### BETWEEN PLAZA AND PALISADE: HOUSEHOLD AND COMMUNITY ORGANIZATION AT EARLY MOUNDVILLE

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A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Anthropology.

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#### ABSTRACT

GREGORY D. WILSON: Between Plaza and Palisade: Household and Community Organization at Early Moundville (Under the direction of Vincas P. Steponaitis)

This dissertation examines issues of political consolidation and the origins of social inequality in the context of the early Mississippian Moundville chiefdom in west-central Alabama. Using a GIS-based approach I link large-scale architectural and artifactual datasets to examine variability in the composition of and relationships among early Mississippian households at the Moundville site. Specifically, I explore how everyday household activities and political negotiations generated relations of inequality at the political and ceremonial capital of the Moundville chiefdom.

Overall this analysis has revealed that the early Mississippian Moundville community consisted of a number of spatially discrete multi-household groups. This form of multihousehold organization is similar to ethnohistorically described kin groups from the early Historic southeastern United States. Hosting feasts, dances, and other ceremonial events were important strategies by which elite households created social debts and legitimized their positions of authority. Non-elite households, on the other hand, maintained considerable economic and ritual autonomy through diversified production activities, risk sharing, and household ceremonialism.

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#### CHAPTER 1

#### INTRODUCTION

How complex were Mississippian polities and in what ways were they complex? What role did small-scale social groups play in the emergence of regionally organized political hierarchies? These issues are the focus of this archaeological investigation of the Moundville site in the Black Warrior valley of west-central Alabama. Between the 12<sup>th</sup> and 15<sup>th</sup> centuries, the Moundville site was the political and ceremonial center of a regionally organized Mississippian polity. The Moundville site encompasses 70 hectares and consists of 32 mounds grouped in pairs around a rectangular plaza (Figure 1.1). There is a very orderly arrangement of these earthen monuments (Peebles 1971, 1978). The largest mounds are located on the northern edge of the plaza and become increasingly smaller going either clockwise or counter clockwise around the plaza to the south (Figure 1.1). Knight (1998) has interpreted this community plan as a sociogram, "an architectural depiction of a social order based on ranked clans" (Steponaitis and Knight 2004:168). According to this model the Moundville community was segmented into a variety of different clan precincts, the ranked position of which was represented in the size and arrangement of paired earthen mounds around the central plaza. The largest earthen mounds on the northern portion of the plaza were associated with the highest-ranking clans while smaller mounds to the south were associated with lower-ranking clans.

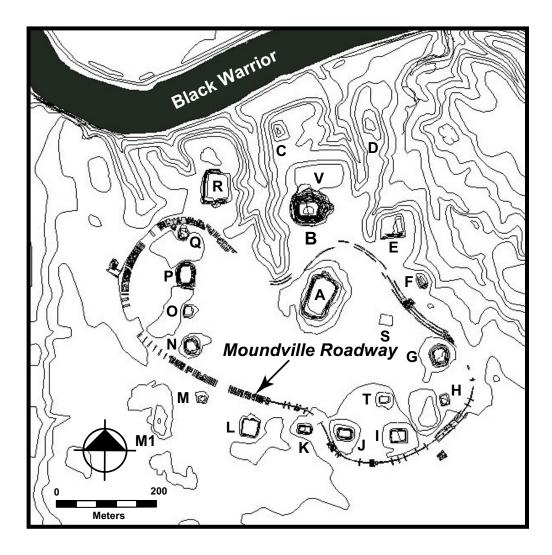


Figure 1.1 The Moundville site featuring the 1939-1940 Roadway excavation.

There has been a general acceptance of Knight's (1998) interpretation, which is grounded in both archaeological analysis and ethnohistoric analogy. Still unclear is the kind of hierarchy this network of ranked clans at Moundville entailed. Did a corporate group's ranked place and space in the Moundville sociogram involve notable differences in status and wealth? If so, how were these inequalities materialized and what kinds of corporate group strategies served to produce them?

Previous investigations of Moundville's Mississippian occupation portrayed a complex chiefdom that was highly differentiated politically, socially, and economically. It has been argued that substantial organizational differences not only characterized mound and off-mound residential contexts, but also crosscut the broader community and regional polity (Peebles 1971, 1987a, 1987b; Peebles and Kus 1977; Steponaitis 1978; Welch 1991a, 1991b, 1995; Welch and Scarry 1995). This model of Moundville's political economy has become an oft-cited example of how Mississippian polities were organized and compare to other "chiefdoms" around the world (Cobb 2003; Earle 1987; Price and Feinman 2001; Scarry and Fish 1999). In recent years, however, there has been increasing debate concerning the organization of Moundville's political economy (Marcoux 2000; Maxham 2000, 2004; Welch 1996; Wilson 2001). These disagreements stem from a broader scholarly debate regarding the complexity of Mississippian polities throughout the southeastern U.S. (Blitz 1999; Milner 1998; Muller 1984, 1986, 1997; Pauketat 1994; Welch 1991b). Over the last decade different scholars have generated contrasting arguments based on the examination of the same regional datasets (Anderson 1994; Blitz 1999; Emerson 1997a 1997b; Mehrer 1995). In many cases it appears that these disparate interpretations are linked to different

perspectives about the organizational dynamics that define "chiefdoms" as a societal category.

I believe that investigations of Moundville's political economy would benefit from the implementation of a household-based archaeological approach. By focusing on the everyday practices and interactions among small-scale social groups, I hope to sidestep many of the *a priori* assumptions about macro-scale organizational dynamics which fuel ongoing debates about Mississippian political complexity. I begin by documenting and describing the different residential groups at early Moundville and the kinds of routine activities that formed everyday Mississippian domestic life. Secondly, I consider how the everyday practices and interactions among these groups contributed to the emergence of social complexity in the Black Warrior Valley of west-central Alabama. The data for this research include 140 Mississippian buildings and 20,616 pottery sherds from throughout the Moundville site. These data derive primarily from the 1939 and 1940 Moundville Roadway excavations conducted by the Alabama Museum of Natural History.

Examining the emergence and maintenance of political complexity through the everyday practices of small groups is a complex endeavor. My investigation of this issue is divided into seven chapters. In Chapter 2 I provide background on theories of practice and agency and discuss how small-group interactions structure community- and polity-scale social and economic organization. I also offer a broader discussion of the history of chiefdom studies and outline the basic issues relevant to household archaeology. Chapter 3 provides background on the organization of Mississippian communities and households. I begin by summarizing ethnohistorical information on Southeastern kinship systems as it relates to Mississippian social organization. I also consider archaeological case studies of

Mississippian residential groups in order to identify general trends in the spatial layout and organization of Mississippian households. This is followed by a review of previous archaeological investigations about Moundville community organization and Mississippian occupation in the Black Warrior Valley of west-central Alabama. Chapter 4 provides background on the 1939 and 1940 Moundville Roadway.

The data for this study are presented in Chapters 5, 6, and 7. I begin in Chapter 5 with a ceramic and architectural seriation that chronologically situates the different residential groups that are the focus of my analyses. In Chapter 6 these different residential groups are defined and discussed. A number of architectural analyses provide the data that inform my investigation of Moundville's community formation, occupation span, and household wealth and status. An analysis and discussion of domestic pottery assemblages in Chapter 7 helps broaden my investigation of Mississippian household organization at Moundville by providing information on domestic foodways. Finally, in Chapter 8 I summarize the results of my analyses and discuss the role that small group interactions played in the emergence of the Moundville polity.

#### CHAPTER 2

#### CHIEFDOM ORIGINS AND ORGANIZATION

The origins and organization of political complexity has a long history of investigation in the social sciences. The chiefdom concept in particular has become an important topic of scholarly attention over the past 50 years. This is particularly the case in the southeastern United States where Mississippian chiefdoms marked the peak of political complexity prior to European contact. As I write many older and well-accepted models and explanations of Mississippian chiefdom development and organization are being reconsidered (Beck 2003; Blitz 1999; Blitz and Lorenz 2002; Cobb 2003; Wilson 2001). This is also an era marked by heightened disagreements about how complex Mississippian chiefdoms were and how regional hierarchies were established in the first place (Blitz 1999; Emerson 1997a 1997b; Milner 1998; Muller 1997; Pauketat 1994).

In this chapter I provide historical background on the anthropological research leading up to these current academic debates. In particular I review previous research on chiefdom organization and elite strategies of political control. I then outline a practice-based theoretical approach which guides my interpretations of the household and community data considered in the following chapters. Households and other small-scale social groups are the primary social units of this analysis in this dissertation. Thus, in the final portion of this chapter I discuss important middle-range theoretical issues related to household archaeology.

#### **Origins of the Chiefdom Concept**

The use of the term chiefdom has undergone many transformations throughout the years. Oberg (1955) has been credited with the first use of the term in reference to multiple villages ruled by a single leader or chief. The term was later adopted and given additional meaning by early cultural evolutionists (Fried 1967; Sahlins 1962; Service 1962). For unilinear evolutionists like Service, chiefdoms were societal forms intermediate in development between tribes and states. Service (1962:144) argued that redistribution was the primary economic function of chiefdoms (Fried 1967; Sahlins 1958; Service 1962, 1975). Due to population pressure and resource stress, chiefs were thought to have been necessary for organizing the management of production and centralized redistribution of foodstuffs among different segments of the populace. This redistribution scenario was later discredited by the work of Earle (1977, 1978) and others (Carneiro 1981; Peebles and Kus 1977, Scarry 1993a). Earle's (1977) study of Polynesian chiefdoms revealed that while the nonelite mobilized surplus foodstuffs and other goods to chiefly administrators, they were not redistributed to the regional populace, but instead were consumed by the chief and other officials. These studies also demonstrated that the households and communities comprising many chiefdoms were largely economically self-sufficient and not reliant upon centralized chiefly managers for redistribution.

Despite this important criticism there is much of Service's original discussion with which scholars still agree. Redistribution aside, many scholars still conceive of chiefdoms as societies with some degree of political centralization organized around

hereditary leadership positions (Anderson 1994:5; Muller 1997:41; Pauketat 1994). Ascribed status differences in chiefdoms are based on genealogical distance from chiefly rulers (Knight 1990; Service 1962:155). Many scholars also see a qualitative organizational difference between chiefdoms and states. Political authority in chiefdoms is not backed by an administrative bureaucracy or a monopoly of force as it is in statelevel societies (Pauketat 1994; Service 1962, 1975:86). These last two points support Service's (1975) additional observation that there is an inherent organizational instability to chiefdom political structure. Service argues that the genealogical basis of chiefly authority results in an overabundance of qualified people vying for limited leadership positions (see also Fried 1967:109). Thus, ambiguity built into kin-based systems of social ascription generates possibilities for aspiring elite to contest a leader's authority (Brumfiel and Fox 1994). This is especially true in more politically complex chiefdoms where there may be lower-ranking chiefs who seek the paramouncy for themselves (Anderson 1994; Pauketat 1994:21-22; Service 1975:96).

#### The Basis of Chiefly Authority

Issues of power and control gained importance as scholars recognized that chiefs and chiefdoms were not necessary to manage redistributive economies (Billman 1999; Haas 1982; Helms 1979; Peebles and Kus 1977; Steponaitis 1978; Wright 1984). But if this was the case, then why and how did stratified political formations emerge? Some scholars argue that the key to political development was competition over economic resources. Carneiro (1981) suggests that social and environmental circumscription

generated situations in which resource availability was limited. Under circumstances in which people's settlement mobility was restricted, warfare emerged as the primary means by which groups competed for access to arable land, water, and other basic resources (Brookfield and Brown 1963; Carneiro 1970; Rappaport 1967). The victors of such conquests thus became politically dominant over the conquered.

Other scholars argue that administrative hierarchies emerged through the centralized control of long-distance exchange networks (Helms 1979; Steponaitis 1991). The prestige goods model introduced by Frankenstein and Rowlands (1978) posits that central administrators gained political authority through exchange relations with their high-ranking peers in distant polities. Elite groups monopolized the production and exchange of items necessary for a wide range of social transactions such as bride wealth payments, status markers, and emblems of political office. Such items were charged with social value based on their exotic origin. The control over long-distance exchange networks provided the elite with an important economic and ideological base of power.

More recent explanations have emphasized that the control over subsistence economy, warfare, and exchange networks were interrelated strategies employed to some degree by all successful chiefly administrators (Earle 1997; Haas 1982). Haas (1982:159-160) argues there are three different power bases available to aspiring leaders; economic, ideological, and physical.<sup>1</sup> Economic power consists of the "control over the production or procurement and distribution of subsistence and/or non subsistence resources." (Haas 1982:159). A well known example of economic power is the elite control of irrigation systems (Billman 2002; Earle 1997; Sanders 1976; Wittfogel 1957). Economic power, however, may also consist of controlling the exchange or production of

highly-valued items or resources such as agricultural tools or building materials (Welch 1991a; Wilson 2001).

Ideological power involves the "control over symbols which have religious or supernatural significance to the general population" (Haas 1982:160). More specifically, ideological power refers to the control of ideas that legitimize a system of inequality. Systems of symbolic control often emphasize the role of the elite in maintaining social and cosmological order (Helms 1979). The use of ceremony and other forms of public ritual provide the aspiring elite with opportunities by which to manipulate social ideas and values. Dominant ideologies may also be perpetuated and transmitted to the populace through the manufacture and circulation of politically-charged items such as prestige goods or material symbols of rank and authority (Frankenstein and Rowlands 1978; Peebles and Kus 1977; Wright 1984). It is important to note that subordinated groups may develop ideologies of resistance that counter dominant group interests (Comaroff 1982; Gramsci 1971).

Physical power entails "managerial control over the personnel in a military or police force." (Haas 1982:160). Physical power may be used to raid or conquer new territories or to enforce certain behaviors in the local domain (Carneiro 1981; Earle 1997:105-106). The primary goal of conquest warfare is the forceful acquisition of new lands, resources, or peoples. Raiding, on the other hand, is a tactic often employed to acquire resources or captives without establishing permanent territorial control over a region. Raiding and destroying an enemy's temple may symbolically undercut a rival leader's ritual ties to the divine (Dye 1990; Hassig 1988:105). This form of combat may also provide aspiring elite with a means of increasing their status through small-scale

incursions (Dye 1990). Thus, demonstrating military prowess in battle may be the primary goal for the participants of this kind of warfare. Elite authority built upon military success, however, may depend on the continuation of chiefly rivalries for purposes of political legitimation.

All three power bases facilitate the maintenance of social inequalities in any society. Moreover, no single power base is *a priori* less well-suited than another for chiefdom building. Successful leaders are adept at manipulating different power bases in ways that are mutually supportive. For instance, economic surpluses can be used to invest in the production of monuments and display goods for ideological purposes. Through the manipulation of material symbols, aspiring elites can emphasize the

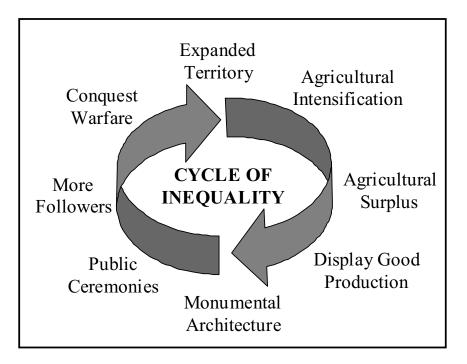


Figure 2.1 Cyclical relationships among different power bases.

importance of strong leaders for protection against external threats. Ideologies promoting the glory of combat or the threat of enemies can be used to legitimize the use of physical force. Warfare can be used to conquer new territories and acquire resources that can in turn be invested in agricultural production. Because each strategy or power base generates capital that can be invested and converted into another there is no need to interpret one as relationally causal to the others (Figure 2.1; Latour and Woolgar 1986:198-201). It can be argued that chiefly success is measured in a leader's ability to convert the capital generated from one power base or political strategy into another. Thus, long-term success in chiefly political arenas requires the perpetuation of this cycle of inequality (Figure 2.1).

It is important to note that any one of these three power bases may become more or less prominent based on a society's historical trajectory and regional environmental setting (Earle 1997:193-94). For instance, it may be difficult to develop an economic power base in environmental settings where arable land is abundant and population densities are low (e.g. southeastern U.S.). In such situations ideological control and warfare might be more effective strategies for aspiring elites to pursue. However, in environmental settings where arable land is in short supply and population densities are high, an economic power base might be more easily maintained.

#### **Chiefdom Organizational Variation**

In recent years archaeologists have come to recognize considerable organizational variation among chiefdoms throughout the world. Most notable are differences in

regional population densities, the scale of public labor projects, and the intensity of craft production and exchange (Blitz 1999; Rees 1997; Steponaitis 1991). Analytical categories such as simple/complex and corporate/network have been introduced to grapple with this variation (Blanton et al. 1996; King 2001; Steponaitis 1978; Trubbitt 2001). As heuristic tools, such concepts can provide a useful framework for understanding general structural differences in the political economy of chiefdoms. These categories, however, can also mask a wide range of organizational variability and thus, obscure more detailed understandings of organizational differences between chiefdoms (Blitz 1999; Feinman and Neitzel 1984; Yoffee 1993).

The terms simple and complex were introduced as a means of distinguishing between chiefdoms with different levels of centralized decision making (Earle 1978; Steponaitis 1978; Wright 1984). Simple chiefdoms are political entities with one level of centralized decision making above local communities. Complex chiefdoms have two levels of centralized decision making: a paramount chief ruling over a number of subordinate chiefs who in turn govern local communities. Traditionally, southeastern archaeologists (as have archaeologists in other regions) have directly inferred the scale of political complexity of a given chiefdom based on the number of sites with public architecture in its settlement system (Anderson 1994; Steponaitis 1978, 1986). Sites with one platform mound are considered to be the administrative centers of simple chiefdoms. In contrast, complex chiefdoms are defined as consisting of a number of single mound centers under the administrative control of a single paramount center with multiple mounds.

Blitz (1999) has recently questioned this approach, arguing that the fusion of simple chiefdoms into more inclusive political units occurred along an organizational continuum, resulting in an array of loosely to more highly centralized political entities. According to his fission-fusion model simple chiefdoms often formed confederacies which lacked the multi-tiered decision-making structure of a complex chiefdom (Blitz 1999:586-87). Thus, a strict adherance to the simple/complex chiefdom dichotomy may result in overlooking a variety of other chiefdom organizational forms that existed in the past.

The dual processual model represents another attempt to deal with organizational diversity among complex political formations (Blanton et al. 1996; see also Renfrew 1974). A society's political structure can be categorized as corporate or exclusionary based on the extent of supra-local exchange relations, the presence or absence of iconographic depictions of individual rulers, the size and function of monumental architecture, and inter-household differences in wealth and status. In corporate political strategies "power is shared across different groups and sectors of society" (Blanton et al. 1996:2). Status differences between different social groups are minimized and there is an emphasis on the construction of large public works such as mounds, plazas, and pyramids used for communal ritualism (Blanton et al. 1996:6). Corporate-based societies are also argued to have been capable of transcending the scale of network-based societies, thus resulting in many of the more complex and powerful polities in prehistory. Moreover, there is a general deemphasis on iconographic depictions of prominent individuals in favor of more communal themes.

Network-based political strategies are characterized by long-distance exchange relationships dominated by prominent leaders. Societies with network-based political structures tend to be less stable than corporate-based societies due to the unpredictability of exchange relations and competition between rival elites. In general, network-based political strategies should result in well-demarcated differences in status and wealth between different societal members. Moreover, there should be minor evidence for the construction and use of monumental architecture related to communal ritualism (Blanton et al. 1996).

Blanton et al (1996:5-6) caution readers that while either corporate or network strategies may dominate social relations at any one time, these strategies may coexist and even cycle back and forth in importance throughout a polity's history. The corporate/network paradigm has served to promote awareness of organizational diversity in chiefdoms and early states throughout the world (Earle 2001; King 2001; Peregrine 2001; Trubitt 2000). Such a model, however, does run the risk of creating a binary categorization of social organization, thus masking a wide range of variability. Indeed, there have been few detailed investigations of the historical processes involved in any specific polity's shift from one end of the corporate/network continuum to the other. Moreover, while reference has been made to the idea that organizational continuums exist, scholars sometimes simply lump a polity into one category or another.

Broad organizational categories such as simple, complex, corporate, and network, and the term chiefdom itself, have analytical utility in so far as they are used for heuristic purposes. These models should be used as starting places by which to investigate the past rather than organizational categories assigned to societies by way of a conclusion. An

over-reliance on organizational categories also runs the risk of imposing behavioral characteristics onto past societies rather than inferring them directly from the archaeological record (Blitz 1999; Feinman and Neitzel 1984:72; Yoffee 1993). As I argue below this problem can be minimized by the use of a more historical and agent-centered model of the past.

#### Agency and Structure in the Archaeological Record

Agency theory and practice theory are broad, interrelated approaches for examining the relationship between the actions of individuals and broader social phenomena. These theoretical approaches were developed, in part, as a reaction against top down models that seek to explain human behavior as a direct result of structural forces like social institutions, cultural norms, and the environment (Dobres and Robb 2000). Structure can be loosely defined as beliefs, environmental conditions, or infrastructure that condition, constrain, or enable human behavior (Scarry 2003). The notion of reflexivity between structure and agency is a cornerstone to theories of practice (Dornan 2002; Giddens 1979). Structure conditions behaviors and beliefs but individuals also produce and alter structure through their actions. Structure is not external to the individual but internalized in the form of pragmatic understandings about the world and everyday routines and behaviors (Bourdieu 1977). It is through these day-to-day routines that social norms and institutions are generated and maintained.

What is the relationship between everyday practices and broader social phenomena? Simply put, our everyday practices and common sense understandings are

charged with deeper meanings. As Shennan (1993) has argued, these seemingly mundane behaviors are surface phenomena that relate to more deeply structured notions about how we perceive and act in the world. Thus, the gendered organization of domestic space and labor (Bourdieu 1977; Whitridge 1999), technological choices in tool manufacture (Pauketat 2001), food preparation techniques, and even methods of trash disposal (Walker and Lucero 2000) serve to produce cultural norms about the position of individuals in society.

Throughout their lifetimes individuals acquire knowledge about their social positions by observing and participating in everyday routines. Because such routines are steeped in tradition, their relationship to the social system often goes unquestioned. This nonexplicit and unquestioned collective of understandings and practices is termed "doxa" by Bourdieu (1977) and "ideological" by Jean and John Comaroff (1991:22-27). This is not to say that individuals are automotons destined to unconsciously accept and reproduce traditional values and relationships. Individuals have the ability to critically and reflexively monitor past conduct in light of new situations that arise (Dornan 2002; Giddens 1979). Moreover, traditional practices may be altered or abandoned in light of structural problems and contradictions within the social system.

The unquestioned and taken-for-granted nature of many everyday practices and beliefs makes them well-suited for those aspiring to produce and maintain relations of social inequality. A common strategy employed by aspiring elites is to coopt widely held traditions for their own political purposes. Archaeologically documented transitions from egalitarian to hierarchically ascribed societies are replete with examples of this political and cultural dynamic. Puebloan religious specialists coopted traditional forms of

domestic architecture in the construction of ceremonial facilities known as kivas (Walker and Lucero 2000:143). Earthen platform mounds in the late prehistoric Southeast were traditional communal ceremonial facilities that the Mississippian elite coopted to legitimize their elevated social positions (Knight 1989; Steponaitis 1986).

An important principle guiding practice-centered research is that the actions of individuals and small groups must be examined in order to determine how broader social arrangements were generated. The goal of such an endeavor is to first identify the different social groups that existed and consider the strategies they pursued that served to reproduce or alter (intentionally or not) the existing social order. Through cooperative labor projects, cost sharing, and communal ritualism small-scale social groups negotiate relationships by which more inclusive social entities are formed. Thus, from a practice approach, society writ large is the outcome of negotiations that take place among a network of individuals.

A structuralist interpretation might contend that non-elite members of a society paid tribute to central administrators in the form of corvee labor or the mobilization of surplus foodstuffs because they lived in a hierarchical society like a chiefdom. In contrast, a practice-centered interpretation would contend that a hierarchical society existed because some individuals provided others with tribute in the form of corvee labor or surplus foodstuffs. The difference between these theoretical approaches is that within certain structuralist models, tribute payments are considered to be an intrinsic quality of hierarchical societies. Societal members are then assumed *a priori* (and sometimes in the absence of supportive data) to have behaved in accordance with this cross-cultural norm. Rather than assume that certain structural qualities existed based on a pre-assigned

societal category, practice theorists contend that it is necessary to begin with small-scale social groups and follow out the network of relationships that were negotiated to generate the broader social order.

#### Household Archaeology

Household archaeology refers to a number of loosely related methodological and theoretical approaches to understanding social, political, and economic organization. Household archaeology is not practice theory. Many of the goals and interests of household archaeologists, however, overlap with those of practice theorists. First and foremost is an interest in micro-scale organizational dynamics (Rogers 1995:7; Wilk and Rathje 1982). Archaeological approaches to households differ based on theoretical interests in production, consumption, gender, health, and social status (Wilk and Netting 1984). There have been nearly as many definitions for the household as have been offered for the concept of culture. For my purpose here I use the term household to refer to the minimal, co-residential social group present in a given society.

Households vary greatly in terms of the number and composition of their constituents (Ashmore and Wilk 1988). It is this intra-household organizational variation and the network of inter-household relationships that is of interest here. In order to properly account for intra-household variation in artifact assemblages and architectural features, it is necessary to consider a suite of issues which archaeologists have traditionally referred to as middle range theory.

Making sense of archaeological data from domestic contexts requires reconstructing households and examining differences and similarities in the ways they organized themselves. Reconstructing household organization requires consideration of the following factors: (1) occupation span and dates of occupation, (2) household size and structure function, (3) the life cycle of the household, and (4) post-abandonment formation processes.

#### Occupation Span and Dates of Occupation

Absolute dating techniques such as radiocarbon dating, obsidian hydration, and dendrochronology are used to determine the calendric dates during which a site was occupied. Ceramic seriation combined with absolute dating techniques can generate more precise dates of occupation. While such techniques provide data about when a site was occupied, they often do not have the resolution by which to determine length of occupation.

Analyses of structure use life and ceramic accumulation studies provide the means by which occupation span can be reliably estimated (Pauketat 1986, 2003; Schlanger 1986; Varien and Mills 1997; Varien and Potter 1997; Ward and Davis 1991). Ethnoarchaeological and experimental studies have produced estimates of structure use life that can be applied to archaeological cases where people used similar building materials and structures were subject to similar environmental conditions (Warrick 1988:37). Occupation span is also an important factor in the composition of discard assemblages as different artifacts have variable use lives and replacement rates (Varien and Mills 1997).

#### Household Size and Structure Function

One of the most fundamental axioms of household archaeology is that houses are not the same as households (Wilk and Netting 1984; Wilk and Rathje 1982). Households are people while houses are the structures within which they live. A single household may occupy one or more houses, storage buildings, kitchens, and outbuildings. Different kinds of structures may be occupied seasonally. Moreover, the function of individual structures may change through time, beginning their use lives as sleeping and eating quarters and ending their use lives as kitchens, work sheds, or storage rooms (Bailey 1996; Rothschild et al. 1993). Thus, to understand household organization it is critical to properly ascertain the function of different buildings and how these functions may have changed through time.

Differences in household size and composition greatly contribute to the architectural and artifactual variation observable in the archaeological record (Shapiro 1984; Turner and Lofgren 1966). Understanding why these differences in household size and composition existed in the past is a separate but related issue from documenting the differences in the first place. Household organizational variation may be a result of differences in social status and wealth, but is also linked to site function and to a household's stage in the cycle of life (see below).

Power asymmetries are often built into the spatial structure of communities (Knight 1998; Nielson 1995). Thus, proximity of households to monumental architecture, plazas and other politically important areas form an important spatial axis through which inter-community differences in power relations can be manifested (Herndon 1995). Variation in the sizes, types, and spatial arrangements of domestic

architecture provides an important source of information about inter-community power relations (Nielsen 1995). House size is a common method used by archaeologists to infer household wealth and status (Kramer 1982; Netting 1982; Wilk 1983). Big houses require more resources in terms of building materials and labor investment than small houses. Larger houses may also indicate larger households, as social groups will create architectural spaces of the appropriate size for the number of people who use those spaces (Naroll 1962). Due to their greater access to or control over certain resources, wealthier households not only attract more kin to residential locations than poorer households, but may also experience higher reproductive success (Netting 1982:642). Larger and wealthier households may also possess a greater number and variety of architectural features such as storage structures and ceremonial facilities. Amassing large stores of surplus foodstuffs provides wealthy households with a competitive edge over their more modest neighbors.

#### The Life Cycle of the Household

Household size and composition change though time. A household may begin as a young married couple living in a small house with few material possessions. When that couple has children they may need to enlarge their house or build another one altogether. With time the couple may also acquire more material possessions and increase their social status in the greater community (Smith 1987:322). Eventually the couple's children move away, marry, and begin families of their own. Elderly family members may ultimately come to reside with the couple.

All of these life-changing events are part the household life cycle (Fortes 1958; Goody 1958, 1972). This cycle varies for every household but they all pass through it in one way or another. The relevant point here is that a household will have a different archaeological signature based on its stage in the life cycle. Moreover, considerable inter-household organizational variability documented by archaeologists is in some way related to the household life cycle.

#### Feature Formation Processes

An understanding of feature formation processes is critical to archaeological interpretation. All items of material culture, whether they be artifacts or buildings, pass through a series of formational stages referred to here as use, abandonment, and postabandonment (Lamotta and Schiffer 1999; Schiffer 1977, 1987). It is important to understand that artifacts recovered from archaeological features may not directly reflect the activities that took place in or near those features. A whole series of factors structure the rate at which certain items are broken and replaced, where they are discarded, and how long they preserve after discarded.

Much of what is recovered from archaeological excavations is refuse. Discard assemblages recovered from refuse contexts differ considerably from artifact assemblages recovered from primary use contexts (DeBoer 1983). Different artifacts and buildings have variable use lives based on their function, frequency of use, and the materials from which they are constructed. Ceramic vessel assemblages provide a good example of this phenomenon. Cooking jars that are repeatedly exposed to the thermal stress of cooking fires have very short use lives compared to large storage jars that are

moved infrequently and kept away from fires (David 1972; Foster 1960). Although there may be an equal number of cooking and storage jars in use at any one time in a household, the higher breakage and replacement rates for cooking jars will generate discard assemblages in which cooking jars are disproportionately represented relative to storage jars.

Items deposited or lost in use locations comprise a very small percentage of the archaeological record (Lamotta and Schiffer 1999). Because it is important to keep living and working areas clear of hazardous waste and clutter, much of the refuse that accumulates in use locations is ultimately collected and deposited elsewhere. This kind of discard is commonly referred to as *secondary refuse* and may consist of toft areas, land fills, or trash dumps in abandoned buildings or storage pits (Hayden and Cannon 1983; Killion 1990). The distance in which refuse is transported for disposal is influenced by population density, the hazard level of the waste, size and weight of the waste, and potential reuse value. Damaged or broken items with potential reuse value are often placed in special out-of-the-way locations near domestic areas. Termed *provisional discard* by Schiffer (1972), such items may re-enter the use context at a later date.

Secondary refuse deposits are also subject to formational processes. Community members may collect and recycle items from secondary refuse deposits (Schiffer 1987). Ethnoarchaeological studies have revealed that much of this recycling or scavenging behavior is conducted by children who sometimes create toys out of the abandoned or broken items in trash dumps (Hayden and Cannon 1983:132). As domestic and activity areas expand or change locations it may be necessary to redeposit secondary refuse accumulations in new locations. These *tertiary refuse* deposits are identifiable based on

the presence of weathered, trampled, or otherwise poorly preserved materials (Schiffer 1996).

### **Theoretical Summary**

This research stands in a long line of studies in which scholars have examined the origins of social inequality. I benefit directly from ongoing and previous research on chiefly politics and regional developments of political complexity. We have much to learn from a cross-cultural approach to chiefdom political economy. That being said, I have embraced a healthy skepticism concerning an over-reliance on organizational categories and societal models. In recent years a number of southeastern archaeologists have charged that the use of ethnographic models from other times and places has obscured archaeological understandings of Mississippian political and economic organization (Blitz 1993b:21, 1999:579; Muller 1997). While it is important to look broadly at chiefly strategies of control, we shouldn't lose sight of the historical particularities of regional political complexity.

Based on this perspective I have adopted a bottom-up approach to examining chiefdom political organization. Households and other small-scale social groups serve as the starting place for this endeavor. By examining the organization of and relationships among small-scale social groups, I hope to arrive at an understanding of broader social phenomena that is less structured by top-down assumptions about what chiefdoms are and how they function. At the same time I understand that no anthropological investigation can be truly objective. My interpretations are necessarily, and I hope

positively, influenced by the research of others. With this in mind I have attempted to follow the lead of an increasing number of southeastern archaeologists who have consulted ethnohistoric information on indigenous social organization from the protohistoric and historic southeastern U.S. (Blitz 1993b, 1999; Knight 1986, 1998; Muller 1997). The following chapter is devoted to the task of providing an ethnohistorical and archaeological background on Southeastern household and community organization.

 $<sup>\</sup>frac{1}{1}$  A base consists of the resources available to a leader to enforce his or her will on others.

## CHAPTER 3

# MISSISSIPPIAN COMMUNITIES AND HOUSEHOLDS

Mississippian peoples throughout the southeastern U.S. drew from a common suite of architectural elements to build and organize their communities. Mounds, plazas, courtyards, palisades, and cemeteries were basic components of a Mississippian architectural grammar that defined major settlements throughout the greater Southeast and Midwest (Lewis and Stout 1998). There was also considerable variation among Mississippian communities in regards to scale and composition. On one end of the organizational spectrum there were densely populated, multi-mound civic-ceremonial centers. On the other end of the spectrum there were small, dispersed villages.

Examples of the largest Mississippian communities include sites like Etowah, Cahokia, and Moundville. Each of these sites consists of multiple, contemporaneously used platform mounds and residential areas arranged about one or more plazas (King 2003; Knight and Steponaitis 1998; Fowler 1989).<sup>1</sup> These sites were also fortified by the construction of palisade walls and/or moats at some point in each of their occupational histories. While larger and more complex than many other communities in the Southeast, these three mound centers also differed considerably from one another. Cahokia consisted of numerous plazas flanked by mounds and residential areas. Both Etowah and Moundville, on the other hand, consisted of fewer mounds and one main plaza. At its peak Cahokia also had a population several magnitudes larger than either Etowah or Moundville (Pauketat and Lopinot 1997; Steponaitis 1998). The vast majority of Mississippian communities had significantly smaller populations and fewer mounds (Payne 1994). Sites like Town Creek Indian Mound in North Carolina and Cardin Farm II in Tennessee consisted of only about a dozen houses arranged around a central plaza (Coe 1995; Schroedl 1998).

The differences between Mississippian communities were not all scalar in nature. Individual communities were uniquely shaped by their developmental histories. Just as there were organizational differences between communities, individual communities also changed dramatically over time. For instance, a nucleated village organizational pattern only characterized many Mississippian communities for a restricted portion of their occupational history and for some communities never at all (Pauketat and Lopinot 1997; Rogers 1995; Knight and Steponaitis 1998). Patterns of nucleation tend to correspond well with periods of political consolidation or warfare (Knight and Steponaitis 1998; Morse 1990; Pauketat 1994; Stanish 1999). In periods of regional consolidation, a nucleated population provides an emerging elite with a centralized source of labor. In times of war it is necessary to relocate large portions of the regional populace behind palisade walls. In other times and situations, however, a more dispersed pattern of settlement with vacant ceremonial centers appears to have been more commonplace (Rogers 1995; Steponaitis 1998).

This chapter provides archaeological and ethnohistoric background on the organization of Mississippian communities and households. I begin by discussing historic Southeastern kinship systems to identify the different corporate groups that comprised native towns and villages. I argue that a better understanding of these historically-documented kin groups can inform archaeological research on Mississippian household and community organization. Next, I consider archaeological research on Mississippian household

organization. I present case studies from eastern Tennessee and southwestern Illinois to illustrate similarities and differences in the organization of Mississippian households and multi-household groups. In the final portion of this chapter I provide an overview of Mississippian culture history in the Black Warrior Valley of west-central Alabama and summarize previous models of Moundville community organization.

### **Kin Groups and Community Composition**

The entities that archaeologists identify as Mississippian towns, villages, and communities were composed of numerous, smaller social and residential groups. A community's developmental history is a chronicle of the interactions among these groups. Thus, a better understanding of Mississippian community organization requires an examination of the network of interactions among households. Another reason to study small-scale Mississippian social groups is that household organizational schemes were employed on the community level. Muller (1997:185) argues that the Mississippian "public square replicated the household on a grander and promoted scale. Indeed, so did the location of mounds around plazas." Likewise, Sullivan (1987:27-28) has argued late Mississippian, Mouse Creek phase (AD 1400-1600) townhouse-and-plaza community arrangements in eastern Tennessee mimicked the pairing of household winter and summer structures. From this perspective Mississippian villages and civic-ceremonial centers were founded upon the organizational principles of the household rather than the other way around.

Great strides have been made in understanding Mississippian chiefdom organization by relating archaeological data to ethnohistoric information on southeastern kinship

organization. This approach has been directed primarily at the study of regional settlement patterns and broad-scale community organizational characteristics such as mound and plaza arrangements (Blitz 1993b, 1999; Knight 1990, 1998; Rodning 2005). However, I believe there is also utility in considering households and other small-scale residential groups from this perspective. It is not always possible to directly equate historically documented kin groups with the residential groups we identify archaeologically. Nevertheless, an understanding of the basic mechanics of historic Southeastern kinship can provide a heuristic framework for investigating Mississippian domestic organization.

### The Matrilineage and Matriclan

The matrilineage and the matriliclan were the two most important social units within native Southeastern kinship systems. Both the clan and the lineage were exogamous; penalties for violating these rules were sometimes severe (Blitz 1993:10; Hudson 1976:195). Hudson (1976:189) states that the matrilineal lineage was a strongly corporate group that consisted of "all those kinsmen who could trace descent from a known ancestress and most of whom lived in the same locality, owning property, and sharing certain ceremonial rights." These were functioning social and economic groups, the members of which interacted on a daily basis (Hudson 1976; Knight 1990). Lineages could range in size from an extended family to a cluster of closely related families (Knight 1990). When they grew too large or when domestic disputes occurred, lineages sometimes fissioned to form two different descent groups (Muller 1997:191).

Matrilineages were building blocks for the more encompassing matriclan. As described by Hudson (1976), the matrilineal clan is a kinship group consisting of those

people who believed themselves to be related, but who could not trace their relationships to a common female ancestor. Clans provided individuals with a regional social network as members often lived in numerous villages and rarely assembled as a unified group (Muller 1997:191). The matrilocality of Southeastern societies, however, often created situations where individual towns were disproportionately composed of one particular clan or another.

## Dualistic Social Organization

Based on ethnohistoric evidence, Knight (1990) has argued that native Southeastern societies had a dualistic organizational structure. Lineages and clans within any society would have belonged to one of two opposing social divisions. In some cases these divisions were exogamous and functioned as moieties. Each of the two divisions was assigned different and often opposing social and ceremonial responsibilities. One side often administered issues of warfare and the other peace. Historically such divisions were referred to as red groups and white groups (Blitz 1993b:11; Hudson 1976:234-39; Knight 1998; Swanton 1931:78). Knight (1990:6) has argued that an ingrained notion of hierarchy was fundamental to the relationship between these dual social groups as well as between the clans that comprised them (see also Speck 1909). In some cases this hierarchy was merely ceremonial, but in other cases resulted in a formal ranking of social groups. In this sense, historic southeastern chiefdoms were essentially kinship writ large in that kinship provided the social mechanisms by which lineages and clans could be drawn together to assemble politically integrated social formations.

#### Mississippian Household Archaeology

After a century of Southeastern archaeology scholars are still addressing the nuts and bolts of Mississippian domestic organization. In part this situation is a result of the importance assigned to the excavation of mounds and burials. Domestic artifact assemblages are less ornate than burial assemblages and non-elite houses are less elaborate than mound summit architecture. However, with increasing interest in small-scale social dynamics and the practices of everyday life, Southeastern archaeologists have taken new interest in examining Mississippian households and the organization of domestic space (Emerson 1997b; Hally and Kelly 1998; Mehrer 1995; Rogers 1995; Scarry and McEwan 1995).

Houses are but one example of a constellation of archaeological features often associated with households. Winter (1976) used the term *household cluster* to refer to the set of archaeological features associated with individual households in Formative period Oaxaca. As a general trend, Winter found that Oaxacan household clusters consisted of houses, storage pits, earth ovens, midden deposits, and burials. Household clusters within a single community were typically separated from one another by 20 to 40 m of empty space. Archaeologists have identified similar clusters of archaeological features within Mississippian communities throughout the southeastern U.S. These feature clusters typically consist of some combination and arrangement of houses, storage facilities, midden deposits, burials and workspace. To be sure, not every Mississippian household cluster was identical in terms of its composition and spatial layout or in its relationship with the broader community. The archaeological signatures of Mississippian households varied based on

social status, stage in the domestic cycle, population density, the local environmental context, and regional political dynamics (Rogers 1995).

Here I summarize Mississippian household organizational patterns from eastern Tennessee and the American Bottom region of southwestern Illinois. Examples from both regions are discussed in terms of the spatial arrangement of buildings, storage facilities, activity areas, and methods of refuse disposal. The primary goal of this exercise is to identify trends in the spatial layout and organization of Mississippian households.

