coastal	river
Tu754	20	30	78.9	303.6	0.1	0.0	50 m and above	0	upland slope	Cumberland	second
Tu755	20	50	78.9	7987.8	0.1	0.0	50 m and above	260	upland crest	coastal	well
Tu756	20	20	70.8	399.3	0.1	0.0	50 m and above	240	upland crest	coastal	first
Tu768	55	0	105.3	882.0	0.2	0.1	below 50 m	120	floodplain	Cumberland	swamp
Tu805	100	300	836.8	24092.8	6.0	2.4	below 50 m	130	terrace	coastal	swamp
Tu820	50	75	239.4	4560.2	1.1	0.5	below 50 m	130	terrace	coastal	first
Tu821	50	50	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	first
Tu842	25	45	72.8	379.9	0.1	0.0	below 50 m	110	floodplain	coastal	river
Tu843	35	60	92.8	594.5	0.1	0.1	below 50 m	110	floodplain	coastal	river
Tu858	39	105	203.6	2897.0	0.7	0.3	below 50 m	135	terrace	Cumberland	swamp

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu545	50	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	TRUE
Tu546	20	1	T17	AL106	1	2	2	TRUE	TRUE				TRUE
Tu549	30	1	T33	AL106	4	2	1	TRUE	TRUE		275		TRUE
Tu552	5	1	T14	AL106	1	2	2	TRUE	TRUE			TRUE	TRUE
Tu562	100	1	T14	AL106	5	5	8		TRUE			TRUE	TRUE
Tu566	100	1	T14	AL106	2	2	5						TRUE
Tu567	10	1	T14	AL106	2	3	5						TRUE
Tu568	250	1	T13	AL106	3	2	5						TRUE
Tu569	80	1	T18	AL106	2	2	5						TRUE
Tu570	100	1	T14	AL106	1	1	5						TRUE
Tu571	100	1	T14	AL106	1	1	5						TRUE
Tu572	25	1	T14	AL106	4	3	7		TRUE			TRUE	TRUE
Tu584	50	1	T19	AL106	1	5	3	TRUE	TRUE				
Tu586	200	1	T13	AL106	10	7	9						TRUE
Tu587	200	1	T14	AL106	1	3	2	TRUE	TRUE			TRUE	TRUE
Tu588	75	1	T13	AL106	1	6	5	TRUE					TRUE
Tu589	150	2	T18	AL109	1	6	5	TRUE			348		TRUE
Tu590	100	2	T19	AL109	3	6	5	TRUE					TRUE
Tu603	125	1	T5	AL106	6	2	2	TRUE					TRUE
Tu620	800	1	T17	AL106	3	2	5						TRUE
Tu631	10	1	T13	AL106	11	7	9						TRUE
Tu659	200	1	T18	AL106	1	1	1	TRUE	TRUE				
Tu668	20	1	T17	AL106	1	1	1	TRUE	TRUE			TRUE	TRUE
Tu669	300	1	T6	AL106	2	1	1	TRUE	TRUE			TRUE	TRUE
Tu746	10	1	T17	AL106	1	2	11						TRUE
Tu754	110	1	T5	AL106	4	2	1	TRUE	TRUE				
Tu755	0	1	T33	AL106	5	2	2	TRUE	TRUE			TRUE	
Tu756	125	2	T28	AL107	5	4	5	TRUE					TRUE
Tu768	250	1	T17	AL106	2	1	5						
Tu805	5	1	T13	AL106	9	6	9						TRUE
Tu820	130	1	T13	AL106	10	7	9						TRUE
Tu821	100	1	T13	AL106	10	7	9						TRUE
Tu842	60	1	T17	AL106	1	2	3		TRUE				TRUE
Tu843	90	1	T17	AL106	1	2	3		TRUE				TRUE
Tu858	60	1	T13	AL106	3	3	8		TRUE			TRUE	

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu545	TRUE	4	10	TRUE	TRUE		West Jefferson	Mississippian	
Tu546		0	0				historic		
Tu549	TRUE	21	0	TRUE			West Jefferson		
Tu552		0	0	TRUE	TRUE		West Jefferson	Mississippian	
Tu562	TRUE	0	0				unknown aboriginal	historic	
Tu566		0	0				Hamilton		
Tu567		0	0				post-pottery		
Tu568		0	0				unknown aboriginal	historic	
Tu569		0	0				post-pottery		
Tu570		0	0	TRUE			West Jefferson		
Tu571	TRUE	3	0	TRUE			West Jefferson		
Tu572		0	0				unknown aboriginal		
Tu584		0	0				unknown aboriginal		
Tu586		0	0		TRUE		Mississippian	historic	
Tu587	TRUE	225	0	TRUE			Saltillo Fabric Mark	Miller III	West Jefferson
Tu588		0	0	TRUE			Morrow Mountain	Baldwin Plain	West Jefferson
Tu589		0	0				historic		
Tu590		0	0	TRUE			West Jefferson		
Tu603		0	0		TRUE		Mississippian		
Tu620		0	0	TRUE			West Jefferson		
Tu631		0	0				unknown aboriginal		
Tu659		0	0		TRUE		Mississippian		
Tu668		0	0	TRUE			West Jefferson		
Tu669		0	0	TRUE			West Jefferson		
Tu746		0	0	TRUE	TRUE		West Jefferson	Mississippian	
Tu754		0	0				historic		
Tu755		0	0				historic		
Tu756		0	0				historic		
Tu768		0	0		TRUE		Moundville I		
Tu805		0	0	TRUE			Baldwin Plain	West Jefferson	
Tu820		0	0				unknown aboriginal		
Tu821		0	0				historic		
Tu842	TRUE	6	0	TRUE			West Jefferson		
Tu843	TRUE	0	4		TRUE		Mississippian		
Tu858	TRUE	268	1	TRUE	TRUE		West Jefferson	Mississippian	