## Eastern Tennessee

Archaeological research in eastern Tennessee has provided important insight into Mississippian community and household organization (Lewis and Kneeberg 1946; Polhemus 1987; Schroedl 1986, 1998; Sullivan 1987, 1995). The late Mississippian and Historic period occupation in this region can be divided into the Dallas phase (AD 1300-1600), Mouse Creek phase (AD 1400-1600), and Overhill Cherokee (post AD 1600). Differences in community organization, mortuary patterns, and mound construction indicate that these three archaeological complexes differed in terms of political complexity (Schroedl 1998:91; Sullivan 1995:120). Sullivan (1995) has argued that ascribed status differences were more rigorously defined in the Dallas phase than in the Mouse Creek phase. Overhill Cherokee communities, on the other hand, appear to have been relatively egalitarian compared to earlier Dallas phase and Mouse Creek phase communities. There is no evidence of Overhill Cherokee platform mound construction and the arrangement of mortuary complexes and public buildings suggest that achievement and not ascription was the primary avenue to social status (Sullivan 1995:120).

Despite these differences in social organization there was considerable continuity among these eastern Tennessee groups in terms of household organization. As a general trend, household clusters from all three eastern Tennessee phases consist of a winter house, a summer house, some kind of cleared activity space, and storage facilities (Sullivan 1995). Polhemus (1987:1240) also identified small-scale Dallas-phase multi-household groups that consist of two or more household clusters situated around a central yard or open space. Similar household aggregates appear to have been missing from Mouse Creek and Overhill Cherokee phase communities (Schroedl 1998). Other organizational differences between Dallas, Mouse Creek, and Overhill Cherokee household clusters relate to house size, storage, and refuse disposal.

Sullivan (1995:114-115) has identified a larger range of house sizes in both Dallas (27-86 m<sup>2</sup>) and Mouse Creek phase (27-86 m<sup>2</sup>) sites than in Overhill Cherokee sites (29-42 m<sup>2</sup>). She interprets this pattern as evidence of more pronounced status distinctions in Dallas and Mouse Creek phase communities than in Overhill Cherokee phase communities (Sullivan 1995; Polhemus 1987). There are also phase-specific community differences in the location and sizes of public buildings. The Dallas phase occupation at the Toqua site included two categories of public buildings, located on and adjacent to mounds (Sullivan 1995:116). Both Mouse Creek and Overhill Cherokee sites lacked mounds and included fewer public structures (Sullivan 1995:117).

Other more basic differences existed between Dallas, Mouse Creek, and Overhill Cherokee households. Deep storage pits are rare in both Dallas and Mouse Creek phase communities. Instead, surplus foodstuffs were primarily stored in above-ground structures (Schroedl 1998:82). There was a shift toward the use of below-ground storage in the

Overhill Cherokee period (Polhemus 1987). Why this shift took place is unclear. However, the increasing importance of sweet potato cultivation may have figured prominently in these changes (Brett Riggs personal communication 2003). For preservation purposes maize is best stored above ground. Sweet potatoes, on the other hand, require cool and damp conditions to keep them from sprouting or dehydrating (Riggs 1999). These changes in storage were accompanied by changes in domestic refuse disposal. Extensive sheet middens identified at the Toqua site reveal that Dallas phase villagers primarily deposited refuse in trash dumps or toft areas. Overhill Cherokee households, on the other hand, took advantage of abandoned pit features for refuse disposal (Polhemus 1987).

## American Bottom

Considerable household organizational variation has been documented in the early Mississippian (AD 1050-1200) American Bottom. At least three different modes of early Mississippian domestic organizational have been identified in the region. These three organizational patterns correspond with mound centers, upland villages, and rural farmsteads. Household clusters associated with rural farmsteads typically consist of one to three structures, several storage pits, and cleared activity areas (Finney 1985; Jackson 1980; Mehrer 1995; Milner 1983). Abandoned storage pits and house basins were used as receptacles for domestic refuse disposal. There are, however, small rural sites that include ceremonial architecture, mortuary complexes, larger than average storage pits, and an overrepresentation of serving ware pottery containers (Emerson 1997b). While some of these sites may simply represent older and more affluent households, others appear to have served to integrate politically and ceremonially a dispersed community of rural farmsteads (Emerson 1997a, 1997b).

Pauketat's (1994, 1998) analysis of the Tract 15A and Dunham-tract excavations at the Cahokia site revealed an early Mississippian community consisting of a number of multihousehold groups arranged around a rectangular plaza. Early Mississippian architecture in this portion of the Cahokia site included a variety of building sizes, styles, and functions. A wide assortment of domestic activities probably took place in the plaza and in cleared activity spaces between buildings. Surplus foodstuffs were primarily stored in subterranean pit features but may have also been placed inside small buildings (Pauketat 1998; see also Mehrer and Collins 1995). Once abandoned, these features were used for refuse disposal.

A more or less continuous distribution of houses, ceremonial structures, and pit features within these multi-household group residential areas has hindered attempts to identify individual household clusters (Pauketat 1998). However, there are organizational differences between multi-household groups that point to differences in social status. Pauketat (1994, 1998) has identified a bimodal distribution of early Mississippian structure sizes in this portion of the Cahokia site. Moreover, there also exists in this area a class of ceremonial circular buildings known as sweatlodges. Multi-household groups on the northern end of the plaza include many examples of the larger size class of houses. These large houses, however, are scarce or absent from multi-household groups on the southern edge of the plaza (Pauketat 1994, 1998). This pattern also correlates with the distribution of circular sweatlodges: multi-household groups on the northern end of the plaza include a number of these ceremonial buildings while those to the south have relatively few (Pauketat 1994, 1998).

The uneven distribution of larger houses at the Cahokia site indicates that some multihousehold groups included larger and higher-status households than others (Netting 1982; Pauketat 1994). It is also significant that some multi-household groups included sweatlodges and others did not. Those groups who more directly participated in sweatlodge ceremonialism probably enjoyed elevated positions of status in the greater Cahokian community.

The final domestic organizational mode corresponds with a number of early Mississippian upland villages immediately east of the American Bottom. These communities consist of clusters of domestic structures and storage pits arranged around central courtyards (Alt 2001; Bareis 1976; Pauketat 2003; Wilson 1998).<sup>2</sup> Individual household clusters are difficult to define within courtyard groups, suggesting that the courtyard group itself was the basal social and residential unit at these upland communities. The central portions of courtyards were primarily devoid of features and were probably used for communal work and ritual (Wilson 1998). Midden deposits located between and behind houses suggest that these central spaces were regularly swept clean of refuse. Refuse was also deposited in abandoned house basins and pit features.

### Regional Comparison

There are broad similarities between both the American Bottom and Eastern Tennessee cases in terms of household composition. Household clusters in both regions consisted of some combination of buildings, storage facilities, and cleared activity spaces. One important difference relates to architectural style. Early Mississippian household clusters from the American Bottom lacked clear evidence of the seasonal (summer/winter)

houses identified in the eastern Tennessee case studies. As will be discussed in Chapter 6 this difference relates to technological changes in domestic architecture that occurred during the late Mississippian period Southeast. The nature of domestic refuse disposal also varied based on the kind of storage technology used. In the American Bottom and Overhill Cherokee cases household members took advantage of abandoned storage pits for refuse disposal. Above-ground midden deposits were minimized as a result. In the Dallas and Mouse Creek phase communities surplus goods were primarily stored above ground and refuse was dumped in toft areas that later formed extensive sheet middens. This difference affects the formation of domestic artifact assemblages. In the American Bottom and Overhill Cherokee cases individual pit deposits formed relatively discrete discard assemblages while in the Dallas and Mouse Creek cases (and in the Moundville case examined in this dissertation) it is necessary to sample from sheet midden deposits.

These case studies have also revealed the presence of domestic co-residential groups organized on a scale intermediate betwen the household and the community. The members of these small-scale coresidential groups often shared cleared work space and in some cases appear to have pooled agricultural surpluses (Kelly 1990; Polhemus 1987). These courtyard groups and other clusters of domestic structures have been interpreted as corporate kin groups (Kelly 1990; Pauketat 2003; Polhemus 1987). The smaller examples of these coresidential groups may simply represent extended families. Larger multi-household groups, however, may represent kin groups such as the historically documented matrilineal lineages discussed earlier.

Finally, this comparison has provided several potential archaeological correlates of inter-household status variation. Mississippian communities characterized by ascribed status

distinctions appear to have included a wider range of house sizes than less hierarchically organized communities (Pauketat 1994, 1998; Sullivan 1995). Inter-community status distinctions also appear to be represented in the location and size of public buildings and other ceremonial facilities. The American Bottom case revealed that ceremonial buildings were part of some household clusters and not others. Moreover, the Dallas-phase Toqua site case displayed a variety of public building sizes and locations that were not present at less hierarchical Mouse Creek and Overhill Cherokee communities.

# Discussion

Now that I have provided a general background on the organization of Mississippian and Historic period Southeastern households and communities, I turn my attention to the Mississippian occupation of the Black Warrior Valley. In the remaining portion of this chapter I provide an overview of the terminal late Woodland and Mississippian occupation of the region and summarize previous investigations of Moundville community organization. In the final portion of the chapter I summarize recent Moundville archaeological investigations and define important research questions that will be examined in Chapters 5-8.

## Moundville Culture History and Community Organization

The Moundville site is located in west-central Alabama on a high flat terrace where the Black Warrior River cuts close to the Fall-Line Hills (Knight and Steponaitis 1998; Peebles 1978). The Moundville site and other affiliated settlements are located within a

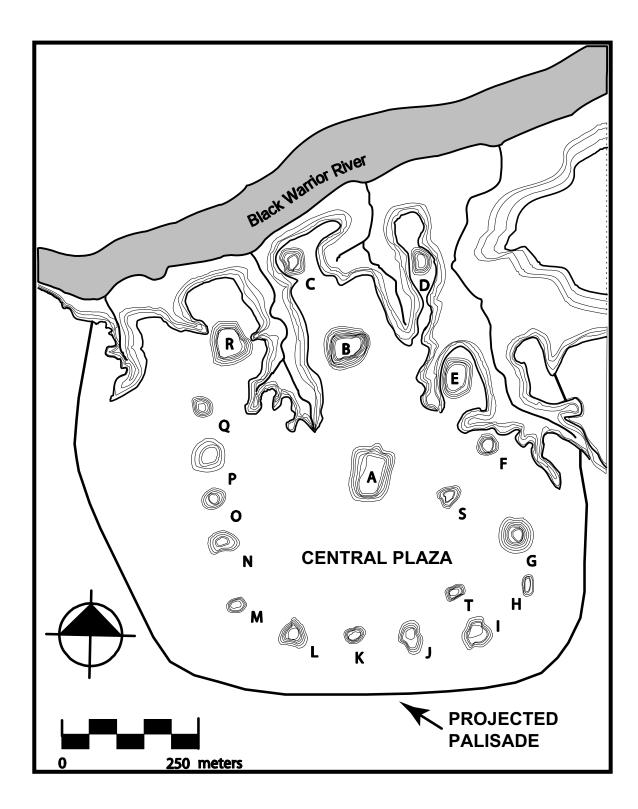


Figure 3.1 The Moundville Site featuring mounds, central plaza, and palisade wall.

portion of the Black Warrior River Valley starting below the fall line just south of Tuscaloosa, Alabama and extending 40 km down river (Peebles 1978; Welch 1981:25). Below the fall line, the valley widens and the uplands consist of rolling hills dissected by intermittent streams (Scarry 1986:92). This region corresponds with the transition between the Piedmont and Coastal Plains and encompasses considerable physiographic and ecological diversity (Peebles 1978:23; Scarry 1986:67). Environmentally this portion of the Black Warrior Valley was an ecotone that had floral and faunal characteristics from temperate Oak-Hickory, Maritime Magnolia, and Pine forests (Peebles 1978:29).

Today the Moundville site consists of 29 mounds arranged around a rectangular plaza (Knight and Steponaitis 1998:3). Figure 3.1 displays the estimated location of the palisade wall that surrounded the site. In all, the Moundville site was about 75 ha in size (Knight and Steponaitis 1998:3). The primary areas of residential occupation are located between the plaza and the palisade wall. Much of the central plaza appears to have been unoccupied. However, a number of small residential areas have been identified along the outside edges of the plaza as well as outside the limits of the palisade (Chapter 6).

### West Jefferson Phase

Moundville emerged from a terminal late Woodland period occupation known as the West Jefferson phase. The West Jefferson settlement system consisted of small villages ranging from .2 to .5 ha in size scattered up and down the floodplain terraces and adjacent uplands of the Black Warrior River Valley (Bozeman 1982; Welch 1990:211). Welch (1981) has outlined a shifting seasonal settlement model for the West Jefferson phase based in part on the location of many floodplain sites at elevations below the five-year flood line. When

flooding occurred during the late winter to early spring these floodplain communities would have had to be abandoned (Welch 1981, 1990). In this model upland sites would have been occupied in the cold season with floodplain sites being occupied in the warm season. This model is also supported by seasonality data from faunal and botanical materials recovered from upland and floodplain sites (Welch 1990).

In terms of subsistence, early West Jefferson communities had a wide resources base, relying primarily on wild gathered plants and animals (Scarry 1993a, 1993b). Maize production intensified in the later portion of the West Jefferson phase, though regional inhabitants still relied upon a variety of wild plants and animals (Scarry 1993a). Similar landforms and loam series soil types appear to have been repeatedly targeted by West Jefferson phase peoples based on the identification of multiple, overlapping sites, particularly on floodplain terraces (Hammerstedt 2000; Hammerstedt and Myer 2002).

Very little is known about West Jefferson phase community and household organization. Only one West Jefferson-phase house has thus far been excavated. The house was a single-post structure with a central hearth. The excavation of several West Jefferson phase bell-shaped pits indicates that surplus foodstuffs were stored below ground. Based on surface surveys and limited excavations there is little evidence to suggest the presence of social ranking in the West Jefferson phase Black Warrior Valley (Welch 1990). With the exception of greenstone and small amounts of Fort Payne chert, regional inhabitants relied primarily on local lithic materials. Tuscaloosa chert is abundant in the gravel bars of the Black Warrior Valley (Pope 1989; Welch 1990). Collected primarily in the form of small river-worn pebbles, Tuscaloosa chert was commonly heat treated prior to being knapped into projectile points and a wide variety of expedient flake tools. Also present in West Jefferson

phase lithic assemblages are specialized tools know as microdrills. Pope's (1989) use-wear analysis of microdrills revealed they were used primarily for the manufacture of shell beads. Marine shell beads have been interpreted as wealth items, the production of which may have been related to increasing competition between tribal leaders in the region (Pope 1989; Steponaitis 1986). In addition to the intensification of maize production, the introduction of this shell bead industry points to important political-economic changes that foreshadowed the development of the Moundville chiefdom.

# Early Moundville I

The early Moundville I phase marks the emergence of Mississippian culture in the Black Warrior Valley. At around AD 1200 a suite of highly visible and sudden changes in settlement patterns, community organization, and material culture took place. Village life in the region was abandoned for a settlement system consisting primarily of dispersed farmsteads and small administrative centers with earthen platform mounds (Ensor 1993; Knight and Steponaitis 1998; Michals 1998; Mistovich 1988). Several politically autonomous simple chiefdoms may have existed in the region at this time. However, the only two platform mounds in the region were built at the site of Moundville (Steponaitis 1992). Thus, in the era immediately preceding regional consolidation Moundville appears to have been a locus of unequaled political importance. Based on available survey data it would also appear that there was a higher density of early Moundville I households along the Moundville riverbank than elsewhere in the region (Knight and Steponaitis 1998).

Limited research has taken place at both of the two early Moundville I phase mounds. In 1975 the University of Alabama Field School conducted excavations at the Asphalt Plant

mound (1TU50) immediately northeast of the Moundville site. The materials recovered from these excavations were later analyzed by Steponaitis (1992). The results of this research revealed a small mound center with an artifact assemblage comprised of an unusually high percentage of non-local materials. Steponaitis (1992) concluded from his analysis that the abundance of exotic materials in what was presumably an elite context reveals the importance of craft production and long distance exchange in the early development of the Moundville chiefdom.

Considerably less is known about the mysterious Mound X located just east of Mound G on the southeastern corner of the Moundville site. Limited excavations conducted in 1984 revealed that the mound was partially truncated during the late Moundville I phase by the construction of several palisade lines (Vogel and Allan 1985). This early mound was essentially abandoned and destroyed during the construction of the regional political center of Moundville in the late Moundville I phase.

Our current understanding of early Moundville I household organization comes from a handful of small-scale excavations. C. Margaret Scarry's (1995, 1998) analysis of the maps and artifact assemblages generated from the excavation of two areas along the northwest riverbank at the Moundville site has yielded the most coherent picture of Moundville I domestic life.<sup>3</sup> The excavation of these two areas, dubbed the Picnic Area tract (PA) and the East Conference Building tract (ECB), uncovered eight buildings, four of which date to the early Moundville I phase. Three different architectural styles are represented among the early Moundville I buildings from the Riverbank (Scarry 1995, 1998). One style is characterized by a rectangular building with four wall-trench foundations. Also present were rectangular houses constructed from walls built from single-set posts. The final house style

is represented by one house that displayed a combination of both wall-trench and single-post construction techniques. The walls of this building were also set in a shallow, rectangular basin. Aside from central hearths these early Moundville I buildings have no evidence of interior features such as benches, support posts, or partitions.<sup>4</sup>

Evidence of stylistically similar early Moundville I phase buildings have been identified elsewhere at the Moundville site and the surrounding countryside (Scarry 1986; Steponaitis 1992). One early Moundville I building excavated north of Mound R is particularly worthy of mention (Scarry 1986). In addition to having its foundation set in a shallow basin this building also had a raised clay platform or bench on its floor that was immediately adjacent to a wall. The building was not fully excavated so the shape and size of this interior feature is unclear. It is noteworthy that the basin house from the Moundville Riverbank also had a raised platform composed of yellow sand adjacent to one of its walls.<sup>5</sup> Similar features have been identified on the floors of several domestic buildings at the Bessemer site (DeJarnette and Wimberly 1941). These small, mound-like features have been interpreted as benches. How frequent these features occur inside early Moundville I houses is uncertain. However, they appear to be absent from later Mississippian structures in the Black Warrior Valley.

Overall, there appears to have been considerable architectural variation and experimentation in this era (Laquement 2004). Notably missing from early Moundville I domestic contexts are the bell-shaped storage pits commonly associated with West Jefferson phase residential areas. The absence of subterranean storage facilities has been interpreted as indirect evidence that surplus foodstuffs were stored in above-ground facilities such as granaries (Scarry 1995, 1998).

Local Tuscaloosa gravel still comprises much of early Moundville I flaked stone assemblages (Scarry 1995). Notably present, however, are Mill Creek chert hoes from southern Illinois (Steponaitis 1992). The appearance of these agricultural implements corresponds with the intensification of maize agriculture in the region (Scarry 1998). Also present are both Fort Payne and Bangor cherts from northern Alabama, used primarily for the manufacture of expedient flake tools (Scarry 1995; Steponaitis 1992). As noted earlier the presence of these non-local materials reveals an expansion of regional trade networks negotiated in part by aspiring Mississippian leaders attempting to consolidate political control over the region (Steponaitis 1992).

Pottery assemblages from early Moundville I contexts contrast sharply with preceding West Jefferson assemblages. Shell tempered wares predominate in these early Mississippian assemblages (Scarry 1995, 1998). However, the presence of small amounts of grogtempered sherds in early Moundville I assemblages reveals that potters continued to manufacture minor amounts of grog-tempered pottery. Elsewhere in the nearby uplands these late Woodland pottery traditions were apparently retained for a century or more (Jackson 2004; see also Seckinger and Jenkins 1980).

A number of new vessel shapes were introduced during the early Moundville I phase (Steponaitis 1983). Many of these vessels were serving wares, embellished with a variety of slips and incised design fields that were not present in earlier West Jefferson phase assemblages. The lack of a clear stylistic transition between West Jefferson and early Moundville I phase pottery assemblages has fueled arguments for an intrusive origin for Mississippian culture in the Black Warrior Valley (Jenkins 2003; Seckinger and Jenkins 1980). Intrusive origin explanations were all but rejected over the last two decades.

However, new evidence of intrusive Mississippian settlements in the nearby Chattahoochee River Valley (Blitz and Lorenz 2002) has reasserted the possibility that Mississippian settlement in the Black Warrior Valley somehow involved non-local populations. Most scholars still argue for a local developmental scenario for the Moundville chiefdom (Knight and Steponaitis 1998). Currently there is not enough evidence from this transitional period to disprove either scenario.

#### Late Moundville I-Early Moundville II

The late Moundville I phase marks the establishment of the Moundville chiefdom as a regionally consolidated Mississippian polity (Knight and Steponaitis 1998). The dynamics of regional consolidation transformed socioeconomic relationships throughout the Black Warrior Valley. A regional administrative center was established at the Moundville site, where many polity members settled to form a nucleated community (Steponaitis 1998). Diachronic settlement studies have revealed that the Mississippian emergence in the Black Warrior Valley was marked by a sharp decrease in the population of the rural countryside (Maxham 2004:126). This rural population decrease corresponds with the influx of people at the Moundville site (Maxham 2004; Steponaitis 1998). Pre-existing mound sites were abandoned, and at least four second-order mound centers were established (Knight and Steponaitis 1998). Tribute relationships developed that required the planting, harvesting, and processing of maize at lower-order settlements and its transport to higher-order settlements (Scarry and Steponaitis 1997; Welch and Scarry 1995).

The residents of this greatly expanded Moundville community participated in a variety of large-scale labor projects. A palisade was erected around the perimeter of the site.

This fortification was rebuilt a minimum of six times before being dismantled around A.D. 1300 (Knight and Steponaitis 1998; Scarry 1998; Vogel and Allan 1985). The Moundville ceremonial precinct was also constructed during the late Moundville I phase. This endeavor involved the construction of at least 29 mounds arranged around a rectangular plaza (Knight 1992, 1998). Portions of the plaza were also artificially filled to create a level surface (Knight 1998).

#### Late Moundville II-Early Moundville III

Starting in the late Moundville II phase dramatic organizational changes took place at Moundville and throughout the Black Warrior Valley. What was once a nucleated and fortified town became a vacant ceremonial center occupied by a small number of Moundville's elite (Knight and Steponaitis 1998:17-21). This outmigration corresponds with increasing population densities in the rural countryside of the Black Warrior Valley (Maxham 2005:129). Somewhat paradoxically this is the era where there is the strongest evidence of an administrative elite group in the region represented in the emergence of a chiefly cult symbolism and high status burials at Moundville with elaborate mortuary regalia (Knight and Steponaitis 1998:17-21). It seems the symbolic distancing of the Moundville elite from the nonelite corresponded with the physical distancing of these groups in the region.

At this time Moundville became a necropolis where regional inhabitants buried their dead in numerous cemeteries throughout the site (Knight and Steponaitis 1998; Steponaits 1998). Although the Moundville site continued to be used for many ceremonial activities it ceased being a residential locus for much of the regional populace. The palisade surrounding

the site also fell out of use (Scarry 1998). On the household level a new hipped-roof architectural technology was adopted, replacing the traditional flexed pole style of buildings. Analysis of lithic assemblages from mound contexts indicates a decline in long distance exchange and certain crafting activities from the Moundville II to Moundville III phase (Knight 2002:148-50). Relatively little is known about non-elite domestic contexts in this era of Moundville's culture history.

#### Late Moundville III-Moundville IV

This era in Moundville's culture history is characterized by regional trends of political collapse and reorganization (Knight and Steponaitis 1998). Only three mounds at Moundville show evidence of occupation and construction at this time. All three earthworks, Mounds P, B, and E, are located in the northern portion of the site (Knight and Steponaitis 1998). The only area of off-mound occupation that has been dated to this period is located in an area to the southwest of Mound G.

Outlying mound sites show considerable evidence of continued residential occupation, mound construction, and mortuary ceremonialism (DeJarnette and Peebles 1970; Knight and Steponaitis 1998; Rees 2001; Welch 1991b). Moreover, Steponaitis (1983) reports that mortuary mounds at Moundville were no longer used for the interment of elite burials (Knight and Steponaitis 1998:21). Collectively, these organizational changes indicate an increasing political autonomy of outlying centers with a diminished importance of Moundville as a regional political and ceremonial center (Knight and Steponaitis 1998).

### **Previous Perspectives on Moundville Community Organization**

Christoper Peebles's (1974, 1978, 1981, 1983, 1987a) model of Moundville as a ranked society is one of the best known archaeological case studies of Mississippian political organization (Peebles and Kus 1977). In this model the Moundville chiefdom consisted of elite and non-elite classes; membership in each was genealogically based. Peebles also argued that the organization of the Moundville chiefdom was highly differentiated politically, socially, and economically.

Support for this model derived from Peebles's mortuary analysis of over 2,000 burials at Moundville. Through this analysis Peebles (1974) divided the Moundville burial population into superordinate (elite) and subordinate (nonelite) classes. The superordinate class comprised approximately 5% of the population and was defined based on burial location in or near mounds and the presence of distinctive artifacts and human retainers (Peebles and Kus 1977). The rest of the burial population was interred with artifacts "associated with particular ages and one or the other of the sexes" (Peebles 1987a:29). The social standing of these subordinate-class burials was further delineated by their placement in non-mound portions of the Moundville community.

As further evidence of social ranking Peebles (1971) pointed to a highly structured use of space at the Moundville site. Moundville's ceremonial precinct consists of at least 29 mounds arranged in functional pairs around a rectangular plaza. Each pair consists of a smaller elite mortuary mound and a larger elite residential mound. Peebles (1971:82) observed a bilateral symmetry to this spatial arrangement such that the eastern and western portions of the Moundville site mirror one another (see also Knight 1998). Peebles argued

that aspects of this bilateral symmetry were also represented in the distribution of effigy vessels and mineral pigments at the Moundville site. Frog, turtle, bat, clam, and fish effigy vessels were found to be associated with eastern and duck effigy vessels with the western portion of the site (Peebles 1971:83).

Peebles also observed important distinctions between the northern and southern portions of Moundville. Mounds in the north are appreciably larger than in the south. Moreover, two of the northernmost earthworks, Mounds C and D, included the most elaborate, high-status burials at Moundville. He interpreted these spatial patterns as indicating an underlying status gradient built into the layout of the Moundville community. Peebles argued that further evidence of this inter-community differentiation is represented in non-mounded architecture. He identified a high-status residential area in the northeastern portion of the site (Peebles and Kus 1977:435). Moreover, he identified large public buildings and areas for ritual game playing (chunkey) at the northern corners of the plaza (Peebles 1987a:27; Peebles and Kus 1977:435). A sweatlodge and charnal houses were also located along the margins of the plaza (Peebles and Kus 1977:435).

Peebles argument for an economically differentiated Moundville was based primarily upon the identification of craft workshops and other evidence of specialized production activities. Based on an analysis of records and artifact assemblages from depression-era excavations at Moundville, Peebles identified three specialized craft industries: pottery production, hide processing, and shell-bead manufacture (Peebles and Kus 1977). Specialization in the manufacture of pottery vessels was represented in the presence of large firing areas, caches of mussel shell, clay, and fuller's earth in the northwestern portion of the site (Peebles and Kus 1977:442). Peebles also argued that a high level of stylistic

standardization among Moundville pottery vessels indicates "their manufacture was not a household craft" (Peebles and Kus 1977:443). Evidence for hide processing derives from a large area in the northeastern portion of the site where "hundreds of large bone awls and the stones which were used to sharpen.." them were recovered (Peebles and Kus 1977:442). The shell bead production area was also located in the northeastern portion of the site. Evidence for this industry consisted of "a large quantity of finished shell beads, unworked shell, and beadworking tools" (Peebles and Kus 1977:442).

Welch (1991b, 1996) further developed Peebles's model of Moundville's political economy. He examined the regional production and distribution of craft items and subsistence goods. Welch (1991b:179) argued that Moundville's economy was characterized by the centripetal mobilization of agricultural foodstuffs and venison from the rural nonelite to the chiefly elite living at mound centers in the Black Warrior Valley. Balancing this inward mobilization of subsistence goods was the outward distribution of prestige goods from Moundville to the elite at outlying mound sites (Welch 1991b:180).

Welch (1991a:164-165, 1996:81) also argued that the production of utilitarian greenstone celts was centralized at Moundville, based on the identification of greenstone production debris in the northeastern portion of the site and the presence of greenstone celt performs in the Moundville Roadway assemblage. This argument for centralized production has important implications for Moundville's political economy. By controlling access to greenstone celts, the Moundville elite would have effectively controlled the ability of commoners to clear agricultural fields and conduct other basic tasks like house construction. Thus, in dominating the production and distribution of greenstone celts, the Moundville elite

could have exerted control over the agricultural means of production in the Black Warrior Valley.

Welch also identified variation in the organization of foodways represented in pottery discard assemblages (Welch and Scarry 1995). Comparisons between pottery assemblages from farmsteads, rural mound sites, and different portions of the paramount center of Moundville revealed considerable variation in service-to-cooking ware ratios. These pottery assemblages also varied in terms of the relative frequencies of different kinds of serving wares. Welch linked this inter-assemblage variation to status distinctions between the different social groups comprising the Moundville chiefdom.

### Recent Investigations

A number of recent archaeological investigations have contributed to a more finegrained understanding of Moundville community organization and to Mississippian political economy in the Black Warrior River Valley in general. Some of these studies have supported aspects of both Peebles's and Welch's arguments while others have contradicted them. Here I briefly summarize several of these important investigations by subject of inquiry.

Knight's (1998) research on Moundville's ceremonial precinct has supported Peebles' argument that Moundville was a planned community with a spatial layout corresponding to an underlying social organization. Through comparison with an ethnographic example of Chickasaw community organization Knight (1998) argued that each of the paired mound groupings at Moundville served as political and ceremonial facilities for distinct social groups such as matrilineal clans. The political ranking of these social groups is represented

in the variable sizes of these earthen monuments, the largest of which are in the north and the smallest in the south (Knight 1998).

C. Margaret Scarry's paleobotanical research has supported Welch's argument that the Moundville elite received tribute in the form of agricultural goods. Scarry's analysis and comparison of paleobotanical assemblages has revealed that rural, non-elite farmsteads conducted more onsite processing (shelling) of maize cobs than did residents of the Moundville site and other mound centers in the Black Warrior Valley. Moreover, there was more on-site maize processing at lower-status than higher-status residential areas of the Moundville site (Welch and Scarry 1995). Scarry interprets these variable patterns of food production as evidence of tribute mobilization in the form of shelled maize provided to the Moundville elite from nonelite residents of the Black Warrior Valley (Welch and Scarry 1995).

Issues of economic centralization and social differentiation at Moundville have been debated in recent years. Marcoux (2000) recently conducted a distributional study of display goods manufacturing debris in the Black Warrior Valley. Surprisingly, Marcoux's examination of artifacts and excavation records did not confirm the existence of the four offmound special production loci previously identified at Moundville by Peebles, Kus, and Welch. Only a small number of display goods in an incomplete stage of manufacture were identified. Moreover, these incomplete specimens and two concentrations of craft-related artifacts were recovered either from mound-summit contexts or from contexts immediately flanking the mounds (see also Astin 1996; Wilson 2001).

Perhaps of greater import to this dissertation was Marcoux's conclusion that much of the evidence for craft production appears to post-date the early Mississippian period. With

the exception of a small cache of unworked mica found in a Moundville I phase house, the evidence discussed above was recovered from contexts that are thought to date to the late Moundville II and early Moundville III phases (ca. A.D. 1300-1450).<sup>6</sup> It is important to note, however, that no excavations have been conducted on mound summits dating to the early Mississippian period. Nevertheless, the timing and evidence of craft production suggests that this activity was a relatively small-scale affair restricted to elite households within the Moundville site.

I also have taken issue with aspects of Welch's economic model in an expanded study of the Mississippian greenstone industry at Moundville (Wilson 2001). My analysis of greenstone tool production, use, and recycling revealed little evidence of celt production at Moundville. Many of the greenstone artifacts Welch previously identified as production related were in fact finished celts that were broken in use and had been subsequently recycled into other tools. Based on this evidence, I argued that most utilitarian greenstone tools must have been either crafted at the greenstone outcrops in northeastern Alabama or transported to the Black Warrior Valley as late-stage preforms (Wilson 2001). The upshot of this study is that there is little direct evidence that the Moundville elite exerted a high degree of control over the economic means of production in the Black Warrior Valley.

# **Summary and Discussion**

Evidence of tribute mobilization (Welch and Scarry 1995), ascribed mortuary patterns (Peebles 1971, 1974) and large-scale labor projects indicate that the Moundville chiefdom was political centralized with an ascribed social hierarchy. The spatial layout of the

Moundville community suggests that Moundville was comprised of multiple, ranked social groups (Knight 1998). Clearly Moundville was one of the most politically complex chiefdoms in the Mississippian Southeast. However, important questions remain unanswered. What kinds of coresidential social groups comprised early Moundville? What status-based differences existed between these groups and how were these differences produced and maintained? How did social ranking play out in the daily lives of Moundville community members? Did membership in a higher-ranked clan entail special privileges for all of its members or only for the elite? I submit that finding answers to these questions requires a more inductive, household-centered, theoretical approach combined with the analysis of large-scale midden assemblages from Moundville's residential areas. This theoretical approach is outlined in Chapter 2. The data for this research are discussed and analyzed in Chapters 5, 6, and 7.

<sup>1</sup> In the case of Cahokia, multiple plazas are present each of which is surrounded by numerous mounds and residential areas.

<sup>2</sup> As with the Tract 15A case it is difficult to isolate individual household clusters suggesting that the courtyard group itself represents the basal social and residential unit at these upland sites.

<sup>3</sup> These excavations were conducted in 1991 and 1992 prior to efforts by the United States Army Corps of Engineers to protect this portion of the site from further erosion. Knight directed these excavations (Scarry 1995).

<sup>4</sup> Early Mississippian architecture is discussed more thoroughly in Chapter 4.

<sup>5</sup> It is unclear whether this feature was of intentional design or merely a disturbance.

<sup>6</sup> A small concentration of unworked mica was also identified in a single context at the northwest fringes of the Moundville site. No direct evidence, however, for the manufacture of mica items, in the form of partially manufactured artifacts, has been found.

## CHAPTER 4

# THE MOUNDVILLE ROADWAY EXCAVATIONS

The Roadway excavations were conducted in 1939 and 1940 at the Moundville site within a winding corridor, 50 ft wide and 1.5 miles long, that was to be disturbed by the construction of a road that now encircles portions of the plaza and areas east, west, and south of the mounds (Peebles 1971). In conjunction, several large block excavations occurred prior to the construction of an entrance building and site museum. These excavations were divided into 147 50-×-50-ft blocks. Each of these blocks was subdivided into ten 5-×-50-ft blocks (Figure 4.1). Most ceramic artifacts were assigned to these excavation units. However, many nonceramic materials (copper, shell, bone, pigments, greenstone celts and pendants, projectile points, discoidals, and nutting stones) and large ceramic vessel fragments were piece-plotted on the original excavation maps. Excavated soil was not screened. Moreover, stratigraphic information was not recorded. However, excavators collected all ceramic and greenstone artifacts they encountered. Other archaeological materials were less systematically collected; only a small portion of the faunal, botanical, and chipped stone artifacts recovered from these excavations was collected.

The excavation and mapping of the Moundville Roadway was supervised by Maurice Goldsmith. Goldsmith's excavation system involved first uncovering individual 5-×-50-ft blocks. These blocks were expanded upon the identification of architectural features or

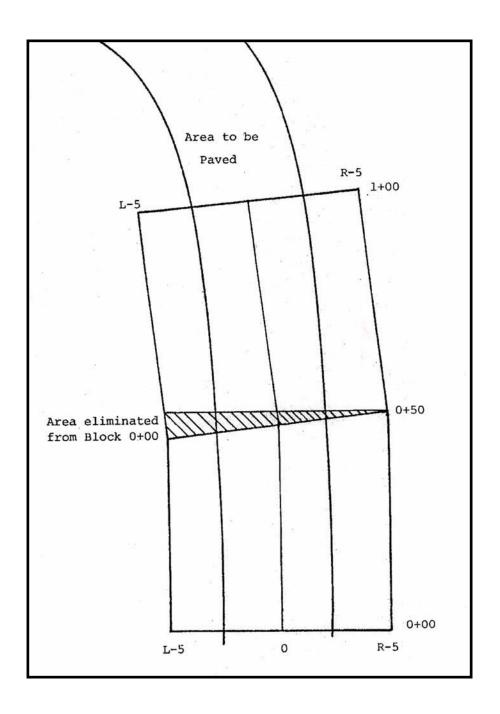


Figure 4.1. Drawing of the relationship between the excavation blocks and the Roadway (from Peebles 1979:Figure X-1).

midden deposits. Ultimately, close to one third of the 362,000 ft<sup>2</sup> of the Moundville Roadway was excavated (Peebles 1979). These excavations uncovered the archaeological remains of hundreds of Mississippian buildings and associated architectural features, a total of 289 burials, and over 100,000 artifacts.

### The Study Assemblages

All the subsurface features from the Moundville Roadway were examined in this study. This dataset consists of thousands of postmolds, wall trenches, burials, and other features. The ceramic study assemblage for this project consists of a total of 14,439 sherds from five widely separated and discrete portions of the Moundville Roadway (Figure 4.2). I also examined published ceramic and architectual data from the Moundville Riverbank and North of Mound R excavations at Moundville (Scarry 1995, 1998; Steponaitis 1983). The five contexts from which the Roadway ceramic assemblages derived are marked on Figure 4.2 and consist of Roadway blocks 30+00-31+50, 40+00-45+00, 72+00-73+00, the Administration Building (ADM), and the Museum Parking Area (MPA) excavations. The Moundville Riverbank and north of R excavations are also plotted on the map.

Table 4.1. Counts of rims and body sherds per area.								
Area Rim Counts		Body Sherd Counts	Total					
30+00-31+50	68	490	558					
43+50-46+00	883	5066	5949					
70+50-72+05	545	2171	2716					
ADM	185	1978	2163					
MPA	375	2678	3053					
TOTAL	2056	12383	14439					

Table 4.1. Counts of rims and body sherds per area

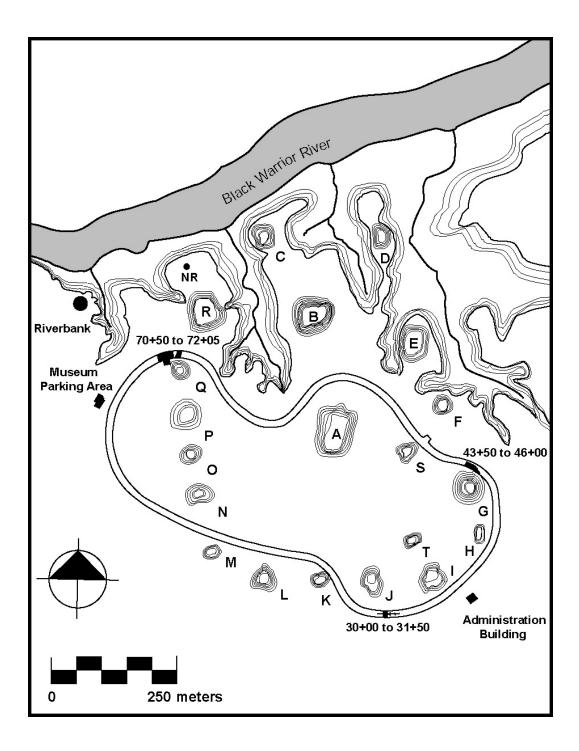


Figure 4.2 The Moundville site featuring portions of the Roadway from which pottery assemblages were analyzed.

These assemblages were chosen based on their large sample sizes, associations with residential architecture, and locations in widely separated portions of the Moundville site. Each of these assemblages derive from midden contexts that were formed through the successive dumping of refuse near residential areas. These deposits consist primarily of secondary refuse deposits based on the recovery of large and generally well-preserved vessel fragments and other artifacts. A lack of crossmends between sherd assemblages indicates a low degree of post-depositional disturbance. While these midden assemblages are qualitatively similar in terms of their formation, they vary in sample size with 40+00-45+00 being the largest sample and 30+00-31+50 being the smallest (Table 4.1).

## CHAPTER 5

### SERIATION

The purpose of this chapter is to define the chronological relationships among the different archaeological contexts I examine in this study. Domestic ceramic assemblages provide the principal evidence for this analysis. Ceramics are the most abundant archaeological materials recovered from the Moundville site. Moreover, domestic cooking and serving vessels had a high breakage and replacement rate relative to other examples of Mississippian material culture. The frequent replacement of Mississippian domestic wares, particularly cooking jars, created an enhanced possibility for stylistic changes in their manufacture over time. Tracking these stylistic changes has allowed archaeologists to define four primary chronological periods or phases in Moundville's occupational history (Figure 5.1; Steponaitis 1983; Knight and Steponaitis 1998). Each of these phases, in turn can be subdivided based on statistical differences in the presence of certain ceramic variables (Knight and Steponaitis 1995; Steponaitis 1983).

Domestic architecture provides another line of chronological information for this analysis. As discussed in Chapter 3, there are chronological changes in the ways in which Mississippian community members manufactured their houses at Moundville (Laquement 2004; Scarry 1995, 1998). Although houses had longer use lives than pots they provide a useful means by which to date different archaeological contexts at Moundville and estimate their occupation spans. I begin by providing background on previous ceramic seriation research at the Moundville site. In doing so I introduce the important ceramic attributes in which my seriation of the Moundville Roadway assemblages will focus. Next, I present a seriation of the Moundville Roadway ceramic assemblages. Several steps were required to establish a ceramic seriation for the Moundville Roadway. First, I present an incidence matrix for the Moundville Roadway ceramic assemblages noting the presence or absence of temporally sensitive ceramic attributes from different phases of Moundville's occupation. Then I present an abundance matrix comparing the counts and relative frequencies of various ceramic attributes from the Moundville Roadway to well-dated assemblages recovered from the Moundville Riverbank and North of Mound R excavations. Third, I compare metric data on unburnished jar handles from the Moundville Roadway assemblages to mortuary assemblages from various well-dated contexts from the Moundville site and elsewhere in the Black Warrior Valley. This step provides important information on the degree of chronological mixture in the Moundville Roadway ceramic assemblages.