Site Number	Component 4	Component 5	Sponsor	Notes
Tu545			UAL	
Tu546			unavailable	
Tu549			unavailable	
Tu552			unavailable	
Tu562			CH2M Hill	
Tu566			Dames & Moore	125 m SE of McKenzie Well 1-8
Tu567			Dames & Moore	
Tu568			Dames & Moore	SW of McKenzie Well 1-2-103
Tu569			Dames & Moore	
Tu570			Dames & Moore	
Tu571			Dames & Moore	
Tu572			Dames & Moore	
Tu584			unavailable	
Tu586			Sonat	
Tu587			unavailable	
Tu588			Metfuel	
Tu589			Metfuel	
Tu590			Metfuel	
Tu603			Metfuel	
Tu620			AL Power	
Tu631			Coe	
Tu659			UAL	
Tu668			gas utilities of AL	
Tu669			unavailable	
Tu746			Coe	
Tu754			Almon Associates	
Tu755			Almon Associates	
Tu756			Almon Associates	
Tu768			NG	
Tu805			Lanier Environmental	
Tu820			RACON	
Tu821			Racon	
Tu842			Ebsco Realty	
Tu843			Ebsco Realty	
Tu858			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu859		Tuscaloosa	440040	3666160	-87.64	33.13	Coker	22S	11W	13
Tu860		Tuscaloosa	444380	3666080	-87.60	33.13	Tuscaloosa	22S	10W	17
Tu861		Tuscaloosa	444000	3665660	-87.60	33.13	Tuscaloosa	22S	10W	17
Tu862		Tuscaloosa	443820	3665860	-87.60	33.13	Tuscaloosa	22S	10W	17
Tu863		Tuscaloosa	445270	3666800	-87.59	33.14	Tuscaloosa	22S	10W	16
Tu864		Tuscaloosa	443140	3668130	-87.61	33.15	Tuscaloosa	22S	10W	8
Tu865		Tuscaloosa	443180	3668180	-87.61	33.15	Tuscaloosa	22S	10W	8
Tu866		Tuscaloosa	443260	3668370	-87.61	33.15	Tuscaloosa	22S	10W	8
Tu867		Tuscaloosa	443380	3668180	-87.61	33.15	Tuscaloosa	22S	10W	8
Tu868		Tuscaloosa	443300	3668780	-87.61	33.16	Tuscaloosa	22S	10W	5
Tu869		Tuscaloosa	445400	3666830	-87.59	33.14	Tuscaloosa	22S	10W	16
Tu870		Tuscaloosa	442750	3656940	-87.62	33.05	Englewood	24N	05E	18
Tu871		Tuscaloosa	442940	3656740	-87.61	33.05	Englewood	24N	05E	18
Tu872	Englewood	Tuscaloosa	442740	3656500	-87.61	33.05	Englewood	24N	05E	19
Tu873		Tuscaloosa	442440	3656350	-87.62	33.05	Englewood	24N	05E	19
Tu874		Tuscaloosa	439620	3652210	-87.65	33.01	Fosters	24N	04E	35
Tu876	Fitts	Tuscaloosa	441450	3658250	-87.63	33.06	Fosters	24N	04E	12
Tu877		Tuscaloosa	441220	3658210	-87.63	33.06	Fosters	24N	04E	13
Tu878		Tuscaloosa	437430	3666760	-87.67	33.14	Coker	22S	11W	15
Tu879		Tuscaloosa			-87.62	33.11	Englewood	22S	10W	30
Tu880		Tuscaloosa	442260	3663170	-87.62	33.11	Englewood	22S	10W	30
Tu881		Tuscaloosa	439440	3663580	-87.65	33.11	Fosters	22S	11W	26
Tu882		Tuscaloosa	438860	3663640	-87.66	33.11	Fosters	22S	11W	26
Tu883		Tuscaloosa	439040	3663600	-87.65	33.11	Fosters	22S	11W	26
Tu884		Tuscaloosa	439060	3663760	-87.65	33.11	Fosters	22S	11W	26
Tu885		Tuscaloosa	439140	3663790	-87.65	33.11	Fosters	22S	11W	26
Tu886		Tuscaloosa	440410	3663830	-87.64	33.11	Fosters	22S	11W	25
Tu887		Tuscaloosa	440500	3663740	-87.64	33.11	Fosters	22S	11W	25
Tu888		Tuscaloosa	440320	3663710	-87.64	33.11	Fosters	22S	11W	25
Tu889		Tuscaloosa	440490	3663640	-87.64	33.11	Fosters	22S	11W	25
Tu890		Tuscaloosa	439770	3663660	-87.65	33.11	Fosters	22S	11W	25
Tu891		Tuscaloosa	439930	3663600	-87.64	33.11	Fosters	22S	11W	25
Tu892		Tuscaloosa	440470	3663000	-87.64	33.11	Fosters	22S	11W	25
Tu893		Tuscaloosa	440230	3662990	-87.64	33.11	Fosters	22S	11W	25
Tu894		Tuscaloosa	440330	3663140	-87.64	33.11	Fosters	22S	11W	25

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu859	43	73	219.3	3225.2	0.8	0.3	below 50 m	130	terrace	coastal	swamp
Tu860	20	25	52.3	199.5	0.0	0.0	below 50 m	130	terrace	coastal	first
Tu861	5	15	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	second
Tu862	10	15	112.8	1013.4	0.3	0.1	below 50 m	125	terrace	coastal	first
Tu863	8	13	112.8	1013.4	0.3	0.1	below 50 m	125	terrace	coastal	swamp
Tu864	6	7	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	swamp
Tu865	6	12	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	swamp
Tu866	2	3	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	swamp
Tu867	11	16	112.8	1013.4	0.3	0.1	below 50 m	130	terrace	coastal	swamp
Tu868	36	42	305.8	5686.9	1.4	0.6	below 50 m	130	terrace	coastal	swamp
Tu869	2	2	112.8	1013.4	0.3	0.1	below 50 m	125	terrace	coastal	swamp
Tu870	5	20	61.8	199.5	0.1	0.0	below 50 m	125	floodplain	coastal	swamp
Tu871	24	52	205.5	212.3	0.8	0.3	below 50 m	125	floodplain	coastal	oxbow
Tu872	15	39	124.4	804.2	0.3	0.1	below 50 m	125	floodplain	coastal	oxbow
Tu873	5	5	104.3	3225.2	0.2	0.1	below 50 m	120	floodplain	coastal	swamp
Tu874	58	78	197.6	4182.7	0.5	0.2	below 50 m	120	terrace	coastal	first
Tu876	41	45	189.1	2684.3	0.7	0.3	below 50 m	120	terrace	coastal	river
Tu877	10	31	93.9	702.2	0.2	0.1	below 50 m	120	terrace	coastal	second
Tu878	37	52	132.2	1391.5	0.3	0.1	below 50 m	135	terrace	coastal	swamp
Tu879	0	0	194.4	2192.4	0.5	0.2	below 50 m	0			
Tu880	36	64	234.8	2715.2	0.7	0.3	below 50 m	130	terrace	coastal	first
Tu881	2	37	197.1	1815.3	0.4	0.2	below 50 m	130	terrace	coastal	first
Tu882	50	202	441.2	11585.9	2.9	1.2	below 50 m	130	terrace	coastal	first
Tu883	40	95	253.4	3930.2	1.0	0.4	below 50 m	130	terrace	coastal	first
Tu884	73	84	203.0	2985.5	0.7	0.3	below 50 m	130	terrace	coastal	river
Tu885	15	37	106.5	799.7	0.2	0.1	below 50 m	130	terrace	coastal	river
Tu886	30	54	286.9	5622.9	1.4	0.6	below 50 m	130	terrace	coastal	second
Tu887	65	68	250.1	4180.9	1.0	0.4	below 50 m	130	terrace	coastal	second
Tu888	10	24	143.9	1646.7	0.4	0.2	below 50 m	130	terrace	coastal	first
Tu889	15	43	84.2	522.6	0.1	0.1	below 50 m	130	terrace	coastal	second
Tu890	33	40	171.9	2142.4	0.5	0.2	below 50 m	130	terrace	coastal	river
Tu891	2	48	117.0	966.5	0.2	0.1	below 50 m	130	terrace	coastal	first
Tu892	46	165	286.7	6110.5	1.5	0.6	below 50 m	130	terrace	coastal	second
Tu893	15	15	143.9	1646.7	0.4	0.2	below 50 m	130	terrace	coastal	first
Tu894	55	60	275.9	4979.7	1.2	0.5	below 50 m	130	terrace	coastal	first

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu859	40	1	T14	AL106	3	3	8		TRUE			TRUE	
Tu860	60	1	T14	AL106	5	4	8		TRUE			TRUE	
Tu861	40	1	T14	AL106	3	4	7		TRUE			TRUE	
Tu862	60	1	T14	AL106	3	4	7		TRUE			TRUE	
Tu863	120	1	T13	AL106	7	5	8		TRUE			TRUE	
Tu864	420	1	T13	AL106	8	6	9						
Tu865	460	1	T13	AL106	8	6	9						
Tu866	500	1	T13	AL106	9	6	9						
Tu867	360	1	T13	AL106	8	6	9						
Tu868	80	1	T13	AL106	10	6	9						
Tu869	100	1	T16	AL106	8	6	8		TRUE			TRUE	
Tu870	200	1	T17	AL106	1	2	3	TRUE	TRUE			TRUE	
Tu871	100	1	T17	AL106	1	3	3	TRUE	TRUE		376	TRUE	
Tu872	60	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu873	180	1	T17	AL106	1	3	3	TRUE	TRUE			TRUE	
Tu874	200	1	T16	AL106	2	2	1	TRUE	TRUE			TRUE	
Tu876	140	1	T17	AL106	1	2	4	TRUE					
Tu877	80	1	T17	AL106	1	2	4	TRUE					
Tu878	200	1	T2	AL106	3	3	8		TRUE			TRUE	
Tu879		1	T17	AL106	3	1	6		TRUE			TRUE	
Tu880	50	1	T14	AL106	2	1	6		TRUE			TRUE	
Tu881	100	1	T16	AL106	1	2	6		TRUE			TRUE	
Tu882	60	1	T14	AL106	1	1	6		TRUE			TRUE	
Tu883	70	1	T14	AL106	1	1	6		TRUE			TRUE	
Tu884	200	1	T13	AL106	1	1	6		TRUE			TRUE	
Tu885	160	1	T13	AL106	1	1	6		TRUE			TRUE	
Tu886	160	1	T16	AL106	1	2	6		TRUE			TRUE	
Tu887	40	1	T16	AL106	2	3	6		TRUE			TRUE	
Tu888	40	1	T16	AL106	1	2	6		TRUE			TRUE	
Tu889	40	1	T16	AL106	2	3	6		TRUE			TRUE	
Tu890	160	1	T16	AL106	1	2	6		TRUE			TRUE	
Tu891	200	1	T16	AL106	1	2	6		TRUE			TRUE	
Tu892	60	1	T16	AL106	3	2	6		TRUE			TRUE	
Tu893	30	1	T16	AL106	3	3	6		TRUE			TRUE	
Tu894	10	1	T16	AL106	3	3	6		TRUE			TRUE	