As a final step in this ceramic seriation I perform a nonmetric multidimensional scaling of the Moundville Roadway assemblages and those from the Moundville Riverbank and North of Mound R excavations. This step presents the finalized chronological sequence in which all further analyses are based in this study. Finally, I use Ford's method to further evaluate the occupation span and degree of chronological mixture in the Moundville Roadway and Riverbank contexts.

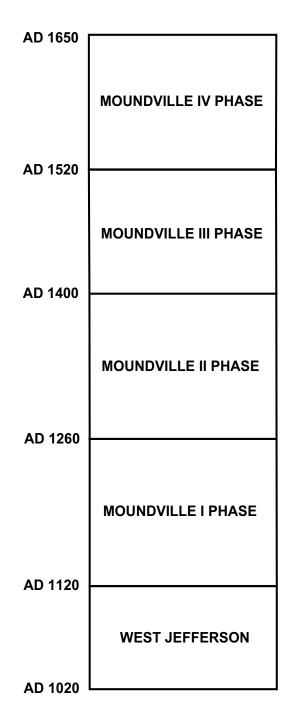


Figure 5.1 Mississippian period chronology for the Black Warrior Valley (after Knight et al. 1999:Figure 7).

### **Background on Moundville Ceramic Seriation**

The seriation presented here benefits greatly from previous analyses of Woodland and Mississippian ceramic assemblages from west-central Alabama (DeJarnette 1952; DeJarnette and Wimberly 1941; Jenkins 1980, 1981; Jenkins and Nielson 1974; McKenzie 1966; Scarry 1995; Steponaitis 1980, 1981, 1983, 1998). Several projects in particular provide well-dated benchmarks that help to chronologically situate the Moundville Roadway assemblages. These projects include the University of Michigan's excavations north of Mound R, and the University of Alabama's excavations at the PA and ECB tracts along the Moundville Riverbank (Scarry 1986, 1995; Steponaitis 1983). Also relevant is Steponaitis' (1998) ceramic research on diachronic trends in population density at the Moundville site.

### UMMA Excavations North of Mound R

The University of Michigan's 1978 and 1979 excavations north of Mound R consisted of two  $2 \times 2$  m squares which were excavated from surface to subsoil through approximately two meters of cultural deposits (Scarry 1986). These deposits were systematically excavated and screened in natural levels. Steponaitis's (1984) analysis of the ceramic assemblages north of Mound R, along with an assemblage of whole pots from Moundville burial contexts, produced the first comprehensive, fine-grained ceramic seriation for the Moundville site. Based on his seriation efforts, Steponaitis stratigraphically divided the midden deposits into Moundville I, II, and III phases (Figure 5.1). A radiocarbon sample from near the top of the Moundville I strata produced an uncalibrated date of A.D.  $1260 \pm 60$ . The lowest strata produced virtually unmixed Moundville I artifact assemblages (Steponaitis

1983). Moundville II and III deposits, however, did exhibit an increasing mixture with earlier materials.

Steponaitis (1983) defined six dimensions by which to characterize different attributes of Moundville ceramic assemblages: types and varieties, representational motifs, painted decoration, basic shapes, secondary shape features, and effigy features. I use this classification system in my seriation of the Moundville Roadway ceramics, and I focus on types and varieties, basic shapes, and secondary shape features. These dimensions proved to be the most robust indicators of temporal change in the study assemblage. I summarize each dimension below.

- Types and varieties are units within a hierarchical classification system based on differences in vessel paste, surface treatment and decorative technique. Types represent broad units of classification. Varieties are more specific classification units, the identification of which is based on minor differences in vessel characteristics.
- The basic shape dimension refers to the overall shape or profile of a vessel. General categories within the basic shape dimension include jars, bowls, and bottles. Each of these general categories can be subdivided into a number of more specific subcategories. Table 5.1 lists and describes a number of chronologically sensitive basic shape classes as defined by Steponaitis (1983).

Vessel Shape	Phase	Description
Neckless Jar	EMI	Jars with inslanting lip shapes; jar lips do not
		reach a point of vertical tangency
Burnished Jar	MI-MII	Burnished or slipped jars often with surface
		and/or rim decorations not present on
		unburnished jars
Carinated Bowl	EMI-MII	Wide and shallow vessels with vertical or slightly
		inslanting rims that join a relatively flat base at a
		corner point
Outslanting Bowl	MII	Bowls with relatively straight upper walls and
		lips that slant outward at an angle greater than 20
		degrees
Short-Neck Bowl	LMIII	The restricted rim bowl shape with the addition of
		a short vertical neck

Table 5.1 Selected chronologically sensitive Moundville basic shape classes.

Key: E=Early, L=Late, M=Moundville, I-III=phase

• Secondary shape features consist of elaborations of form found on Moundville pots. A

list of relevant secondary shape features is provided in Table 5.2.

Table 5.2 Selected emonologically sensitive secondary shape reatures.					
Feature	Phase	Description			
Folded Rim	M1	A jar rim that has been thickened by adding a coil strip beneath the lip			
Folded-Flattened Rim	MI	A jar rim with a folded rim that has a flattened lip			
Gardrooning	MI	A modeled decoration in which a vessel (usually a bottle) has vertical grooves evenly spaced around its body.			
Beaded Rim	MIII	A notched appliqué strip encircling the rim of a vessel			

Table 5.2 Selected chronologically sensitive secondary shape features.

Key: E=Early, L=Late, M=Moundville, I-III=phase

# AMNH Riverbank Excavations

The University of Alabama, Alabama Museum of Natural History's 1991 and 1992 excavations targeted two areas where erosion threatened portions of the Moundville site near the riverbank (Scarry 1995:1). The areas excavated during this project include the ECB tract (East of the Conference Building) and the PA tract (Picnic Area). Radiocarbon dates from both tracts revealed that most of the occupation in these areas dated to the Moundville I phase (Scarry 1995:91-94). Based on differences in the ceramic assemblages and architectural features from these areas, Scarry (1995) concluded that the PA tract occupation dated primarily to the *early* Moundville I phase and that the ECB tract occupation dated primarily to the *late* Moundville I phase. Deposits in both tracts exhibited minor amounts of mixing with later Moundville II and III materials.

### Steponaitis's Least-Squares Regression

Most recently, Steponaitis (1998) employed a least-squares regression technique developed by Kohler and Blinman (1987) to sort out chronological mixing in midden pottery assemblages from Moundville. Using well-dated assemblages from the Bessemer site and from stratified deposits north of Mound R at Moundville, Steponaitis (1998) was able to generate model assemblages from different periods in Moundville's culture history. These model assemblages provided the baseline for analyzing the mixed assemblages. An important source of data for this research was Wimberly's (1956) basic tabulation of ceramic type varieties in the Moundville Roadway. The results of the least-squares regression revealed that approximately 73.4 percent of the total Moundville Roadway assemblage dates to the Moundville I phase, 25.5 dates percent to the Moundville II-III phases, and the remaining 1.1 dates percent to the Woodland period West Jefferson phase (Steponaitis 1998:Table 2.2).

### **Methods of Seriation**

My first step in seriating the study assemblage entailed documenting the presence of chronologically sensitive types and varieties, basic shapes, and secondary shape features. Table 5.3 shows the presence of many Moundville I diagnostics in the study assemblage, but also reveals the presence of a number of diagnostics from the Moundville II and III phases. Thus, while the study assemblage includes a substantial Moundville I component, there also appears to be some degree of mixing with later materials.

Sorting out this mixing is not an easy task. The Moundville Roadway artifact assemblages were not consistently provenienced by stratigraphic level. As a result, it is not possible to sort out earlier and later occupations by separating assemblages from natural or arbitrary levels in midden deposits. Moreover, there are few clear indicators of Moundville II and III ceramic assemblages that can be used to sort out the degree of chronological mixture. The primary diagnostics of Moundville II and III ceramic assemblages consist mostly of serving wares such as Moundville Engraved, pedestalled bottles, a number of effigy forms, and beaded-rim bowls. Not only do these serving wares represent a small amount of the total variation in post Moundville I assemblages, but their relative abundance in refuse deposits may also be strongly influenced by social and economic factors such as status, ceremonialism, and duration of occupation (Maxham 2000, 2004; Varien and Potter 1997; Welch and Scarry 1995; Wilson 1999).

As an initial step in sorting out this mixing I compare the relative frequency of Moundville I chronological markers from the Roadway assemblages to the well-dated Moundville Riverbank and North of Mound R assemblages. The variables used in this

	EMI	LMI	EMII	LMII	EMIII	LMIII
Short-neck Bowl						Х
Carthage Incised - Carthage					Х	Х
Moundville Engraved - Hemphill				Х	Х	Х
Beaded-Rim Bowl				Х	Х	Х
Carthage Incised - Akron	Х	Х	Х	Х	Х	
Moundville Incised - Snows Bend		Х	Х			
Moundville Incised - Carrollton	Х	Х	Х			
Moundville Incised - Moundville	Х	Х	Х			
Gardrooning	Х	Х				
Moundville Engraved - Elliot's Creek	Х	Х				
Carthage Incised - Moon Lake		Х				
Carthage Incised - Summerville	Х	Х				
Folded Rim	Х	Х				
Folded-Flattened Rim	Х					
Moundville Incised - Oliver	Х					

Table 5.3 Distribution of chronologically sensitive types and modes in the study sample.

Table 5.4. Counts and Percentages of selected ceramic attributes by assemblage.

Assemblage	Standar	Standard Rims		Folded and		d Rims	Moundville Incised		
		Flattened Rims							
Late Moundville I		%	Ν	%	Ν	%	Ν	%	
ECB Tract	50	60.98	11	13.41	21	25.61	112	2.92	
M1NR	30	43.00	3	4.00	40	53.00	84	2.98	
ADM	10	10.99	23	25.27	58	63.74	137	6.33	
MPA	24	10.91	44	20.00	152	69.09	145	4.75	
30+00 to 31+50	14	31.82	7	15.91	23	52.27	21	3.76	
43+50 to 46+00	72	12.65	145	25.48	352	61.86	241	4.05	
70+50 to 72+05	27	6.91	156	39.90	208	53.20	144	5.30	
Early Moundville I									
PA Tract	6	10.71	29	51.79	21	37.50	32	1.36	

comparison consist of standard, folded, and folded-flattened unburnished jar rims and the ceramic type Moundville Incised. Based on his seriation of stratified North of R assemblages Steponaitis identified a temporal trend where folded-flattened rims were the most popular jar rim type in the early Moundville I phase. This rim type was gradually replaced by folded rims during the Moundville I phase. By the Moundville II phase, standard or unmodified jars were the most common jar rim type. Moundville Incised is a ceramic type that was most common during the Moundville I phase that continues into early Moundville II (Scarry 1995; Steponaitis 1983:108).

As revealed in Table 5.4, the Moundville Roadway assemblages are comparable to the late Moundville I Riverbank and North of Mound R assemblages in terms of the relative frequency of these ceramic variables. In nearly every case the relative frequencies of Moundville Incised sherds, folded rims, and folded-flattened rims are higher or equal to those from late Moundville I assemblages from North of Mound R and the ECB tract (Table 5.4). Moreover, the Roadway assemblages have lower relative frequencies of standard jar rims than the North of Mound R and the ECB-tract assemblages (Table 5.4). The only explanation for these patterns is that the vast majority of sherds in the Moundville Roadway assemblage date to the Moundville I phase with only a slight Moundville II and III admixture.

### Unburnished Jar Handles

An analysis of jar handles provides another means of evaluating the degree of chronological mixture in the Moundville Roadway assemblages (Steponaitis 1983). These changes relate to differences between the top (near the lip of the jar) and bottom width of handles (where the bottom of the handle is attached to the vessel shoulder). The top and bottom of strap handles from Moundville I phase jars tend to be very similar in width. Throughout the Moundville II and III phases, however, Moundville potters increasingly made jars with strap handles that were wider on top relative to handle bottoms. This chronological trend can be expressed as a ratio of the top width divided by the bottom width (Figure 5.2).

Figure 5.3 compares the distribution of top-to-bottom width ratios for jar handles from each of the Moundville Roadway assemblages to a sample assemblage of Moundville I, II, and III whole vessels from the Moundville, Lubbub, and Bessemer sites (Steponaitis 1983: Table 22, Table 24, Table 25, Table 26). I chose this sample assemblage because it was used by Steponaitis (1983) in his original seriation of Moundville jar rim handles. I use boxplots for the purpose of graphically comparing these assemblages. Boxplots facilitate the visual representation of values within an archaeological assemblage, through the use of a number of graphical elements. The outer edges (hinges) of the box represent the 25<sup>th</sup> and 75<sup>th</sup> percentiles of the distribution. The median value of the distribution is represented by a notch at the center of the box. The vertical lines (whiskers) on opposite sides of the box represent the tails of the distribution. Outlier values in the distribution are represented as asterisks and far outliers as open circles or dots (McGill et al. 1978). It is possible to compare the distribution of values within different assemblages by superposing them on the same graph. The outer portion of the notched section of the box represents the 95% confidence interval around the median. The medians of the two assemblages are significantly different at the 0.05 level when their notched sections do not overlap.

The results of this exercise revealed a very similar distribution of top-to-bottom width ratios for all of the Moundville Roadway assemblages and for the Moundville I phase sample assemblage (M1). The notched confidence intervals for each of these assemblages overlap, indicating that they are not significantly different. The maximum and minimum scores for each assemblage are also very similar. The Moundville II assemblage (M2), however, does not overlap with any of the Moundville Roadway assemblages or the Moundville I sample assemblage. Moreover, the Moundville III sample assemblage (M3) exhibits a much larger

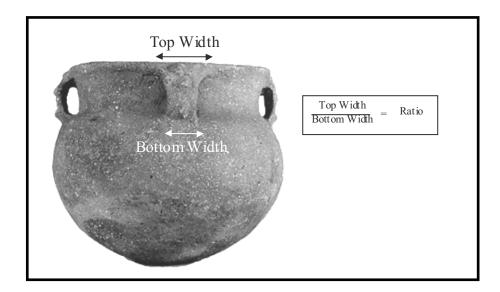


Figure 5.2 Mississippi Plain jar highlighting the location of top and bottom handle-width measurements.

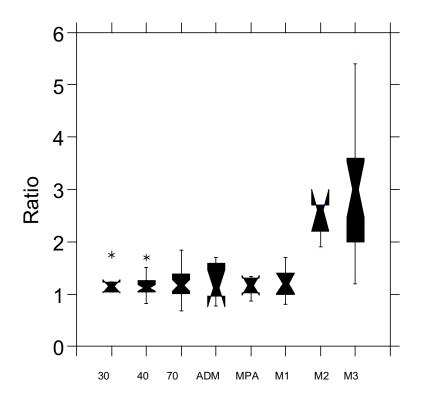


Figure 5.3 Boxplots of unburnished jar handles from Moundville contexts displaying the distribution of handle width measurements ratios (30=Roadway blocks 30+00 to 31+50, 40= Roadway blocks 43+50 to 46+00, 70= Roadway blocks 70+50 to 72+05, ADM=Administration Building, MPA=Museum Parking Area).

distribution of jar width ratios than any of the other assemblages. Its mean value, however, is the highest among all the assemblages compared in Figure 5.3. This analysis indicates that the Moundville Roadway ceramic assemblages consist primarily of Moundville I sherds with little mixing with later Moundville II and III materials. If there was significant mixing with later sherds, then the handle width ratio distributions would be much higher than exhibited in Figure 5.3.

#### Nonmetric Multidimensional Scaling

Here I use nonmetric multi-dimensional scaling (MDS) to seriate ceramic assemblages from the five Roadway contexts, the PA and ECB tracts, and the Moundville I and Moundville II-III assemblages from North of R. When used for the purposes of ceramic seriation, MDS graphically represents the relationships among various assemblages in twodimensional space (Marquardt 1978). Thus, the MDS technique generates a rank-ordering of intra-assemblage dissimilarities by reducing the number of dimensions in which the data are represented. The spatial distance between graphed assemblages indicates their degree of dissimilarity. Widely spaced assemblages reveal notable intra-assemblage compositional differences while closely-spaced assemblages indicate similarities. Stress is a numerical index that denotes how successful a MDS seriation was achieved. Successful seriations can be generated with a low degree of stress. MDS seriations for assemblages characterized by well-demarcated temporal differences are commonly represented in chronological order along an arc or curve.

Vessel attributes used in this MDS seriation include the relative frequency of foldedflattened, folded, and standard unburnished jar rims and Moundville Incised sherds. These

particular attributes were selected as they have proven to be useful temporal indicators in Mississippian ceramic assemblages from the Black Warrior Valley (Steponaitis 1983). As a first step to conducting this analysis I created a dissimilarity matrix of distance coefficients between these attributes using the city-block coefficient (See Cowgill 1972; Steponaitis 1983:85-88). Next, I used non-metric multidimensional scaling to arrange these coefficients into a relative sequence. These procedures were performed using the statistical, software application SYSTAT 9.0 (Wilkinson et al. 1992). As shown in Figure 5.4, this analysis

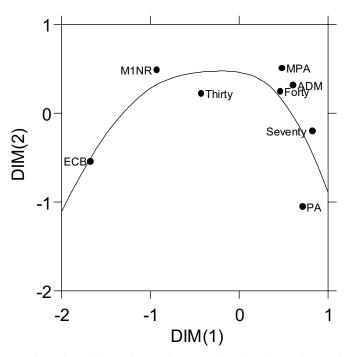


Figure 5.4. Multidimensional scaling of Roadway, Riverbank, and North of R assemblages

produced a configuration in the shape of an elongated arc. The chronological ordering of assemblages in Figure 5.4 is presented right to left beginning with the early Moundville I assemblage from the PA Tract and ending with the late Moundville I assemblage from the

ECB Tract. The stress of this configuration is very low at .012 with the two dimensions capturing 99 % of the variation in the dissimilarity matrix.

This seriation confirms that all five Moundville Roadway assemblages date to the Moundville I phase. There is also some obvious clustering in this configuration. Assemblages from Roadway blocks 43+50 to 46+00, the Administration Building, and the Museum Parking Area, assemblages comprise a tight cluster while those from Roadway blocks 70+50 to 72+05 and 30+00 to 31+50 fall earlier and later in the sequence respectively (Figure 5.4). Moreover, the late Moundville I assemblage from north of Mound R falls between the Roadway blocks 30+00 to 31+50 and the ECB tract. Thus, while all the Moundville Roadway assemblages date to the Moundville I phase, there appear to be chronological differences in their occupation within the Moundville I phase.

One possible explanation for this pattern is that the clustered assemblages from 43+50 to 46+00, the Administration Building, and the Museum Parking Area date to one portion of the Moundville I phase while the remaining assemblages date earlier and later in the sequence respectively. Another possibility is that the seriation presented in Figure 5.4 represents assemblages characterized by the differential mixing of early and late Moundville I sherds. If the later possibility is correct then each of the contexts I examine in this study essentially represent contemporaneous late Moundville I occupations that were preceded by larger or smaller early Moundville I occupations. To distinguish between these two possibilities I turn to architectural data.

# Architectural Seriation

Changes in architectural style provide an important means of evaluating occupational history that is independent of ceramics. As discussed in Chapter 3, archaeologists have identified three distinct architectural building techniques used at Moundville during the Mississippian period (Knight and Steponaitis 1998:18; Laquerment 2004; Scarry 1995, 1998). During the early Moundville I phase, inhabitants of the Black Warrior Valley primarily built structures using a single-set post technique in which wall posts were bent over and interwoven to form a rounded roof (Lacquement 2004; Scarry 1995, 1998:91). A minority of early Moundville I structures consisted of a combination of single-set post and

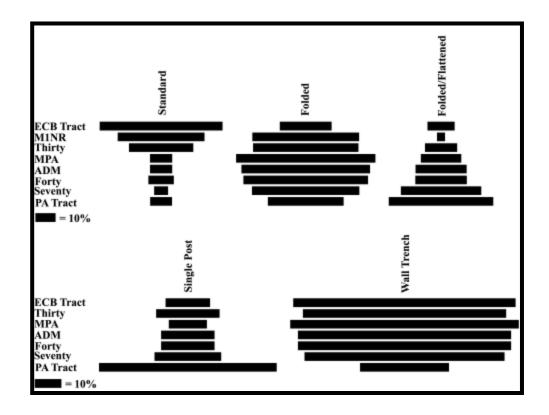


Figure 5.5. Ford's method seriation of Roadway structures by architectural style and unburnished jar rims by context.

wall-trench technologies. These "hybrid" structures may represent a transitional form between single post and wall trench architecture (Scarry 1995; 1998:91). By the late Moundville I phase, the regional populace primarily built structures using a wall-trench architectural design. After around AD 1300, they built structures using a large-diameter, rigid-set post technology involving internal support posts and separate wall and roof components (Knight and Steponaitis 1998:18).

Using Ford's method, I conducted a seriation of buildings by frequency of architectural style for each of the five Moundville Roadway areas and for the PA and ECB tracts.<sup>1</sup> Ford's method is based on the assumption that different stylistic attributes of material culture wax and wane in popularity through time (see Ford and Quimby 1946; Ford and Willey 1940). In other words, a particular style is introduced, gains popularity, and eventually is abandoned for a new style. By tabulating the relative frequencies of particular stylistic attributes from one context and comparing them to a set of diagnostics from earlier or later contexts it is possible to get a relative idea of how the popularity of a particular diagnostic changed through time. Horizontal bars representing the relative frequencies of different pottery diagnostics from each context can be ordered vertically to graphically depict these changes. Each column of bars should ultimately depict the chronological waxing and waning of individual diagnostics. Such graphical trends are often referred to as "battleshape curves" as they narrow and widen to represent a particular attribute's changing popularity. For the purpose of this analysis, single-post and hybrid-flexed structures are aggregated to represent the early Moundville I phase. Wall trench structures represent the late Moundville I and early Moundville II phases. In addition, rigid-set single-post buildings represent post AD 1300 occupations.

Based on the results of this seriation, it appears that both early Moundville I and late Moundville I to early Moundville II architecture is present in all contexts considered (Figure 5.5). Early Moundville I architecture, however, represents a minority of the total structures in all contexts except for the PA tract. The PA Tract has a much higher percentage of singlepost and hybrid structures (66.7%) and a lower percentage of wall-trench structures (33.3%) than any other context. In fact, wall-trench architecture predominates in Roadway contexts and the ECB tract but represents only a minority of the total structures in the PA tract.

This architectural seriation is important as it provides an independent line of evidence dating the Moundville Roadway study areas to the Moundville I phase. For purposes of comparison I juxtaposed this architectural seriation with a Ford's graph of unburnished jar handles from the same contexts. The results of both seriations and the nonmetric multidimensional scaling are very similar. The exceptions are Roadway Blocks 30+00 to 31+50 and the Administration Building which are reversed in the architectural and ceramic seriations. The reasons for this are unclear but may be a result of small architectural sample sizes for both of these areas. It is also noteworthy that the architectural data indicates a much sharper distinctions presented above. Based solely on these results, it appears that the PA tract consists primarily of an early Moundville I occupation with a minor late Moundville occupation, while all other areas possess a minor early Moundville I occupation.

### **Summary of Seriation Evidence**

All the seriation techniques employed in this chapter indicate the same general pattern; Each of the Roadway areas was primarily occupied during the middle to late Moundville I phase (Table 5.4). When compared to the MDS seriation, the architectural data provide more specific information about the residential histories of each of the five Moundville Roadway contexts. Each area under consideration is marked by a minor early Moundville I phase occupation followed by a more intensive middle to late Moundville I occupation. The PA tract is somewhat unique in that it appears to date primarily to the early Moundville I phase (Scarry 1995, 1998). There is also ceramic admixture from later Moundville II and III occupations in each of these areas. The extent of this admixture, however, appears to be minor based on the MDS ceramic seriation, the scarcity of late Mississippian architectural styles, and the scarcity of post Moundville I jar handle styles in the Roadway assemblages. This chronological information will facilitate my architectural and ceramic analysis in Chapters 5 and 6.

<sup>&</sup>lt;sup>1</sup> Due to its spatially restricted nature the North of Mound R contexts were excluded from this analysis.

# CHAPTER 6

### ARCHITECTURE AND COMMUNITY ORGANIZATION

This chapter presents an analysis of the architectural and mortuary features from the Moundville Roadway and Riverbank excavations. I begin by providing background on the architectural techniques used to construct Mississippian structures and the purposes that these buildings served. Next, I describe the way the Moundville Roadway was originally mapped and the procedures used to create a GIS map for Moundville. The rest of the chapter is devoted to a discussion of how Moundville's early Mississippian residential occupation was organized. Specifically, I consider when Moundville was first occupied, how long that occupation endured, and how kin groups organized themselves in relation to community space over the long term.

## **Architectural Construction Techniques and Functions**

Despite major innovations in excavation methods and the expansion of regional datasets, Lewis and Kneberg's (1946) research in eastern Tennessee is still the yardstick against which any study of Mississippian architecture must be measured. Indeed, much of what is currently known about architectural construction techniques, building materials, form and function, and chronology can be traced back to the heyday of culture history. The details of these technological studies were primarily related to time-space systematics rather than

issues of political organization or domestic economy. Nevertheless, these earlier investigations have proven invaluable to contemporary researchers throughout the southeastern U.S. Future refinements or applications of architectural data would contribute greatly to studies of Mississippian household archaeology.

In the 1940s Lewis and Kneberg (1946) excavated several burned Mississippian structures in which the charred remains of walls, roofs, and other construction materials like thatch and matting were preserved. Architectural floor plans provided an additional source of data for their analyses. Based on the excavation and analysis of numerous Mississippian buildings from Hiwassee Island and other eastern Tennessee sites, Lewis and Kneberg (1946) identified a basic chronological distinction between early and late Mississippian architectural styles. Early Mississippian buildings were constructed using a flexed-post technique with small, closely spaced wall posts that were bent over and interwoven to form a rounded roof. Wall posts were set in linear trenchs or individually excavated postholes. In contrast, late Mississippian buildings were constructed using a rigid-post technique with large and widely spaced wall posts in which additional beams were attached to form a hipped or gabled design.

Polhemus's (1987) research at the Toqua site in eastern Tennessee built upon Lewis and Kneberg's earlier investigations in the region. The Toqua investigation represents one of the most comprehensive analyses of Mississippian architecture to date. The Toqua site project is relevant to the current study of the Moundville community in that much of the architectural variation documented by Polhemus is also present at the Moundville site. In all, Polhemus analyzed 133 buildings excavated by the University of Tennessee. Present in the Toqua sample are a variety of different structure shapes, styles, and functions. Most

structures appear to have been of a wattle construction with either bark or thatched-covered roofs (Polhemus 1987). Rectangular, square, and circular building shapes were identified. Both flexed- and rigid-post structures were present, indicating a long-term occupation for the site. Many structures had interior hearths, and some also included benches and internal wall partitions.

Polhemus (1987:Figure 5.1) assigned a suite of different functions to Toqua site buildings based on an analysis of variable structure sizes, construction techniques, and the presence or absence of certain internal features. In general, many of the smaller square and rectangular buildings appear to have been dwellings. The smallest of these were likely used for domestic food storage and/or special processing tasks. The largest square or rectangular buildings are interpreted as public buildings. Circular buildings dating to the early Mississippian period may have also had public uses. In the historic Overhill Cherokee period, circular buildings were winter houses often paired with elongate, rectangular domestic buildings that were used in the summer.

### **Creating a Geographical Information System for Moundville**

A Geographical Information System map for the Moundville Roadway excavations was generated as part of a larger project to create a base map for the Moundville site (Wilson and Davis 2003). This system was generated with the use of ESRI ArcView, a software package that facilitates linking tabular data with georeferenced raster and vector images. Creating the final ArcView map of the Moundville Roadway involved several steps. First, the original field maps from the Roadway excavations where photocopied and scanned at 150 dpi. Next, each of these maps was loaded into DesignCAD, a vector drawing program. Different kinds of features (e.g., postholes, walltrenches, hearths, burials, and piece-plotted artifacts) were traced in different colors so that they would be distinguishable when exported into ArcView (Figure 6.1).

In order to fit together individual excavation maps, it was first necessary to plot



Figure 6.1. Three views of Roadway excavation section 4+50 to 5+00 (west of Mound P): field drawing (left); CAD drawing (center); and GIS representation (right).

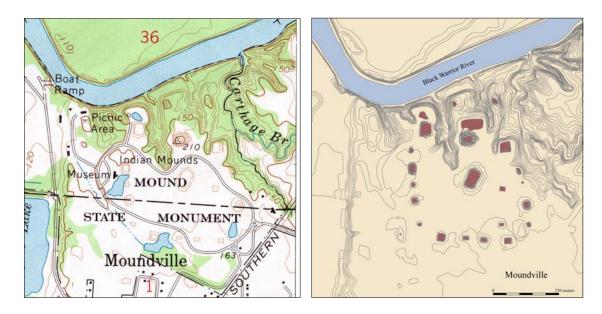


Figure 6.2. USGS topographic map showing the Roadway (left) and GIS shapefile of Moundville, with mounds highlighted (right).

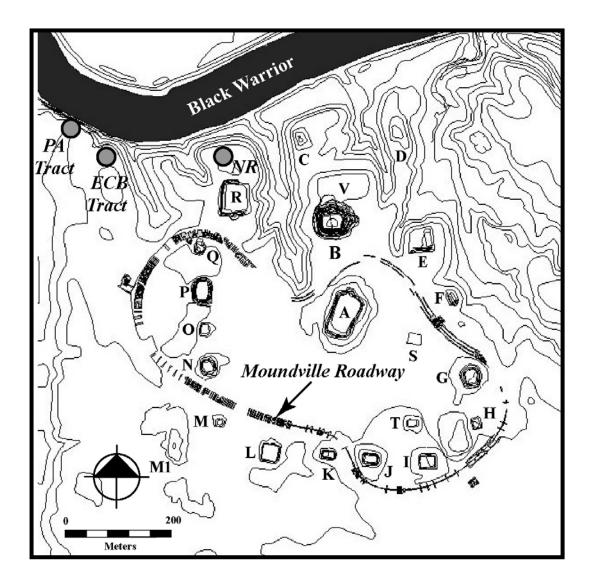


Figure 6.3. GIS representation of Moundville featuring the Moundville Roadway, Riverbank (PA and ECB tracts) and north of Mound R (NR) excavations.

the centerline of the Roadway. This was accomplished by using the Fosters, Alabama 7.5minute USGS map (1969) as a guide (Figure 6.2). This quad map was chosen as it depicts the location of the modern Roadway and the old administration building. Once the centerline was plotted, it was possible to fit individual excavation maps together in DesignCAD. Once completed, the total accumulated error along the entire length of the roadway was found to be less than 2 m (Wilson and Davis 2003). The final step in this process was to export the CAD drawing into ArcView and generate individual, color-coded maps for excavation blocks, burials, hearths, walltrenches, postholes, and piece-plotted artifacts (Figure 6.3).

### **Structure Identification**

One of the main objectives of generating a GIS map for the Moundville Roadway was to identify and gather data on domestic structures and other excavated features. This task was accomplished in several steps. As discussed above, different feature types were color-coded for easy identification. Individual structures were then marked by shading their architectural floor areas. Once a structure was identified, all the features associated with it (e.g., wall trenches, postholes, and hearths) were temporarily removed from the map. This procedure allowed me to the peel apart palimpsests of superimposed structures.

I identified a total of 140 structures in the Moundville Roadway. An additional 12 structures from the Moundville Riverbank are also included in my analysis (Scarry 1995). All but one of the structures identified in the Moundville Roadway and Riverbank excavations were of an early Mississippian (Early Moundville I-Early Moundville II) flexedpole architectural style. These buildings have rectangular or square floor plans that typically lack internal features, with the exception of prepared clay hearths. One rigid-post structure stands out as the only example of late Mississippian architecture in the entire Moundville Roadway.

For analytical purposes I sorted all flexed-pole structures into two chronological groups (early Moundville I, and late Moundville I to early Moundville II) based on differences in wall-foundation construction (Chapter 3). The early Moundville I group includes single post structures as well as "hybrid" structures that were built using a combination of single-post and wall-trench construction techniques. The late Moundville I to early Moundville II group, on the other hand, consists of structures that were built using only a wall-trench construction technique. I gathered the following eight kinds of architectural data for each complete structure: style, location, floor length, floor width, floor area, number of building episodes, number of hearths, and orientation (Appendix A). A more limited set of data was gathered from structures that were incompletely excavated or mapped.

### Variation in Structure Size and Function

Floor areas for structures in the study assemblage varied in size from 8 to 64 m<sup>2</sup>. As illustrated in Figure 6.4, there is a tri-modal distribution of floor areas for these buildings. These three size modes, which I refer to as Class I, Class II, and Class III structures, have average floor areas of  $21 \text{ m}^2$ ,  $43 \text{ m}^2$ , and  $62 \text{ m}^2$ , respectively. Possible explanations for this trimodal pattern include synchronic differences in structure function, household size, and household status, and diachronic changes in household organization. Interpretation of this

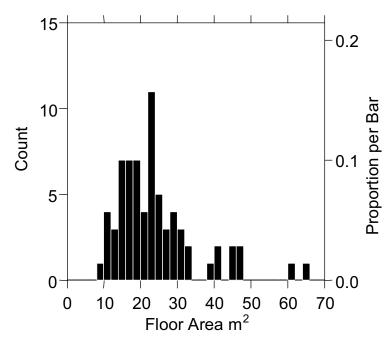


Figure 6.4. Histogram of structure floor areas from the Moundville Roadway and Riverbank.

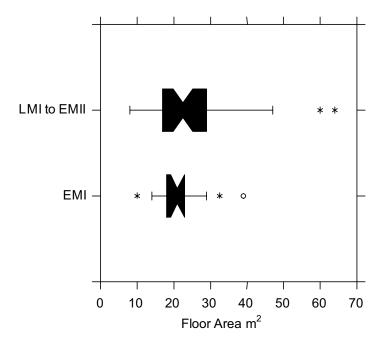


Figure 6.5. Boxplot comparing structure floor areas from early Moundville I and late Moundville I to early Moundville II architecture groups.

pattern is complicated by low degree of chronological control for Roadway architecture. However, it is possible to gain some insight into structure size differences through a consideration of architectural style, frequency, shape, spatial distribution, and the presence or absence of certain internal figures.

Figure 6.5 presents a boxplot comparing the floor areas of structures from both the early Moundville I and the late Moundville I/early Moundville II architectural groups. This comparison reveals that the early Moundville I group has a smaller size range of floor areas than the late Moundville I/early Moundville II group. Specifically, the early Moundville I group includes only two examples of Class II buildings. Examples of Class III structures are absent from this group. Thus, there do appear to be diachronic changes in structure size at early Moundville. As I argue in the following pages, these changes represent the introduction of new functional structure types and increasing differences in household size during the late Moundville I phase. A better understanding of these differences in structure size can be achieved by examining each of the three structure size classes individually.

## Class I Structures

Sixty-one Class I structures were identified in the study assemblage. This structure size class comprises most of the buildings in densely packed residential areas of the Moundville Roadway and Riverbank. Based on their high frequency and ubiquity, I argue that most Class I structures were dwellings. The small size (8-32.5 m<sup>2</sup>) of these structures would have precluded many indoor activities. For this reason, I argue that Class I structures were primarily used as sleeping quarters, as well as a limited number of other domestic activities such as domestic cooking tasks indicated by the presence of prepared clay hearths

(Figure 6.6).<sup>1</sup> It is possible that Class I structures lacking hearths were used for different domestic purposes than those with hearths. It is more likely, however, that deep plowing disturbed the floors of some structures, thus removing evidence of hearths. Floor preservation would have depended on the depth of sheet middens deposited over abandoned houses. Structure floors blanketed by only thin midden deposits had poor chances for preservation.

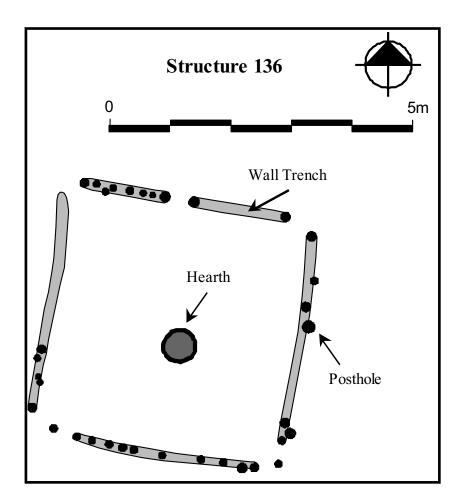


Figure 6.6. A Class I structure from the Museum Parking Area.

# Class II Structures

Only eight Class II structures were identified in the Moundville Roadway and Riverbank excavation areas. These buildings have floor areas that range from  $39 \text{ m}^2$  to  $47 \text{ m}^2$ . Although rare, Class II structures are widely distributed at Moundville, being present in over half of the residential areas identified in the Roadway excavation (Table 6.1). In addition to being larger, Class II structures also have more rectangular floor plans than Class

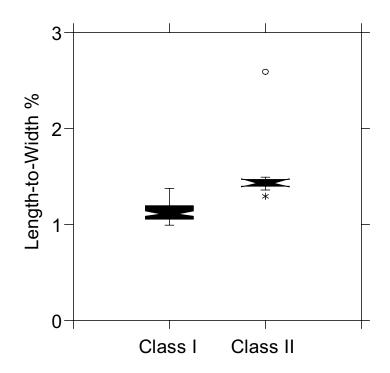


Figure 6.7. Length to width ratios for Class I and Class II structures.

I structures (Figure 6.7). This makes sense architecturally as increasing structure length while maintaining a standard width limits the need for longer wall/roof members to only two sides of the building. Otherwise, the floor plans of Class II structures are fundamentally similar to Class I structures in that they lack internal features aside from centrally placed

hearths. Thus, despite differences in size and shape, many Class II structures were probably used for similar domestic purposes as Class I structures, though probably by larger households.

Three Class II structures (93, 94, and 96) require special consideration. These structures are part of a palimpsest of superimposed buildings located between Roadway blocks 48+00 to 48+50 on the western edge of a small cluster of domestic buildings (Figures 6.9-6.10). Structure 96 is the only building in this palimpsest that exhibits both wall-trench and single-post construction techniques. This structure has wall-trench foundations along its long walls and single-set posts along its short walls. It superimposes or is superimposed by at least two (Structures 94 and 95) and possibly a third (Structure 93) structure. Due to ambiguities in the original excavation maps, however, it is impossible to accurately determine the chronological order of superimposition.

Structure 93 is an unusually long and narrow  $(11 \times 4 \text{ m})$ , wall-trench building. Its dimensions roughly correspond with two and a half (average-sized) structures in length by one (average-sized) structure in width. A line of small widely spaced posts a meter outside the western short wall represents a single rebuilding episode for this structure. No hearths or other internal architectural features were associated with this building. Structure 93 was superimposed by at least two other structures (94 and 95). Structure 95 is a 64 m<sup>2</sup>, Class III, wall-trench building that appears to have been an expansion of Structure 94, an earlier Class II, wall-trench building (Figure 6.9). Based on their large size and unusual architectural characteristics, I suggest that all the superimposed buildings in this palimpsest represent different stages of a special-purpose building associated with the adjacent multi-household group.

An examination of small rectilinear arrangements of burials associated with three Class II structures (Structures 16, 25, and 89) suggests these buildings were contemporaneous with most of the Class I buildings in the Moundville Roadway and Riverbank. Figure 6.8 illustrates the location of two of these burial clusters in relation to Structures 16 and 25. At first glance it is tempting to conclude that the burials comprising these small cemeteries were placed beneath house floors while the structures were in use. Like the houses with which they are associated, most of the burials in each cemetery are oriented in the cardinal directions, creating a rectilinear spatial arrangement. Closer examination, however, reveals that several burials superimpose the wall-trench foundations of these houses (Figure 6.8). Thus, it is clear that these cemeteries postdate the wall-trench structures that they superimpose. Indeed, Steponaitis's (1983, 1998) analysis of the pottery vessels interred with these burials revealed most date to the late Moundville II and early Moundville III phases, which indicates their interment after the abandonment of these earlier domestic structures.<sup>2</sup>

# Class III Structures

Class III structures have floor areas between 60 m<sup>2</sup> and 64 m<sup>2</sup> and represent the largest buildings in the Moundville Roadway. I identified only two examples of completely excavated and mapped Class III structures (95 and 85). However, there are two other partially excavated Roadway structures (135 and 131) with floor areas greater than 60 m<sup>2</sup>. I will describe each of these structures individually.