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu859		4	0	TRUE			Decatur	West Jefferson	historic
Tu860	TRUE	1	0	TRUE			West Jefferson		
Tu861	TRUE	0	0				unknown aboriginal		
Tu862	TRUE	0	0				unknown aboriginal		
Tu863	TRUE	0	0				unknown aboriginal		
Tu864	TRUE	0	0				unknown aboriginal		
Tu865	TRUE	0	0	TRUE			West Jefferson		
Tu866	TRUE	0	0				unknown aboriginal		
Tu867	TRUE	0	0				unknown aboriginal		
Tu868		1	0	TRUE			West Jefferson		
Tu869	TRUE	0	0				unknown aboriginal		
Tu870	TRUE	1	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu871	TRUE	104	0	TRUE			West Jefferson		
Tu872	TRUE	106	5	TRUE	TRUE		West Jefferson	Mississippian	
Tu873	TRUE	4	0	TRUE			West Jefferson		
Tu874	TRUE	0	0				unknown aboriginal		
Tu876	TRUE	98	123	TRUE	TRUE		late Moundville II	early Moundville III	
Tu877	TRUE	3	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu878	TRUE	0	0				historic		
Tu879	TRUE	5	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu880	TRUE	1	4	TRUE	TRUE		West Jefferson	Mississippian	
Tu881	TRUE	3	0	TRUE			West Jefferson		
Tu882	TRUE	34	31	TRUE	TRUE		West Jefferson	Mississippian	
Tu883	TRUE	41	22	TRUE	TRUE		West Jefferson	Moundville I	
Tu884	TRUE	26	7	TRUE	TRUE		West Jefferson	Mississippian	
Tu885	TRUE	8	0	TRUE			West Jefferson		
Tu886	TRUE	0	0				unknown aboriginal		
Tu887	TRUE	0	0				unknown aboriginal	historic	
Tu888	TRUE	0	0				unknown aboriginal		
Tu889	TRUE	0	0				unknown aboriginal		
Tu890	TRUE	75	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu891	TRUE	0	6		TRUE		Mississippian		
Tu892	TRUE	0	0				Dalton		
Tu893	TRUE	0	0				unknown aboriginal		
Tu894	TRUE	0	0				unknown aboriginal		

Site Number	Component 4	Component 5	Sponsor	Notes
Tu859			UAL	
Tu860			UAL	
Tu861			UAL	
Tu862			UAL	
Tu863			UAL	
Tu864			UAL	
Tu865			UAL	
Tu866			UAL	
Tu867			UAL	
Tu868			UAL	
Tu869			UAL	
Tu870			UAL	
Tu871			UAL	
Tu872			UAL	
Tu873			UAL	
Tu874			UAL	
Tu876			UAL	evidence of sandstone working
Tu877			UAL	
Tu878			UAL	
Tu879				
Tu880			UAL	
Tu881			UAL	
Tu882			UAL	
Tu883			UAL	
Tu884			UAL	
Tu885			UAL	
Tu886			UAL	
Tu887			UAL	
Tu888			UAL	
Tu889			UAL	
Tu890			UAL	
Tu891			UAL	
Tu892			UAL	
Tu893			UAL	greenstone celt frags
Tu894			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu895		Tuscaloosa	438790	3663840	-87.66	33.11	Fosters	22S	11W	26
Tu896		Tuscaloosa	440500	3665060	-87.64	33.12	Fosters	22S	11W	24
Tu897		Tuscaloosa	440570	3665040	-87.64	33.12	Fosters	22S	11W	24
Tu898		Tuscaloosa	440390	3664560	-87.64	33.12	Fosters	22S	11W	24
Tu899		Tuscaloosa	440490	3664500	-87.64	33.12	Fosters	22S	11W	24
Tu900		Tuscaloosa	440560	3664510	-87.64	33.12	Fosters	22S	11W	24
Tu901		Tuscaloosa	438670	3663800	-87.66	33.11	Fosters	22S	11W	26
Tu902		Tuscaloosa	438550	3663580	-87.66	33.11	Fosters	22S	11W	26
Tu903		Tuscaloosa	438500	3663660	-87.66	33.11	Fosters	22S	11W	26
Tu904	Gilliam	Tuscaloosa	438560	3663770	-87.66	33.11	Fosters	22S	11W	26
Tu905		Tuscaloosa	438610	3663890	-87.66	33.11	Fosters	22S	11W	26
Tu906		Tuscaloosa	438420	3663670	-87.66	33.11	Fosters	22S	11W	26
Tu907		Tuscaloosa	438500	3663840	-87.66	33.11	Fosters	22S	11W	26
Tu908		Tuscaloosa	440400	3664500	-87.64	33.12	Fosters	22S	11W	24
Tu909		Tuscaloosa	440520	3664440	-87.64	33.12	Fosters	22S	11W	24
Tu910		Tuscaloosa	440400	3664320	-87.64	33.12	Fosters	22S	11W	24
Tu911		Tuscaloosa	438380	3663810	-87.66	33.11	Fosters	22S	11W	26
Tu912		Tuscaloosa	438480	3663930	-87.66	33.11	Fosters	22S	11W	26
Tu913		Tuscaloosa	438430	3663850	-87.66	33.11	Fosters	22S	11W	26
Tu914		Tuscaloosa	438360	3663910	-87.66	33.11	Fosters	22S	11W	26
Tu915		Tuscaloosa	438400	3664000	-87.66	33.11	Fosters	22S	11W	23
Tu916		Tuscaloosa	438370	3664010	-87.66	33.11	Fosters	22S	11W	23
Tu917		Tuscaloosa	440500	3664010	-87.64	33.11	Fosters	22S	11W	25
Tu920		Tuscaloosa	435580	3652300	-87.69	33.01	Fosters	24N	04E	33
Tu921		Tuscaloosa	435720	3652370	-87.69	33.01	Fosters	24N	04E	33
Tu922		Tuscaloosa	435460	3652220	-87.69	33.01	Fosters	24N	04E	33
Tu923		Tuscaloosa	435420	3652120	-87.69	33.01	Fosters	24N	04E	33
Tu924		Tuscaloosa	435720	3652020	-87.69	33.01	Fosters	24N	04E	33
Tu925		Tuscaloosa	435390	3652320	-87.69	33.01	Fosters	24N	04E	33
Tu926		Tuscaloosa	435150	3652130	-87.69	33.01	Fosters	24N	04E	33
Tu927		Tuscaloosa	435400	3652040	-87.69	33.01	Fosters	24N	04E	33
Tu943		Tuscaloosa	439971	3655673	-87.64	33.04	Fosters	24N	04E	23
Tu944		Tuscaloosa	439833	3655679	-87.64	33.04	Fosters	24N	04E	23
Tu945		Tuscaloosa	439896	3655719	-87.64	33.04	Fosters	24N	04E	23
Tu946		Tuscaloosa	440331	3655631	-87.64	33.04	Fosters	24N	04E	24