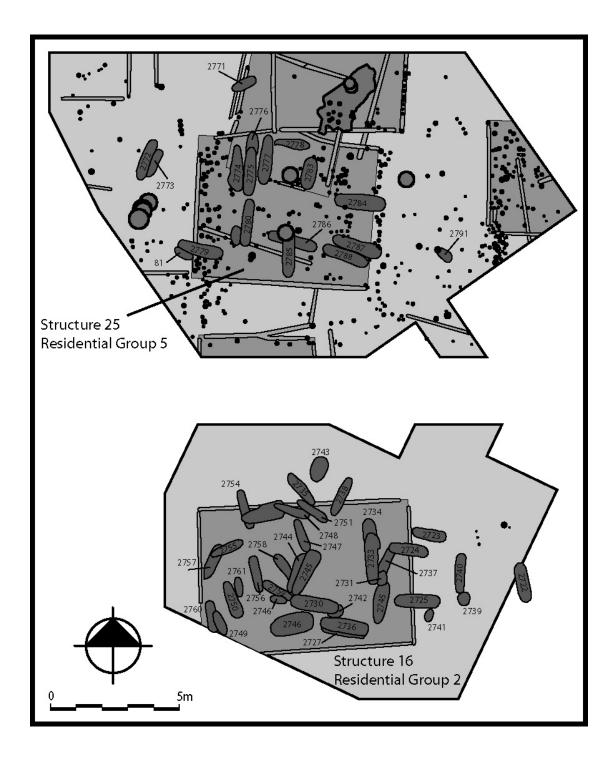


Figure 6.8. Two Class II structures superimposed by Moundville II and III burials.

pit features along its inner walls (Peebles 1979). These unusual characteristics led Peebles (1979) to interpret this structure as a public building. Indeed, Structure 95 and the palimpsest of structures with which it is associated all appear to be different stages of a special-purpose facility maintained by the same residential group.

Structure 85 is a square, wall-trench building located immediately north of Mound Q between Roadway blocks 71+50 and 72+00. This Class III building represents one stage of at least five buildings rebuilt in the same location. Based on its large size and proximity to Mound Q, it is unlikely that Structure 85 was an ordinary domestic structure. Like Structure 96, it may have served as a public building for an adjacent residential group.

The two remaining Class III structures (135 and 131) were not completely excavated, which makes it impossible to determine their exact shapes and sizes. Structure 135 is located between Roadway blocks 4+50 and 5+00 west of Mound P. The distance along one axis of this structure measures 10.85 m. Had it been completely excavated it would have likely been the largest building in the Moundville Roadway. Structure 131 is the final Class III structure and is located in the Museum Parking Area. Only a small portion of this large wall-trench structure was excavated and mapped, making it difficult to assess fully. Based on their large sizes it is likely that both of these structures served non-domestic functions. Like Structures 95 and 85, they may have been public buildings associated with an adjacent residential group.

Structure 95 has a floor area of 65 m<sup>2</sup> and is the largest completely excavated walltrench structure in the Moundville Roadway (Figures 6.9-6.10). It is located southwest of Mound F between Roadway blocks 48+00 to 48+50. As discussed earlier, Structure 95 is the largest in a palimpsest of superimposed structures situated on the western edge of a small

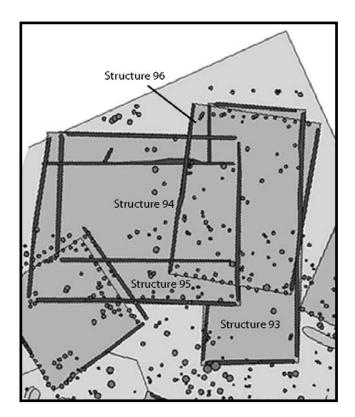


Figure 6.9. Palimpsest of Class II and III structures between Roadway blocks 47+50-49+00.

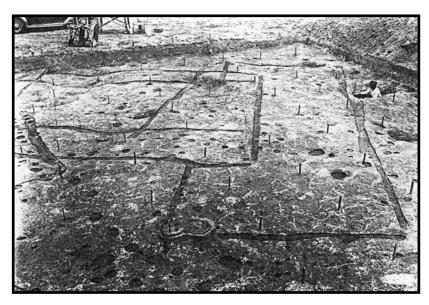


Figure 6.10. Excavation photo of superimposed structures between Roadway blocks 47+50-49+00 (Peebles 1979:Figure X-24).

cluster of domestic structures (Figure 6.9-6.10). In addition to being very large, Structure 95 is characterized by a number of other unusual architectural features. Four large posts placed in a row down the middle of the structure's short axis may represent internal roof supports (Figure 6.9). Moreover, excavators identified three basin-shaped pit features along the east and north walls.

# **Residential Group Organization**

The construction of the GIS map for the Moundville Roadway facilitated the identification of a variety of household and community organizational trends. One of the most important discoveries is that early Moundville was characterized by a highly segmented residential organization. Moundville's residential areas consist of well-defined clusters of buildings, burials, and postholes separated by areas devoid of features. In some cases these residential areas appear to consist of several, smaller clusters of domestic, public, and mortuary features.

The identification and analysis of these residential areas involved several steps. First, I calculated the ratio of postmold density to excavation area for each of the 50 x 50-ft blocks comprising the Moundville Roadway. Wall trenchs were converted into postmolds for the purpose of this analysis. This was accomplished by calculating the average number of postmolds per meter of wall trench for several early Mississippian structures.<sup>3</sup> Differences in postmold density per excavation block are visually represented in Figures 6.11 and 6.12 by a graduated color scheme overlaid on the Roadway GIS map. This analysis revealed 10 discrete residential areas divided by areas where excavators uncovered little or no evidence of subsurface features (Figure 6.13). Two additional areas are represented by the PA and

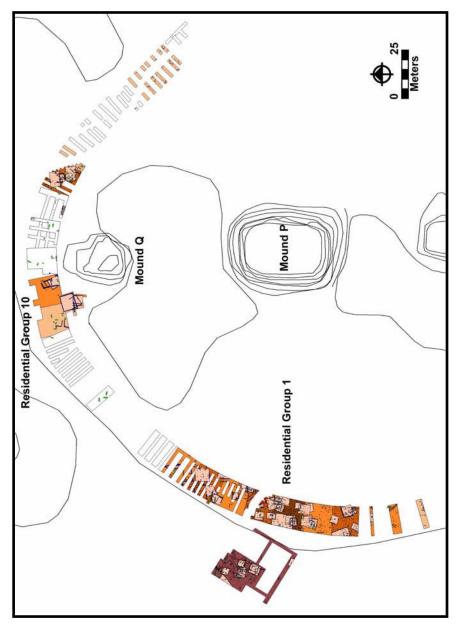


Figure 6.11. Postmold density display highlighting Residential groups 1 and 10.

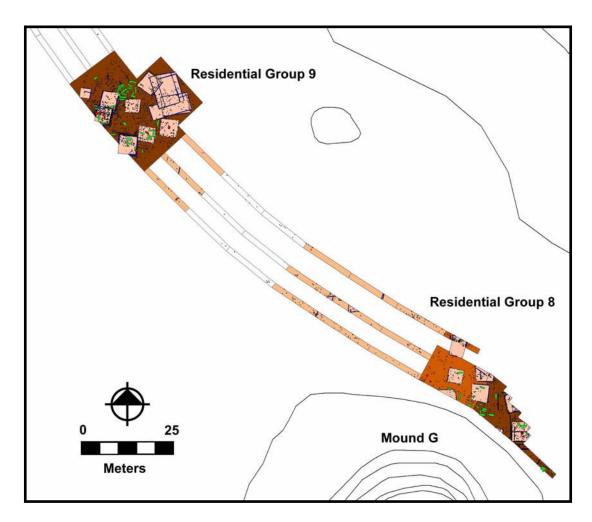


Figure 6.12. Postmold density display highlighting Residential groups 8 and 9.

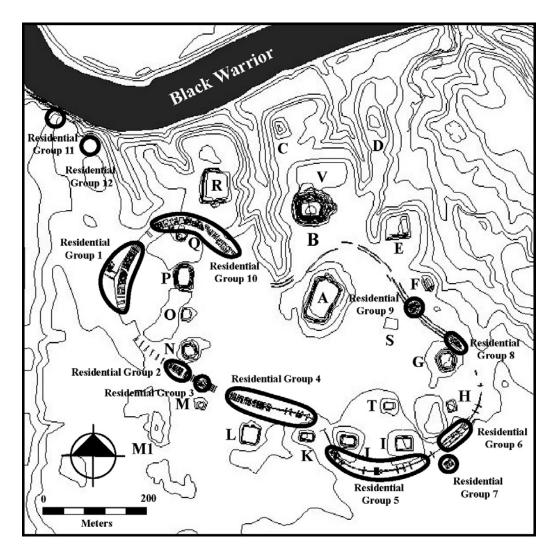


Figure 6.13. Residential groups identified in the Moundville Roadway and Riverbank excavations.

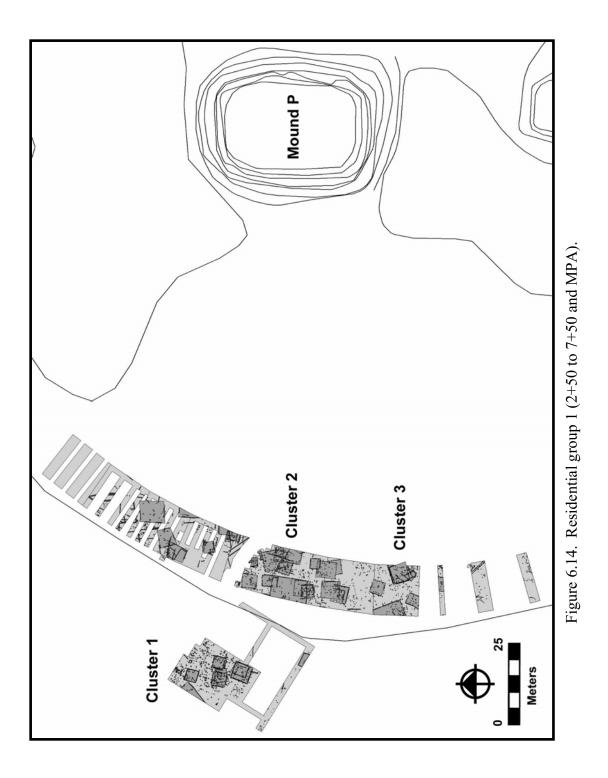
Residential Group	Area	Class I	Class II	Class III
1	2+50-7+50 and MPA	21	-	2
2	12+00-14+00	5	-	-
3	15+00-15+50	-	1	-
4	17+50-24+50	5	1	-
5	26+00-34+00	6	2	-
6	35+50-37+60	-	-	-
7	ADM	3	-	-
8	43+50-46+50	2	-	-
9	47+50-49+00	8	2	1
10	66+00-70+00	3	2	1
11	PA	6	-	-
12	ECB	2	-	-
	TOTAL	61	8	4

Table 6.1. Counts of buildings by size class and area.

ECB tracts on the Moundville Riverbank. These residential areas (labeled 1-12) are listed in Table 6.1 and will be discussed individually.

# Residential Group 1

Residential Group 1 is located 105 m west of Mound P in the northwestern portion of the Moundville site. This area represents the largest and most densely occupied portion of the Moundville Roadway. It consists of Roadway Blocks 2+50 to 7+50 and the Museum Parking area (MPA). I tentatively divided this residential group into three feature clusters based on the uneven distribution of buildings, postholes, and burials (Figure 6.14). The narrow boundaries of the Roadway and Museum Parking excavations make it impossible to determine the exact size and composition of these clusters. Nevertheless, an examination of the number, location, and size of buildings within these clusters reveals several generalized organizational trends. First, it appears that each of these feature clusters consists of small, nucleated arrangements of an estimated 10 to 20 buildings. Most of the buildings in each cluster are Class I domestic



structures. However, two of these groups also include a large Class III structure that may have served a public function. Finally, scattered throughout this residential group are a number of burials that date to the Moundville II and III phases.

## Residential Groups 2 and 3

Residential group 2 comprises Roadway blocks 12+00 to 14+00 and is located immediately southeast of Mound N. It consists of a small, nucleated cluster of Class I domestic structures superimposed by several burials dating to the Moundville II and III phases (Figure 6.15). One small structure (with a floor area of 10 m<sup>2</sup>) in this area is distinguishable by its large, closely-spaced wall posts (McKenzie 1964a:236-39). These large posts suggest the building had a rigid-post construction—an architectural style that dates primarily to the late Mississippian period (see Lewis and Kneberg 1946; Polhemus 1987). Another two lines of large postmolds immediately to the west of Structure 15 may represent a portion of another incompletely excavated and mapped rigid-post building.

Residential Group 3 consists of only one Class II structure located between Roadway blocks 15+00 and 15+50. Situated just 36 m north of Mound M, this structure may be associated with a larger residential group outside the limits of the Roadway excavation. Both residential groups 2 and 3 include clusters of burials dating to the Moundville II and III phases.

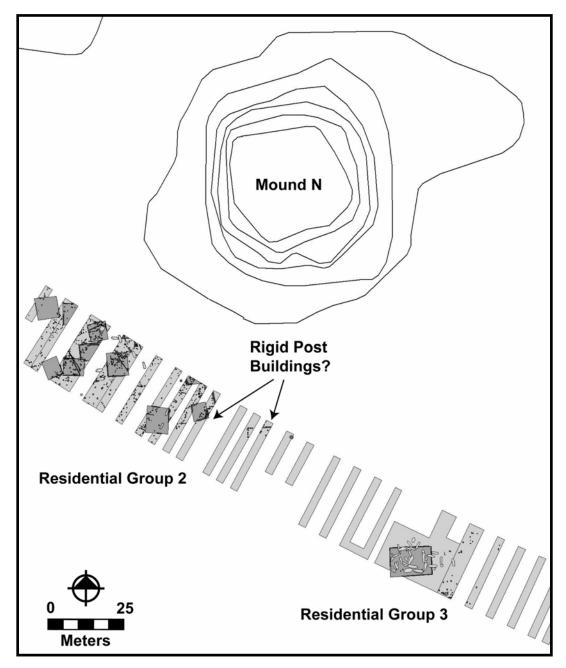


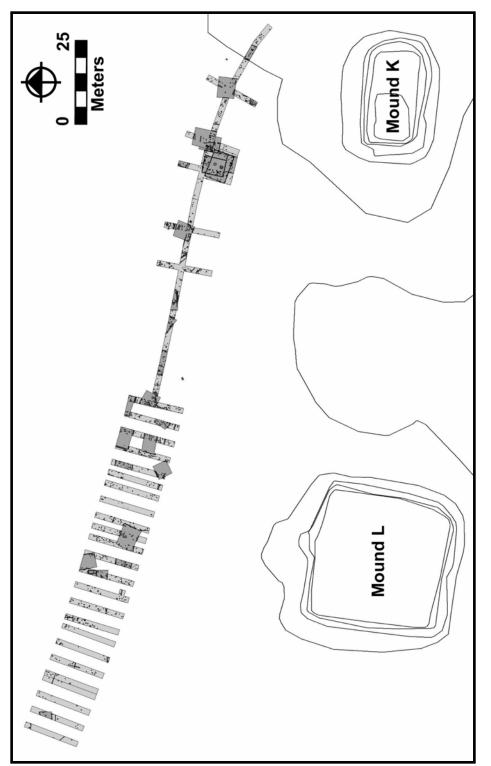
Figure 6.15 Residential groups 2 (12+00 to 14+00) and 3 (15+00 to 15+50).

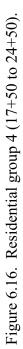
# Residential Group 4

Residential Group 4 includes Roadway blocks 17+50 to 24+50 and is situated immediately north of Mounds L and K. Like Residential Area 1, this is a large and densely occupied portion of the Moundville Roadway. However, the number and arrangement of buildings and other features in this area is impossible to determine due to the piecemeal fashion in which it was excavated (Figure 6.16).

One set of superimposed structures in this group requires additional discussion due to its contested interpretive history. The original excavation photo for this area is presented in Figure 6.17. I have also included a GIS representation of this area in Figure 6.18. McKenzie (1964b:239-43) originally concluded that this set of features represented multiple structures rebuilt in the same location. Peebles (1971:83, 1979:857-58) later reinterpreted this palimpsest as a rebuilt structure with a central room and series of passageways or room partitions. Based on its unusual architectural style and the presence of a square hearth, Peebles (1971:83) argued that this building was a sweatlodge. However, my examination of the original maps and excavation photos cast doubt on his complex interpretation. Both images clearly depict four superimposed structures; a pattern that corresponds with McKenzie's interpretation (Figures 6.17-6.18). Three of these, Structures 18, 19, and 108, are labeled on the GIS map in Figure 6.18. Structure 20 is the unlabeled structure in the upper left corner of Figure 6.18.

Some of the confusion over these buildings appears to have resulted from the way in which they were excavated. In attempting to identify different structure floors, portions of the floors from Structure 18 and 19 were excavated away, creating the illusion in the excavation photos of a central room and a series of entranceways (Figure 6.17). In reality,





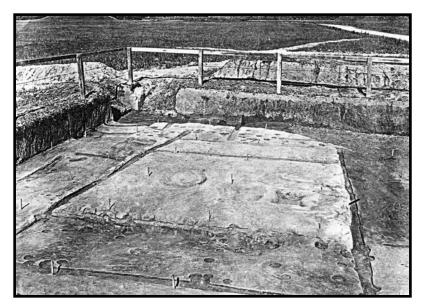


Figure 6.17. Superimposed structures located in Roadway blocks 17+50 to 24+50 (from Peebles 1979:Figure X-10).

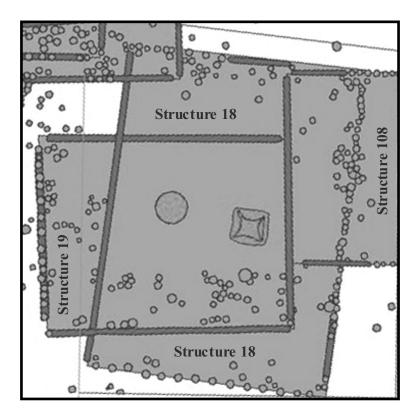


Figure 6.18. GIS representation of superimposed structures located in Roadway blocks 17+50 to 24+50.

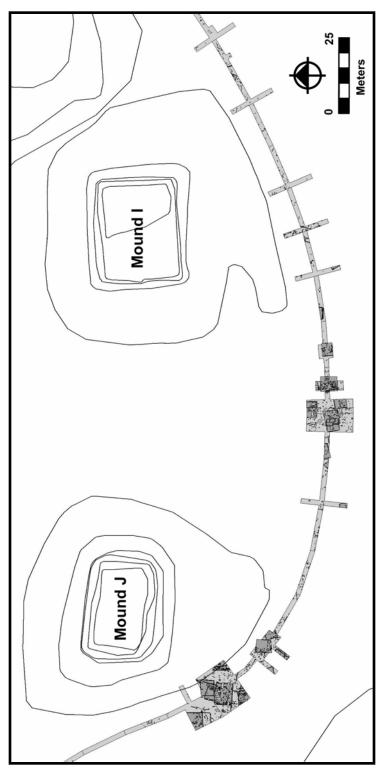
such a complex architectural design would have been impractical considering the constraints of the flexed-pole technology associated with wall-trench buildings. Based on my simplified interpretation, all of the buildings in this palimpsest appear domestic in nature. While the rectangular hearth associated with Structure 18 is unusual for Moundville, Lewis and Kneberg (1946, 1995) identified numerous examples associated with early Mississippian structures in eastern Tennessee.

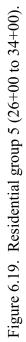
### Residential Group 5

Residential Group 5 includes Roadway blocks 26+00 to 34+00 and is located immediately south of Mounds J and I. I identified a total of six Class I and 2 Class II structures in this area. These buildings are located in two separate clusters connected by a 56  $\times$  2 m-long trench with a number of postholes and unassigned wall-trench segments. Small Moundville II-III cemeteries superimpose each of these building clusters. It is possible that these two building clusters represent different social and residential groups (Figure 6.19). However, the narrow area of excavation between them limits a definitive interpretation.

## Residential Group 6

Residential Group 6 includes Roadway blocks 35+50 to 37+60 and is situated approximately 40 m south of Mound H (Figure 6.20). Close examination of the residential features in this area is limited by the segmented fashion in which it was excavated. As a result, none of the structures in this group could be assigned to a discrete size class. However, based on the density of architectural features and the location of several partially excavated buildings, this residential area appears to consist of one large or multiple smaller clusters of domestic structures.





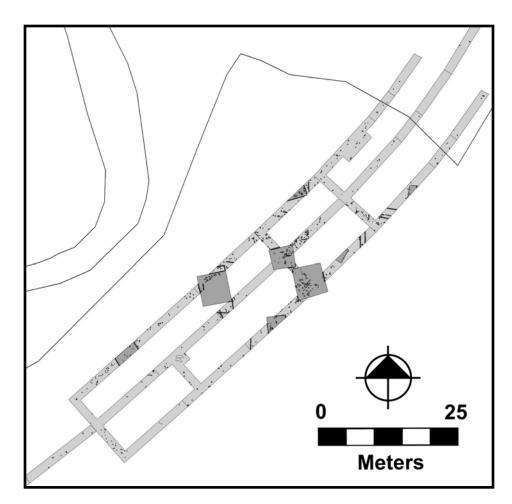


Figure 6.20. Residential group 6 (35+50 to 37+60).

The two burials located in this area could not be assigned to a particular phase.

# Residential Group 7

Residential Group 7 consists of a  $15 \times 18$  m block excavation that was conducted prior to the construction of an administration building (ADM). It is located 80 m southwest of Mound I. I identified three class I structures in this area. Also present are several lines of posts and wall trenchs that could not be associated with a discrete structure. Superimposed on these houses are a number of burials dating to the Moundville II and III phases (Figure 6.21).

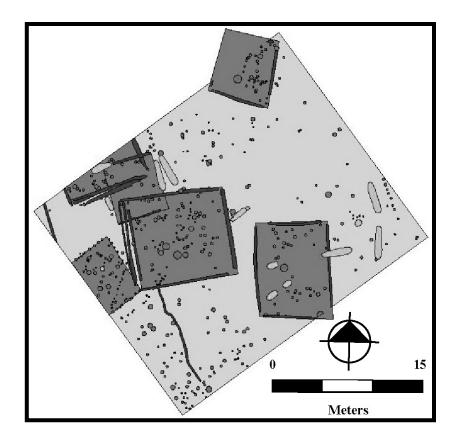


Figure 6.21. Residential group 7 (Administration Building).

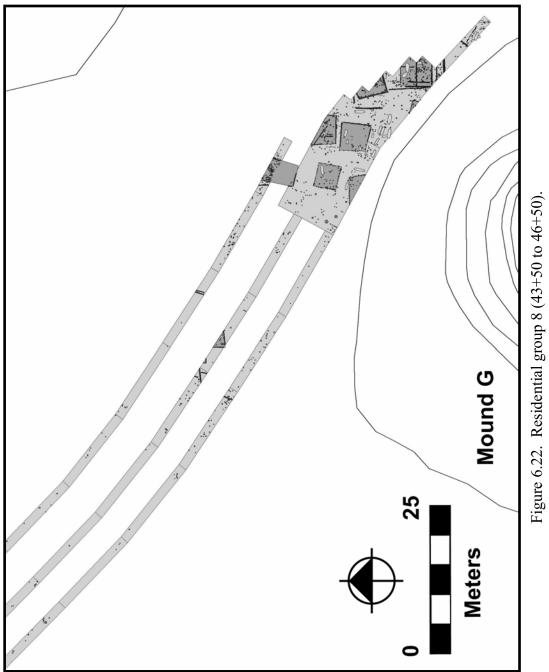
# Residential Group 8

Residential Group 8 includes Roadway blocks 43+50 to 46+50 and is situated immediately northeast of Mound G (Figure 6.22). The excavated portion of this residential area revealed seven structures, only two of which were completely excavated and mapped. Both of these are class I domestic structures. In addition, several wall trenches, hearths, and lines of posts in this area could not be assigned to discrete structures. The buildings in this residential area appear to be situated in three, closely spaced rows. During the Moundville II and III phases a number of burials were placed over the top of these abandoned buildings.

## Residential Group 9

Residential Group 9 includes Roadway blocks 47+50 to 49+00 and is located 34 m southwest of Mound F. Architecture in this area consists of a nucleated cluster of eight Class I domestic structures arranged in a tight cluster around a  $6 \times 7$  m central area that may have been a courtyard (Figure 6.23). In addition, there are numerous lines of posts and several hearths in this area that could not be assigned to discrete structures.

Immediately to the northwest of these domestic structures is a palimpest of one Class III and three Class II structures. Based on their large size and unusual architectural features, these were probably public buildings used by the members of this local residential group. Several rectilinearly arranged burial clusters were placed in this area during the Moundville II and III phases.





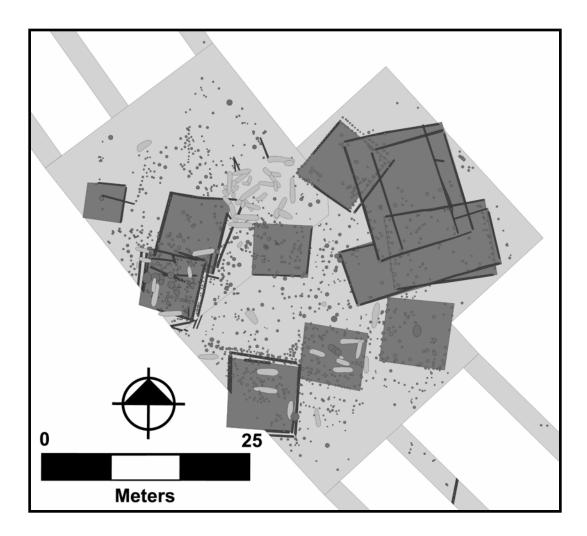
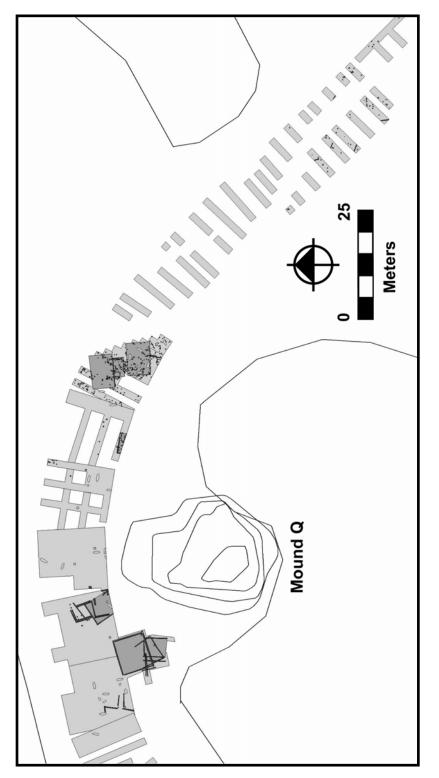
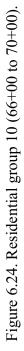


Figure 6.23. Residential group 9 (47+50 to 49+00).





# Residential Group 10

Residential Group 10 includes Roadway blocks 66+00 to 70+00 and is located immediately north of Mound Q (Figure 6.24). The architecture in this area consists of three Class I, two Class II, and one Class III building. Also present in this area are a number of wall trenches and lines of posts that could not be assigned to a discrete building. These buildings and unassigned architectural features are distributed in two small clusters separated by a 31m area of the Roadway devoid of features. The western cluster of buildings includes Structure 85, a square Class III structure with a floor area measuring 60 m<sup>2</sup>. Based on its large size and close proximity to Mound Q, it was probably a public building. Several additional buildings and unassigned wall trenches are located immediately to the northeast and northwest of Structure 85, forming a central courtyard. Scattered throughout Residential group 10 are small clusters of burials dating to Moundville II and III.

#### Residential Groups 11 and 12

Residential groups 11 and 12 consist of the PA and ECB tracts, respectively (Figure 6.25). Both residential groups are located on the Moundville riverbank in the northwestern portion of the Moundville site (Scarry 1995, 1998). The PA tract consists of six Class I structures. Three of these are superimposed, single-post structures that likely represent a rebuilt dwelling associated with a single early Moundville I household (Scarry 1998). The three other structures in this area are widely spaced—a pattern that contrasts with the nucleated architectural arrangements throughout much of the Moundville Roadway.

The ECB tract contains of a total of six structures. Two of these are Class 2 structures. The other four buildings were not completely mapped, making it impossible to

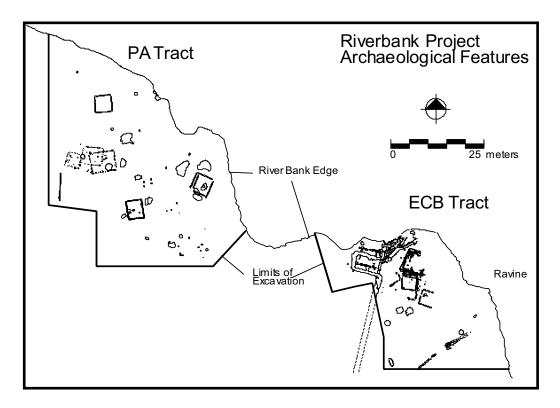


Figure 6.25. Residential groups 10 (PA Tract) and 11 (ECB Tract) (adapted from Scarry 1998:Figure 4.5).

assign them to a size class. Also present in this area is a portion of the palisade wall that surrounded the site during the Moundville I phase. Counting the number of palisade trenches visible in this area, Scarry (1998:82) was able to determine that this fortification wall was rebuilt a minimum of six times. The close proximity of late Moundville I structures in this area is a pattern that more closely corresponds with the nucleated residential organization throughout the Moundville Roadway.

# Summary of Residential Group Patterns

There appear to be some consistencies in residential group organization. Most groups consist of a small, nucleated cluster of 10 to 20 domestic structures separated by areas with

little or no evidence of subsurface features. The largest examples appear to consist of multiple, smaller building clusters. Most of the buildings within residential groups are small Class I structures. However, large public structures are associated with four residential groups. Similar public buildings may have also been associated with other residential groups; however, the narrow boundaries of the Moundville Roadway often limit the complete identification of residential group size and composition.

Individual households are difficult to identify within residential groups, suggesting that multi-household groups were the basal social and residential units at early Moundville. Houses within residential groups appear to be spatially arranged so as to provide space for both foot travel and small group domestic tasks. For example, Residential group 8 exhibits a linear arrangement of buildings consisting of three rows of at least 6 structures (Figure 6.22). Cleared pathways lie between these rows, perhaps to facilitate the movement of people to and from Mound G located immediately to the south. This row-like structure is also observable in Residential group 5 where pathways between linearly aligned buildings would have enabled movement to and from Mound J immediately to the north (Figure 6.19). Small, central yards are also observable in residential groups 5, 8, and 10. These cleared areas may have been the loci for a variety of domestic and ritual activities.

#### **Changing Community Patterns**

Analysis of the Roadway architecture allows for a detailed examination of Moundville's occupational history. In this section I consider how and when the nucleated early Mississippian community at Moundville was first settled and later abandoned. The principal evidence I use to examine this process consists of the number and location of chronologically sensitive architectural styles, methods of structure repair, and the date and location of burials.

#### Diachronic Changes in Household Distribution

I begin by comparing the number of early Moundville I buildings to those dating to late Moundville I to early Moundville II. The early Moundville I group includes single-post and hybrid single post/wall trench structures while the late Moundville I to early Moundville II group consists entirely of wall-trench structures. Table 6.2 presents the counts and percentages of different styles of Mississippian structures by residential group. A total of 100 wall-trench structures represent 66.2 % of all Mississippian structures uncovered in the Moundville Roadway and Riverbank excavations. The remaining 33.8 % of these structures are represented by 24 single-post buildings, 11 hybrid buildings, and 16 buildings that could not be assigned to a particular style class. The unassigned buildings all have at least one wall-trench foundation and probably date to late Moundville I to early Moundville II. Due to their incomplete excavation, however, it is impossible to rule out the possibility that they are hybrid buildings.

These data indicate a larger early Moundville I occupation of the Moundville site than previously expected (Chapter 4). In addition, there appears to be a small early Moundville I occupation preceding a much larger late Moundville I occupation in nearly every residential group identified in the Moundville Roadway and Riverbank (Table 6.2). This evidence alters our understanding of how the Moundville community was initially settled. It now appears that aspects of Moundville's highly structured community organization, represented in the

layout of monumental architecture, was already being negotiated during the early Moundville I phase.

Area	Single Post		Hybrid		Wall Trench		Indeterminate		Total	
	N	%	N	%	N	%	Ν	%	N	%
2+50-7+50 and MPA	7	19.4	1	2.8	22	61.1	6	16.7	36	100.0
12+00-14+00	2	20.0	1	10.0	7	70.0			10	100.0
15+00-15+50					1	100.0			1	100.0
17+50-24+50	1	3.9	2	7.7	17	65.4	6	23.1	26	100.0
26+00-34+00	2	9.1	3	13.6	16	72.7	1	4.6	22	100.0
35+50-37+60	2	25.0	1	12.5	4	50.0	1	12.5	8	100.0
43+50-46+50	1	10.0	1	10.0	8	80.0			10	100.0
47+50-49+00	2	16.7	1	8.3	9	75.0			12	100.0
66+00-70+00	2	25.0			6	75.0			8	100.0
ADM	1	16.7			4	66.7	1	16.7	6	100.0
PA	3	50.0	1	16.7	2	33.3			6	100.0
ECB	1	16.7			4	66.7	1	16.7	6	100.0
TOTAL	24	15.9	11	7.3	100	66.2	16	10.6	151	100.0

Table 6.2. Counts of buildings by construction style

# Architectural Repair and Rebuilding

Patterns of architectural repair and rebuilding provide additional evidence regarding diachronic changes in household organization at Moundville. I have documented two techniques of architectural rebuilding at early Moundville that I argue relate to different kinds of residential organization (Wilson 2001). The first rebuilding technique consists of the complete rebuilding of a structure. Although salvageable construction materials from the previous structure may be recycled, the new structure is completely rebuilt, albeit usually in a different location. Insect infestation, soil depletion, and the accumulation of refuse would have provided strong motivation for people to choose new locations when rebuilding episodes identified at Mississippian farmsteads throughout the Southeast it appears that when space was available, households opted to relocate rather than rebuild in the same location. Under such circumstances, domestic space would have also been less rigidly structured by public

concerns regarding the placement of paths, storage facilities, and the location of specialized activity areas.

The second rebuilding technique involves *in situ* repair. In this scenario the use life of a structure is prolonged through the repair and replacement of key architectural components such as walls, roofs, and internal hearths. Under more nucleated conditions, households would have organized domestic space in direct relation to their neighbors. The incorporation of communal work areas and pathing routes into the domestic sphere necessitates a more formalized spatial arrangement of houses and other residential facilities. As a consequence, households may not have had the luxury of relocating to new areas when structure rebuilding was necessary.

The archaeological signatures of a complete rebuilding strategy should be discernable from an *in situ* repair strategy based on the lack of a shared spatial alignment of nearby structures, an absence of paths between and around structures, and the presence of superimposed rebuilt structures whose walls have variable orientations. In contrast, an *in situ* repair strategy should exhibit a more formalized spatial arrangement of domestic structures in relation to shared work spaces, storage facilities and paths. There should also be multiple *in situ* building episodes, with later houses maintaining an alignment consistent with earlier building stages.

Table 6.3 lists the number of *in situ* building episodes for early Moundville I (singlepost and hybrid) and late Moundville I to early Moundville II (wall trench) structures from the Moundville Roadway and Riverbank excavations.<sup>4</sup> These data reveal a sharp contrast between the two architectural groups in terms of structure rebuilding techniques. Only six percent (n=2) of the early Moundville I structures exhibit any evidence of *in situ* rebuilding.

Moreover, these two structures were rebuilt only once (Table 6.3). In contrast, over half (52 percent) of the structures in the late Moundville I to early Moundville II group exhibit evidence of *in situ* rebuilding. Many of these buildings were rebuilt two and even three times (Table 6.3).

Table 0.5. Counts of <i>in stiu</i> building episodes by structure style.					
Number of Building Episodes	Single Post	Hybrid	Wall Trench	Indeterminate	TOTAL
1	22	10	43	3	78
2	2		34	2	38
3			11		11
4			2		2
TOTAL	24	10	90	5	129

Table 6.3. Counts of *in situ* building episodes by structure style.

These contrasting strategies of architectural repair correlate with changes in the distribution of early Mississippian households at Moundville. During the early Moundville I phase, residential groups at Moundville consisted of only a few households occupying a small number of widely spaced domestic structures. Scarry (1995, 1998) first documented this household organizational pattern in her analysis of the Moundville Riverbank architecture. Based on the wide spacing of single-post and hybrid structures in the PA tract, she concluded that "there would have been room for gardens and, perhaps, some fields near the dwellings" (Scarry 1998:93). Indeed, my analysis of the Roadway architecture indicates that early Moundville I households took advantage of the space available to them, shifting their residences to new (though often adjacent) locations rather than repairing them *in situ*.

The expansion of residential groups during the late Moundville I phase entailed a reorganization of domestic space. Late Moundville I residential groups consisted of tightly arranged clusters of domestic structures most of which shared a similar orientation. Domestic structures were sometimes built around shared activity spaces and other times

aligned in rows to create pathways. In addition, large public structures were built that created well-defined ceremonial spaces within residential group areas. The shift to an *in situ* architectural repair strategy reveals the importance of maintaining a more formalized organization of domestic space. By repairing and rebuilding structures in place, structured domestic spatial arrangements could be maintained for several decades.

Although gardens could have been cultivated along the edges of these expanded residential groups, it is likely that most agricultural fields were located outside the palisaded boundaries of the nucleated late Moundville I community. Collectively, these agricultural changes and the expansion of residential groups may have entailed a reallocation of land use and reorganization of domestic labor during the late Moundville I phase. That is, the increasing size of residential groups may have promoted or even required closer socioeconomic ties just as the removal of agricultural fields from the domestic sphere may have entailed a more corporate system of land use and agricultural labor organization.

# **Estimating Occupation Span**

The architectural palimpsests of the Moundville Roadway and Riverbank provide important information about the span of Moundville's early Mississippian occupation. The maximum number of sequential building episodes in a residential group can provide a reasonable estimate for how long it was occupied. Extracting this information, however, hinges on calculating reliable use-life estimates for Mississippian architecture.

Use-life estimates for Mississippian structures vary based on whether one places more faith in ethnohistorical reports, archaeological analyses, or experimental studies (le

Page du Pratz 1758; Milner 1998; Pauketat 1986, 1989; Swan 1855; Ward and Davis 1991). Ethnohistorical data from the southeastern U.S. cite longevity estimates ranging from two years for Creek structures (Swan 1855) to 20 years for Natchez structures (le Page du Pratz 1758; see also Davy 1982). These variable reports may result from differences in architectural construction techniques and types of building materials (Milner 1998; Pauketat 1986).

When combined with excavation data, experimental studies provide important insight into structure longevity. Warrick's (1988:37) study of Iroquoian village duration summarizes commercially gathered data on untreated wood-post longevity for northern portions of the Eastern Woodlands. Longevity figures for untreated wood posts varied from 4.5 to 26.9 years with respect to wood type. Surprisingly, soil type was not a major determinant in post longevity. Pretreatment techniques such as burning the butts of posts before setting them in the ground also made little difference in terms of extending use life. Warrick (1988) combined these commercial data with archaeological information on wall-post replacement to estimate the longevity of Iroquoian long houses from several sites in Ontario. The results of his application revealed that (with repair) the use lives of houses varied from between 10 to 36 years.<sup>5</sup>

Warrick's study provides insight into how the selection of different wood types affected structure longevity in the Eastern Woodlands. Differences in construction and repair techniques, however, present potentially confounding factors in applying Warrick's method to the Mississippian case. As previously discussed, early Mississippian structures were commonly erected using a flexed-pole technique. In contrast, later Mississippian structures were more often constructed using a rigid-post technology. These two techniques would

have produced different kinds of structures requiring different repair techniques and potentially different use lives.

With flexed-pole structures, wall posts were simply bent over and interwoven to create a rounded roof. In this case, both the structure's walls and roof were constructed from the same poles, and the entire building's superstructure was held together through a kind of flexed tension (Lacquement 2004; Lewis and Kneberg 1946). Due to this interwoven framework, it may have been difficult to conduct localized repairs. Thus, when individual posts began to rot it was probably necessary to replace entire linear wall/roof sections to repair the structure. This situation probably explains the pattern of frequent wall replacement commonly represented in the archaeological signatures of early Mississippian structures throughout the southeastern U.S.

Pauketat (2003) has recently revised estimates for the longevity of early Mississippian flexed-pole structures in the American Bottom region of southwestern Illinois. These new estimates were derived from a tabulation of structure rebuilding and replacement episodes from the ICT-II and Tract 15A excavations at the Cahokia site. Superimposed structures and structures with rebuilt walls provided the principal evidence for his investigation. A highly consistent rate of structure rebuilding and replacement was evident for both residential areas at Cahokia. Based on a calculation of structure rebuilding per phase, Pauketat (2003) arrived at a minimum longevity estimate of 12 years for Mississippian structures in the American Bottom. Thus, Cahokian structures lasted for a minimum of 12 years before major rebuilding or replacement was necessary. However, minor forms of repair probably took place much earlier in a structure's use life.

Based on the technological similarities between Cahokian flexed-pole structures and those from the Moundville area, I adopt Pauketat's 12-year use-life estimate for the current study. The feasibility of this 12-year estimate depends on the availability of hardwoods for wall-post construction (Warrick 1988). In situations where hardwoods were scarce or in which walls were built from a combination of wood types, structure use-lives would have been more abbreviated.

A means of estimating the life span of rigid-post structures awaits further investigations of late Mississippian construction and repair techniques. Rigid-post structures had more substantial wall foundations than flexed-pole structures, in addition to separate roof components. Larger and more substantial wall posts would have positively contributed to structure longevity. Rigid-post structures may have also had a practical advantage over flexed-pole structures in terms of repair technology. With separate roof and wall components, it may have been possible to selectively replace individual components of a building's superstructure as they degraded. Due to the more flexible repair strategies afforded by this architectural design, rigid-pole structures probably had longer use-lives than structures built using a flexed-pole method.

#### Occupation Estimates by Residential Group

Table 6.4 presents minimum estimates for the occupation spans of different early Mississippian residential groups at Moundville. These estimates were determined by summing the total number of *in situ* and superimposed building episodes in the most stratified palimpsest of each residential group. The total building episodes (TBE) was calculated separately for both the early Moundville I and late Moundville I/early Moundville

II architectural groups. Finally, the TBE from both architectural groups were added and then multiplied by Pauketat's 12-year-use-life estimate for Mississippian flexed-pole structures [12 years (EMI+LMI/EMII)] to calculate the minimum occupation span estimate for a residential group. This is a minimum estimate, as it is possible and probable that households built new structures that did not overlap with previous structures. This would have been the case particularly during the early Moundville I period when widely spaced households often rebuilt houses in new locations.

An example of this technique is presented in Figure 6.26, which illustrates a set of superimposed and *in situ* rebuilt structures from Residential Group 7. In this case, Structure 117 is a single-post structure with one building episode creating a TBE of 1 (12 years) for the early Moundville I architectural group. In addition, Structure 120 is a wall-trench building in this group with one building episode. It was superimposed by Structure 116, a wall-trench building with 3 building episodes creating a TBE of 4 (48 years) for the late Moundville I and early Moundville II group. Collectively, these two figures produce a minimum occupation estimate of 60 years for Residential group 7.

Residential groups with larger excavation blocks and more numerous structures are better suited for this analysis than those with more segmented excavations and fewer structures. For example, the 12-year estimate for Residential group 3 is based on only one structure and is not representative of most other areas. Likewise, the segmented excavation of Residential group 6 hinders the accurate identification of structure building episodes.

Seven of the 12 residential groups in the study have a TBE of 5 for the late Moundville I phase. This building index correlates with a minimum occupation span of 60 years for the late Moundville I phase. The most complex set of superimposed structures

Residential	Area	EM1	LM1/EM2	Occupation Span
Group				(EM1+LM1)12
1	2+50-7+50 and MPA	2 (24 yrs.)	5 (60 yrs.)	84
2	12+00-14+00	1 (12 yrs)	4 (48 yrs.)	60
3	15+00-15+50	0	1 (12 yrs)	12
4	17+50-24+50	1 (12 yrs)	5 (60 yrs.)	72
5	26+00-34+00	1 (12 yrs)	5 (60 yrs.)	72
6	35+50-37+60	1 (12 yrs)	3 (36 yrs)	48
7	ADM	1 (12 yrs)	4 (48 yrs.)	60
8	43+50-46+50	1 (12 yrs)	5 (60 yrs.)	72
9	47+50-49+00	1 (12 yrs)	5 (60 yrs.)	72
10	66+00-70+00	1 (12 yrs)	5 (60 yrs.)	72
11	PA	3 (36 yrs)	2 (24 yrs.)	60
12	ECB	0	5 (60 yrs.)	60

Table 6.4. Residential group occupation estimates based on total building episodes.

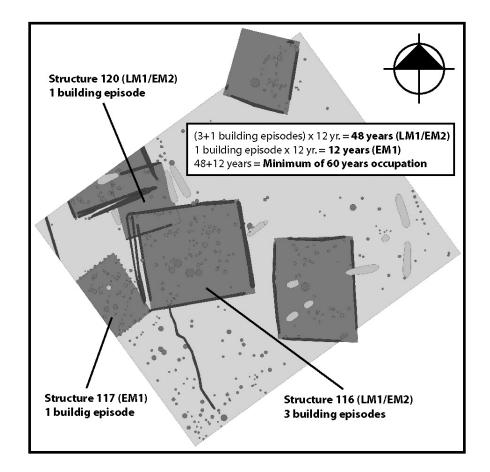


Figure 6.26. Use life occupation estimate technique applied to Residential group 7 (EM1=early Moundville I, LM1=late Moundville I).

during the early Moundville I phase is located in the PA tract. Here there are three superimposed single-post structures. This building index correlates with a minimum occupation span of 36 years. Collectively, the data on architectural rebuilding from the structure groups from both periods indicate about a century (96 years) of early Mississippian occupation.

Figure 6.27 compares the results of these occupation-span estimates to the 140-year

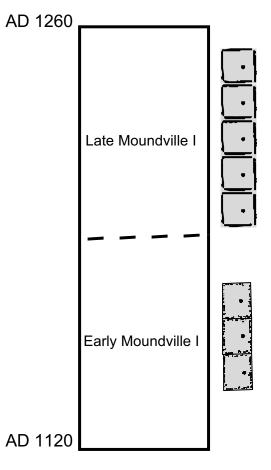


Figure 6.27. Calibrated Moundville I chronology with the total number of structure building episodes per subphase (each structure scaled to represent 12 years).

Moundville I phase. The 60-year occupation-span estimate calculated for the late Moundville/early Moundville II group fits nicely with the latter half of the Moundville I phase. This number also correlates well with estimates for the duration of Moundville's palisade (Scarry 1998:82). The 36-year occupation-span estimate for the early Moundville I phase is not as good a fit with the calibrated dates for this subphase. Taken at face value these data indicate that Moundville was occupied for only a portion of the early Moundville I phase. It is more likely, however, that the paucity of early Moundville I households, combined with their practice of rebuilding structures in new locations, generated far fewer palimpsests than did the more nucleated late Moundville I community.

### **Intra-community Status Differences**

The structured layout of mounds at Moundville has been interpreted as indicating the presence of a number of ranked social groups (Knight 1998). The incremental decrease in mound size from the northern to southern portion of the site is thought to mark a basic polarity of space and power (Knight 1998). However, it is unclear how pronounced this power asymmetry was. Were hierarchical relationships between groups primarily ceremonial in nature, or did they entail material inequalities in the day-to-day lives of community members?

Data on the size and style of domestic architecture from the Moundville Roadway provide one line of evidence by which to examine this issue. As discussed in Chapter 2, house size is often correlated with household size. In turn, household size is correlated with status and wealth (Kramer 1982; Netting 1982; Wilk 1983). If hierarchical relationships

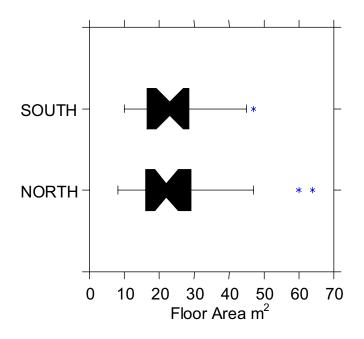


Figure 6.28. Structure floor areas from the southern and northern portions of the Moundville Roadway.

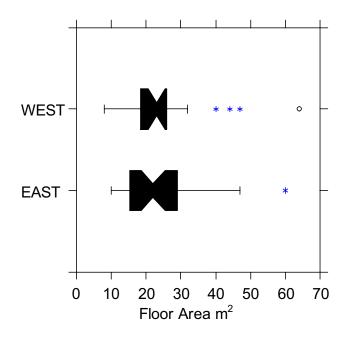


Figure 6.29. Structure floor areas from the eastern and western portions of the Moundville Roadway.

produced material inequities between different social groups at Moundville, it should be observable in the distribution of house sizes.

Sample size differences make it difficult to directly compare the distribution of floor areas among individual residential groups. Thus, I collapse structures into larger spatial groups for the purpose of comparison. Figure 6.28 compares the distribution of structure floor areas from the northern and southern portions of the Moundville Roadway; Figure 6.29 compares the distribution of floor areas from the eastern and western portions of the Moundville Roadway. Neither graph reveals any statistical differences between respective portions of the Moundville site with regard to structure size. Thus, while there do appear to be differences in household size within residential groups, there do not appear to have been dramatic differences between residential groups. This is an important point as there are no detectable differences in household size that correspond with the ranked distribution and sizes of mounds at the site.

### **Mortuary Patterns**

A total of 279 burials were identified in the Roadway excavations. Ten more were identified in the ECB-tract Riverbank excavations (Scarry 1995). Most of these burials are distributed in small, rectilinear clusters with individual burials oriented generally in the cardinal directions (Figures 6.15 and 6.23). In terms of composition these cemeteries include men, women, and children of a variety of ages (Powell 1988). Moreover, while the dead were primarily buried in extended positions, there are also numerous examples of secondary mortuary treatments including bundles and individual cranium interments (Peebles 1979).

An examination of the original excavation maps reveals that these burials often superimpose the wall-trench and single-post foundations of early Mississippian structures (Figure 6.8). Indeed, not a single burial from the roadway is superimposed by a wall trench or single-post building foundation. Moreover, Steponaitis's (1983, 1998) analysis of mortuary vessels at Moundville has revealed that only one of the 34 datable Roadway burials (SK2884) positively dates to the Moundville I phase. In addition, Scarry (1995, 1998) has demonstrated that the 10 burials in the ECB-tract postdate the Moundville I phase occupation of the area. These Roadway and Riverbank trends conform to a site-wide pattern identified by Steponaitis (1998:39) in which Moundville's residential population peaked during the Moundville I phase and declined considerably thereafter. During the Moundville II and III phases, Moundville was transformed into a necropolis in which the rural populace of the Black Warrior Valley interred their dead (Steponaitis 1998).

It is important to note that in nearly every case these small Moundville II and III cemeteries in the Moundville Roadway and Riverbank are placed in the same locations as earlier Moundville I residential groups. Very few burials are located outside of these earlier residential areas. Thus, it would appear that people maintained connections with very particular places at Moundville even after the nucleated population had dispersed.

#### Summary

This study of Mississippian architecture at Moundville has revealed a number of patterns relevant to understanding the span of Moundville's residential occupation and how it changed organizationally though time. I created maps from five different residential groups

to visually represent these organizational changes in the community (Figures 6.30-6.34). Each map revealed a similar pattern of occupation. The Mississippian occupation of every residential group was first established in the early Moundville I phase. During this time each residential group was composed of only a few households occupying a small number of single-post and hybrid buildings. Households took advantage of the space available to them and often shifted locations when they rebuilt their domestic structures.

During the subsequent late Moundville I phase Moundville's population increased dramatically. Each residential group expanded in size. In addition, larger houses and public structures were built, indicating an increasing diversification of household sizes. Though minor, this variation in house size suggests an increasing differentiation in household statuses at Moundville. Differences in house size, however, appear within every residential group and are not restricted to certain areas of the Moundville site. Thus, the ranking of clans at Moundville, represented in the distribution of volumes and sizes of mounds, does not appear to have correlated with differences in household size.

The late Moundville I expansion of residential groups entailed a more formalized use of domestic space. Residential group members adopted an *in situ* architectural rebuilding strategy to maintain a more structured layout and use of both domestic and ceremonial space. The size and corporate organization of these residential groups conforms to ethnohistoric descriptions of Southeastern matrilineages (Hudson 1976:189). Like matrilineages, early Mississippian residential groups functioned as social and economic groups, the members of which interacted on a daily basis. Moreover, the introduction of large public buildings linked with individual residential groups indicates some degree of corporate social and ceremonial autonomy. While the chiefly elite may have usurped important aspects of mound and plaza

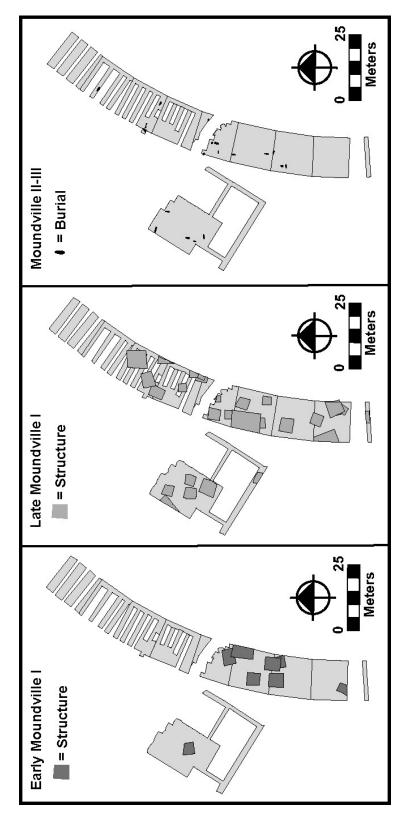
ceremonialism at Moundville, small-scale residential groups maintained their own ceremonial facilities and practices.

If these residential groups were organized like matrilineages, then their locations at Moundville may correspond with broader clan residential and ceremonial precincts at the site. Indeed, if Knight's (1998) interpretation of Moundville as a "planned community" is correct, the entire community was divided into a number of corporate kin segments—each with its own platform and burial mounds and residential district. From this perspective, people's identities within the broader political and ceremonial order were physically mapped onto the Moundville community. Thus, it would have been important for kin groups to maintain a strong connection with their lineage/clan space at the Moundville site.

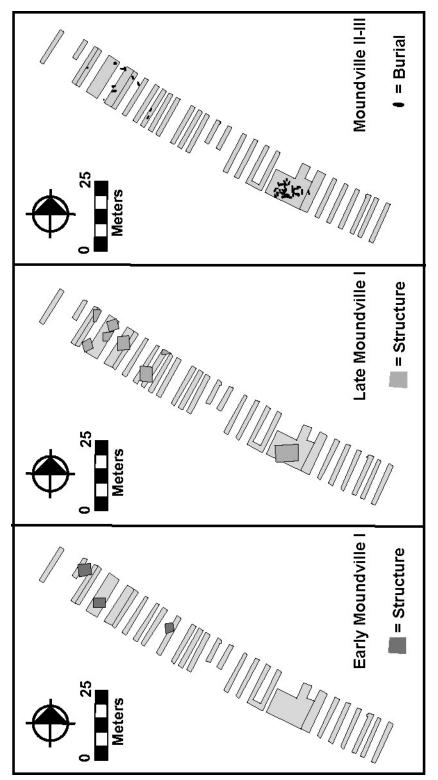
My analysis of architectural rebuilding episodes generated an estimate of 60 years for Moundville's late Moundville I occupation. After this period of nucleated occupation, most of Moundville's residents vacated the site. During the Moundville II phase residential group space was converted into mortuary space (see also Steponaitis 1998). Many small and compact cemeteries were placed directly on top of abandoned residential areas. Very few burials are located outside of these earlier residential group areas in the Moundville Roadway and Riverbank. Kin group ties to particular locations at Moundville may help explain this pattern—one of the most symbolic ways that group members can naturalize their connection and claim to a particular space is by burying their ancestors there (Charles and Buikstra 1983).

It appears that connections with particular places and spaces at Moundville were very important to community members. These social connections to community space were first initiated during the early Moundville I phase by a small number of Mississippian households.

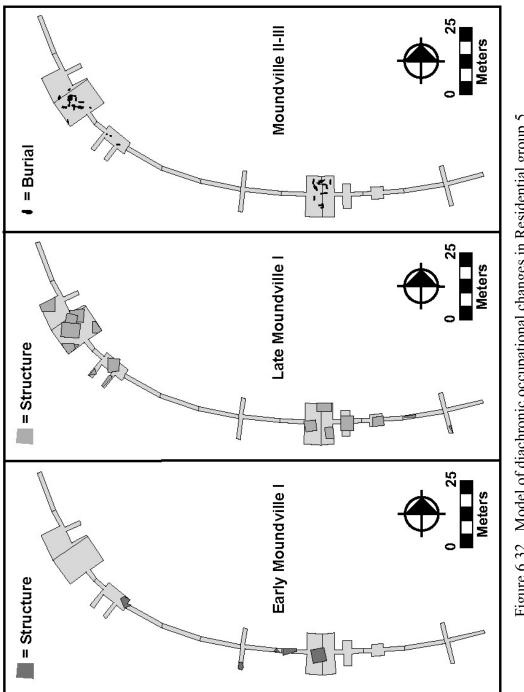
During the late Moundville I phase kin groups formalized their connections to community space as they expanded in size and strengthened their corporate organization. During this period everyday domestic practices of house construction and rebuilding served to produce their space and place within the broader political and ceremonial order. These kin groups continued to claim these social and physical places by returning to bury their dead generations after their ancestors had moved away from Moundville.



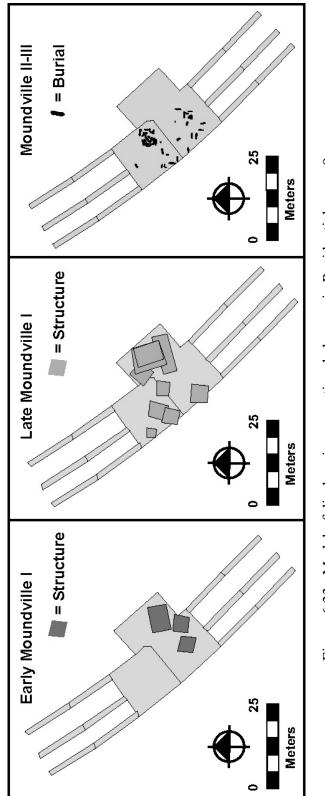














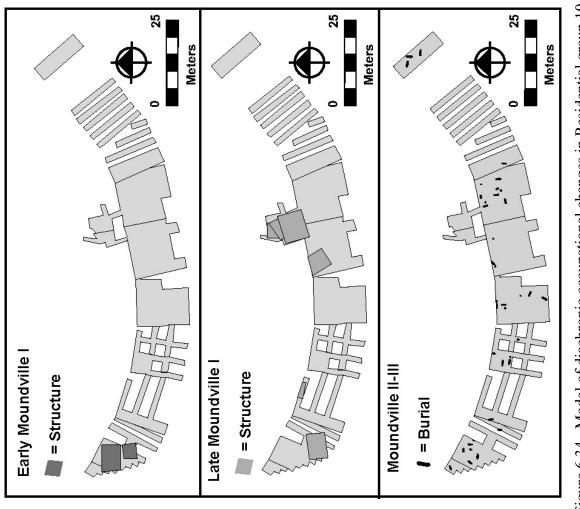


Figure 6.34. Model of diachronic occupational changes in Residential group 10.

<sup>1</sup> Twenty-four Class I structures possess hearths while 37 do not.

<sup>2</sup> In one case the wall-trench foundation of a Structure is superimposed by a burial dating to the early Moundville II phase (Figure 9).

 $^{3}$  Next, all wall trenches were measured and their lengths were summed by excavation block. This sum was then multiplied by the average number of postmolds per meter of wall trench. Finally, this figure was divided by excavation block (m<sup>2</sup>) to generate the final architectural density ratio.

<sup>4</sup> These counts only include those structures in which the number of *in situ* building episodes could be accurately determined.

<sup>5</sup> These figures are based on the assumption that houses were constructed from a combination of cedar and pine wall posts.

## CHAPTER 7

# CERAMICS AT EARLY MOUNDVILLE

The analysis of archaeological ceramics in the southeastern U.S. has traditionally been directed towards building regional chronologies and defining areas of cultural interaction. In the last 20 years, however, there has be en an expanding body of research aimed at linking archaeological ceramic assemblages to foodways (Blitz 1993a; Hally 1983a, 1984, 1986; Pauketat 1987, 1989; Steponaitis 1983, 1984; Wilson 1999; Wilson and Rodning 2000). Drawing from both technological and ethnohistorical studies, southeastern archaeologists have devised an analytical framework by which to determine how pots were used and what the number, combination, and size of different pots in a domestic pottery assemblage indicates about past foodways. In many cases these functional studies have dovetailed with ceramic seriation efforts to provide more fine-grained understandings of socio-economic organization in the prehistoric Southeast.

The goals of my analysis of the Moundville Roadway vessel assemblage are twofold. The first goal is to determine, on a general level, what the function and relative frequency of different Moundville I vessel classes indicate about food storage, preparation, and consumption at early Moundville. The second goal is to compare and contrast different vessel assemblages to determine how, when, and where Mississippian foodways varied at early Moundville. The remainder of this chapter is devoted to achieving these goals. I begin with a summary of previous research on Mississippian ceramic technology in the Black Warrior Valley. Next, I examine the study assemblage as a whole and present a functional analysis of each vessel class within it. Then, I perform a number of comparisons among the five different ceramic assemblages that comprise the sample.

#### **Methods of Analysis**

To examine early Mississippian foodways at Moundville I identify the full range of different vessel types present in the study assemblage. Functional interpretations of individual vessel classes are based on frequency, shape, size, surface treatment, use wear, and paste composition. Below I present a brief discussion of how these different attributes relate to vessel function.

### Minimum Number of Vessels (MNV)

Determining the relative frequency of different vessel classes in a ceramic assemblage provides clues to the importance of various food preparation, storage, and serving activities. It is important to note that discard assemblages or midden assemblages differ in the relative frequency of different vessel classes from a behavioral (or in use) assemblage (Schiffer 1972, 1977, 1985). Variability in the rate of vessel breakage and replacement generates discard assemblages that differ from behavioral assemblages. Cooking vessels, for example, have higher breakage and replacement rates than serving vessels (David 1972; Foster 1960). Moreover, storage vessels that are infrequently moved about may have longer use lives than serving vessels that are frequently manipulated (Deboer 1974; DeBoer and Lathrap 1979:128). Thus, the relative frequency of different vessel classes in domestic refuse assemblages can provide important insight into how vessels were used.

An accurate estimation of the minimum number of vessels (MNV) represented in domestic refuse assemblages is a necessary step to any assemblage-level functional analysis. Sherd counts in and of themselves are not a reliable means of estimating MNV (Chase 1985). Differences in vessel size, shape, paste composition, method of breakage, and postdepositional processes can alter the number of sherds that derive from whole vessels. To compensate for this problem it is necessary to tabulate the MNV from diagnostic vessel fragments. It is also necessary to ensure that vessel counts are not inflated by counting multiple sherds from the same vessel. I selected rim sherds for the purpose of estimating MNV in that they are easily sorted into discrete vessel classes and provide a suite of other important information about vessel function.<sup>1</sup>

#### Shape and Size

On a fundamental level pots are tools designed to perform certain tasks. Shaperelated factors such as access restriction and vessel stability provide insight into the intended function or functions of a particular vessel shape (Blitz 1993a; Braun 1980, 1983; DeBoer and Lathrap 1979; Hally 1984, 1986; Pauketat 1987; Turner and Lofgren 1966; Welch and Scarry 1995). Size is another important factor related to vessel function. Ethnoarchaeological studies have revealed that large cooking and serving vessels are often a sign that large groups of people gathered to share meals (Blitz 1993a; Turner and Lofgren 1966). In contrast, smaller vessels were often used by single individuals or small groups (DeBoer and Lathrop 1979; Henrickson and McDonald 1983). Functional differences may

also exist between different size modes with a discrete vessel shape class (Hally 1983b; Wilson and Rodning 2002).

To gather information on vessel shape I sorted each rim sherd in the study assemblage into one of 12 basic shape classes listed in Table 7.1. These basic shape classes were either adopted or adapted from previous ceramic research in the Black Warrior Valley and elsewhere in the Mississippian Southeast (see Steponaitis 1983). Vessel orifice diameter serves as a proxy for vessel size in this analysis. Orifice diameter was measured on all vessels with rims representing at least 5% of the total vessel orifice.

### Paste Composition

Technological studies of archaeological ceramics have demonstrated that vessels with finer pastes exhibit a higher resistance to mechanical stress and a lower resistance to thermal stress than vessels with coarser pastes (Rice 1987; Shepard 1971:131; Steponaitis 1984). Mississippian potters typically used fine shell and/or grog-tempered pastes to manufacture serving wares (such as bowls, bottles, and beakers) that were exposed repeatedly to mechanical stress (Million 1975; Steponaitis 1984). Coarser shell-tempered pastes typically were selected to manufacture cooking vessels such as jars and pans (Steponaitis 1983, 1984).

The temper of every sherd in the study assemblage was identified with the aid of 10X hand lens. Temper types in the Moundville Roadway include shell, grog, shell and grog, and grit. A few sherds lacked tempering material. Atypical clays or fine tempers were also noted.

# Surface Treatment

Surface treatment provides additional clues to vessel function. Mississippian archaeologists commonly interpret pots with burnished or slipped surfaces as serving containers (Steponaitis 1983). In contrast, pots with plain or unburnished surfaces are often interpreted as cooking or storage containers (Steponaitis 1983). These inferences are based on several lines of evidence. First, burnished or slipped surfaces strongly correlate with Mississippian vessel shapes like bowls and bottles which are conducive to food presentation and consumption. Jars, pans, and other utility wares have basic shapes more conducive to cooking and other preparation activities. Second, many burnished vessels from the Mississippian Southeast were intentionally fired in an oxygen poor environment (reduced) to create a black, shiny surface. Some burnished vessels were further embellished with incised, excised, and/or engraved designs. Others were painted with mineral pigments to produce red, white, or yellow surface colors. Such decorative treatments are delicate and do not hold up well to prolonged exposure to a cooking fire (Steponaitis 1984). Considering the labor that was invested in decorating serving containers, it is not surprising that most lack sooting, oxidation, and other evidence of thermal alteration (Holmes 1886:272; Wilson 1999). Surface treatments identified in the study assemblage include plain, burnished, slipped, incised, excised, negative painted, and punctated sherds. Moreover, weathered sherds that lacked identifiable surface treatments were coded as eroded.

### Use Wear

Observations of use wear were made only for rim sherds. Three major types of use wear were identified in the study assemblage-sooting, oxidation, and abrasion. Sooting is a dark carbon deposit that accumulates on pots as a result of exposure to a wood fire (Hally 1983a). Oxidation is the result of the organic material in a clay pot being decomposed via exposure to a high-temperature (>200°) open-air fire. The location of sooting and oxidation on a vessel varies according to whether the vessel is placed directly on a fire or elevated above it (Hally 1983a:7). Pots placed directly on a cooking fire tend to accumulate soot in their upper portions and oxidation at their bases (Hally 1983a:10). If a pot is elevated above a cooking fire then sooting may accumulate on the vessel base and upper vessel portions, and there may be little evidence of oxidation.

Abrasion is the result of repeated physical contact with a vessel's surface. Such contact may consist of stirring a vessel's contents, scraping out or removing vessel contents, washing, and even repeated handling (Griffiths 1978). Use wear resulting from these activities includes surface pitting, scratches, and patches of erosion (Griffiths 1978; Hally 1983a, 1983b).

## **Previous Research on Vessel Function at Moundville**

There has been considerable research directed at the issue of Mississippian ceramic technology in the Black Warrior Valley (Hardin 1981; Steponaitis 1983; Taft 1996; Welch 1991b). McKenzie (1964b, 1965) provided one of the first analyses of Mississippian vessel classes from Moundville. Based on an examination of whole vessels from mortuary contexts he defined three basic shape forms—jars, bowls, and bottles. McKenzie noted variation within these shape forms but did not define formal vessel subcategories.

Steponaitis (1983, 1984) provided the first functional analysis of Moundville ceramics. He defined two functional categories (service and utility wares) based on a technological analysis of vessel paste recipes, surface treatments, and basic shapes (Steponaitis 1983, 1984:33-45). Service wares consist of vessels typically used for eating and storage. Utility wares, on the other hand, consist of vessels used to cook and otherwise prepare foods for consumption.

Steponaitis (1983) also defined twenty-two basic shape classes, variation among which was demonstrated to be both chronologically and functional significant. Specific vessel shapes were found to correlate with certain paste recipes and surface treatments. For example, Moundville potters tended to use coarse, shell-tempered pastes to make cooking jars, and fine shell and grog-tempered pastes to make serving bowls and bottles (Steponaitis 1984:23-29). Furthermore, Moundville potters typically left jar surfaces undecorated, but applied burnished and incised/engraved decorations to the surfaces of bowls and bottles.

Most recently Taft (1996) identified functional differences among different vessel shapes present in Moundville II and III phase midden assemblages excavated from Mounds E, G, and Q at Moundville. Taft's (1996) functional inferences were based on an analysis of vessel shape, size (orifice diameter), and surface treatment. As a result she was able to define the full range of basic shapes present in each of the three assemblages and outline the food storage, preparation, and cooking activites that took place in each of these mound contexts.

### Form and Function of Moundville I Vessel Classes

In this section I summarize functionally relevant data for each of the ten basic shape classes identified in the study assemblage (Table 7.1). In so doing, I offer a functional analysis of Moundville I vessel assemblages that builds upon previous investigations. Interassemblage variability is then more fully addressed in the final portion of the chapter.

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Basic Shape	Count	Percent					
Unburnished jar	1278	64.64					
Thickened-rim jar	49	2.48					
Burnished jar	23	1.16					
Cylindrical bowl	5	0.25					
Bowl	36	1.82					
Simple bowl	220	11.13					
Restricted-rim bowl	55	2.78					
Carinated bowl	14	0.71					
Terraced bowl	6	0.30					
Peaked bowl	1	0.05					
Indeterminate	78	3.95					
Flaring-rim bowl	212	10.72					
TOTAL	1977	100.00					

Table 7.1. Moundville I vessel counts in the study assemblage by basic shape.

### Unburnished Jars

A minimum number of 1,278 unburnished jars comprise 64 percent of the total vessel assemblage. These are shouldered vessels with restricted orifices and subglobular bodies (Figure 7.1; Steponaitis 1983). Unburnished jars are the most common jar type as well as the most common basic shape class in Moundville I assemblages (Scarry 1995; Steponaitis 1983). It is noteworthy that most unburnished jars can be divided into two types based on surface treatment—Mississippi Plain and Moundville Incised (Table 7.2). Mississippi Plain jars are more frequent with rims representing a MNV of 915 vessels. Moundville Incised jars

are less frequent with rims representing a MNV of 353 vessels.<sup>2</sup> As discussed in Chapter 5, there are diachronic changes in the kinds of decorations (varieties) present on Moundville Incised jars, as well as a gradual decline in the overall popularity of Moundville Incised jars through time. Considering the study assemblage as a whole, Moundville Incised, *variety Moundville* is most common, followed by *varieties Carrollton, Oliver*, and *Snows Bend*, respectively (Table 7.2). The remaining ten unburnished jars in the assemblage are

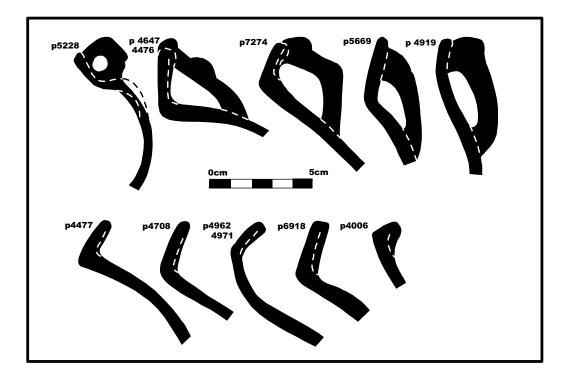


Figure 7.1. Unburnished jar rims.

represented by rims from possible non-local pots. These include one Evansville Punctated, one L'Eau Noire Incised, one Late Savannah Simple Stamped, one Mathews Incised, one Mazique Incised, and two Autagua Plain rims (Table 7.2).

There is a unimodal distribution of orifice diameters for unburnished jars that ranges from 9 cm to 52 cm with a median of 28 cm (Figure 7.2). Unburnished jars exhibit

considerable evidence of thermal alteration. Traces of sooting were identified on rims from throughout the entire size range of this basic shape class. Moreover, oxidation was present on a number of basal fragments.

Given their shape, size, surface treatment, paste composition, and use wear patterns, unburnished jars were primarily used for boiling food like hominy and other dishes but may

	ADM	43+50-	70+50-	30+00-	MPA	TOTAL
		46+00	72+05	31+50		
Autauga Plain	2				1	3
Moundville Incised –	7	12	9		8	36
Carrollton						
Moundville Incised –	35	104	65	11	43	258
Moundville						
Moundville Incised –	2	9	9	1	1	22
Oliver						
Moundville Incised –		1	-			1
Snows Bend						
Moundville Incised –	6	18	5	5	2	36
unspecified						
Mississippi Plain –	39	391	282	27	150	889
Warrior						
Mississippi Plain – <i>Hull</i>	2	18	3		3	26
Lake						
Evansville Punctated		1				1
L'Noire Incised					1	1
Late Savannah Simple					1	1
Stamped						
Mathews Incised		1				1
Mazique Incised		2	1			3
TOTAL	93	557	374	44	210	1278

Table 7.2. Counts of unburnished jars by type and variety.

have also been used as storage containers (Hally 1986; Shapiro 1984; Taft 1996:49; Wright 1958). Hominy preparation requires a boiling period of three to four hours in which a mixture of shelled maize kernels and water is stirred repeatedly. The orifice constriction of unburnished jars would have increased containment security while decreasing rapid

evaporation of water during boiling (Linton 1944:370). A pattern of neck abrasion found on several unburnished jars was likely a result of vessel contents being stirred with some kind of spoon or ladle during preparation. Steponaitis (1983) has also demonstrated that the coarse shell-tempered pastes used in the manufacture of most unburnished jars would have increased resistance to thermal shock. Likewise, the absence of burnishing and other delicate surface treatments indicates these vessels were intentionally designed for cooking tasks.

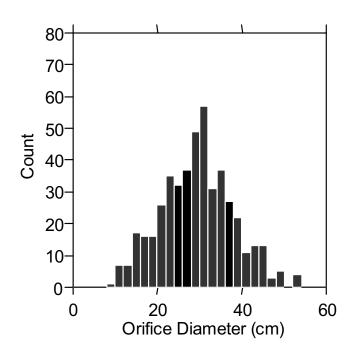


Figure 7.2. Unburnished jar orifice diameters

Considering their obvious cooking function, it is no surprise that unburnished jars are the most frequent vessel class in Moundville I assemblages. Long-term exposure to cooking fires would have increased the breakage and replacement rates for these vessels (David 1972; Foster 1960; Pauketat 1989).

It is noteworthy that similar patterns of thermal use wear are present on both Mississippi Plain and Moundville Incised unburnished jars. In addition, both Moundville Incised and Mississippi Plain jars are comparable in terms of orifice diameter size distributions. Thus, both unburnished jar types appear to have been used for similar cooking and storage tasks.

# Thickened-rim Jars

Forty-nine thickened rim jars were identified in the Moundville Roadway assemblage. As the name implies, these jars have rims that are reinforced by the application of a wide clay slab immediately below the vessel lip (Figure 7.3). Based on the identifiable rim sherds in the Roadway assemblages, it appears that thickened-rim jars differ from unburnished jars in overall shape. Thickened-rim jars generally have more vertical walls with less pronounced shoulders than unburnished jars. Considering the shape of upper vessel

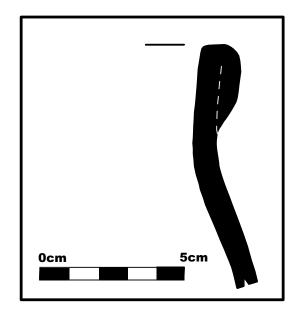


Figure 7.3. Thickened-rim jar profile.

portions, thickened-rim jars probably had deeper and more ovular bodies than unburnished jars. Clearly these pots were designed to contain bulk comestibles.

Thickened-rim jars tend to have considerably larger orifice diameters than other jar classes in Moundville I assemblages. In the past these vessels have been dubbed "over-sized jars" due to examples with orifice diameters exceeding 60 and even 80 cm (Welch and Scarry 1995). Determining the size range of thickened-rim jars is complicated by the fact that many of these large vessels are represented by rim fragments too small to accurately calculate orifice diameter. Thus, the orifice diameter of only a small number of vessels from the study assemblage could be accurately determined. While a few thickened-rim jar rims have orifice diameters as low as 28 cm, the majority exceed 50 cm in size. Based on rough estimates some appear to have had orifice diameters exceeding 80-90 cm.

Determining the function or functions of thickened-rim jars is hindered by the fragmentary nature of the representative vessel fragments. In the past it has been assumed that these pots were cooking vessels used to prepare mass quantities of foodstuffs. Based on the available evidence, however, a tentative case can be made that thickened-rim jars were used domestically to store bulk foodstuffs. I base this inference on several lines of evidence. First, thickened-rim jars do not bear evidence of long-term exposure to cooking fires such as sooting and oxidation.<sup>3</sup> Moreover, although rare, thickened-rim jars are widely distributed. Examples of this distinctive vessel class have been identified in assemblages from the PA tract, ECB tract, North of Mound R, and throughout the Moundville Roadway (Scarry 1995). A more restricted pattern of distribution would be expected if these vessels had a ceremonial use (such as cooking large quantities of food for feasting). A domestic association for

thickened-rim jars is also indicated by their co-occurrence with other domestic wares in midden assemblages.<sup>4</sup>

Considering their large size and the reasons discussed above, thickened-rim jars were probably designed to contain bulk comestibles. Once filled these vessels would have been too heavy to be manipulated or moved about frequently and were likely placed in the corners of houses and used for long-term storage purposes. Lack of mobility would have contributed to the long use-lives of these vessels. Thus, the rarity of thickened-rim jars in the study assemblage may simply be a product of low breakage and replacement rates.

In addition to reinforcing the rims of these jars, the wide slabs placed on their exterior lips would have facilitated the use of skin covers to seal and preserve contents. Considering the scarcity of subterranean storage facilities at Moundville, bulk foodstuffs must have been stored above ground. Large storage jars along with corn cribs or barbacoas could have served this purpose.

### **Burnished** Jars

The term burnished jar is somewhat of a catch-all-classification used here to describe jars in Moundville I assemblages with burnished or slipped surfaces (Steponaitis 1983). The 23 burnished jars in the Moundville Roadway assemblages include a variety of types and

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	ADM	43+50-	70+50-	30+00-	MPA	TOTAL
		46 + 00	72+05	31+50		
Bell Plain - Hale	1	11	3	-	2	17
Carthage Incised -	-	3	-	-	3	6
Summerville						
TOTAL	1	14	3	-	5	23

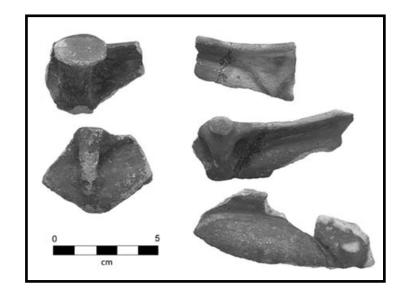


Figure 7.4. Carthage Incised, variety Summerville burnished jars.

varieties, basic shapes, and secondary shape features.

At least two types of burnished jars can be identified based on surface treatment- Bell Plain and Carthage Incised. In addition to surface treatment, Bell Plain and Carthage Incised jars also differ in terms of basic shape and secondary surface attributes. Bell Plain jars in the assemblage are similar in shape and size (orifice diameter distribution) to unburnished jars (Mississippi Plain and Moundville Incised) but often have more pronounced shoulders and upper rim sections that are more sharply inslanting. Sixteen Bell Plain jars have reduced and burnished surfaces. One other is red slipped. In terms of secondary shape attributes one Bell Plain jar rim differs from the others in having evenly spaced nodes located immediately below its lip. Other Bell Plain jars in the assemblage lack distinctive secondary shape attributes. Carthage Incised jars differ in a number of ways from other burnished jars in the assemblage. I classified five burnished jars as Carthage Incised, *variety Summerville* based on their burnished surfaces and the presence of incised arches on their upper vessel portions. One other burnished and incised jar rim was classified as Carthage Incised but was too fragmentary to assign a variety classification. These are well-made vessels with thin walls and fine, compact pastes. In terms of basic shape Carthage Incised jars have lower height-to-width ratios than other burnished and unburnished jars making them shorter and squatter than other jar classes.<sup>5</sup> Carthage Incised jars are also embellished with four shoulder nodes executed by pushing out the vessel's shoulders from the interior. Thin and deeply incised arcs are located directly above these shoulder modifications. In addition, Carthage Incised jars often possess two strap handles on opposite sides of the vessel mouth. The tops of these handles often include flattened appendages (Figure 7.4).

Based on their burnished and reduced surfaces, it is unlikely that burnished jars were used for cooking activities. An absence of sooting and oxidation supports this inference. Considering the effort that went into decorating these vessels, in particular the Carthage Incised examples, a serving function is probable. The general shape characteristics of burnished jars would have facilitated the serving of a variety of foodstuffs. The short, restricted necks of these vessels would have provided some degree of containment security without hindering access to contents (Taft 1996:49). Indeed, burnished jars have fine and compact pastes that would have increased resistance to mechanical shock. This is particularly the case with the Carthage Incised examples in the assemblage.

Carthage Incised burnished jars are smaller, shallower, and more elaborately decorated than other burnished jars. Considering their small size and unrestricted shapes

these vessels were individual serving containers. Bell Plain Burnished jars have a wider range of orifice diameters and may include both individual and small group serving containers.

### Simple and Restricted Bowls

A total of 220 simple bowls and 55 restricted bowls were identified in the study assemblage. Thirty-six additional bowls were assigned to a general bowl category as they were too fragmentary to confidently classify as either simple or restricted. Due to general similarities in shape, size, and surface treatment, I discuss these three vessel classes collectively.

As defined by Steponaitis, Moundville simple bowls

have an approximately hemispherical profile, without inflection or corner points. The lip diameter must be greater than three fourths of the maximum diameter; on simple bowls that lack a point of vertical tangency, the lip is equivalent to the maximum diameter. [Steponaitis 1984:68]

For the current study, I widen the simple bowl classification to include a number of large, pan-like bowls with outslanting rims (Figure 7.8).

Restricted bowls are similar to simple bowls in overall shape but have incurving rims that result in an orifice diameter "less than three-fourths of the maximum diameter of the body" (Steponaitis 1984:68). Another way to describe restricted bowls is that they are essentially bottles without the restricted, vertical neck.