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu895	115	276	692.8	20662.2	5.1	2.1	below 50 m	130	terrace	coastal	river
Tu896	13	20	82.1	496.7	0.1	0.1	below 50 m	130	floodplain	coastal	river
Tu897	10	20	75.4	428.6	0.1	0.0	below 50 m	130	floodplain	coastal	river
Tu898	23	28	68.9	348.3	0.1	0.0	below 50 m	130	floodplain	coastal	river
Tu899	26	29	71.1	360.5	0.1	0.0	below 50 m	130	floodplain	coastal	river
Tu900	17	23	79.7	468.8	0.1	0.0	below 50 m	130	floodplain	coastal	first
Tu901	42	1300	759.4	13970.4	3.5	1.4	below 50 m	130	terrace	coastal	first
Tu902	23	55	147.0	1588.9	0.4	0.2	below 50 m	130	terrace	coastal	first
Tu903	19	100	199.1	2677.2	0.7	0.3	below 50 m	130	terrace	coastal	first
Tu904	35	95	291.5	6170.7	1.5	0.6	below 50 m	130	terrace	coastal	first
Tu905	52	125	416.1	13029.1	3.2	1.3	below 50 m	130	terrace	coastal	river
Tu906	52	65	178.1	2332.4	0.6	0.2	below 50 m	130	terrace	coastal	first
Tu907	30	36	205.3	2395.4	0.6	0.2	below 50 m	130	terrace	coastal	first
Tu908	40	46	123.4	1153.7	0.3	0.1	below 50 m	130	terrace	coastal	river
Tu909	36	58	114.6	914.2	0.2	0.1	below 50 m	130	terrace	coastal	first
Tu910	32	107	196.8	2006.0	0.5	0.2	below 50 m	130	terrace	coastal	river
Tu911	11	34	67.9	349.3	0.1	0.0	below 50 m	130	terrace	coastal	first
Tu912	42	72	146.9	1378.8	0.3	0.1	below 50 m	130	terrace	coastal	first
Tu913	15	36	64.4	319.8	0.1	0.0	below 50 m	130	terrace	coastal	first
Tu914	14	34	78.5	456.4	0.1	0.0	below 50 m	130	terrace	coastal	first
Tu915	23	50	106.7	804.2	0.2	0.1	below 50 m	130	terrace	coastal	first
Tu916	11	12	139.2	1429.5	0.4	0.1	below 50 m	130	terrace	coastal	first
Tu917	7	8	84.2	522.6	0.1	0.1	below 50 m	130	terrace	coastal	second
Tu920	0	0	82.0	509.9	0.1	0.1	below 50 m	105	terrace	coastal	river
Tu921	0	0	72.6	356.6	0.1	0.0	below 50 m	105	terrace	coastal	river
Tu922	10	10	70.9	355.1	0.1	0.0	below 50 m	105	terrace	coastal	river
Tu923	20	20	84.7	514.1	0.1	0.1	below 50 m	105	terrace	coastal	river
Tu924	0	0	70.5	347.1	0.1	0.0	below 50 m	105	terrace	coastal	swamp
Tu925	0	0	64.6	293.4	0.1	0.0	below 50 m	105	terrace	coastal	river
Tu926	0	0	71.0	369.5	0.1	0.0	below 50 m	105	terrace	coastal	swamp
Tu927	25	25	70.2	367.7	0.1	0.0	below 50 m	105	terrace	coastal	swamp
Tu943	49	50	169.3	33520.1	0.6	0.2	below 50 m	125	floodplain	coastal	swamp
Tu944	5	29	176.8	49075.6	0.4	0.2	below 50 m	125	floodplain	coastal	swamp
Tu945	33	37	141.8	49181.8	0.4	0.1	below 50 m	125	floodplain	coastal	swamp
Tu946	20	39	131.8	2533.4	0.3	0.1	below 50 m	120	floodplain	coastal	river

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu895	150	1	T13	AL106	1	1	6		TRUE			TRUE	
Tu896	220	1	T17	AL106	1	3	7		TRUE			TRUE	
Tu897	300	1	T17	AL106	1	3	7		TRUE			TRUE	
Tu898	100	1	T14	AL106	1	2	7		TRUE			TRUE	
Tu899	200	1	T14	AL106	1	2	7		TRUE			TRUE	
Tu900	160	1	T17	AL106	1	3	7		TRUE			TRUE	
Tu901	100	1	T14	AL106	1	1	6		TRUE			TRUE	
Tu902	40	1	T14	AL106	2	1	6		TRUE			TRUE	
Tu903	100	1	T14	AL106	2	1	6		TRUE			TRUE	
Tu904	200	1	T14	AL106	2	1	6		TRUE			TRUE	
Tu905	230	1	T14	AL106	1	1	6		TRUE			TRUE	
Tu906	60	1	T14	AL106	2	1	6		TRUE			TRUE	
Tu907	180	1	T14	AL106	1	1	6		TRUE			TRUE	
Tu908	80	1	T17	AL106	1	2	7		TRUE			TRUE	
Tu909	100	1	T14	AL106	1	2	7		TRUE			TRUE	
Tu910	80	1	T14	AL106	1	2	7		TRUE			TRUE	
Tu911	100	1	T14	AL106	2	1	6		TRUE			TRUE	
Tu912	180	1	T14	AL106	1	1	7		TRUE			TRUE	
Tu913	160	1	T14	AL106	1	1	6		TRUE			TRUE	
Tu914	100	1	T14	AL106	1	1	7		TRUE			TRUE	
Tu915	80	1	T14	AL106	1	1	7		TRUE			TRUE	
Tu916	40	1	T14	AL106	1	1	7		TRUE			TRUE	
Tu917	20	1	T14	AL106	1	2	6		TRUE			TRUE	
Tu920	140	1	T14	AL106	1	1	3		TRUE			TRUE	
Tu921	20	1	T14	AL106	1	1	3		TRUE			TRUE	
Tu922	260	1	T14	AL106	1	1	3		TRUE			TRUE	
Tu923	360	1	T14	AL106	1	1	3		TRUE			TRUE	
Tu924	300	1	T14	AL106	1	1	3		TRUE			TRUE	
Tu925	220	1	T14	AL106	1	1	3		TRUE			TRUE	
Tu926	60	1	T14	AL106	2	1	3		TRUE			TRUE	
Tu927	290	1	T14	AL106	2	1	3		TRUE			TRUE	
Tu943	78	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu944	111	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu945	135	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu946	54	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu895	TRUE	835	27	TRUE	TRUE		West Jefferson	Mississippian	
Tu896	TRUE	10	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu897	TRUE	4	0	TRUE			West Jefferson		
Tu898	TRUE	15	0	TRUE			West Jefferson		
Tu899	TRUE	7	0	TRUE			West Jefferson		
Tu900	TRUE	2	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu901	TRUE	26	10	TRUE	TRUE		West Jefferson	Mississippian	
Tu902	TRUE	88	57	TRUE	TRUE		West Jefferson	Mississippian	
Tu903	TRUE	13	13	TRUE	TRUE		West Jefferson	Moundville I	
Tu904	TRUE	21	5	TRUE	TRUE		West Jefferson	early Moundville II	
Tu905	TRUE	1	2	TRUE	TRUE		West Jefferson	Mississippian	
Tu906	TRUE	5	33	TRUE	TRUE		West Jefferson	Mississippian	
Tu907	TRUE	2	16	TRUE	TRUE		West Jefferson	Mississippian	
Tu908	TRUE	6	8	TRUE	TRUE		West Jefferson	Mississippian	
Tu909	TRUE	7	0	TRUE			West Jefferson		
Tu910	TRUE	19	5	TRUE	TRUE		West Jefferson	Moundville I	
Tu911	TRUE	0	5		TRUE		Mississippian		
Tu912	TRUE	4	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu913	TRUE	0	13		TRUE		Mississippian		
Tu914	TRUE	1	6	TRUE	TRUE		West Jefferson	Mississippian	
Tu915	TRUE	2	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu916	TRUE	0	2		TRUE		Mississippian		
Tu917	TRUE	0	0		TRUE		Mississippian		
Tu920	TRUE	0	5		TRUE		Mississippian		
Tu921	TRUE	0	9		TRUE		Mississippian		
Tu922	TRUE	5	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu923	TRUE	1	4	TRUE	TRUE		West Jefferson	Mississippian	
Tu924	TRUE	0	45		TRUE		Mississippian		
Tu925	TRUE	2	19	TRUE	TRUE		West Jefferson	Mississippian	
Tu926	TRUE	15	7	TRUE	TRUE		West Jefferson	Mississippian	
Tu927	TRUE	9	52	TRUE	TRUE		West Jefferson	Mississippian	
Tu943	TRUE	85	0	TRUE			West Jefferson		
Tu944	TRUE	0	0				unknown aboriginal		
Tu945	TRUE	0	0				unknown aboriginal		
Tu946	TRUE	3	0	TRUE			West Jefferson		