Rims representing 118 simple and restricted bowls were complete enough to determine orifice diameter. Three histograms plotting these orifice diameters reveal a bimodal distribution of bowl sizes (Figures 7.5-7.7). The smallest size mode consists of 111

<b>`</b>	ADM	43+50-	70+50-	30+00-	MPA	TOTAL
		46+00	72+05	31+50		
Addis Plain					1	1
Bell Plain – Hale	27	75	24	9	39	174
Bell Plain – Goldsmith		2				2
Carthage Incised – Akron	6	15	5		12	38
Carthage Incised – Moon		1				1
Lake						
Carthage Incised –	2	4	2		1	9
Summerville						
Carthage Incised –	5		2		2	9
Unspecified						
D'Olive Incised		1				1
Indeterminate Plain		1				1
Shell/Grog						
Moundville Engraved –	1		2			3
Elliot's Creek						
Mississippi Plain – Warrior	6	30	15	3	13	67
Mississippi Plain – <i>Hull</i>		2				2
Lake						
Mazique Incised		1				1
Unclassified Engraved	1					1
TOTAL	48	132	50	12	68	310

Table 7.4. Counts of simple and restricted bowls by type and variety.

rims with orifice diameters ranging from 8 to 34 cm. Both simple and restricted bowls are represented in this small size mode. The larger size mode is represented by seven simple-bowl rims with orifice diameters ranging from 40 to 50 cm.

A total of 300 rims from both vessel classes can be sorted into one of three type categories based on surface treatment: Bell Plain, Mississippi Plain, and Carthage Incised (Table 7.4). The ten remaining bowls are represented by one Addis Plain rim, two Bell Plain, *variety Goldsmith*, one D'Olive Incised, one unclassified shell and grog-tempered, three Moundville Engraved, *variety Elliots Creek*, one Mazique Incised, and one unclassified engraved rim respectively. Figures 7.5, 7.6, and 7.7 plot the distribution of the orifice diameter measurements for simple and restricted bowls by surface treatment. All three major

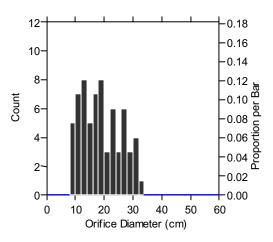


Figure 7.5. Orifice Diameters for Bell Plain bowls.

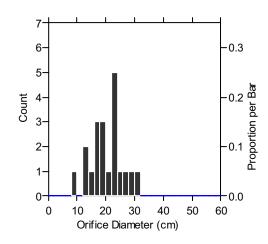


Figure 7.6. Orifice diameters for Carthage Incised and other decorated bowls.

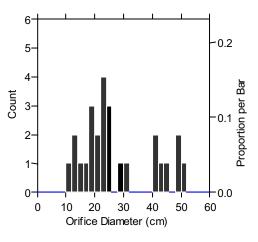


Figure 7.7. Orifice diameters for Mississippi Plain bowls.

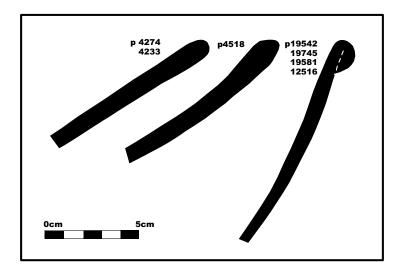


Figure 7.8. Large simple bowls.

surface-treatment categories possess the small size range discussed earlier. Moreover, each of these surface-treatment categories displays a similar range of vessel sizes within this small size mode. Plain surface vessels, however, represent the only category that includes the larger size mode of bowls (Figure 7.7). Moreover, all six of the vessels comprising this large size mode are simple bowls.

The large size mode of Mississippi Plain simple bowls represents a previously undefined Mississippian vessel subclass in Moundville I assemblages (Figure 7.8). Two of these vessels have a wide and shallow basic shape that is similar to pans, as defined elsewhere in the Mississippian Southeast. The other large simple bowls have deeper bodies and outslanting rims. Sooting and oxidation were identified on two vessels. Based on the lack of decorative surface treatment, large size, and evidence of thermal shock, these large bowls were probably used for cooking and possibly mixing tasks. Their coarse shell tempering also indicates a cooking function as this paste composition would have provided increased resistance to thermal shock (Steponaitis 1984).

The small size mode of simple and restricted-rim bowls consists primarily of burnished and/or incised vessels with fine shell or shell and grog paste. It is important to note that many of the Mississippi Plain bowl rims in this category are eroded vessels that may have been originally burnished. Considering that Mississippi Plain, Carthage Incised, and Bell Plain bowls in this small size mode share comparable orifice diameter distributions and are consistent in vessel morphology, I contend that they were probably used for similar serving tasks. Restricted bowls, however, clearly provided a higher level of containment security with more access restriction than simple bowls and may have been used more frequently for the serving and short-term storage of liquid foodstuffs.

Small simple and restricted-rim bowls lack sooting, oxidation, and other evidence of thermal alteration. The small size of these vessels, their fine shell and/or grog-tempered pastes, and their burnished and otherwise decorated surfaces suggest they were primarily used as individual serving containers (Taft 1996:51). The rounded bases found on most of these bowls would have decreased overall stability, suggesting that they were frequently carried or held rather than used communally. That being said, some of the larger simple and restricted-rim bowls may have been used for serving meals to household members and other small groups.

Taft (1996:51) has demonstrated that simple bowls were sometimes used for nonfood related activities. A simple bowl recovered from Mound Q was encrusted with glauconite, a green pigment. Another bowl recovered from the Moundville site contained

hematite, a red pigment. Based on this evidence, Taft (1996) argues that these pots were sometimes used to store paints for a variety of craft activities.

## Flaring-Rim Bowls

Rims representing a minimum number of 212 flaring-rim bowls were identified in the study assemblage. These vessels generally have hemispherical bodies with sharply out-flaring rims (Figure 7.9; Steponaitis 1983:68). Steponaitis (1983) distinguishes between deep and shallow flaring-rim bowls. Deep flaring-rim bowls have upper vessel portions that have a point of vertical tangency. Shallow flaring-rim bowls have out-slanting upper vessel portions that do no reach a point of vertical tangency. This distinction is important as deep bowls do not appear in the Black Warrior Valley until the Moundville III phase. Only shallow flaring-rim bowls were identified in the study assemblage. That being said, many of the rims representing flaring-rim bowls were too fragmentary to confidently assign to one of these subcategories.

Nearly half of the flaring-rim bowls (n=88) in the study assemblage can be classified as Bell Plain, *variety Hale* based on their burnished but otherwise undecorated surfaces (Table 7.5). The remaining vessels are represented by a total of 39 Carthage Incised, 27 Mississippi Plain, 5 Moundville Engraved, 3 Unclassified Engraved, and 1 D'Olive incised rim, respectively (Table 7.5).

Flaring-rim bowls clearly were used for food serving based on their shape, surface treatment, and lack of thermal alteration (Taft 1996:50; Welch and Scarry 1995:412). The flaring rims provided a practical means of carrying these vessels as well as a highly visible area to place incised and/or engraved decorations. These vessels have a shallow shape that

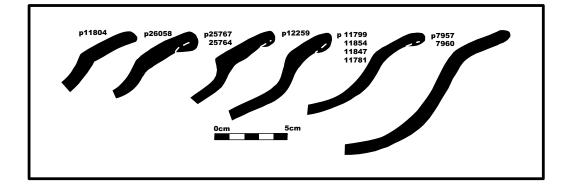


Figure 7.9. Flaring-rim bowl rims.

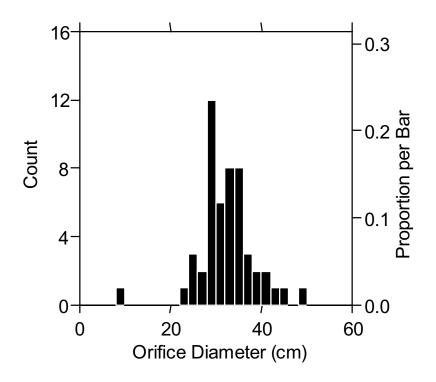


Figure 7.10. Flaring-rim bowl orifice diameters.

would have provided less containment security for liquid foods than simple or restricted bowls. Thus, flaring-rim bowls may have been used for serving and eating solid foods or thick gruels rather than soups or stews. Considering their small size, most flaring-rimbowls probably were used as individual serving containers (Taft 1996:50). The largest examples could have been used by small groups.

	ADM	43+50-	70+50-	30+00-	MPA	TOTAL
		46 + 00	72+05	31+50		
Addis Incised		48			1	49
Bell Plain - Hale	12		51	6	19	88
Carthage Incised - Akron		2				2
Carthage Incised – Carthage	1					1
Carthage Incised – Fosters		1				1
Carthage Incised – Moon Lake	1	6	7		4	18
Carthage Incised – Summerville	2	1				3
Carthage Incised - Unspecified		6	2		6	14
D'Olive Incised		1				1
Moundville Engraved – Elliot's Creek	2					2
Moundville Engraved – Unspecified		1			2	3
Mississippi Plain – Hull Lake		1		1		2
Mississippi Plain – Warrior	1	10	5		9	25
Unclassified Engraved	1	1			1	3
TOTAL	20	78	65	7	42	212

Table 7.5. Counts of flaring-rim bowls by type and variety.

## Carinated Bowls

A minimum number of 13 carinated bowls were identified in the Moundville Roadway assemblage. They are wide and shallow vessels with a vertical or slightly inslanting rim that joins a relatively flat base at a corner point (Figure 7.11). Their unrestricted shape would have provided ready access to contents. In addition, their low height-to-width ratios and flat bases would have contributed to overall vessel stability. These bowls are essentially serving platters and are among the rarest and most elaborate vessels in Moundville I assemblages. Indeed, the base portion of one carinated bowl exhibits a pattern

	<u> </u>	,
43+50-46+00	70+50-72+05	TOTAL
1	1	2
-	1	1
6	1	7
1	-	1
2	-	2
10	3	13
	43+50-46+00 1 - 6 1 2 10	$\begin{array}{ccccccc} 43+50-46+00 & 70+50-72+05 \\ 1 & 1 \\ - & 1 \\ 6 & 1 \\ 1 & - \\ 2 & - \\ 10 & 3 \\ \end{array}$

Table 7.6. Counts of carinated bowls by type and variety.

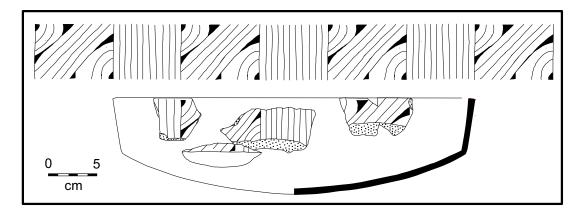


Figure 7.11. Moundville Engraved, variety Chapman carinated bowl.

of pitting that was likely the result of the bowl's contents being scooped out with a ladle (Hally 1983a, Shapiro 1984; Wilson 2002).

In terms of type-variety classifications, seven carinated bowls can be classified as Moundville Engraved, *variety Chapman* based on their incised and excised design fields which consist of quarter circles bordered by vertical parallel lines (Figure 7.11). The outer surfaces of these bowls are reduced and burnished. In addition, engraved and excised areas are sometimes embellished with a red slip. Two other carinated bowls are classified as Bell Plain, *variety Goldsmith*. Both are made from a pinkish-brown shell- and grog-tempered paste that is virtually identical to the *Chapman* vessels but have undecorated surfaces. The remaining four carinated bowls are represented by two Unclassified Engraved, one Moundville Engraved, *variety Elliot's Creek*, and one Bell Plain, *variety Hale* rim respectively (Table 7.6).

## Cylindrical Bowls

Five cylindrical bowls represent less than 1 percent (0.25%) of the study assemblage. These vessels have approximately vertical walls and a rounded or flattened base. Three of these pots were classified as Bell Plain, *variety Hale* based on their burnished but otherwise undecorated surfaces. Two others were classified as Unclassified Engraved (Table 7.7).

Table 7.7. Counts of cylindrical bowls by type and variety.

	ADM	43+50-46+00	70+50-72+05	TOTAL
Bell Plain – Hale	1	1	1	3
Unclassified Engraved	-	2	-	2
TOTAL	1	3	1	5

Based on their basic shape characteristics, cylindrical bowls were probably used as liquid serving and drinking containers. The large height-to-width ratio of this vessel shape would have created a high degree of access restriction, making it difficult to remove solid foods. Their fine pastes and burnished and decorated surfaces also suggest a serving function. Considering their small size, most cylindrical bowls were likely used as individual drinking containers. Larger examples could have been used by small groups.

# Terraced Bowls

Six terraced bowls comprise less than 1 percent (0.3%) of the study assemblage. The defining feature of this vessel class is a terraced or scalloped lip where the rim in one portion of the vessel is lower than the rest (Steponaitis 1983:69). Most terraced bowls are square to

Table 7.8. Counts of cylindrical bowls by type and variety.

Type and Variety	43+50-46+00	TOTAL
Bell Plain – Goldsmith	1	1
M. Engraved – Chapman	4	4
M. Engraved – Unspecified	1	1
TOTAL	6	6

rectangular in shape with a flat base. Others have rounded, ovoid bodies with pedestaled bases.

Four of the terraced bowls in the study assemblage were classified as Moundville Engraved, *variety Chapman* based on their pinkish-brown shell- and grog-tempered pastes and incised and excised design fields (Figure 7.12). One terraced bowl was classified as Bell Plain, *variety Goldsmith*. This vessel was made from a paste virtually identical to the Moundville Engraved, *variety Chapman* vessels but had undecorated surfaces. The final terraced bowl was classified as Moundville Engraved but was too fragmentary to assign to a variety designation (Table 7.8).

Terraced bowls are rare and elaborate vessels that required considerable labor investment to manufacture. A service function for these pots is indicated by their

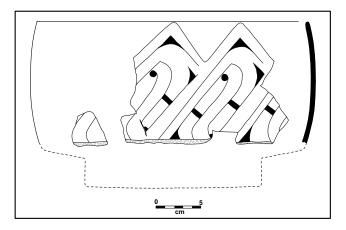


Figure 7.12. Moundville Engraved, variety Chapman terraced bowl.

unconventional shapes, elaborate surface treatments, and fine pastes. The open-sided shape of these vessels would have been well suited to display a vessel's contents. While terraced bowls may have been used for the presentation of foods, it is also possible they were used to present or display non-food items.

## Peaked-Rim Bowls

One peaked (or square-rim) bowl rim was identified in the Moundville Roadway assemblage. Due to the fragmentary nature of this rim sherd, it is difficult to determine the overall shape of the vessel. However, more complete square-rimmed vessels have been recovered from the Stirling-phase (AD 1100-1200) American Bottom in southwestern Illinois (Milner 1983:135-36; O'Brien 1972:Figure 60a). These Cahokia examples were wide and shallow, four-sided vessels.

This vessel's fine paste and burnished surfaces (Bell Plain, *variety Hale*) indicate a serving function. However, the fragmentary nature of this vessel limits functional interpretations. If this Moundville example is similar in overall shape to the Cahokia examples, then it was likely used as a serving platter for food presentation.

## Bottles

Rim sherds representing a minimum number of 46 bottles were identified in this analysis. In general, bottles are vessels with more or less vertical, restricted necks attached to distinct bodies (Steponaitis 1983:66). Steponaitis (1983:66-68) has defined a variety of different bottle shape classes at Moundville. Moundville I bottles typically have elongated or ovoid bodies with pedestaled bases. Cylindrical bottles are another bottle form in Moundville I assemblages. As their name implies, these bottles have cylindrical (barrel-

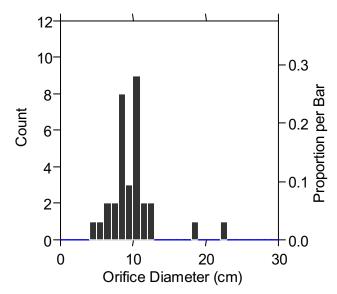


Figure 7.13. Orifice Diameters for bottles in the study assemblage.

shaped) bodies and wide necks (Steponaitis 1983:66). Toward the end of the Moundville I phase ovoid bottles began to be replaced with subglobular bottles. By the latter portion of the Moundville II phase potters began making subglobular bottles without pedestaled bases.

The fragmentary nature of most bottle rims recovered from domestic refuse contexts makes it difficult to distinguish between different bottle shape classes. Indeed, most of the bottles in the study assemblage are represented by rim sherds broken at the point where the neck meets the body. That being said, several pedestaled bases were identified in the analysis. Moreover, it was possible to tentatively identify a number of cylindrical bottles based on paste and surface treatment attributes unique to this particular bottle class.

Thirty-five bottles were classified as Bell Plain, *variety Hale* based on their burnished surfaces. Three of these are red slipped. Six other bottle rims were classified as Mississippi Plain, *variety Warrior*. Several of these rims may have originally had burnished or slipped surfaces that were eroded. A minimum number of two rims were assigned to the type

Tuble 7.5. Counts of bottles by	spe und v	unoty.			
	ADM	43+50-	70+50-	MPA	TOTAL
		46 + 00	72+05		
Bell Plain – Goldsmith		2			2
Bell Plain – Hale	12	9	7	7	35
Carthage Incised – Unspecified			1		1
Mississippi Plain – Warrior			5	1	6
M. Engraved – Chapman		2			2
TOTAL	12	13	13	8	46

Table 7.9. Counts of bottles by type and variety.

Moundville Engraved, *variety Chapman*. Both of these rims were manufactured from a very similar pinkish-brown, fine shell and grog-tempered paste. Finally, one burnished and incised bottle rim was classified as type Carthage Incised (Table 7.9). Due to its fragmentary nature, however, it could not be assigned to a particular variety.

As I will discuss in greater detail later, the two Moundville Engraved, *variety Chapman* bottles are part of a distinct suite of elaborate serving wares found in Moundville I assemblages. Based on the one complete vessel and the few larger body fragments recovered from Moundville, these bottles have cylindrical bodies with long and wide necks. Moreover, they all appear to share similar surface treatments and designs. Vessel bodies are decorated with a bulls-eye motif executed through an elaborate set of incised curves and excised triangles and circles. These incised and excised areas are usually filled with a red, hematitebased slip. Outer surfaces are burnished and reduced to a dark brown to black color. However, due to the soft and easily erodable pastes from which these bottles were manufactured, sometimes only traces of this burnishing and red slipping is detectable. In some cases vessel necks are also decorated with three horizontally incised parallel lines.

Orifice diameters for most bottles in the Moundville Roadway assemblage range from 4 cm to 12 cm. However, two bottle rims with orifice diameters measuring 18 and 22 cm, respectively, may represent a larger size class of these vessels (Figure 7.13). Based on their

small size and restricted necks most bottles were used as individual and small-group liquid serving containers. Indeed, several bottle rims have patches of neck and lip abrasion that were likely created from repeated handling with wet hands. Bottles are typically made from finer and more compact pastes than most other vessels in the study assemblage. This paste composition would have increased resistance to mechanical shock and breakage, an important quality as bottles would have been frequently handled and passed around.

#### **Inter-Assemblage Comparison**

In this section I perform a number of inter-assemblage comparisons to evaluate organizational similarities and differences in foodways between different residential groups at early Moundville. In addition to the Moundville Roadway assemblages I also examine assemblages from north of Mound R (Steponaitis 1983) and the ECB and PA Tract assemblages from the Moundville Riverbank (Scarry 1995). I begin by comparing the relative frequencies of different vessel classes in each assemblage. Data generated from this comparison highlight general patterns of food storage, preparation, and serving activities. In addition, this comparison provides information on how everyday foodways differed from special occasions such as feasts and other ceremonial events. I also consider interassemblage diversity in type and variety frequencies. This comparison highlights spatial patterning in pottery distributions that crosscut different vessel types.

In the next set of analyses I compare the size (orifice diameter) distributions of individual vessel classes from different portions of the Moundville site. As discussed at the beginning of this chapter, vessel size provides insight into differences and similarities in the

size and composition of groups sharing meals. In turn, this information provides insight into a variety of factors ranging from household social status to the domestic cycle.

## Basic Shape Frequencies

For the purposes of this inter-assemblage comparison I collapsed all vessels into four broad shape classes; jars, bowls, flaring-rim bowls, and bottles. Table 7.10 presents counts and percentages for these four vessel classes by context. Assemblages examined for this comparison include the Moundville I assemblage from north of Mound R (NR), the Moundville II-III assemblage from NR, and assemblages from Roadway blocks 30+00 to 31+50, 40+00 to 45+00, 72+00 to73+00, and the Administration Building (ADM) and Museum Parking Area (MPA).<sup>6</sup>

An examination of these data reveals that assemblages vary in terms of the relative frequency of jars, bowls, and bottles. Flaring-rim bowls frequency, however, remains roughly consistent in each assemblage relative to other vessel classes (Table 7.10). As a general trend, assemblages with higher relative frequencies of bowls and bottles have lower

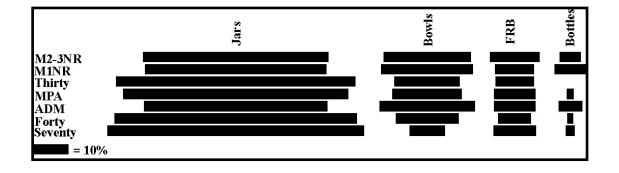


Figure 7.14 Seriation of MNV percentages by context.

		1		0		2	0	
	Jars		Bowls		Flarir	ng-Rim Bowls	Bottle	s
	n	%	n	%	n	%	n	%
M2-3NR	132	54.10	62	25.41	35	14.34	15	6.15
M1NR	75	52.82	38	26.76	16	11.27	13	9.15
30+00-31+50	44	69.84	12	19.05	7	11.11	0	0
MPA	228	65.71	70	20.17	42	12.10	7	2.02
ADM	94	53.41	49	27.84	21	11.93	12	6.82
43+50-46+00	587	70.64	152	18.29	79	9.51	13	1.56
70+50-72+05	396	75.00	54	10.23	65	12.31	13	2.46

Table 7.10. Counts and frequencies of general vessel classes by assemblage.

relative frequencies of jars. This trend does not necessarily mean that jars are less ubiquitous in these assemblages. Most likely, jar ubiquity remained fairly constant, and bowls and bottles are more ubiquitous in some assemblages than others.

What factors are responsible for these inter-assemblage differences? In an oft-cited study on Mississippian foodways at Moundville, Welch and Scarry (1995) argue that interassemblage variation in Mississippian serving-ware frequencies at Moundville is a product of status-based differences in foodways. In this scenario, high-status households at Moundville hosted a variety of ceremonial events such as feasts that generated discard assemblages with elevated serving-ware frequencies. Due to a different method by which I calculated the minimum number of vessels for the Roadway assemblages I can not directly engage with Welch and Scarry's data. However, I will consider the relevance of this explanation for the pattern of variation noted in Figure 7.14 for the Moundville Roadway and North of R assemblages. Another possible explanation for this inter-assemblage variation may be chronology. Previous ceramic studies have revealed diachronic changes in both the types and frequencies of Mississippian serving wares at Moundville (Knight 2002:94-94; Steponaitis 1983). To examine this second possibility, I ordered the study assemblages from earliest to latest, as determined by the seriation presented in Chapter 5 (Figure 7.14). The seriation diagram in Figure 7.14 reveals trends in the percentages of jars, bowls, and bottles. With few exceptions, the latest Moundville I and Moundville II to III assemblages from North of Mound R have the highest percentages of bowls and bottles. In contrast the earliest Moundville I assemblages from Roadway Blocks 72+00-73+00 and 40+00-45+00 have the lowest percentages of bowls and bottles.<sup>7</sup>

Based on the results of this analysis, I suggest that most of the inter-assemblage variation in serving-ware frequencies identified in Table 7.10 is the product of diachronic changes rather than synchronic differences in foodways at Moundville. The Administration Building assemblage is an exception to this trend. Although being the third earliest assemblage in the seriation, the ADM assemblage contains a higher relative frequency of bowls than any other assemblage. One possible explanation for this pattern is that the Administration Building ceramic assemblage consists of a mixture of domestic and ceremonial refuse deposits. Another possibility is that the Administration Building assemblage may date later in the Moundville I phase than indicated by the ceramic seriation. Indeed, the architectural evidence presented in Chapter 5 contrasts with the ceramic seriation in that it indicated the Administration Building assemblage represents only a minor exception to the broader trend represented in Figure 7.14.

The upshot of this analysis then is that there appears to be little status-based variation between different residential areas at early Moundville, at least in terms of the frequencies of vessels used to prepare and serve food. However, if this interpretation is correct there was a

relatively sharp increase in the production and use of bowls and bottles during the Moundville I phase. Exactly when these serving containers peak in popularity is unclear. However, there is a decrease in the relative frequency of bowls and bottles from the Moundville I to the Moundville II-III assemblages from North of Mound R (Table 7.10). Knight (2002:94-95) reports a similar decrease in serving wares (particularly bottles) relative to jars during the transition from Moundville II to III in assemblages from Mound Q.

#### Type-Variety Distribution

In this section I examine the distribution of different serving ware types and varieties. By highlighting types and varieties I hope to identify spatial patterning in pottery distributions that cross-cut different vessel types. Specifically, I examine the distribution of local serving-ware types including Bell Plain, *varieties Hale* and *Goldsmith*, Carthage Incised (all varieties), and Moundville Engraved, *varieties Elliots Creek* and *Chapman*. Probable non-local serving-ware types are not considered here.

Sherds representing Bell Plain, *variety Hale* vessels comprise a total of 16 percent of all the Moundville I assemblages listed in Table 7.11 and are by far the most common serving containers during the Moundville I phase (Figure 7.15). Bell Plain, *variety Hale* sherds are also widely distributed at Moundville. As listed in Table 7.11, Bell Plain, *variety Hale* sherds comprise at least 11% of every Moundville I assemblage considered in my analysis. Based on their frequency and ubiquitous distribution, I believe that Bell Plain, *variety Hale* pots were domestic serving containers used on a daily basis throughout the early Moundville community.

I hesitate to draw any conclusions from inter-assemblage differences in Bell Plain frequencies (see Table 7.11). There are several reasons for my caution. First, as I discussed above, chronology affected serving-ware frequencies at Moundville. Later Moundville I assemblages are more likely to have higher relative frequencies of burnished sherds than earlier Moundville I assemblages. Moreover, there is inter-analyst variation in the criteria used to distinguish burnished (Bell Plain) and plain sherds (Mississippi Plain). No two analysts appear to draw the line between Bell Plain and Mississippi Plain in exactly the same place. In addition, diversity in both feature formation processes and preservation factors also affects the identification of burnished sherds. Pottery assemblages that have endured greater exposure to the elements possess fewer sherds with intact burnished surfaces than more pristine assemblages.<sup>8</sup>

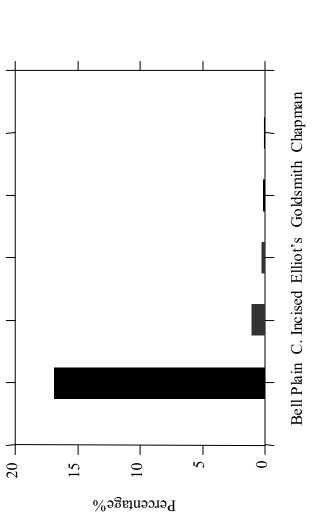
Carthage Incised sherds are considerably less common than Bell Plain sherds, representing 1% of all Moundville I assemblages. Though rare, Carthage Incised sherds are widely distributed at Moundville. In addition, there are minimal differences between different Moundville I assemblages in terms of the frequency of Carthage Incised sherds (Table 7.11). There is only a 1.3% difference between the assemblages with the highest (ADM) and the lowest frequencies (30+00-31+50) of Carthage Incised (see Table 7.11). The inter-assemblage diversity that does exist is difficult to evaluate as Carthage Incised sherds comprise such a small amount of the total variation in any Moundville I assemblages. Just a few Carthage Incised sherds added or subtracted to any assemblage could alter relative percentages dramatically. Considering their wide distribution, Carthage Incised pots were probably used similarly to Bell Plain, *variety Hale* vessels. Though less common, Carthage

Incised pots are essentially Bell Plain vessels with incised decorations. Both serving-ware types share the same suite of basic shape forms and sizes.

Other important local servingware types in Moundville I assemblages include Moundville Engraved, *varieties Elliot's Creek* and *Chapman*, and Bell Plain, *variety Goldsmith*. These are by far the most rare and elaborate serving containers found at early Moundville. Considerable labor was invested in the manufacture and decoration of these pots. Figure 7.16 plots the locations of these three varieties from the Moundville Riverbank, North of Mound R, and from the five Moundville Roadway assemblages considered here. Also plotted are the locations of individual sherds identified from preliminary analyses of other portions of the Moundville Roadway.

As represented in Figure 7.16, these elaborate serving wares are widely distributed at Moundville. Indeed, representative sherds have been identified in almost every sizable Moundville I ceramic assemblage that has been systematically analyzed to date (Scarry 1995; Steponaitis 1983). However, despite their wide distribution, these elaborate vessels are exceedingly rare when compared to other pottery types at Moundville. Sherds classified as Moundville Engraved, *varieties Elliot's Creek, Chapman*, and Bell Plain, *variety Goldsmith* collectively represent less than 0.5 percent of all Moundville I assemblages (Figure 7.15; Table 7.11). There are also differences among these varieties of fineware in terms of overall frequency. There are over twice the number (N=63) of Moundville Engraved, *variety Elliot's Creek* sherds in Moundville I assemblages than both Moundville Engraved, *variety* 

Table 7.11 Counts and percentage	unts and perc	centage	ges for early N	~	lississippian	an servin	g ware type	ware type varieties b	by contex	t.			
	Total Sherds Bell	Bell Pla	in,	Cartha	hage Incised	Moundville F	ille Engraved,	Moundville E	e Engraved,	Bell Plain	,1 ,1	Total	
		variety	Hale	(all va	(all varieties)	variety Elliot's	Elliot's Creek	variety Ch	apman	variety G	oldsmith	Fineware	are
	n	n	%	u	%	n	%	n	%	n	%	u	%
ADM	2180	406	10.97	37	1.70	5	.23	ı	ı	ı	ı	5	.23
43+50 to 46+00	5855	696	11.89	63	1.08	30	.51	13	.22	34	.58	LL	1.32
70+50 to 72+05	2663	419	15.73	27	1.01	12	.45	б	.11	1	.04	16	.60
30+00 to 31+50	547	64	11.70	7	.37	ı	·	ı	ı	ı	ı	ı	ı
MPA	3018	417	13.82	44	1.46	-	.03	-1	.03	ı	ı	7	.06
PA-Tract	2345	279	11.90	12	.51	e	.13	ı	ı	ı	ı	m	.13
ECB-Tract	3833	678	17.69	43	1.12	4	.10	ı	ı	ı		4	.10
NR	2813	973	34.59	15	.53	8	.28	ı	ı	ı	ı	8	.28
TOTAL	23254	3932	16.91	243	1.04	63	.27	17	.07	35	.15	115	.49





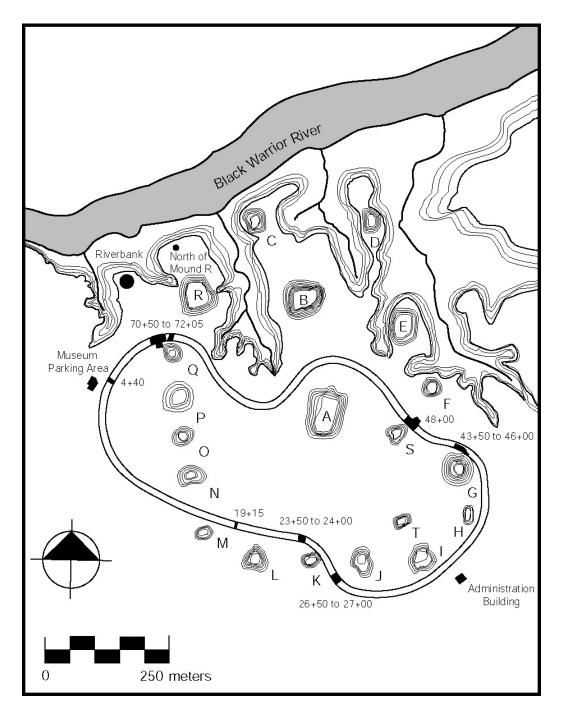


Figure 7.16. Assemblages that include Moundville Engraved, *variety Chapman*, Moundville Engraved, *variety Elliot's Creek*, or Bell Plain, *variety Goldsmith* sherds.

*Chapman* (N=17) and Bell Plain, *variety Goldsmith* (N=35) sherds combined (Table 7.11). It is important to note that inter-assemblage differences in these servingware frequencies are minor and appear to relate primarily to variation in sample size. This is a significant discovery as a more restricted or uneven distribution would be expected if the use and exchange of these vessels were tightly controlled by the Moundville elite.

#### Vessel Size Comparisons

In this section I evaluate inter-assemblage differences and similarities in the sizes ofjars and bowls. For the purpose of this analysis the jar category refers to unburnished jars and the bowl category consists of all bowl classes except flaring-rim bowls. Collapsing different bowl classes into one category substantially increased the sample sizes for each assemblage. It is also important to note that a size comparison of individual bowl classes from each assemblage generated a trend comparable to that presented in Figure 7.18. Other basic shape classes were excluded due to small sample size. Orifice diameter measurements provide the data on vessel sizes. I use box plots to compare the distribution of orifice diameters in each Moundville I assemblage. Due to sample sizes, the ECB and PA tract jar assemblages from the Moundville Riverbank were combined. Small sample size also required the exclusion of both the ECB and PA tract bowl assemblages from this comparison.

Figures 7.17 and 7.18 display the distribution of jar and bowl orifice diameters for each assemblage, respectively. An examination of Figure 7.17 reveals that the jar orifice distributions for each assemblage are generally comparable. The whiskers (representing the range of assemblage values) of each box plot overlap. Likewise, the hinges (which represent 50 percent of the variation in each assemblage) of each box plot overlap. That being said,

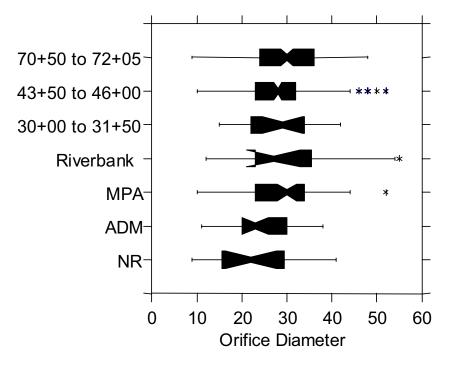


Figure 7.17. Jar orifice diameter distributions by assemblage.

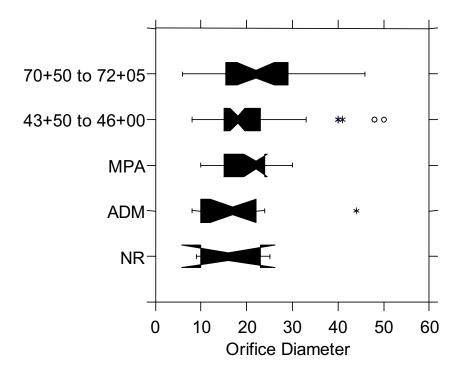


Figure 7.18. Bowl orifice diameter distribution by assemblage.

there are differences worth noting. A closer inspection of the data reveals that the assemblages from North of Mound R and the Administration Building are different from several of the other assemblages. Specifically, the notched confidence intervals of the Administration Building jar assemblage boxplot do not overlap with assemblages from Roadway Blocks 70+50 to 72+05, 43+50 to 46+00 and the Museum Parking Area. In addition, the notched confidence intervals of the North of Mound R boxplot do not overlap with assemblages from the Museum Parking Area and Roadway Blocks 70+05 to 72+05. These results reveal statistically significant differences between these assemblages at the .05 level.

The bowl assemblage comparison in Figure 7.18 reveals a similar, though less pronounced pattern. Although no two bowl assemblages are significantly different, both the Administration Building and the North of Mound R assemblages have smaller orifice diameter distributions than the other assemblages. As discussed earlier in this chapter vessel size distributions often correspond with the size of social groups that come together to prepare and consume meals. Thus, the smaller orifice diameter distributions identified for the ADM and north of Mound R assemblages may indicate the presence of somewhat smaller residential groups in these two areas than the other areas.

Though relatively minor, these differences are nonetheless important as they may correspond with different stages in a residential group's domestic cycle. As revealed by the architectural analyses presented in Chapter 6, the Administration Building exhibits the lowest late Moundville I occupation span estimate (48 years) of all the contexts from which ceramic assemblages were analyzed. Unfortunately, comparable architectural data from the North of Mound R excavations are not available. Nevertheless, the presence of smaller jars and bowls

in the Administration Building assemblage may relate to particular stages of this residential group's development when it consisted of a small number of residents. Due to the processes of biological reproduction, older and more established residential groups may have included more residents, relative to younger groups that came together to prepare and consume meals.

## Discussion

One way of discussing early Mississippian pottery assemblages at Moundville is to divide them into vessel sets. Broadly speaking, there is the Mississippi Plain set, the Bell Plain, *variety Hale* set, and the Carthage Incised set. There is also what I would classify as a fineware set, consisting of Moundville Engraved *varieties Elliot's Creek* and *Chapman*, Bell Plain, *variety Goldsmith*, and Unclassified Engraved, the latter consisting of a small number of eccentrically decorated sherds that do not fit into any of the other categories. The pots that comprise each of these sets share certain similarities in paste composition, surface treatment, and general function.

The Mississippi Plain set consists entirely of utilitarian pots, most of which are cooking jars but also include a smaller number of storage jars, pans, and unburnished serving vessels (bowls and bottles).<sup>9</sup> These are by far the most common and widely distributed vessels in Moundville I assemblages. This is not surprising as they were used primarily for everyday cooking tasks and to store household foodstuffs. My analysis revealed that most households living in different portions of early Moundville used a similar range of cooking jar sizes. This pattern suggests certain consistencies in the sizes of residential groups at Moundville that gathered to prepare and share meals (see Turner and Lofgren 1966).<sup>10</sup> If

households or other co-residential groups were considerably larger in one area of the Moundville community than another, then this should be represented in the larger sizes of the vessels that were used to prepare their food. The variation that does exist is minor and likely relates to the different stages of a residential group's domestic cycle. One of the two assemblages with the smallest jar and bowl size distributions had the shortest occupation span estimates based on architectural analyses presented in Chapter 6.

Bell Plain, *variety Hale* and Carthage Incised are related serving ware sets that include the same series of vessel shapes and sizes. Both sets consist primarily of small restricted and simple bowls, flaring-rim bowls, and bottles, most of which were probably individual-serving containers. While vessels in the Bell Plain, *variety Hale* set were more common than Carthage Incised pots, both were probably consistantly used as everyday domestic serving ware. These serving ware sets increased in popularity throughout the Moundville I phase, suggesting that organizational changes took place in domestic foodways in the decades following Moundville's regional consolidation.

The fineware set at early Moundville is perhaps the most difficult to interpret. These are the rarest and most elaborate vessels in Moundville I assemblages. They exhibit considerable standardization in form, decoration, and paste composition. Based on the labor invested in their manufacture and elaborate decoration, it is tempting to interpret these serving containers as wealth or prestige goods. However, inter-assemblage differences in fineware sherd frequencies are minor. A more restricted or uneven distribution would be expected if these vessels were tightly controlled by the Moundville elite. That being said, fineware sherds are far too rare for these vessels to have been manufactured and used by every household at early Moundville.

Is there an alternative to interpreting fineware as either prestige goods or utilitarian items? Insight into this issue can be achieved through an examination of Moundville's community organization. As discussed in Chapter 6, Moundville's early Mississippian population was divided into a number of multi-household groups similar to ethnohistorically described matrilineages. Ceremonial events conducted by these different social groups may have entailed the use of fineware pots as well as other ritual items. While not part of every household's domestic inventory, ceremonial items like fineware pots would have been used, broken, and discarded by numerous residential groups throughout early Moundville. In this scenario, fineware pots were important ceremonial items but not prestige goods in the traditional sense. They were too widely circulated to have been tightly controlled by the Moundville elite. Moreover, they were not produced in sufficient quantity to have functioned as wealth items.

<sup>1</sup> In some cases vessel bases are also distinctive enough to assign to a vessel class. Vessel shape, however, may be more easily identified from the base sherds of some vessels than others. Moreover, there is the risk of inflating counts by tabulating both the rim and base sherds from the same vessel.

<sup>2</sup> The greater frequency of Mississippi Plain jars is partially the product of breakage and identification patterns. For example some jar rims identified as Mississippi Plain may have derived from portions of Moundville Incised jars that did not bear incised decorations.

<sup>3</sup> It is important to note, however, that we are missing the basal portions of these vessels where much of this evidence would be visible.

<sup>4</sup> As will be discussed in greater detail later, thickened-rim jars are not present in greater numbers where refuse from feasting events has been identified.

<sup>5</sup> No complete Carthage Incised jars have been recovered from excavations. The argument for these jars having lower height-to-width ratios is based on partial vessels.

<sup>6</sup> Both the PA and ECB tract assemblages were excluded from this study as the MNV for those assemblages was calculated in a manner that is not directly compatible with the current study.

<sup>7</sup> The Riverbank assemblage falls in the middle of this sequence as both the early Moundville I PA-Tract assemblage and the late Moundville I ECB-Tract assemblage were combined.

<sup>8</sup> Due to their more distinct paste compositions and/or surface treatments other Moundville servingware types are not as susceptible to issues of inter-analyst bias and differential preservation as Bell Plain variety Hale is.

<sup>9</sup> A number of the Mississippi Plain bowls and bottles are probably Bell Plain var. Hale vessels with eroded surfaces.

<sup>10</sup> The logic of this argument rests on the ethnographically documented practice of larger social groups using larger pots to cook and serve meals than smaller social groups.

## CHAPTER 8

#### CONCLUSIONS

Moundville was among the largest Mississippian polities, and thus it was clearly more complex than most other settlements in the late prehistoric Southeast. However, this observation raises the question, how complex was Moundville and in what ways was it complex? These are important issues as Moundville has become an off-cited example of how Mississippian polities were organized and compare to other so called "middle-range" societies around the world (Cobb 2003; Earle 1987; Price and Feinman 2001; Scarry and Fish 1999).

Knight (1998) argues that the paramount center of Moundville was designed as a sociogram. Based on a comparison with ethnographic case studies of Southeastern and Plains tribes, Knight contends that hierarchical relationships among clans were mapped onto the Moundville community through the structured arrangement of monumental architecture. The ranked position of each clan was represented in the size and arrangement of paired earthen mounds around a large, central plaza. Larger earthen mounds on the northern portion of the plaza are thought to have been associated with higher-ranking clans and smaller mounds to the south with lower-ranking clans (Figure 8.1). One of the central issues I have struggled with here is what kind of hierarchy was this? Did the ranking of clans at Moundville entail notable material differences between different social groups at the site? If so, what were these material inequalities and how did they correspond with the spatial

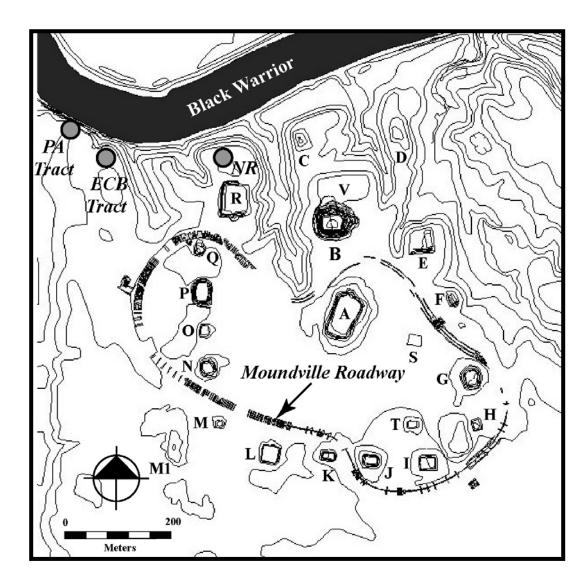


Figure 8.1. GIS image of the Moundville site featuring the Roadway, North of Mound R, and Riverbank excavations.

arrangement of ranked clans at the site?

Over the last 20 years scholars have made a strong case that Moundville was highly differentiated politically, socially, and economically (Peebles 1983, 1987a; Peebles and Kus 1977; Welch 1981; Welch and Scarry 1995). This perspective situates Moundville as the administrative node in a highly centralized regional political and economic network. The basis of elite power at Moundville hinged upon controlling the production of prestige goods used in a variety of social transactions and utilitarian items necessary for agricultural food production (Peebles and Kus 1977; Welch 1981, 1996). It has been argued that these centralized control strategies contributed to Moundville's long-term political stability (Welch 1996:91).

These studies contributed a great deal to our understanding of Moundville as a regional polity. Moreover, they injected into southeastern archaeology much-needed concepts about chiefly control and social inequality that helped overturn managerial explanations for the origins of ascribed political hierarchies (Peebles and Kus 1977). That being said, important aspects of these previous models of Moundville's political economy have not been supported by my research. For example, I have found few organizational differences between residential areas at the Moundville site that can be related to variability in status or wealth. There are a few possible exceptions to this pattern. I briefly summarize the evidence below.

Domestic architecture and pottery assemblages provided the data for this investigation. Based on my architectural analyses it appears that Early Mississippian households built domestic structures of similar sizes, shapes, and styles throughout the Moundville community. An expansion in structure floor areas from the early to late

Moundville I phase, however, does suggest an increasing variability in household sizes and statuses that should not be ignored. These larger households were few in number and widely distributed such that a comparison between any two residential groups would produce a similar distribution of structure sizes (Chapter 6).

My analysis of early Mississippian pottery assemblages at Moundville generated similar results. Assemblages from different residential groups consist of a similar range of vessel shapes, styles, and sizes. While there are minor intra-assemblage differences in the relative frequencies of serving bowls and bottles, these differences appear to be primarily chronological in nature. Specifically, those assemblages resulting from the mixing of early and late Moundville I middens produced lower relative serving-ware frequencies than assemblages from more discrete late Moundville I contexts. The Administration Building was an exception to this trend in that it possesses more bowls relative to other assemblages relative to its place in the ceramic seriation. However, overall there were important consistencies in the ways households stored, prepared, and consumed food throughout much of the early Moundville community (Chapter 7).

Generally, early Moundville appears to have been a community in which differences in status and wealth were downplayed in everyday life. A strong ethos of equality apparently structured the socioeconomic relationships among most residential groups during this era. I am not suggesting there were no socioeconomic differences at Moundville. The large-scale construction of earthen mounds around the perimeter of Moundville's central plaza is strong evidence that a political elite established itself during the late Moundville I phase (Knight and Steponaitis 1998). Knight's (1998) mound excavations and analyses have revealed that the elite used these monuments as temples, homes, and mortuaries during the Moundville II

and III phases (see also Markin 1994, 1997; Ryba 1995; Taft 1996). The use and occupation of these mounds during Moundville I is less understood due to a lack of excavations on mound living surfaces dating to this period. Nevertheless, it is reasonable to assume that during the late Moundville I phase, small elite groups occupied and used these monuments in ways that were analogous to their use in the late Mississippian period.

It is intriguing that most early Mississippian households at Moundville acted to level inequalities amongst one another while they simultaneously acted to promote the political interests of small elite groups. Answers to this conundrum likely relate to the number of ranked political groups comprising the Moundville community. When kin groups acted to increase the prestige of their leaders relative to other clan leaders they may have conceived of it as promoting their collective corporate interests. Given the data presented in this study, there appear to have been restricted contexts in which inequalities could be materially expressed at early Moundville—mound ceremonialism and mortuary ritual perhaps being the key examples (Knight 1998; Peebles and Kus 1977). Promoting strong leaders in life and death may have been the primary mechanism through which clans could elevate their corporate status in a social order where material expressions of inequality were downplayed on the level of the household or residential group. From this perspective, the basis of chiefly power at Moundville was the language of kinship and ritual. Indeed, considering the natural productivity of the Black Warrior Valley combined with its relatively low population density during the early Mississippian period, it would have been very difficult for the elite to have exerted any direct control over the economic means of production in the region.

Moundville's complexity was in some respects a product of the sheer number of different kin groups that linked themselves together to form this polity. Factional

competition among clans created a political arena in which inequities in status and wealth could be manifested in specific contexts and groups. Meanwhile, everyday practices and interactions among much of the populace structured and were structured by egalitarian processes and strong leveling mechanisms.

### **Community and Everyday Practices**

If this chapter were to end here this investigation would have contributed to a better understanding of Moundville's political economy during the early Mississippian period. It would have contributed very little, however, to an understanding of how Moundville's political and ceremonial order was embedded within and generated by the everyday practices of most of its populace. This is an important point as there are diverging explanatory trends in the contemporary archeology of political complexity. At one end of the scholarly continuum, there are those who would categorize polities based on the character of their leadership strategies with little regard for what the masses were doing. It is probably no surprise to the reader that I place myself on the opposite end of the continuum, which emphasizes the role of everyday domestic practices and small-scale domestic groups in shaping community- and polity-scale organization.

The site of Moundville was not always a sociogram just as it was not always the political capital of a large Mississippian polity. At some point changes in the everyday social practices and negotiations among early Mississippian households made it possible for an hereditary elite to emerge and for a complex, kin-based political and ceremonial hierarchy to be established. My goal in this investigation has been to document these everyday domestic practices and the social groups that performed them in order to better understand the

emergence of the Moundville polity. In the remainder of this chapter I summarize diachronic trends in Moundville's residential organization. Changes in the use of space by small-scale kin groups provide insight into how broader political and ceremonial relationships were negotiated at Moundville.

## Early Moundville I

There is much that we do not understand about the early Moundville I occupation of the Black Warrior Valley. The only two mounds in the region at this time were both located on the Moundville terrace, indicating that Moundville was already a place of emerging political and ceremonial importance (Knight and Steponaitis 1998; Steponaitis 1992). It is unclear how expansive the residential occupation was in the immediate vicinity of these two mounds. However, my analyses of the Roadway architecture and ceramic assemblages have demonstrated that the early Moundville I occupation of the Moundville site was more widespread than previously believed. There was a small early Moundville I occupation in nearly every area that later became a larger and more formally organized residential group during the late Moundville I phase.

This pattern suggests that households were not casually dispersed across the Moundville terrace but were already staking claims to specific portions of the landscape. By settling into certain areas of the Moundville terrace and carrying out the everyday tasks of building houses and planting small fields and gardens, these households were initiating a process of routinized domestic behaviors that served to define relationships among different kin groups and the physical landscape. This process ultimately culminated in the construction of the Moundville sociogram during the late Moundville I phase.

## Late Moundville I

Kin groups formally defined their corporate identities and connection to community space during the late Moundville I phase. The initiation of large-scale mound construction at this time indicates that Moundville community members had a vested interest in inscribing their clan-based social identities on the landscape. My analysis has revealed strong parallels to these community-level corporate-defining behaviors on the domestic level.

An abrupt expansion in residential group size took place during the late Moundville I phase as an estimated 10 to 20 structures were built in areas previously occupied by only a few households during the early Moundville I phase. Based on the analysis of associated midden deposits, it appears that these residential groups engaged in a wide variety of domestic activities such as woodworking, hide processing, pottery manufacture, flintknapping, food preparation, eating, and sleeping (Peebles and Kus 1977; Scarry 1995, 1998; Steponaitis 1983; Welch 1996; Wilson 2001). There are also clues to the kinds of ritual activities these kin groups organized and in which they participated. Residential group members built large public buildings that provided them the means of exerting some degree of ritual autonomy within Moundville's broader political and ceremonial order (Chapter 6). Moreover, fragments of decorated fineware pots, clay pipes, ground pigments, turtle-shell rattles, and small pottery gaming disks hint at a well-developed ceremonial life that took place within the spatial domain of these residential groups (Scarry 1995; Wilson 2001).

As residential groups increased in size, they adopted a more formalized organization of domestic space. Houses were arranged in ways that created shared work spaces, pathing routes, and ritual areas. They were also repeatedly rebuilt *in situ* to maintain particular domestic spatial schemes (Figure 8.2). These numerous *in situ* architectural rebuilding

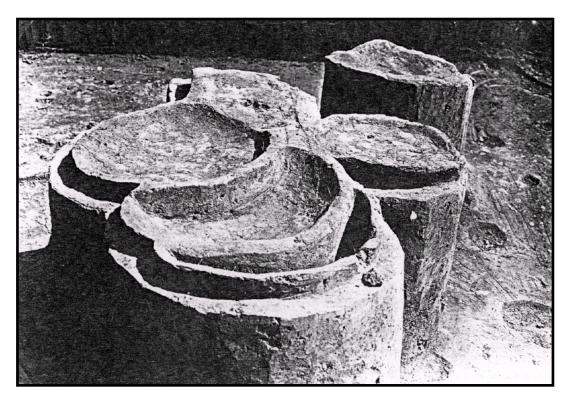


Figure 8.2. Close up of numerous superimposed hearths (Roadway block 43+95) associated with *in situ* rebuilt domestic structures in Residential group 8 (from Peebles 1979:Figure X-17).

events demonstrate the importance that kin groups placed on creating and maintaining connections with particular spaces in the Moundville community. Although Moundville's occupation during this period was nucleated there were sizable unoccupied areas between residential groups. But rather than spread out or relocate when houses required repair or replacement, households opted to rebuild in place, reproducing particular architectural arrangements in particular places.

These well-maintained architectural arrangements would have structured the ways residential group members routinely used and moved through space and interacted with one another. The habitual performance of everyday routines in specific spatial contexts has been argued as a mechanism by which people internalize social norms and other information about their positions in society (Bourdieu 1977, 1984). Meanings, identities, and rules for social action become embodied in everyday practices as well as the artifacts, architecture, and physical locations that structure how and where they are carried out (Hodder and Cessford 2004; Joyce and Gillespie 2000). By carefully creating and maintaining particular architectural spatial arrangements, residential groups were actively producing their space and place in the Moundville sociogram and the network of relationships it referenced.

It is noteworthy that recent settlement patterns studies in the Black Warrior Valley have documented the presence of dispersed clusters of Mississippian farmsteads that may represent the rural equivalents of nucleated residential groups at the Moundville site (Hammerstedt 2000; Maxham 2005; Myer 2002). Maxham's (2000, 2005) research at the Grady Bobo site (1TU66) indicates that these rural farming communities included sites used for community gatherings in which a variety of ceremonial activities took place. Additional research is needed to refine our understanding of Moundville's rural settlement organization. Nevertheless, a pattern of multihousehold residential groups appears to have characterized both rural and centralized settlements in the Mississippian Black Warrior Valley.

#### Moundville II-III

Sometime around AD 1260 most residential groups vacated the Moundville site and settled into dispersed farming villages in the rural countryside of the Black Warrior Valley (Knight and Steponaitis 1998; Maxham 2005; Steponaitis 1998). The motivation for this outmigration is not well understood. Knight and Steponaitis (1998:18) have raised the possibility that this settlement shift was part of an elite aggrandizing strategy to create social

and physical distance between themselves and the nonelite. Moundville's remaining population is thought to have consisted of small groups of elite and ritual specialists. This outmigration marked a new era in the way community space and social relationships were defined at Moundville. Rurally relocated kin groups converted their former residential areas at Moundville into small corporate cemeteries. Most Moundville II and III burials were interred in small rectilinear clusters that superimpose the wall foundations of earlier domestic structures (Figure 8.3). Very few burials in the Moundville Roadway and Riverbank are located outside of these former residential spaces. By burying their dead in traditional kin spaces, the rural inhabitants of the Black Warrior Valley continued to assert their place in the Moundville sociogram and the network of relationships it referenced. Indeed, there are few more overt ways that groups can naturalize their connection to a place than by burying their

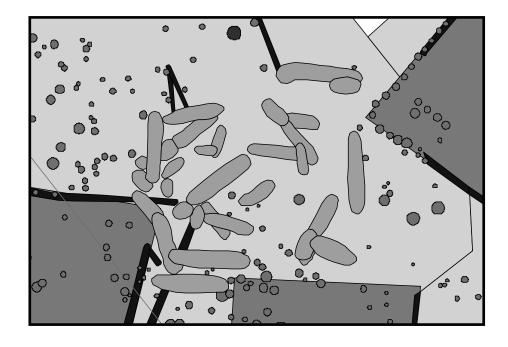


Figure 8.3. Small cemetery in Residential group 9 dating to Moundville II-III.

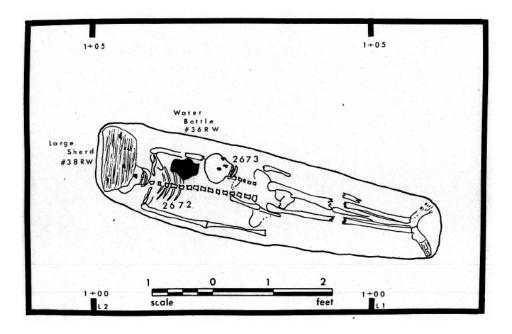


Figure 8.4. Extended burials located in Residential group 1 (from Peebles 1979:Figure X-31).

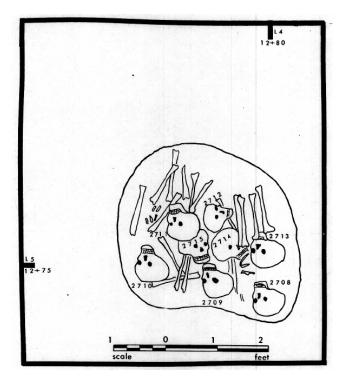


Figure 8.5. Bundle Burials in Residential group 2 (from Peebles 1979:Figure X-34).

ancestors there (Charles and Buikstra 1983).

There is some evidence for elaborate mortuary rituals involving these kin group cemeteries. Although the dead were often interred in extended positions (Figure 8.4), there are numerous examples of secondary burials such as disarticulated bundles (Figure 8.5) and even individual cranium interments (Peebles 1979). As recently discussed by Hutchinson and Aragon (2002), these variable mortuary treatments likely represent different "snap shots" in a complex, multistage mortuary sequence in which the living exerted claims about theircorporate identity and status (see also Kuijt 2000). Indeed, the variety of different mortuary treatments present in any one of these kin group cemeteries indicates that the dead were often subject to different ritual steps of inhumation, exhumation, and reburial. In this way these cemeteries served as a kind of social resource in which kin groups could promote their corporate status through the ritualized manipulation and processing of ancestral skeletal materials.

## Conclusion

I have offered a history of Moundville's early Mississippian occupation by examining the daily practices of a broad cross section of the community's populace. I began by documenting and describing different residential groups at Moundville and the kinds of routine activities that comprised everyday domestic life. I found that early Moundville was occupied by numerous small-scale social groups. These groups organized themselves in ways that are comparable to descriptions of matrilineages from the early historic southeastern U.S. (Hudson 1976; Knight 1990). All evidence indicates these residential groups were at

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once social, economic, and ritual units that consisted of multiple households occupying different domestic structures.

The organizational changes in Moundville's residential occupation highlight the different ways in which kin groups defined and redefined their corporate status and identities over the long term. During their initial, sparse settlement of the Moundville terrace in the early Moundville I phase, households began to establish strong ties to particular parts of the physical landscape and to one another. The abrupt and large-scale transformation of this landscape during the late Moundville I phase is a chronicle of the intensified corporate building and corporate defining activities carried out by these groups. Because Moundville was organized as a sociogram, the physical spaces occupied by different groups coincided with their positions in the broader network of social relationships. This was a generative process. Neither the Moundville sociogram nor the regional political hierarchy existed outside of the various competitive and corporate activities in which these early Mississippian kin groups engaged.

This explanation highlights the role of small social groups in the emergence of social and political complexity during the early Mississippian Black Warrior valley of west-central Alabama. Rather than ask how aspiring elites imposed a ranked hierarchy on Moundville society, I have considered how changes in the everyday practices and relationships among small social groups made it possible for an elite to emerge. I conclude that Mississippian organizational complexity in the Black Warrior Valley was the outcome of the social negotiations among corporate kin groups and their connections to and modification of the physical landscape.

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## APPENDIX A.

## DATA TABLES

Appendix A presents the data for this study. Tables A.1 to A.21 provide data on rim sherds by vessel type from different Moundville Roadway assemblages. Table A.22 provides counts and frequencies for body sherds by type and variety for each Moundville Roadway assemblage. Finally, Table A.23 provides metric and descriptive data for the architectural features in this study.

Catalog#	Block	Basic Shape	Fold	Flat	Tvpe/Varietv	Orifice	%	Wt(g)	Paste
4070 1 171	46100 46160	- I I	510 1	-			¢ c	10121	UTI C
A959.1.151	45+00+45	Jar	х		Bell Plain - Hale	77	× ;	01.61	HS
A939.1.134	45+50-46+00	Jar	x	x	Bell Plain - Hale	16	10	8.70	SH
A939.1.135	45+50-46+00	Jar	Х		Bell Plain - Hale	18	18	52.70	$\mathbf{SH}$
A939.1.243	44+80	Jar	х		Bell Plain - Hale	38	S	54.35	HS
A939.1.131	45+00-45+50	Jar			Bell Plain - Hale	9	15	3.50	SH
A939.1.132	45+00-45+50	Jar			Bell Plain - Hale	22	10	12.90	HS
A9391191	45+50-46+00	lar			Bell Plain - Hale	×	6	05.6	SH/GG
A0301136	00+91-02+21	Iar			Bell Diain - Hale	2.4		36.30	CH S
A0201.720	00-04-00-04	Jai Tor			Dout I tam - Haio Doll Disin Unlo	5	-	0000	55/HS
A939.1.224	44TUU-44TUU	Jai						1.10	
A941.1.1142	44+95	Jar			Bell Plain - Hale			56.01	SH
A941.1.546	44+50-45+00	Jar			Carthage Incised - Summerville			22.41	HS
a941.1.546	44+50-45+00	Jar			Carthage Incised - Summerville			12.76	SH
A939.1.246	45+50-46+00	Jar	х		Carthage Incised - Unspecified	30	12	50.02	SH
A939.1.24	45+00-45+50	Jar			Evansville Punctated	17	14		Grog
A941.1.802	44+45	Jar	×		Moundville Incised - Carrollton	38	12	98.95	SH
A941 1 802	44+45	Iar			Moundville Incised - Carrollton	3.5	: =	106.03	HS
A 941 1 802	44+45	Iar			Moundville Incised - Carrollton	08	14	166.21	HS
A041 1 807	2444	Jai Tor	< >		Moundville Incised Concellion	200	L A	84.40	SH
A941.1.002	01++++0	Jai	v			, , ,	o ț	04.40	
CU8.1.146A	00+44	Jar	x		Moundville Incised - Carrollton	30	1/	1/9.03	HS
A941.1.809	44+50-45+00	Jar	х		Moundville Incised - Carrollton	36	12	127.51	$\mathbf{SH}$
A941.1.800	44+40	Jar	х		Moundville Incised - Carrollton	30	10	107.84	HS
A941.1.1128	44+40	Jar	х		Moundville Incised - Carrollton	26	8	49.00	$\mathbf{SH}$
A939.1.79	45+50-46+00	Jar			Moundville Incised - Carrollton	20	18	22.79	HS
A941.1.805	44+50	Jar			Moundville Incised - Carrollton	34	12	86.56	SH
A941.1.805	44+50	Jar			Moundville Incised - Carrollton	30	10	83.03	HS
A941.1.801	44+40	Jar			Moundville Incised - Carrollton	30	6	68.91	SH
A939.1.182	44+00-44+50	Jar	x		Moundville Incised - Moundville			21.90	SH
A939.1.182	44+00-44+50	Jar	х		Moundville Incised - Moundville	14	20	26.80	HS
A939.1.182	44+00-44+50	Jar	x		Moundville Incised - Moundville	40	9	37.2	HS
A941.1.899	44+00-44+50	Jar	x	x	Moundville Incised - Moundville			7.05	HS
A941.1.899	44+00-44+50	Jar	×	×	Moundville Incised - Moundville			12.53	HS
A941.1.899	44+00-44+50	Jar	x		Moundville Incised - Moundville			38.50	SH
A941.1.899	44+00-44+50	Jar	x		Moundville Incised - Moundville	28	10	38.55	SH
A941.1.899	44+00-44+50	Jar	х		Moundville Incised - Moundville	40	12	95.77	SH
A941.1.899	44+00-44+50	Jar	x		Moundville Incised - Moundville	52	16	117.51	SH
A941.1.903	44+40	Jar	х	х	Moundville Incised - Moundville	30	7	13.29	SH
A941.1.903	44+40	Jar	x	x	Moundville Incised - Moundville	32	11	76.23	HS
A941.1.903	44+40	Jar	х	x	Moundville Incised - Moundville			7.47	SH
A941.1.903	44+40	Jar	Х	х	Moundville Incised - Moundville	34	11	137.73	HS
A939.1.181	44+45	Jar	х	х	Moundville Incised - Moundville	24	7	29.60	SH
A941.1.802	44+45	Jar	х		Moundville Incised - Moundville	30	6	73.05	SH
A941.1.802	44+45	Jar	х		Moundville Incised - Moundville	22	11	23.97	HS
A941.1.802	44+45	Jar	х		Moundville Incised - Moundville	35	10	79.81	HS
A941.1.802	44+45	Jar	×		Moundville Incised - Moundville	36	6	88.52	HS
A941.1.805	44+50	Jar	x		Moundville Incised - Moundville	28	11	129.08	HS

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Jars	
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A939.1.183	44+50-45+00	Jar	x		Moundville Incised - Moundville	28	19	43.60	SH
A939.1.183	44+50-45+00	Jar	х		Moundville Incised – Moundville	18	10		HS
A939.1.183	44+50-45+00	Jar	х		Moundville Incised – Moundville	32	13	63.50	HS
A939.1.183	44+50-45+00	Jar	х	x	Moundville Incised – Moundville	24	8	17.00	HS
A941.1.809	44+50-45+50	Jar	х		Moundville Incised – Moundville			23.27	HS
A939.1.190	44+50-46+00	Jar	х		Moundville Incised – Moundville	20	11	19.10	HS
A939.1.184	44+75	Jar	х	x	Moundville Incised – Moundville	20	6	24.50	HS
A941.1.855	44+85	Jar	×		Moundville Incised – Moundville	24	13	85.43	HS
A939.1.188	45+00-45+50	Jar	x	x	Moundville Incised – Moundville	20	12	29.70	HS
A939.1.188	45+00-45+50	Jar	×		Moundville Incised – Moundville			26.50	HS
A939.1.188	45+00-45+50	Jar	x	x	Moundville Incised – Moundville	28	4	15.20	HS
A939.1.188	45+00-45+50	Jar	×		Moundville Incised – Moundville	28	20	98.80	HS
A939.1.191	45+50-46+00	Jar	х		Moundville Incised – Moundville	22	16	96.90	ΗS
A941.1.898	44+00	Jar	x	x	Moundville Incised – Moundville			62.52	ΗS
A941.1.796	44+00-44+50	Jar	х		Moundville Incised – Moundville			14.86	ΗS
A941.1.796	44+00-44+50	Jar	x		Moundville Incised – Moundville	28	7	19.35	ΗS
A941.1.796	44+00-44+50	Jar	х		Moundville Incised – Moundville	30	9	59.31	SH
A941.1.842	44+00-44+50	Jar	x	x	Moundville Incised – Moundville			37.02	ΗS
A941.1.842	44+00-44+50	Jar	х	x	Moundville Incised – Moundville			9.77	HS
A941.1.843	44+00-44+70	Jar	x		Moundville Incised – Moundville	32	8	39.32	HS
A941.1.756	44+10	Jar	х		Moundville Incised – Moundville			5.60	ΗS
A939.1.249	44+10-44+50	Jar	x		Moundville Incised – Moundville			7.56	HS
A941.1.900	44+20	Jar	х		Moundville Incised – Moundville	10	12	23.55	HS
A941.1.900	44+20	Jar	х		Moundville Incised – Moundville			38.21	SH
	44+25	Jar	х		1			20.00	SH
	44+25	Jar	х		Moundville Incised – Moundville	24	7	32.70	SH
A941.1.901	44+25-44+50	Jar	x		Moundville Incised – Moundville			27.31	SH
A941.1.901	44+25-44+50	Jar	х	х	Moundville Incised – Moundville			23.65	SH
A941.1.901	44+25-44+50	Jar	×		Moundville Incised – Moundville	16	18	45.89	HS
A941.1.902	44 + 30	Jar	х		Moundville Incised – Moundville	24	7	22.65	SH
A941.1.902	44+30	Jar	x		Moundville Incised – Moundville	28	5	31.64	SH
A941.1.902	44+30	Jar	х		Moundville Incised – Moundville			29.29	SH
A941.1.847	44+36	Jar	x		Moundville Incised – Moundville			22.59	SH
A941.1.847	44+36	Jar	х		Moundville Incised – Moundville	34	22	170.8	ΗS
A941.1.800	44+40	Jar	×		Moundville Incised – Moundville	40	10	63.97	HS
A941.1.801	44+40	Jar	х		Moundville Incised – Moundville	15	28	56.12	SH
A941.1.848	44+40	Jar	x		Moundville Incised – Moundville	36	×	38.46	ΗS
A941.1.801	44+40	Jar	х		Moundville Incised – Moundville	30	12	110.22	SH
A941.1.804	44+50	Jar	x		Moundville Incised – Moundville	28	15	95.73	HS
A941.1.804	44+50	Jar	х		Moundville Incised – Moundville			163.15	SH
A941.1.806	44+50-45+00	Jar	х		Moundville Incised – Moundville	26	8	19.39	HS
A941.1.806	44+50-45+00	Jar	х		Moundville Incised – Moundville			11.19	SH
A941.1.806	44+50-45+00	Jar	х		Moundville Incised – Moundville			10.16	HS
A941.1.806	44+50-45+00	Jar	×		Moundville Incised – Moundville	36	11	58.21	HS
A941.1.806	14±50 15±00	Tau	ł						
211111C	00-0-1-00-+++	Jar	X		Moundville Incised – Moundville	12	19	11.78	SH

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.806	44+50-45+00	Jar	x	x	Moundville Incised – Moundville			21.89	SH
A941.1.806	44+50-45+00	Jar	х		Moundville Incised – Moundville			25.84	SH
A941.1.806	44+50-45+00	Jar	х		Moundville Incised - Moundville	26	10	45.44	SH
A941.1.1136	44+50-45+00	Jar	х		Moundville Incised - Moundville			15.00	SH
A941.1.808	44+50-45+00	Jar	х		Moundville Incised - Moundville	18	14	24.47	SH
A941.1.808	44+50-45+00	Jar	х		Moundville Incised - Moundville	28	7	17.84	HS
A941.1.808	44+50-45+00	Jar	х		Moundville Incised - Moundville			20.34	HS
A941.1.808	44+50-45+00	Jar	x		Moundville Incised - Moundville			15.72	HS
A941.1.808	44+50-45+00	Jar	х		Moundville Incised - Moundville	29	4	11.54	HS
A941.1.808	44+50-45+00	Jar	x		Moundville Incised - Moundville	30	4	12.50	SH
A941.1.808	44+50-45+00	Jar	х	х	Moundville Incised - Moundville			49.99	HS
A941.1.897	44+50-45+00	Jar	x		Moundville Incised - Moundville	4	9	70.82	HS
A941.1.806	44+50-45+00	Jar	х		Moundville Incised - Moundville			16.99	HS
A941.1.851	44+55	Jar	x		Moundville Incised - Moundville	29	11	73.59	SH/GG
A941.1.810	44+60	Jar	х	x	Moundville Incised - Moundville	13	13	29.59	HS
A941.1.853	44+70	Jar	x		Moundville Incised - Moundville	22	8	19.52	SH
A941.1.853	44+70	Jar	x		Moundville Incised - Moundville	32	9	51.55	HS
A941.1.853	44+70	Jar	x		Moundville Incised - Moundville	34	6	132.4	HS
A941.1.812	44+90	Jar	х		Moundville Incised - Moundville			24.95	HS
A941.1.813	44+95	Jar	х		Moundville Incised - Moundville			22.61	HS
A939.1.188	45+00-45+50	Jar	х	x	Moundville Incised - Moundville			5.10	HS
A941.1.857	45+00-45+50	Jar	x		Moundville Incised - Moundville			23.56	HS
A941.1.857	45+00-45+50	Jar	х		Moundville Incised - Moundville	26	32	364	ΗS
A941.1.846	44+25	Jar	х		Moundville Incised - Moundville	23	8	18.03	SH
A941.1.1192	44+25	Jar	х		Moundville Incised - Moundville			28.34	ΗS
A941.1.1127	44+40	Jar	х		Moundville Incised - Moundville			21.76	SH
A939.1.186	45+00-45+50	Jar	x		Moundville Incised - Moundville	24	10	25.2	ΗS
A939.1.186	45+00-45+50	Jar	х	x	Moundville Incised - Moundville			61.4	HS
A939.1.245	45+00-45+50	Jar	x	x	Moundville Incised - Moundville			29.98	HS
A941.1.710	45+50	Jar	Х		Moundville Incised - Moundville			18.34	HS
A941.1.710	45+50	Jar	x		Moundville Incised - Moundville	34	6	49.59	ΗS
A941.1.710	45+50	Jar	х		Moundville Incised - Moundville	34	6	49.59	ΗS
A939.1.189	45+50-46+00	Jar	x		Moundville Incised - Moundville	28	16	101.31	ΗS
A939.1.189	45+50-46+00	Jar	х		Moundville Incised - Moundville	34	34	343.84	ΗS
A941.1.806	44+50-45+00	Jar	x	×	Moundville Incised - Moundville			7.96	ΗS
A941.1.842	44+00-44+50	Jar			Moundville Incised - Moundville	24	6	66.69	SH
A941.1.902	44+30	Jar			Moundville Incised - Moundville			8.24	ΗS
A941.1.1128	44+40	Jar			Moundville Incised - Moundville	34	7	61.70	HS
A941.1.805	44+50	Jar	x		Moundville Incised - Oliver			30.86	HS
A941.1.799	44+35-44+50	Jar	х	×	Moundville Incised - Oliver	22	10	65.54	ΗS
A939.1.187	45+00-45+50	Jar	х	x	Moundville Incised - Oliver	20	25		SH
A939.1.187	45+00-45+50	Jar	х	x	Moundville Incised - Oliver	26	8	25.10	HS
A939.1.246	45+50-46+00	Jar	х		Moundville Incised - Oliver	28	13	50.10	SH
A939.1.188	45+00-45+50	Jar			Moundville Incised - Oliver	20	12	82.80	SH
A941.1.853	44+70	Iar			Manuduille Incined Oliver				
		J41			INTOMINATING HIGHER - OILVEL	17	12	67.30	HS

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice		% Wt(g)	) Paste
A939.1.186	45+0-45+50	Jar			Moundville Incised - Oliver	-	19	9 32.80	HS (
A939.1.188	45+00-45+50	Jar	х		Moundville Incised - Snows Bend			28.60	
A939.1.188	45+00-45+50	Jar	х		Moundville Incised - Unspecified	7	8	5	ΗS
A941.1.843	44+00-44+70	Jar	х	x	Moundville Incised – Unspecified			10.38	S SH
A941.1.844	44+05	Jar	х		Moundville Incised – Unspecified			21.61	I SH
A941.1.1261	44+20	Jar	х	x	Moundville Incised – Unspecified	48+	+	22.47	Z SH
A941.1.900	44+20	Jar	х	х	Moundville Incised – Unspecified			14.96	S SH
A941.1.804	44+50	Jar	x		Moundville Incised – Unspecified			44.06	
A941.1.1136	44+50-45+00	Jar	х		Moundville Incised – Unspecified			7.55	SH SH
A941.1.807	44+50-45+00	Jar	x	x	Moundville Incised – Unspecified			23.47	7 SH
A941.1.854	44+75	Jar	х	х	Moundville Incised – Unspecified			17.94	4 SH/GG
A941.1.896	43+50	Jar	x		Moundville Incised – Unspecified			32.61	I SH
A941.1.1123	44+00-44+50	Jar	х		Moundville Incised – Unspecified			14.61	I SH
A941.1.1129	44+45	Jar	х		Moundville Incised – Unspecified			19.43	3 SH
A939.1.186	45+00-45+50	Jar	х		Moundville Incised – Unspecified			13.93	3 SH
A941.1.1194	44+40	Jar	х		Moundville Incised – Unspecified	ŝ	32	6 17.91	I SH
A939.1.185	44+80	Jar			Moundville Incised – Unspecified	>30	0	12.10	HS (
A941.1.842	44+00-44+50	Jar			Moundville Incised – Unspecified	-	14 1	3 13.78	S SH
A939.1.186	45+00-45+50	Jar			Moundville Incised – Unspecified	5	20	8 39.06	5 SH
A941.1.844	44+05	Jar			Moundville Incised – Unspecified	1	16 1	2 35.10	HS (
A939.1.239	4+00-44+50	Jar	х		Mississippi Plain - Warrior	1	18	8 5.10	HS (
A941.1.1127	44+00	Jar	х		Mississippi Plain - Warrior			96.6	S SH
A941.1.1127	44+00	Jar	х		Mississippi Plain - Warrior			26.42	2 SH
A941.1.1127	44+00	Jar	х	х	Mississippi Plain - Warrior			20.95	S SH
A941.1.1127	44+00	Jar	х	x	Mississippi Plain - Warrior			12.43	3 SH
A941.1.1127	44+00	Jar	х		Mississippi Plain - Warrior			51.53	
A941.1.1189	44+00	Jar	x		Mississippi Plain - Warrior	4	46	6 54.81	
A941.1.1189	44+00	Jar	х		Mississippi Plain - Warrior			12.78	
A941.1.259	44+00	Jar	x		Mississippi Plain - Warrior	7	28	6 15.59	
A941.1.259	44+00	Jar	х		Mississippi Plain - Warrior			10.07	
A941.1.259	44+00	Jar	x					26.33	
A941.1.259	44+00	Jar	х		Mississippi Plain - Warrior			32.89	
A941.1.1259	44+00	Jar	x		Mississippi Plain - Warrior			8.52	
A941.1.1259	44+00	Jar	х	x	Mississippi Plain - Warrior			5.04	
A941.1.259	44+00	Jar	x		Mississippi Plain - Warrior			10.28	
A941.1.1189	44+00	Jar	х		Mississippi Plain - Warrior			23.40	
A939.1.239	44+00-44+50	Jar	x	x		ŝ	38		
A939.1.239	44+00-44+50	Jar	х		Mississippi Plain - Warrior	ŝ	0	5 35.50	
A939.1.239	44+00-44+50	Jar	х	x	Mississippi Plain - Warrior	2	4		
A941.1.1123	44+00-44+50	Jar	х	x	Mississippi Plain - Warrior			33.31	
A941.1.1123	44+00-44+50	Jar	х		Mississippi Plain - Warrior			11.3	
A941.1.1123	44+00-44+50	Jar	х		Mississippi Plain - Warrior			18.51	
A941.1.1123	44+00-44+50	Jar	х	x	Mississippi Plain - Warrior			12.88	
A941.1.1123	44+00-44+50	Jar	x	x	Mississippi Plain - Warrior			5.83	
A941.1.1123	44+00-44+50	To .	;						
		Jai	x		Mississippi Plain - Warrior	0	28	6 54.06	SH SH