Site Number	Component 4	Component 5	Sponsor	Notes
Tu895			UAL	
Tu896			UAL	
Tu897			UAL	
Tu898			UAL	
Tu899			UAL	
Tu900			UAL	
Tu901			UAL	
Tu902			UAL	
Tu903			UAL	
Tu904			UAL	
Tu905			UAL	
Tu906			UAL	
Tu907			UAL	
Tu908			UAL	
Tu909			UAL	
Tu910			UAL	
Tu911			UAL	
Tu912			UAL	
Tu913			UAL	
Tu914			UAL	
Tu915			UAL	
Tu916			UAL	
Tu917			UAL	
Tu920			UAL	aka Ha107, Tu41 (HAM9)
Tu921			UAL	aka Ha107, Tu41 (HAM10)
Tu922			UAL	aka Ha107, Tu41 (HAM4)
Tu923			UAL	aka Ha107, Tu41 (HAM3)
Tu924			UAL	aka Ha107, Tu41 (HAM12)
Tu925			UAL	aka Ha107, Tu41 (HAM7)
Tu926			UAL	aka Ha107, Tu41 (HAM6)
Tu927			UAL	aka Ha107, Tu41 (HAM5)
Tu943			UAL	
Tu944			UAL	
Tu945			UAL	
Tu946			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu947		Tuscaloosa	440273	3655647	-87.64	33.04	Fosters	24N	04E	24
Tu948		Tuscaloosa	440244	3655725	-87.64	33.04	Fosters	24N	04E	24
Tu949		Tuscaloosa	440178	3655696	-87.64	33.04	Fosters	24N	04E	24
Tu950		Tuscaloosa	440104	3655650	-87.64	33.04	Fosters	24N	04E	24
Tu951		Tuscaloosa	440161	3655785	-87.64	33.04	Fosters	24N	04E	24
Tu952		Tuscaloosa	440256	3655794	-87.64	33.04	Fosters	24N	04E	24
Tu953		Tuscaloosa	439839	3655728	-87.64	33.04	Fosters	24N	04E	23
Tu954		Tuscaloosa	439324	3655636	-87.65	33.04	Fosters	24N	04E	23
Tu955		Tuscaloosa	439244	3655662	-87.65	33.04	Fosters	24N	04E	23
Tu956		Tuscaloosa	439166	3655705	-87.65	33.04	Fosters	24N	04E	23
Tu957		Tuscaloosa	439436	3655748	-87.65	33.04	Fosters	24N	04E	23
Tu958		Tuscaloosa	440216	3655834	-87.64	33.04	Fosters	24N	04E	24
Tu959		Tuscaloosa	441004	3653298	-87.63	33.02	Fosters	24N	04E	36
Tu960		Tuscaloosa	438059	3655233	-87.66	33.04	Fosters	24N	04E	22
Tu961		Tuscaloosa	433926	3652179	-87.71	33.01	Fosters	24N	04E	32
Tu962		Tuscaloosa	441251	3658132	-87.63	33.06	Fosters	24N	04E	13
Tu963		Tuscaloosa	441383	3658149	-87.63	33.06	Fosters	24N	04E	13
Tu964		Tuscaloosa	439537	3662552	-87.65	33.10	Fosters	22S	11W	25
Tu965		Tuscaloosa	439629	3662647	-87.65	33.10	Fosters	22S	11W	25
Tu966		Tuscaloosa	442171	3663380	-87.62	33.11	Englewood	22S	10W	30
Tu967		Tuscaloosa	442375	3663297	-87.62	33.11	Englewood	22S	10W	30
Tu968		Tuscaloosa	442574	3663812	-87.62	33.11	Englewood	22S	10W	30
Tu969		Tuscaloosa	442516	3663308	-87.62	33.11	Englewood	22S	10W	30
Tu970		Tuscaloosa	442631	3663688	-87.61	33.11	Englewood	22S	10W	30
Tu971		Tuscaloosa	442646	3663760	-87.61	33.11	Englewood	22S	10W	30
Tu972		Tuscaloosa	442660	3663829	-87.61	33.11	Englewood	22S	10W	30
Tu973		Tuscaloosa	442686	3663797	-87.61	33.11	Englewood	22S	10W	30
Tu974		Tuscaloosa	442692	3663628	-87.61	33.11	Englewood	22S	10W	30
Tu975		Tuscaloosa	442752	3663792	-87.61	33.11	Englewood	22S	10W	30
Tu976		Tuscaloosa	442807	3663792	-87.61	33.11	Englewood	22S	10W	30
Tu977		Tuscaloosa	442850	3663731	-87.61	33.11	Englewood	22S	10W	30
Tu978		Tuscaloosa	442856	3663812	-87.61	33.11	Englewood	22S	10W	30
Tu979		Tuscaloosa	442953	3663731	-87.61	33.11	Englewood	22S	10W	29
Tu980		Tuscaloosa	442571	3663107	-87.62	33.11	Englewood	22S	10W	30
Tu981		Tuscaloosa	442640	3663093	-87.61	33.11	Englewood	22S	10W	30

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu947	9	28	98.1	4030.1	0.1	0.1	below 50 m	125	floodplain	coastal	river
Tu948	46	51	240.0	50686.4	1.1	0.5	below 50 m	125	floodplain	coastal	river
Tu949	11	34	129.6	5193.5	0.3	0.1	below 50 m	125	floodplain	coastal	river
Tu950	25	37	141.8	47800.6	0.4	0.1	below 50 m	125	floodplain	coastal	swamp
Tu951	12	33	181.1	5686.9	0.5	0.2	below 50 m	125	floodplain	coastal	river
Tu952	10	18	66.0	49792.7	0.1	0.0	below 50 m	125	floodplain	coastal	river
Tu953	22	24	109.8	4219.2	0.2	0.1	below 50 m	125	floodplain	coastal	swamp
Tu954	51	51	185.1	10768.5	0.7	0.3	below 50 m	125	floodplain	coastal	first
Tu955	7	13	153.4	5497.9	0.4	0.2	below 50 m	125	floodplain	coastal	first
Tu956	50	130	329.1	22607.6	1.3	0.5	below 50 m	125	floodplain	coastal	first
Tu957	15	15	112.8	3552.9	0.3	0.1	below 50 m	125	floodplain	coastal	first
Tu958	20	35	178.2	7516.9	0.5	0.2	below 50 m	125	floodplain	coastal	river
Tu959	20	30	187.2	2160.4	0.5	0.2	below 50 m	122	floodplain	coastal	river
Tu960	1	5	105.0	876.8	0.2	0.1	below 50 m	120	floodplain	coastal	first
Tu961	50	75	292.5	4766.8	1.2	0.5	below 50 m	112	floodplain	coastal	swamp
Tu962	33	92	237.8	2947.4	0.7	0.3	below 50 m	120	floodplain	coastal	second
Tu963	0	40	130.9	1253.6	0.3	0.1	below 50 m	120	floodplain	coastal	river
Tu964	15	23	185.2	2624.5	0.6	0.3	below 50 m	130	floodplain	coastal	first
Tu965	9	18	132.2	1340.0	0.3	0.1	below 50 m	130	floodplain	coastal	first
Tu966	61	62	255.5	5193.5	1.3	0.5	below 50 m	125	floodplain	coastal	first
Tu967	30	58	266.7	4030.1	1.0	0.4	below 50 m	125	floodplain	coastal	first
Tu968	37	151	497.2	11473.1	2.8	1.1	below 50 m	125	floodplain	coastal	swamp
Tu969	18	37	203.9	2355.6	0.6	0.2	below 50 m	125	floodplain	coastal	first
Tu970	22	30	162.2	2093.0	0.5	0.2	below 50 m	125	floodplain	coastal	swamp
Tu971	31	44	187.6	2800.0	0.7	0.3	below 50 m	125	floodplain	coastal	swamp
Tu972	26	89	266.7	4030.1	1.0	0.4	below 50 m	125	floodplain	coastal	swamp
Tu973	28	32	164.3	2147.3	0.5	0.2	below 50 m	125	floodplain	coastal	swamp
Tu974	22	44	196.9	3084.3	0.8	0.3	below 50 m	125	floodplain	coastal	river
Tu975	35	83	327.4	6170.5	1.5	0.6	below 50 m	125	floodplain	coastal	river
Tu976	15	100	406.9	7502.9	1.9	0.8	below 50 m	125	floodplain	coastal	river
Tu977	10	22	153.8	1583.4	0.4	0.2	below 50 m	125	floodplain	coastal	river
Tu978	33	78	327.4	6170.5	1.5	0.6	below 50 m	125	floodplain	coastal	river
Tu979	22	35	178.4	2533.4	0.6	0.3	below 50 m	125	floodplain	coastal	river
Tu980	21	42	203.9	2355.6	0.6	0.2	below 50 m	125	floodplain	coastal	first
Tu981	32	32	164.5	2153.4	0.5	0.2	below 50 m	125	floodplain	coastal	first

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu947	114	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	
Tu948	138	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	
Tu949	153	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	
Tu950	116	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu951	186	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	
Tu952	96	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	
Tu953	147	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu954	211	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu955	198	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu956	132	1	T16	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu957	304	1	T13	AL106	1	2	2	TRUE	TRUE			TRUE	
Tu958	144	1	T13	AL106	1	1	2	TRUE	TRUE			TRUE	
Tu959	220	1	T17	AL106	1	1	1	TRUE	TRUE				
Tu960	109	1	T16	AL106	2	3	3	TRUE	TRUE				
Tu961	20	1	T2	AL106	2	2	4		TRUE			TRUE	
Tu962	66	1	T17	AL106	1	2	3	TRUE					
Tu963	93	1	T17	AL106	1	2	3	TRUE					
Tu964	37	1	T16	AL106	4	2	6		TRUE			TRUE	
Tu965	122	1	T2	AL106	3	2	6		TRUE			TRUE	
Tu966	43	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu967	126	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu968	352	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu969	216	1	T17	AL106	1	1	6		TRUE			TRUE	
Tu970	392	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu971	386	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu972	329	1	T17	AL106	2	2	6		TRUE			TRUE	
Tu973	393	1	T17	AL106	2	2	6		TRUE			TRUE	
Tu974	358	1	T17	AL106	1	1	6		TRUE			TRUE	
Tu975	396	1	T17	AL106	2	1	6		TRUE			TRUE	
Tu976	341	1	T17	AL106	1	2	6		TRUE			TRUE	
Tu977	258	1	T17	AL106	1	1	6		TRUE			TRUE	
Tu978	270	1	T17	AL106	1	2	6		TRUE			TRUE	
Tu979	175	1	T17	AL106	1	2	6		TRUE			TRUE	
Tu980	69	1	T17	AL106	1	1	6		TRUE			TRUE	
Tu981	62	1	T17	AL106	1	1	6		TRUE			TRUE	

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu947	TRUE	3	1	TRUE	TRUE		West Jefferson	Mississippian	
Tu948	TRUE	5	3	TRUE	TRUE		West Jefferson	Mississippian	
Tu949	TRUE	0	9		TRUE		Mississippian		
Tu950	TRUE	0	12		TRUE		Mississippian		
Tu951	TRUE	0	3		TRUE		Mississippian		
Tu952	TRUE	1	4	TRUE	TRUE		West Jefferson	Mississippian	
Tu953	TRUE	9	6	TRUE	TRUE		West Jefferson	Mississippian	
Tu954	TRUE	9	5	TRUE	TRUE		West Jefferson	Mississippian	
Tu955	TRUE	0	2		TRUE		Mississippian		
Tu956	TRUE	19	0	TRUE			West Jefferson		
Tu957	TRUE	4	0	TRUE			West Jefferson		
Tu958	TRUE	16	36	TRUE	TRUE		West Jefferson	Mississippian	
Tu959	TRUE	0	9		TRUE		Mississippian		
Tu960	TRUE	0	0				historic		
Tu961	TRUE	81	0	TRUE			West Jefferson		
Tu962	TRUE	52	12	TRUE	TRUE		West Jefferson	Mississippian	
Tu963	TRUE	1	6	TRUE	TRUE		West Jefferson	Mississippian	
Tu964	TRUE	0	0				unknown aboriginal		
Tu965	TRUE	0	0				unknown aboriginal		
Tu966	TRUE	1	0	TRUE			West Jefferson		
Tu967	TRUE	1	2	TRUE	TRUE		West Jefferson	Mississippian	
Tu968	TRUE	69	5	TRUE	TRUE		West Jefferson	Mississippian	historic
Tu969	TRUE	3	0	TRUE			West Jefferson		
Tu970	TRUE	1	0	TRUE			West Jefferson		
Tu971	TRUE	2	0	TRUE			West Jefferson		
Tu972	TRUE	10	2	TRUE	TRUE		West Jefferson	Mississippian	
Tu973	TRUE	0	0				unknown aboriginal		
Tu974	TRUE	24	0	TRUE			West Jefferson		
Tu975	TRUE	58	2	TRUE	TRUE		West Jefferson	Mississippian	
Tu976	TRUE	13	4	TRUE	TRUE		West Jefferson	Mississippian	
Tu977	TRUE	2	0	TRUE			West Jefferson		
Tu978	TRUE	39	0	TRUE			West Jefferson		
Tu979	TRUE	10	0	TRUE			West Jefferson		
Tu980	TRUE	0	2		TRUE		Mississippian		
Tu981	TRUE	0	0				unknown aboriginal		

Site Number	Component 4	Component 5	Sponsor	Notes
Tu947			UAL	
Tu948			UAL	
Tu949			UAL	
Tu950			UAL	
Tu951			UAL	
Tu952			UAL	
Tu953			UAL	
Tu954			UAL	
Tu955			UAL	
Tu956			UAL	
Tu957			UAL	
Tu958			UAL	
Tu959			UAL	
Tu960			UAL	
Tu961			UAL	
Tu962			UAL	
Tu963			UAL	
Tu964			UAL	
Tu965			UAL	
Tu966			UAL	
Tu967			UAL	
Tu968			UAL	
Tu969			UAL	
Tu970			UAL	
Tu971			UAL	
Tu972			UAL	
Tu973			UAL	
Tu974			UAL	
Tu975			UAL	
Tu976			UAL	
Tu977			UAL	
Tu978			UAL	
Tu979			UAL	
Tu980			UAL	
Tu981			UAL	

Site Number	Site Name	County	Easting	Northing	X	Y	USGS Topo	Township	Range	Section
Tu982		Tuscaloosa	442234	3663728	-87.62	33.11	Englewood	22S	10W	30
Tu983		Tuscaloosa	442168	3663731	-87.62	33.11	Englewood	22S	10W	30

Site Number	Major Axis	Minor Axis	Perimeter Meters	Area Meters	Acres	Hectares	Elev	Elevation	Topographic Zone	Physiographic Zone	Nearest Water
Tu982	13	32	178.4	2533.4	0.6	0.3	below 50 m	125	floodplain	coastal	swamp
Tu983	4	16	112.8	1013.4	0.3	0.1	below 50 m	125	floodplain	coastal	swamp

Site Number	Distance to Water	Geo Form	County Soil	State Soil	Water	Mounds	Moundville	Gas Field	Myer	Bozeman	Well Intersect	Myer Intersect	At OAR
Tu982	232	1	T17	AL106	3	1	6		TRUE			TRUE	
Tu983	204	1	T17	AL106	2	1	6		TRUE			TRUE	

Site Number	Artifact Count	Grog	Shell	Late Woodland	Mississippian	Mound	Component 1	Component 2	Component 3
Tu982	TRUE	1	0	TRUE			West Jefferson		
Tu983	TRUE	0	0				unknown aboriginal		

Site Number	Component 4	Component 5	Sponsor	Notes
Tu982			UAL	
Tu983			UAL	

Appendix C: County Soil Tables

Table C-1 MCDF, sites stratified by county soil series.

County Soil Series	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Tuscaloosa County				
Adaton silt loam	1995.6	2	3	0
Bama fine sandy loam, 0-2% slopes	453.4	0	1	0
Bama fine sandy loam, 2-6% slopes	626.5	2	0	1
Bibb soils, frequently flooded	21.5	0	0	0
Boswell loam, 4-10% slopes	8.3	0	0	0
Cahaba sandy loam	568.6	21	17	1
Choccolocco silt loam	593.6	10	7	1
Dundee silt loam	1283.9	2	0	0
Ellisville silt loam, frequently flooded	1460.5	32	29	0
Falkner silt loam	179.6	1	1	0
Iuka-Mantachie complex, frequently flooded	934.8	3	2	0
Luverne-Smithdale complex, 4-10% slopes	9.4	0	0	0
Pits	85.5	1	1	0
Ruston fine sandy loam, 0-2% slopes	63.1	0	1	0
Ruston fine sandy loam, 2-6% slopes	194.6	1	1	0
Shatta silt loam, 0-2% slopes	101.6	0	0	0
Shatta silt loam, 2-6% slopes	200.3	2	4	0

Table C-1 MCDF, sites stratified by county soil series.

County Soil Series	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Smithdale association, hilly	1785.0	0	0	0
Smithdale fine sandy loam, 6-15% slopes	926.5	3	1	0
Smithdale fine sandy loam, 15-35% slopes	147.6	0	0	0
Smithdale-Flomaton complex, 15-35% slopes	517.8	0	0	0
Smithdale-Luverne association, hilly	89.3	0	0	0
Smithdale-Luverne complex, 15-35% slopes	280.0	0	0	0
Hale County				
Bama fine sandy loam, 2-5% slopes	845.8	1	1	0
Bassville sandy loam, 0-2% slopes, occasionally flooded	74.9	0	0	0
Bibb to Iuka complex, 1-3% slopes, frequently flooded	58.6	0	0	0
Bigbee loamy sand, 0-2% slopes, occasionally flooded	1.7	0	0	0
Cahaba fine sandy loam, 0-2% slopes	797.2	8	9	1
Cahaba fine sandy loam, 2-5% slopes, occasionally flooded	17.1	1	0	0
Columbus loam, 0-2% slopes, occasionally flooded	261.8	0	0	0
Fluvaquents	33.1	0	0	0

Table C-1 MCDF, sites stratified by county soil series.

County Soil Series	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Greenville fine sandy loam, 0-2% slopes	48.6	0	0	0
Greenville fine sandy loam, 2-5% slopes	138.2	0	0	0
Guin soils (undifferentiated)	698.7	0	2	0
Lucedale fine sandy loam, 2-5% slopes	380.6	0	0	0
Luverne-Smithdale complex, 5-15% slopes	711.0	0	0	0
Luverne-Smithdale complex, 15-35% slopes	876.8	0	0	0
Mantachie-Iuka-Kinston soils, 0-1% slopes, frequently flooded	887.0	2	3	0
Mashulaville silt loam, ponded	100.8	1	0	0
Savannah fine sandy loam, 0-2% slopes	824.4	1	0	0
Savannah fine sandy loam, 2-5% slopes	472.0	1	0	1
Shatta silt loam, 2-6% slopes	92.2	0	0	0
Smithdale fine sandy loam, 2-8% slopes	870.0	0	0	0
Smithdale fine sandy loam, 5-15% slopes	822.5	0	0	1
Una silty clay, 0-1% slopes	610.9	0	0	0
Urbo-Moorville-Una complex, gently undulating, frequently flooded	3382.7	0	1	0

Table C-1 MCDF, sites stratified by county soil series.

County Soil Series	Total Area (ha)	Late Woodland Components	Mississippian Nonmound Components	Mississippian Mound Sites
Wadley-Smithdale-Boykin complex, loamy sand, 5-15% slopes	35.6	0	0	0

Table C-2 Late Woodland site densities in Well Pad surveys, stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Tuscaloosa County			
Adaton silt loam	5.9	0	0.0
Bama fine sandy loam, 0-2% slopes	5.0	0	0.0
Bama fine sandy loam, 2-6% slopes	2.5	0	0.0
Bibb soils, frequently flooded	0.0	0	--
Boswell loam, 4-10% slopes	0.0	0	--
Cahaba sandy loam	0.0	0	--
Choccolocco silt loam	4.2	1	23.8
Dundee silt loam	0.0	0	--
Ellisville silt loam, frequently flooded	12.5	4	32.0
Falkner silt loam	0.8	0	0.0
Iuka-Mantachie complex, frequently flooded	5.9	0	0.0
Luverne-Smithdale complex, 4-10% slopes	0.0	0	--
Pits	2.5	0	0.0
Ruston fine sandy loam, 0-2% slopes	0.0	0	--
Ruston fine sandy loam, 2-6% slopes	2.5	0	0.0
Shatta silt loam, 0-2% slopes	0.0	0	--
Shatta silt loam, 2-6% slopes	0.8	0	0.0
Smithdale association, hilly	14.2	0	0.0

Table C-2 Late Woodland site densities in Well Pad surveys, stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Smithdale fine sandy loam, 6-15% slopes	10.0	2	20.0
Smithdale fine sandy loam, 15-35% slopes	1.7	0	0.0
Smithdale-Flomaton complex, 15-35% slopes	0.0	0	--
Smithdale-Luverne association, hilly	0.0	0	--
Smithdale-Luverne complex, 15-35% slopes	1.7	0	0.0
Hale County			
Bama fine sandy loam, 2-5% slopes	29.3	0	0.0
Bassville sandy loam, 0-2% slopes, occasionally flooded	0.0	0	--
Bibb to Iuka complex, 1-3% slopes, frequently flooded	0.0	0	--
Bigbee loamy sand, 0-2% slopes, occasionally flooded	0.0	0	--
Cahaba fine sandy loam, 0-2% slopes	24.2	0	0.0
Cahaba fine sandy loam, 2-5% slopes, occasionally flooded	0.0	0	--
Columbus loam, 0-2% slopes, occasionally flooded	5.9	0	0.0
Fluvaquents	0.0	0	--
Greenville fine sandy loam, 0-2% slopes	1.7	0	0.0

Table C-2 Late Woodland site densities in Well Pad surveys, stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Greenville fine sandy loam, 2-5% slopes	3.3	0	0.0
Guin soils (undifferentiated)	15.9	0	0.0
Lucedale fine sandy loam, 2-5% slopes	0.8	0	0.0
Luverne-Smithdale complex, 5-15% slopes	6.7	0	0.0
Luverne-Smithdale complex, 15-35% slopes	7.5	0	0.0
Mantachie-Iuka-Kinston soils, 0-1% slopes, frequently flooded	7.5	0	0.0
Mashulaville silt loam, ponded	5.0	0	0.0
Savannah fine sandy loam, 0-2% slopes	15.0	1	6.7
Savannah fine sandy loam, 2-5% slopes	8.4	0	0.0
Shatta silt loam, 2-6% slopes	1.7	0	0.0
Smithdale fine sandy loam, 2-8% slopes	28.4	0	0.0
Smithdale fine sandy loam, 5-15% slopes	16.7	0	0.0
Una silty clay, 0-1% slopes	1.7	0	0.0
Urbo-Moorville-Una complex, gently undulating, frequently flooded	48.5	0	0.0
Wadley-Smithdale-Boykin complex, loamy sand, 5-15% slopes	0.0	0	--

Table C-3 HM, Late Woodland site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Tuscaloosa County			
Adaton silt loam	166.8	1	0.6
Bama fine sandy loam, 0-2% slopes	8.5	0	0.0
Bama fine sandy loam, 2-6% slopes	14.9	1	6.7
Bibb soils, frequently flooded	0.0	0	--
Boswell loam, 4-10% slopes	0.0	0	--
Cahaba sandy loam	125.5	23	18.3
Choccolocco silt loam	301.6	34	11.3
Dundee silt loam	211.0	5	2.4
Ellisville silt loam, frequently flooded	421.6	47	11.1
Falkner silt loam	44.8	0	0.0
Iuka-Mantachie complex, frequently flooded	19.5	1	5.1
Luverne-Smithdale complex, 4-10% slopes	0.0	0	--
Pits	1.6	0	0.0
Ruston fine sandy loam, 0-2% slopes	0.6	0	0.0
Ruston fine sandy loam, 2-6% slopes	4.8	0	0.0
Shatta silt loam, 0-2% slopes	2.9	0	0.0
Shatta silt loam, 2-6% slopes	8.3	0	0.0
Smithdale association, hilly	0.3	0	0.0
Smithdale fine sandy loam, 6-15% slopes	28.5	1	3.5
Smithdale fine sandy loam, 15-35% slopes	1.5	0	0.0
Smithdale-Flomaton complex, 15-35% slopes	6.1	0	0.0

Table C-3 HM, Late Woodland site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Late Woodland Components	Late Woodland Site Density
Smithdale-Luverne association, hilly	0.0	0	--
Smithdale-Luverne complex, 15-35% slopes	2.3	0	0.0

Table C-4 MCDF, Mississippian Site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Tuscaloosa County			
Adaton silt loam	5.9	0	0.0
Bama fine sandy loam, 0-2% slopes	5.0	0	0.0
Bama fine sandy loam, 2-6% slopes	2.5	0	0.0
Bibb soils, frequently flooded	0.0	0	--
Boswell loam, 4-10% slopes	0.0	0	--
Cahaba sandy loam	0.0	0	--
Choccolocco silt loam	4.2	1	23.8
Dundee silt loam	0.0	0	--
Ellisville silt loam, frequently flooded	12.5	2	16.0
Falkner silt loam	0.8	0	0.0
Iuka-Mantachie complex, frequently flooded	5.9	0	0.0
Luverne-Smithdale complex, 4-10% slopes	0.0	0	--
Pits	2.5	0	0.0
Ruston fine sandy loam, 0-2% slopes	0.0	0	--
Ruston fine sandy loam, 2-6% slopes	2.5	0	0.0
Shatta silt loam, 0-2% slopes	0.0	0	--
Shatta silt loam, 2-6% slopes	0.8	0	0.0
Smithdale association, hilly	14.2	0	0.0
Smithdale fine sandy loam, 6-15% slopes	10.0	0	0.0
Smithdale fine sandy loam, 15-35% slopes	1.7	0	0.0
Smithdale-Flomaton complex, 15-35% slopes	0.0	0	--
Smithdale-Luverne association, hilly	0.0	0	--
Smithdale-Luverne complex, 15-35% slopes	1.7	0	0.0

Table C-4 MCDF, Mississippian Site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Hale County			
Bama fine sandy loam, 2-5% slopes	29.3	0	0.0
Bassville sandy loam, 0-2% slopes, occasionally flooded	0.0	0	--
Bibb to Iuka complex, 1-3% slopes, frequently flooded	0.0	0	--
Bigbee loamy sand, 0-2% slopes, occasionally flooded	0.0	0	--
Cahaba fine sandy loam, 0-2% slopes	24.2	0	0.0
Cahaba fine sandy loam, 2-5% slopes, occasionally flooded	0.0	0	--
Columbus loam, 0-2% slopes, occasionally flooded	5.9	0	0.0
Fluvaquents	0.0	0	--
Greenville fine sandy loam, 0-2% slopes	1.7	0	0.0
Greenville fine sandy loam, 2-5% slopes	3.3	0	0.0
Guin soils (undifferentiated)	15.9	0	0.0
Lucedale fine sandy loam, 2-5% slopes	0.8	0	0.0
Luverne-Smithdale complex, 5-15% slopes	6.7	0	0.0
Luverne-Smithdale complex, 15-35% slopes	7.5	0	0.0
Mantachie-Iuka-Kinston soils, 0-1% slopes, frequently flooded	7.5	1	13.3
Mashulaville silt loam, ponded	5.0	0	0.0
Savannah fine sandy loam, 0-2% slopes	15.0	0	0.0
Savannah fine sandy loam, 2-5% slopes	8.4	0	0.0
Shatta silt loam, 2-6% slopes	1.7	0	0.0
Smithdale fine sandy loam, 2-8% slopes	28.4	0	0.0

Table C-4 MCDF, Mississippian Site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Smithdale fine sandy loam, 5-15% slopes	16.7	0	0.0
Una silty clay, 0-1% slopes	1.7	0	0.0
Urbo-Moorville-Una complex, gently undulating, frequently flooded	48.5	1	2.1
Wadley-Smithdale-Boykin complex, loamy sand, 5-15% slopes	0.0	0	--

Table C-5 HM, Mississippian site densities stratified by county soil series.

County Soil Series	Surveyed Area (ha)	Mississippian Nonmound Components	Mississippian Site Density
Tuscaloosa County			
Adaton silt loam	166.8	2	1.2
Bama fine sandy loam, 0-2% slopes	8.5	0	0.0
Bama fine sandy loam, 2-6% slopes	14.9	0	0.0
Bibb soils, frequently flooded	0.0	0	--
Boswell loam, 4-10% slopes	0.0	0	--
Cahaba sandy loam	125.5	20	15.9
Choccolocco silt loam	301.6	30	9.9
Dundee silt loam	211.0	3	1.4
Ellisville silt loam, frequently flooded	421.6	33	7.8
Falkner silt loam	44.8	0	0.0
Iuka-Mantachie complex, frequently flooded	19.5	1	5.1
Luverne-Smithdale complex, 4-10% slopes	0.0	0	--
Pits	1.6	0	0.0
Ruston fine sandy loam, 0-2% slopes	0.6	0	0.0
Ruston fine sandy loam, 2-6% slopes	4.8	0	0.0
Shatta silt loam, 0-2% slopes	2.9	0	0.0
Shatta silt loam, 2-6% slopes	8.3	1	12.0
Smithdale association, hilly	0.3	0	0.0
Smithdale fine sandy loam, 6-15% slopes	28.5	1	3.5
Smithdale fine sandy loam, 15-35% slopes	1.5	0	0.0
Smithdale-Flomaton complex, 15-35% slopes	6.1	0	0.0
Smithdale-Luverne association, hilly	0.0	0	--
Smithdale-Luverne complex, 15-35% slopes	2.3	0	0.0

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