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1188	44+00-44+50	Jar	x	x	Mississippi Plain - Warrior			15.61	HS
A941.1.1188	44+00-44+50	Jar	х		Mississippi Plain - Warrior			8.01	HS
A941.1.1188	44+00-44+50	Jar	x		Mississippi Plain - Warrior			13.59	HS
A941.1.197	44+00-44+50	Jar	x		Mississippi Plain - Warrior			31.20	ΗS
A941.1.1260	44+00-44+50	Jar	x		Mississippi Plain - Warrior			13.25	HS
A941.1.1260	44+00-44+50	Jar	х		Mississippi Plain - Warrior	22	1		SH
A941.1.1260	44+00-44+50	Jar	х		Mississippi Plain - Warrior	22			HS
A941.1.1260	44+00-44+50	Jar	x		Mississippi Plain - Warrior	24		8 56.87	SH
A941.1.1190	44+05	Jar	х	x	Mississippi Plain - Warrior			11.37	HS
A941.1.1190	44+05	Jar	x	x	Mississippi Plain - Warrior			11.22	SH
A941.1.1190	44+05	Jar	х	x	Mississippi Plain - Warrior	32	10		SH
A941.1.1190	44+05	Jar	×	×	Mississippi Plain - Warrior			53.74	HS
A941.1.1190	44+05	Jar	x		Mississippi Plain - Warrior			9.27	HS
A941.1.1190	44+05	Jar	x		Mississippi Plain - Warrior			30.60	ΗS
A941.1.1190	44+05	Jar	х	x	Mississippi Plain - Warrior	36		8 231.00	SH
A939.1.249	44+10-44+50	Jar	x	x	Mississippi Plain - Warrior			9.89	ΗS
A941.1.1124	44+25	Jar	х	х	Mississippi Plain - Warrior			18.93	SH
A941.1.1124	44+25	Jar	x		Mississippi Plain - Warrior			15.09	SH
A941.1.1124	44+25	Jar	х	х	Mississippi Plain - Warrior			11.64	SH
A941.1.1124	44+25	Jar	х		Mississippi Plain - Warrior	30		7 41.82	HS
A941.1.1192	44+25	Jar	х		Mississippi Plain - Warrior			14.67	SH
A941.1.1192	44+25	Jar	x		Mississippi Plain - Warrior			10.31	HS
A941.1.1192	44+25	Jar	x		Mississippi Plain - Warrior			12.21	SH
A941.1.1192	44+25	Jar	x		Mississippi Plain - Warrior			14.75	HS
A941.1.1192	44+25	Jar	х		Mississippi Plain - Warrior			18.00	SH
A941.1.1192	44+25	Jar	х	х	Mississippi Plain - Warrior			25.54	SH
A941.1.1192	44+25	Jar	x		Mississippi Plain - Warrior			34.02	SH
A941.1.1262	44+25-44+50	Jar	x			20		7 27.78	ΗS
A941.1.1125	44+30	Jar	x		Mississippi Plain - Warrior			13.85	SH
A941.1.1263	44+30	Jar	х		Mississippi Plain - Warrior			16.00	SH
A941.1.1263	44+30	Jar	x		Mississippi Plain - Warrior			6.10	SH
A941.1.1263	44+30	Jar	x		Mississippi Plain - Warrior			20.60	$\mathbf{SH}$
A941.1.1263	44+30	Jar	×		Mississippi Plain - Warrior			15.40	ΗS
A941.1.1263	44+30	Jar	х		Mississippi Plain - Warrior			19.10	SH
A941.1.1127	44+40	Jar	x	×	Mississippi Plain - Warrior	22	14	.,	SH
A941.1.1127	44 + 40	Jar	х		Mississippi Plain - Warrior			14.64	SH
A941.1.1127	44 + 40	Jar	x		Mississippi Plain - Warrior			42.46	ΗS
A941.1.1127	44+40	Jar	x	x	Mississippi Plain - Warrior			11.55	$\mathbf{SH}$
A941.1.1127	44 + 40	Jar	х		Mississippi Plain - Warrior	36		5 25.90	HS
A941.1.1127	44+40	Jar	х		Mississippi Plain - Warrior			13.66	SH
A941.1.1127	44+40	Jar	х		Mississippi Plain - Warrior			63.50	SH
A941.1.1127	44+40	Jar	x		Mississippi Plain - Warrior	38		7 39.60	SH
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior			15.42	SH
A941.1.1128	44+40	Jar	×		Mississippi Plain - Warrior			6.73	HS
A941.1.1128	44+40	Jar	х		Mississippi Plain - Warrior			15 92	HS
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior			21.11	SH
A941.1.1128	44+40	Jar	x	x	Mississippi Plain - Warrior	48	5	100.94	$\mathbf{SH}$
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior	28	7	44.88	HS
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior			66.02	SH
A941.1.1128	44+40	Jar	х	x	Mississippi Plain - Warrior	42	5	82.06	HS
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior	48	9	53.68	HS
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior			20.74	HS
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior	28	11	73.64	HS
A941.1.1128	44+40	Jar	х		Mississippi Plain - Warrior	46	7	77.28	ΗS
A941.1.1128	44+40	Jar	x		Mississippi Plain - Warrior	12	34	68.76	ΗS
A941.1.1194	44+40	Jar	х		Mississippi Plain - Warrior			6.63	ΗS
A941.1.1194	44+40	Jar	x		Mississippi Plain - Warrior	28	5	38.70	HS
A941.1.1194	44+40	Jar	х		Mississippi Plain - Warrior			8.99	HS
A941.1.1194	44+40	Jar	x	x	Mississippi Plain - Warrior			9.52	ΗS
A941.1.1264	44+40	Jar	Х		Mississippi Plain - Warrior			33.75	HS
A941.1.1264	44+40	Jar	х	x	Mississippi Plain - Warrior	16	6	9.69	HS
A941.1.1264	44+40	Jar	х		Mississippi Plain - Warrior			64.91	HS
A941.1.1264	44+40	Jar	х		Mississippi Plain - Warrior			23.12	HS
A941.1.1264	44+40	Jar	Х	x	Mississippi Plain - Warrior			71.65	ΗS
A941.1.1127	44+40	Jar	x		Mississippi Plain - Warrior	16	15	45.91	HS
A939.1.238	44+45	Jar	Х	x	Mississippi Plain - Warrior	30	5	20.50	ΗS
A941.1.1129	44+45	Jar	x	x	Mississippi Plain - Warrior			13.91	HS
A941.1.540	44+45	Jar	Х	x	Mississippi Plain - Warrior	24	٢	12.00	HS
A941.1.1129	44+45	Jar	x		Mississippi Plain - Warrior			15.43	HS
A941.1.1129	44+45	Jar	x		Mississippi Plain - Warrior			14.73	ΗS
A941.1.1195	44+45	Jar	х		Mississippi Plain - Warrior			21.14	ΗS
A941.1.1130	44+50	Jar	x		Mississippi Plain - Warrior			14.20	HS
A941.1.1130	44+50	Jar	х		Mississippi Plain - Warrior			16.10	HS
A941.1.1130	44+50	Jar	x		Mississippi Plain - Warrior			14.50	HS
A941.1.1131	44+50	Jar	х		Mississippi Plain - Warrior	40	12	79.17	ΗS
A941.1.1131	44+50	Jar	x		Mississippi Plain - Warrior	28	12	52.27	HS
A941.1.1131	44+50	Jar	x		Mississippi Plain - Warrior			121.16	HS
A941.1.1131	44+50	Jar	x	×	Mississippi Plain - Warrior	24	11	45.56	HS
A941.1.1130	44+50	Jar	х	x	Mississippi Plain - Warrior	29	2	50.21	ΗS
A941.1.1131	44+50	Jar	х		Mississippi Plain - Warrior			15.55	HS
A941.1.1131	44+50	Jar	x		Mississippi Plain - Warrior			24.20	HS
A941.1.1131	44+50	Jar	x	×	Mississippi Plain - Warrior	38	9	26.17	HS
A941.1.1131	44+50	Jar	x		Mississippi Plain - Warrior			25.82	HS
A941.1.1132	44+50	Jar	X		Mississippi Plain - Warrior			33.83	ΗS
A941.1.1132	44+50	Jar	x		Mississippi Plain - Warrior			21.55	HS
A941.1.1132	44+50	Jar	x		Mississippi Plain - Warrior			11.87	HS
A941.1.1132	44+50	Jar	x		Mississippi Plain - Warrior			24.12	HS
A941.1.1132	44+50	Jar	х		Mississippi Plain - Warrior			9.77	ΗS
A941.1.1132	44+50	Jar	x		Mississippi Plain - Warrior			13.44	HS
A 941 1 1137	02.11	,							
7741.1.104	0C+44	Jar	x		Mississippi Plain - Warrior	28	6	47.51	HS

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Catalog#		Block Basic Shape Fold Flat Type/Varie	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1132	44+50	Jar	x		Mississippi Plain - Warrior			26.03	ΗS
A941.1.1132	44+50	Jar	х		Mississippi Plain - Warrior	30	26	229.58	$\mathbf{SH}$
A941.1.1132	44+50	Jar	x		Mississippi Plain - Warrior			31.29	ΗS
A939.1.240	44+50-45+00	Jar	x		Mississippi Plain - Warrior	28	9	27.15	SH
A939.1.240	44+50-45+00	Jar	х		Mississippi Plain - Warrior			18.89	SH
A939.1.240	44+50-45+00	Jar	х		Mississippi Plain - Warrior			10.57	ΗS
A939.1.240	44+50-45+00	Jar	х		Mississippi Plain - Warrior			23.74	HS
A939.1.240	44+50-45+00	Jar	x		Mississippi Plain - Warrior	30	8	36.45	SH
A939.1.240	44+50-45+00	Jar	x	x	Mississippi Plain - Warrior			17.53	ΗS
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior			13.80	SH
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior			12.06	HS
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior	29	7	25.82	HS
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior	22	10	19.07	HS
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior			27.30	HS
A941.1.1133	44+50-45+00	Jar	х		Mississippi Plain - Warrior	26	9	9.13	SH
A941.1.544	44+50-45+00	Jar	x		Mississippi Plain - Warrior			52.21	ΗS
A941.1.1133	44+50-45+00	Jar	Х		Mississippi Plain - Warrior			31.96	HS
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior			12.82	SH
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior			7.17	HS
A941.1.806	44+50-45+00	Jar	x		Mississippi Plain - Warrior	30	٢	23.46	HS
A941.1.1133	44+50-45+00	Jar	х		Mississippi Plain - Warrior	26	8	17.16	HS
A941.1.1133	44+50-45+00	Jar	х		Mississippi Plain - Warrior			94.04	ΗS
A941.1.1134	44+50-45+00	Jar	х		Mississippi Plain - Warrior			12.67	HS
A941.1.1134	44+50-45+00	Jar	х	х	Mississippi Plain - Warrior	18	7	4.86	SH
A941.1.1136	44+50-45+00	Jar	х		Mississippi Plain - Warrior			9.09	SH
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior			9.74	HS
A941.1.546	44+50-45+00	Jar	x		Mississippi Plain - Warrior			10.00	ΗS
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior	26	6	19.55	ΗS
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior			16.34	SH
A941.1.1136	44+50-45+00	Jar	х		Mississippi Plain - Warrior	44	Ś	43.83	HS
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior	32	S	18.85	SH
A941.1.1136	44+50-45+00	Jar	х		Mississippi Plain - Warrior			11.89	SH
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior	32	9	33.90	SH
A941.1.808	44+50-45+00	Jar	х		Mississippi Plain - Warrior			13.26	SH
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior	28	9	10.58	ΗS
A941.1.808	44+50-45+00	Jar	х	x	Mississippi Plain - Warrior			17.18	ΗS
A941.1.1136	44+50-45+00	Jar	x		Mississippi Plain - Warrior	12	18	27.16	SH
A941.1.808	44+50-45+00	Jar	х		Mississippi Plain - Warrior			26.19	ΗS
A941.1.1137	44+50-45+00	Jar	х		Mississippi Plain - Warrior	30	8	20.11	ΗS
A941.1.1137	44+50-45+00	Jar	x		Mississippi Plain - Warrior			16.85	HS
A941.1.1137	44+50-45+00	Jar	х		Mississippi Plain - Warrior	26	7	15.04	HS
A941.1.1196	44+50-45+00	Jar	х		Mississippi Plain - Warrior			22.65	SH
A941.1.1196	44+50-45+00	Jar	х		Mississippi Plain - Warrior			6.36	SH
A941.1.1196	44+50-45+00	Jar	x		Mississippi Plain - Warrior			18.38	HS
A941.1.1133	44+50-45+00	Jar	x		Mississippi Plain - Warrior			17 53	SH S
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1136	44+50-45+00	Jar	х		Mississippi Plain - Warrior	52	10	116.96	SH
A941.1.1196	44+50-45+00	Jar	х		Mississippi Plain - Warrior			31.85	SH
A941.1.1197	44+55	Jar	х		Mississippi Plain - Warrior			34.71	SH
A941.1.1197	44+55	Jar	x		Mississippi Plain - Warrior			25.85	SH
A941.1.201	44+55	Jar	х		Mississippi Plain - Warrior			30.47	HS
A941.1.201	44+55	Jar	х		Mississippi Plain - Warrior			30.35	HS
A941.1.1197	44+55	Jar	x		Mississippi Plain - Warrior			13.15	HS
A941.1.1197	44+55	Jar	x		Mississippi Plain - Warrior			15.28	SH
A941.1.1198	44+55	Jar	x		Mississippi Plain - Warrior			22.71	HS
A941.1.1198	44+55	Jar	x		Mississippi Plain - Warrior			17.92	HS
A941.1.1198	44+55	Jar	x		Mississippi Plain - Warrior	26	8	12.54	HS
A941.1.1130	44+65	Jar	×		Mississippi Plain - Warrior	24	10	69.03	SH
A941.1.1139	44+65	Jar	x		Mississippi Plain - Warrior	24	10	69.03	SH
A941.1.1130	44+65	Jar	×	x	Mississippi Plain - Warrior			7.26	SH
A941.1.1139	44+65	Jar	х	х	Mississippi Plain - Warrior			7.26	HS
A941.1.1130	44+65	Jar	x		Mississippi Plain - Warrior			6.90	SH
A941.1.1139	44+65	Jar	х		Mississippi Plain - Warrior			6.90	HS
A941.1.1130	44+65	Jar	x		Mississippi Plain - Warrior			6.83	SH
A941.1.1139	44+65	Jar	х		Mississippi Plain - Warrior			6.83	HS
A941.1.1199	44+70	Jar	х		Mississippi Plain - Warrior	36	9	31.89	HS
A941.1.1199	44+70	Jar	х		Mississippi Plain - Warrior			12.46	SH
A941.1.1199	44+70	Jar	x		Mississippi Plain - Warrior	18	12	29.11	SH
A941.1.1199	44+70	Jar	x		Mississippi Plain - Warrior	48	9	37.54	HS
A941.1.1199	44+70	Jar	х		Mississippi Plain - Warrior			31.52	SH
A939.1.241	44+75	Jar	х	x	Mississippi Plain - Warrior			29.90	HS
A939.1.241	44+75	Jar	x		Mississippi Plain - Warrior			27.50	HS
A939.1.241	44+75	Jar	×		Mississippi Plain - Warrior		,	6.80	HS
A941.1.1200	44+75	Jar	x		Mississippi Plain - Warrior	28	9	27.58	HS
A941.1.1200	44+75	Jar	×		Mississippi Plain - Warrior			15.36	SH
A941.1.1200	44+75	Jar	х		Mississippi Plain - Warrior			7.57	HS
A941.1.1200	44+75	Jar ,	×		Mississippi Plain - Warrior			10.39	HS
A941.1.1200	5/.+44	Jar I	x		Mississippi Plain - Warrior			9/.6	HS
A941.1.1200	c/+++	Jar ,	x		Mississippi Plain - Warrior			11.96	HS
A939.1.241	5/.+44	Jar I	x	x	Mississippi Plain - Warrior	.78	10	33.20	HS
A959.1.241	C/++++	Jar	×	;	Mississippi Plain - Warrior			0.40	
A929.1.243	4470U	Jar	×	X				10.01	
A939.1.243	44+80	Jar	×;	×;	Mississippi Plain - Warrior	06	u L	10.40	
1001 1 1000	11+95	Jai Jor	< >	×	Mississippi I tatti - Wattut	00	<u>.</u> ,		
A941 1 207	44+85	Jai Iar	< >		Mississippi I tatti - Warrior			37 45	E
A941.1.1201	44+85	Jar	: ×	x	Mississinni Plain - Warrior			18.54	HS
A941.1.1201	44+85	Jar	x	х	Mississippi Plain - Warrior	30	10	51.33	HS
A941.1.1201	44+85	Jar	x		Mississippi Plain - Warrior			23.44	HS
A941.1.1201	44+85	Jar	x		Mississippi Plain - Warrior			11.28	HS
A941.1.1201	44+85	Jar	Х	Х	Mississippi Plain - Warrior			745	SH
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1       4440       Jar       X       Mississippi Plain - Warrior         1       44490       Jar       X       Mississippi Plain - Warrior         1       44490       Jar       X       Mississippi Plain - Warrior         1       44490       Jar       X       Mississippi Plain - Warrior         2       44490       Jar       X       Mississippi Plain - Warrior         2       44495       Jar       X       Mississippi Plain - Warrior         2       44495       Jar       X       Mississippi Plain - Warrior         2       44495       Jar       X       Mississippi Plain - Warrior         3       44495       Jar       X       Mississippi Plain - Warrior         44495       Jar <th></th> <th>Block</th> <th>Block Basic Shane Fold Flat Tyne/Vari</th> <th>Fold</th> <th>Flat</th> <th>Tvne/Varietv</th> <th>Orifice</th> <th>%</th> <th><math>W_{f(\sigma)}</math></th> <th>Paste</th>		Block	Block Basic Shane Fold Flat Tyne/Vari	Fold	Flat	Tvne/Varietv	Orifice	%	$W_{f(\sigma)}$	Paste
1       44+90       Jar       X       Mississippi Plain - Warrior         1       44+90       Jar       X       Mississippi Plain - Warrior         1       44+90       Jar       X       Mississippi Plain - Warrior         2       44+95       Jar       X       Mississippi Plain - Warrior         2       44+95       Jar       X       Mississippi Plain - Warrior         3       44+95       Jar       X       Mississippi Plain - Warrior         44+95       Jar       X       Mississippi Plain -	44 1 4	44+90	Iar	A	101 T	Mississinni Plain - Warrior	2000	2	13 00	SHS
44+90JarxMississippi Plain - Warrior44+90JarxMississippi Plain - Warrior44+90JarxMississippi Plain - Warrior44+95JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississi	941.1.1141	44+90	Jar	××		Mississioni Plain - Warrior	30	. 9	16.48	HS
44+90JarXMississippi Plain - Warrior44+90JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Pl	941.1.1141	44+90	Jar	: ×	×	Mississippi Plain - Warrior	46	6	35.64	HS
44+90JarXMississipi Plain - Warrior44+95JarXMississipi Plain - Warrior45+00-45+50JarXMississipi Plain - Warrior <t< td=""><td>941.1.1141</td><td>44+90</td><td>Jar</td><td>×</td><td>×</td><td>Mississippi Plain - Warrior</td><td>16</td><td>10</td><td>14.15</td><td>SH</td></t<>	941.1.1141	44+90	Jar	×	×	Mississippi Plain - Warrior	16	10	14.15	SH
44+90JarXMississipio Plain - Warrior44+95JarXMississipio Plain - Warrior45+00-45+50JarXMississipio Plain - Warrior45+00-45+50JarXMississi	941.1.1141	44+90	Jar	x		Mississippi Plain - Warrior			14.18	ΗS
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45+00-45+50JarX	941.1.1141	44+90	Jar	x		Mississippi Plain - Warrior			8.16	ΗS
44+95JarXMississippi Plain - Warrior44+95JarXXMississippi Plain - Warrior44+95JarXXMississippi Plain - Warrior44+95JarXXMississippi Plain - Warrior44+95JarXXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain -	941.1.1142	44+95	Jar	х		Mississippi Plain - Warrior			11.71	$\mathbf{SH}$
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45+00-45+50 <td>941.1.1142</td> <td>44+95</td> <td>Jar</td> <td>x</td> <td></td> <td>Mississippi Plain - Warrior</td> <td></td> <td></td> <td>28.49</td> <td><math>\mathbf{SH}</math></td>	941.1.1142	44+95	Jar	x		Mississippi Plain - Warrior			28.49	$\mathbf{SH}$
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45+00-45+50 <td>941.1.1142</td> <td>44+95</td> <td>Jar</td> <td>х</td> <td>x</td> <td>Mississippi Plain - Warrior</td> <td>32</td> <td>14</td> <td>81.62</td> <td>ΗS</td>	941.1.1142	44+95	Jar	х	x	Mississippi Plain - Warrior	32	14	81.62	ΗS
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45	941.1.1142	44+95	Jar	х	×	Mississippi Plain - Warrior	28	11	97.21	HS
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior	941.1.1202	44+95	Jar	х		Mississippi Plain - Warrior			14.19	ΗS
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior <td>941.1.1203</td> <td>44+95</td> <td>Jar</td> <td>х</td> <td>×</td> <td>Mississippi Plain - Warrior</td> <td>36</td> <td>٢</td> <td>53.42</td> <td>HS</td>	941.1.1203	44+95	Jar	х	×	Mississippi Plain - Warrior	36	٢	53.42	HS
44+95JarXMississippi Plain - Warrior44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - War	941.1.1203	44+95	Jar	x	x	Mississippi Plain - Warrior			20.16	$\mathbf{SH}$
44+95JarxMississippi Plain - Warrior44+95JarxMississippi Plain - Warrior44+95JarxMississippi Plain - Warrior44+95JarxMississippi Plain - Warrior45+00-45+50JarxMississippi	941.1.1203	44+95	Jar	x		Mississippi Plain - Warrior			16.59	$\mathbf{SH}$
44+95JarxMississippi Plain - Warrior44+95JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMissississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50Jarx	941.1.1203	44+95	Jar	x		Mississippi Plain - Warrior	20	12	56.94	$\mathbf{SH}$
44+95JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45+00-45+50JarX </td <td>941.1.1203</td> <td>44+95</td> <td>Jar</td> <td>x</td> <td></td> <td>Mississippi Plain - Warrior</td> <td></td> <td></td> <td>13.38</td> <td><math>\mathbf{SH}</math></td>	941.1.1203	44+95	Jar	x		Mississippi Plain - Warrior			13.38	$\mathbf{SH}$
45+00-45+50JarxMississipi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50Jar <t< td=""><td>941.1.1202</td><td>44+95</td><td>Jar</td><td>х</td><td></td><td>Mississippi Plain - Warrior</td><td>42</td><td>S</td><td>48.06</td><td>ΗS</td></t<>	941.1.1202	44+95	Jar	х		Mississippi Plain - Warrior	42	S	48.06	ΗS
45+00-45+50JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	x		Mississippi Plain - Warrior			15.97	$\mathbf{SH}$
45+00-45+50JarXMississippi Plain - Warrior45+00-45+50JarXMississippi Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	x		Mississippi Plain - Warrior			8.45	$\mathbf{SH}$
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	x		Mississippi Plain - Warrior	30	7	9.63	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	х		Mississippi Plain - Warrior			3.81	SH
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	Х		Mississippi Plain - Warrior			6.14	ΗS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior			9.83	HS
45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	х		Mississippi Plain - Warrior			12.69	HS
45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	x	x	Mississippi Plain - Warrior			8.54	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior </td <td>939.1.243</td> <td>45+00-45+50</td> <td>Jar</td> <td>х</td> <td></td> <td>Mississippi Plain - Warrior</td> <td></td> <td></td> <td>20.31</td> <td>HS</td>	939.1.243	45+00-45+50	Jar	х		Mississippi Plain - Warrior			20.31	HS
45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior <td< td=""><td>939.1.243</td><td>45+00-45+50</td><td>Jar</td><td>x</td><td></td><td>Mississippi Plain - Warrior</td><td></td><td></td><td>25.48</td><td><math>\mathbf{SH}</math></td></td<>	939.1.243	45+00-45+50	Jar	x		Mississippi Plain - Warrior			25.48	$\mathbf{SH}$
45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+	939.1.243	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior			24.65	$\mathbf{SH}$
45+00-45+50JarxMississipi Plain - Warrior45+00-45+50JarxMississipi	939.1.243	45+00-45+50	Jar	×	x	Mississippi Plain - Warrior	32	×	12.41	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior45+00-45+50Jar<	939.1.243	45+00-45+50	Jar	x	x	Mississippi Plain - Warrior			8.40	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior45+00-45+50Jar<	939.1.132	45+00-45+50	Jar	x		Mississippi Plain - Warrior	18	11	21.70	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior45+00-45+50Jar<	939.1.244	45+00-45+50	Jar	х		Mississippi Plain - Warrior	34	4.5	15.23	SH
45+00-45+50JarxMississipi Plain - Warrior45+00-45+50JarxMississipi Plain - Warrior	939.1.244	45+00-45+50	Jar	x		Mississippi Plain - Warrior	24	9	9.26	ΗS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior	939.1.244	45+00-45+50	Jar	x		Mississippi Plain - Warrior			20.67	$\mathbf{SH}$
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior45+00-45+50Jarxx45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior	939.1.244	45+00-45+50	Jar	×		Mississippi Plain - Warrior			22.64	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior	939.1.244	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	32	10	70.02	SH
45+00-45+50JarxMississipip Plain - Warrior445+00-45+50JarxMississipip Plain - Warrior4	939.1.244	45+00-45+50	Jar	x		Mississippi Plain - Warrior			18.64	HS
45+00-45+50JarxMississipip Plain - Warrior45+00-45+50JarxMississipip Plain - Warrior	939.1.244	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	46+		27.86	SH
45+00-45+50JarxMississipipi Plain - Warrior45+00-45+50JarxMississipipi Plain - Warrior	939.1.244	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	40	б	20.7	ΗS
45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior	939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	36	×	47.16	SH
45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior45+00-45+50JarxMississippi Plain - Warrior	939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	39	10	<i>7</i> 7.92	SH
45+00-45+50 Jar x Mississippi Plain - Warrior 45+00-45+50 Jar x Mississippi Plain - Warrior	939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior			14.62	SH
45+00-45+50 Jar x Mississippi Plain - Warrior	939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	22	10	26.74	HS
	939.1.245	45+00-45+50	Jar	x		Mississippi Plain - Warrior	24	6	44.17	HS
45+00-45+50 Jar x Mississippi Plain - Warrior	A939.1.133	45+00-45+50	Jar	x		Mississippi Plain - Warrior	20	×	30.58	J

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A939.1.133	45+00-45+50	Jar	x		Mississippi Plain - Warrior	28	6	42.51	$\mathbf{SH}$
A939.1.245	45+00-45+50	Jar	х	х	Mississippi Plain - Warrior			20.38	SH
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	34	10	58.84	HS
A939.1.245	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	34	7	41.56	SH
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior			19.61	SH
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior			14.16	SH
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	26	6	26.75	HS
A939.1.245	45+00-45+50	Jar	x	×	Mississippi Plain - Warrior			9.51	HS
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior			16.14	ΗS
A939.1.245	45+00-45+50	Jar	x		Mississippi Plain - Warrior	15	٢	8.87	SH
A939.1.245	45+00-45+50	Jar	x	x	Mississippi Plain - Warrior			30.65	SH
A939.1.245	45+00-45+50	Jar	x					24.12	SH
A941.1.1204	45+00-45+50	Jar	х		Mississippi Plain - Warrior	30	14	105.63	SH
A941.1.1204	45+00-45+50	Jar	x		Mississippi Plain - Warrior	30	S	11.43	SH
A941.1.1204	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	28	12	28.74	HS
A941.1.1204	45+00-45+50	Jar	x		Mississippi Plain - Warrior			12.31	HS
A939.1.243	45+00-45+50	Jar	x	x	Mississippi Plain - Warrior			26.71	HS
A939.1.244	45+00-45+50	Jar	x	×	Mississippi Plain - Warrior	32		138.22	ΗS
A939.1.245	45+00-45+50	Jar	x	x	Mississippi Plain - Warrior			67.76	HS
A939.1.245	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	23	26	66.15	ΗS
A939.1.245	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	48	10	116.36	$\mathbf{SH}$
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	32	20	126.44	ΗS
A939.1.245	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	10	28	20.62	HS
A939.1.243	45+00-45+50	Jar	x	x		18	12	9.47	HS
A939.1.243	45+00-45+50	Jar	х					5.03	ΗS
A939.1.243	45+00-45+50	Jar	x					4.21	ΗS
A939.1.244	45+00-45+50	Jar	×		Mississippi Plain - Warrior	28	9	8.60	ΗS
A939.1.245	45+00-45+50	Jar	х		Mississippi Plain - Warrior	34	2	46.29	SH
A941.1.992	45+50	Jar	x					12.48	HS
A941.1.992	45+50	Jar	Х					46.08	HS
A941.1.992	45+50	Jar	x					48.86	HS
A941.1.992	45+50	Jar	х		Mississippi Plain - Warrior			9.62	HS
A941.1.992	45+50	Jar	×		Mississippi Plain - Warrior			30.25	HS
A939.1.134	45+50-46+00	Jar	Х		Mississippi Plain - Warrior	34	2	122.70	ΗS
A939.1.247	45+50-46+00	Jar	x	×	Mississippi Plain - Warrior			39.6	HS
A939.1.248	45+50-46+00	Jar	х	x		30	10	41.65	SH
A939.1.248	45+50-46+00	Jar	x	×		50	4	157.85	HS
A939.1.248	45+50-46+00	Jar	x		Mississippi Plain - Warrior			25.03	SH
A939.1.249	45+50-46+00	Jar	х		Mississippi Plain - Warrior			13.02	$\mathbf{SH}$
A939.1.248	45+50-46+00	Jar	x		Mississippi Plain - Warrior	24	S	15.27	SH
A939.1.134	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior			20	HS
A939.1.248	45+50-46+00	Jar	x		Mississippi Plain - Warrior			17.04	SH
A939.1.134	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior	11	13	46.00	$\mathbf{SH}$
A939.1.248	45+50-46+00	Jar	x	×	Mississippi Plain - Warrior	26	8	16.49	ΗS
A939.1.248	45+50-46+00	Jar	Х		Mississippi Plain - Warrior	32	Ś	21.42	SH

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	45+50-46+00	Jar	x		Mississippi Plain - Warrior			11.30	HS
	45+50-46+00	Jar	х		Mississippi Plain - Warrior	32	9	34.82	SH
	45+50-46+00	Jar	Х	х	Mississippi Plain - Warrior			90.75	ΗS
	45+50-46+00	Jar	х		Mississippi Plain - Warrior			12.45	ΗS
	45+50-46+00	Jar	х		Mississippi Plain - Warrior			19.71	ΗS
	45+50-46+00	Jar	х	x	Mississippi Plain - Warrior	38	5	39.97	HS
	45+50-46+00	Jar	х	x	Mississippi Plain - Warrior			35.64	ΗS
	45+50-46+00	Jar	x	×	Mississippi Plain - Warrior			10.62	ΗS
	45+50-46+00	Jar	x		Mississippi Plain - Warrior			49.84	HS
	45+50-46+00	Jar	x	×	Mississippi Plain - Warrior			16.07	HS
-	45+50-46+00	Jar	х		Mississippi Plain - Warrior			15.61	SH
-	45+50-46+00	Jar	x		Mississippi Plain - Warrior			11.23	HS
-	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior			24.10	$\mathbf{SH}$
A939.1.250 4	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior			32.71	HS
A939.1.250 4	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior	24	15	28.56	$\mathbf{SH}$
A939.1.250 4	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior	12	9	14.70	HS
A939.1.250 4	45+50-46+00	Jar	х	x	Mississippi Plain - Warrior			41.2	ΗS
A939.1.250 4	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior	26	11	60.96	HS
A939.1.250 4	45+50-46+00	Jar	х		Mississippi Plain - Warrior			14.21	ΗS
	45+50-46+00	Jar	х		Mississippi Plain - Warrior	28	×	25.73	ΗS
	45+50-46+00	Jar	x		Mississippi Plain - Warrior	48	5	180.86	$\mathbf{SH}$
	45+50-46+00	Jar	х		Mississippi Plain - Warrior			41.84	ΗS
	45+50-46+00	Jar	х		Mississippi Plain - Warrior	28	6	58.78	SH
	45+50-46+00	Jar	x	x	Mississippi Plain - Warrior			4.45	ΗS
	44+50-45+00	Jar	х	x	Mississippi Plain - Warrior	26	10	46.87	ΗS
	44+50-45+00	Jar	х	х	Mississippi Plain - Warrior			6.18	ΗS
_	44+90	Jar	x	×	Mississippi Plain - Warrior			41.79	SH
	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior	28	10	46.75	ΗS
-	45+00-45+50	Jar	x	×	Mississippi Plain - Warrior	28	×	20.9	ΗS
	45+00-45+50	Jar	х	x	Mississippi Plain - Warrior			11.35	SH
	44+00	Jar			Mississippi Plain - Warrior			24.12	HS
	44+00-44+50	Jar			Mississippi Plain - Warrior			14.11	HS
	44+25	Jar			Mississippi Plain - Warrior			33.69	ΗS
	44+25	Jar			Mississippi Plain - Warrior			8.47	SH
A941.1.1263 4	44+30	Jar			Mississippi Plain - Warrior			8.70	SH
	44+30	Jar			Mississippi Plain - Warrior			9.50	SH
	44+35-44+50	Jar			Mississippi Plain - Warrior			17.28	SH
	44+35-44+50	Jar			Mississippi Plain - Warrior			15.85	SH
	44+35-44+50	Jar			Mississippi Plain - Warrior	32	10	68.20	SH
A941.1.1126 4	44+35-44+50	Jar			Mississippi Plain - Warrior	16	11	32.90	SH
-	44+35-44+50	Jar			Mississippi Plain - Warrior			8.54	SH
	44+40	Jar			Mississippi Plain - Warrior	52	4	61.07	HS
	44+40	Jar		х	Mississippi Plain - Warrior	44	9	48.76	SH
-	44+40	Jar			Mississippi Plain - Warrior	42	6	103.96	ΗS
A941.1.1128 4	44+40	Jar			Mississippi Plain - Warrior	22	7	26.26	SH

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1128	44+40	Jar			Mississippi Plain - Warrior			17.36	HS
A941.1.634	44+40	Jar			Mississippi Plain - Warrior			51.00	HS
A939.1.238	44+45	Jar			Mississippi Plain - Warrior	23	9	16.40	HS
A941.1.1124	44+45	Jar			Mississippi Plain - Warrior	46	11		ΗS
A941.1.1124	44+45	Jar			Mississippi Plain - Warrior	22	7		HS
A941.1.1129	44+45	Jar			Mississippi Plain - Warrior			12.64	HS
A941.1.1124	44+45	Jar			Mississippi Plain - Warrior	30	6		HS
A941.1.541	44+50	Jar			Mississippi Plain - Warrior			37.91	HS
A941.1.1131	44+50	Jar			Mississippi Plain - Warrior	36	6	77.66	HS
A941.1.1131	44+50	Jar		×	Mississippi Plain - Warrior			6.67	ΗS
A939.1.240	44+50-45+00	Jar			Mississippi Plain - Warrior			7.31	ΗS
A939.1.240	44+50-45+00	Jar			Mississippi Plain - Warrior			25.28	SH
A939.1.240	44+50-45+00	Jar			Mississippi Plain - Warrior			8.20	HS
A939.1.240	44+50-45+00	Jar			Mississippi Plain - Warrior			7.47	ΗS
A939.1.240	44+50-45+00	Jar			Mississippi Plain - Warrior			5.50	HS
A941.1.1134	44+50-45+00	Jar			Mississippi Plain - Warrior	28	4	7.36	ΗS
A941.1.1136	44+50-45+00	Jar			Mississippi Plain - Warrior			9.92	ΗS
A941.1.1136	44+50-45+00	Jar			Mississippi Plain - Warrior	32	S	15.43	HS
A941.1.1136	44+50-45+00	Jar			Mississippi Plain - Warrior			12.5	HS
A941.1.588	44+50-45+00	Jar			Mississippi Plain - Warrior	34	Ś	14.27	HS
A941.1.1196	44+50-45+00	Jar			Mississippi Plain - Warrior			6.63	HS
A941.1.1197	44+55	Jar			Mississippi Plain - Warrior			14.49	HS
A941.1.1197	44+55	Jar			Mississippi Plain - Warrior			13.84	SH
A941.1.1198	44+55	Jar		x	Mississippi Plain - Warrior			78.91	ΗS
A941.1.1130	44+65	Jar			Mississippi Plain - Warrior			19.05	SH
A941.1.1139	44+65	Jar			Mississippi Plain - Warrior			19.05	HS
A939.1.241	44+75	Jar			Mississippi Plain - Warrior	>20			HS
A939.1.185	44+80	Jar			Mississippi Plain - Warrior	>30		13.40	HS
A941.1.1141	44+90	Jar			Mississippi Plain - Warrior			18.09	HS
A939.1.133	45+00-45+50	Jar			Mississippi Plain - Warrior	30	34		ΗS
A939.1.245	45+00-45+50	Jar			Mississippi Plain - Warrior			36.90	HS
A939.1.245	45+00-45+50	Jar			Mississippi Plain - Warrior	20	8	27.79	SH
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Warrior	24	16	92.23	SH
A939.1.134	45+50-46+00	Jar		x	Mississippi Plain - Warrior			33.80	HS
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Warrior	28	9	20.36	ΗS
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Warrior	31	S	23.81	SH
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Warrior			15.49	HS
A939.1.250	45+50-46+00	Jar			Mississippi Plain - Warrior			10.42	SH
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Warrior	24	16	8.90	SH
A941.1.1126	44+35-44+50	Jar			Mississippi Plain - Warrior	20	٢	10.70	SH
A941.1.1136	44+50-45+00	Jar			Mississippi Plain - Warrior	12	14	17.67	ΗS
A941.1.1136	44+50-45+00	Jar		×	Mississippi Plain - Warrior	18	×	8.01	$\mathbf{SH}$
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Warrior				ΗS
A941.1.1189	44+00	Jar	x		Mississippi Plain - Hull Lake	20	9	7.91	SH/GG
A941.1.1190	44+05	Jar	x		Mississippi Plain - Hull Lake			20.96	SH/GG
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1128	44 + 40	Jar	х		Mississippi Plain - Hull Lake			20.02	SH/GG
A941.1.1136	44+50-45+00	Jar	х		Mississippi Plain - Hull Lake			14.12	SH/GG
A941.1.1136	44+50-45+00	Jar	х		Mississippi Plain - Hull Lake			11.01	SH/GG
A941.1.1200	44+75	Jar	х		Mississippi Plain - Hull Lake			17.73	SH/GG
A941.1.1200	44+75	Jar	х		Mississippi Plain - Hull Lake			5.86	SH/GG
A939.1.130	44+80	Jar	х		Mississippi Plain - Hull Lake				SH/GG
A941.1.1141	44+90	Jar	х	x	Mississippi Plain - Hull Lake			39.20	SH/GG
A941.1.1141	44+90	Jar	х	×	Mississippi Plain - Hull Lake	30	10	44.00	SH/GG
A939.1.131	45+00-45+50	Jar	х		Mississippi Plain - Hull Lake	30	13	73.70	SH/GG
A939.1.131	45+00-45+50	Jar	х		Mississippi Plain - Hull Lake			62.20	SH/GG
A939.1.243	45+00-45+50	Jar	х		Mississippi Plain - Hull Lake			11.74	SH/GG
A939.1.244	45+00-45+50	Jar	х	×	Mississippi Plain - Hull Lake	32	6	77.90	SH/GG
A939.1.132	45+00-45+50	Jar			Mississippi Plain - Hull Lake	13	15	19.10	SH/GG
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Hull Lake	22	9	11.88	SH/GG
A939.1.246	45+50-46+00	Jar			Mississippi Plain - Hull Lake	16	8	49.77	SH/GG
A939.1.188	45+00-45+50	Jar	х	×	Matthews Incised	10	15	19.60	HS
A941.1.846	44+25	Jar			Mazique Incised			15.80	SH/GG
	45+00-45+50	Jar			Mazique Incised	15	×	17.50	SH/GG
A939.1.189	45+50-46+00	Jar			RS-SH	26	12	59.68	SH
A939.1.240	44+50-45+00	Oversized Jar	х		Mississippi Plain - Warrior	28	8	33.66	HS
A939.1.240	44+50-45+00	Oversized Jar	х		Mississippi Plain - Warrior			15.61	SH
A939.1.240	44+50-45+00	Oversized Jar	х	х	Mississippi Plain - Warrior	34	7	60.13	HS
A939.1.240	44+50-45+00	Oversized Jar	x		Mississippi Plain - Warrior			12.79	HS
A939.1.240	44+50-45+00	Oversized Jar	x		Mississippi Plain - Warrior	32	×	48.81	HS
A941.1.1259	44+00	Oversized Jar	x	x	Mississippi Plain - Warrior			21.04	HS
A941.1.1259	44+00	Oversized Jar	x	x	Mississippi Plain - Warrior			100.84	HS
A941.1.259	44+00	Oversized Jar	x	×	Mississippi Plain - Warrior			41.15	SH
A941.1.1260	44+00-44+50	Oversized Jar	х	х	Mississippi Plain - Warrior	46+		68.08	HS
A941.1.1192	44+25	Oversized Jar	x		Mississippi Plain - Warrior	52	9	82.89	SH
A941.1.1130	44+65	Oversized Jar	х	х	Mississippi Plain - Warrior			25.51	SH
A941.1.1139	44+65	Oversized Jar	x	×	Mississippi Plain - Warrior			25.51	SH
A939.1.243	45+00-45+50	Oversized Jar	x	x	Mississippi Plain - Warrior			55.88	HS
A939.1.245	45+00-45+50	Oversized Jar	x	x	Mississippi Plain - Warrior			37.78	HS
A939.1.249	45+50-46+00	Oversized Jar	x		Mississippi Plain - Warrior			46.57	HS
A939.1.245	45+00-45+50	Oversized Jar	х	х	Mississippi Plain – Hull Lake			41.62	SH/GG

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A941.1.1134 A939.1.80	DIUCK	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A939.1.80	44+50-45+00	Beaker	Bell Plain - Hale			32.88	SH/GG
	45+50-46+00	Beaker	Unclassified Engraved	16	12	18.00	SH/GG
A939.1.25	45+50-46+00	Beaker/Bowl	Unclassified Engraved			8.90	SH/GG
A939.1.132	45+00-45+50	Bowl	Bell Plain - Hale	22	S	35.30	HS
A941.1.550	44+90	Bowl	Bell Plain - Hale	28	9	23.40	HS
A939.1.240	44+50-45+00	Bowl	Bell Plain - Hale			9.07	SH/GG
A939.1.240	44+50-45+00	Bowl	Bell Plain - Hale			6.17	SH/GG
A939.1.131	45+00-45+50	Bowl	Bell Plain - Hale			34.30	HS
A939.1.133	45+00-45+50	Bowl	Bell Plain - Hale			20.10	HS
A941.1.543	44+50	Bowl	Bell Plain - Hale			13.00	HS
A941.1.543	44+50	Bowl	Bell Plain - Hale			15.00	HS
A941.1.1134	44+50-45+00	Bowl	Bell Plain - Hale			6.50	SH/GG
A941.1.634	44+40	Bowl	Bell Plain - Hale			6.30	SH
A939.1.133	45+00-45+50	Bowl	Bell Plain - Hale			46.73	SH
A939.1.239	44+00-44+50	Bowl	Mississippi Plain - Warrior	41	9	33.20	SH
A941.1.1132	44+50	Bowl	Mississippi Plain - Warrior			17.90	HS
A939.1.25	45+50-46+00	Carinated Bowl	Bell Plain – Goldsmith	22	5	16.00	SH/GG
A939.1.79	45+50-46+00	Carinated Bowl	Moundville Engraved – Chapman	8		42.10	SH/GG
	45+00-45+50	Carinated Bowl	Moundville Engraved – Chapman	22			SH/GG
A939.1.246	45+50-46+00	Carinated Bowl	Moundville Engraved – Chapman	25	4	10.50	SH/GG
	45+50-46+00	Carinated Bowl	Moundville Engraved – Chapman	30	18	132.00	SH/GG
	44+50-45+00	Carinated Bowl	Moundville Engraved – Chapman			5.00	SH/GG
A941.1.311	44+10-44+50	Carinated Bowl	Moundville Engraved – Chapman			17.20	SH/GG
A941.1.336	44+25	Carinated Bowl	Moundville Engraved – Elliots Creek			7.60	None
	44+75 L1-L4	Carinated Bowl	Unclassified Engraved	10			SH/GG
	45+50-46+00	Carinated Bowl	Unclassified Engraved				SH/GG
A941.1.595	44+95	Outslanting Bowl	Bell Plain - Hale	20	٢	12.39	SH
A939.1.246	45+50-46+00	Outslanting Bowl	Bell Plain - Hale	28	7	37.12	SH/GG
A939.1.134	45+50-46+00	Outslanting Bowl	Bell Plain - Hale	31	7	24.10	HS
A941.1.596	45+00-45+50	Outslanting Bowl	Bell Plain - Hale			12.65	HS
A941.1.294	44+50	Peaked-Rim Bowl	Bell Plain - Hale			34.06	SH/GG
A939.1.243	45+00-45+50	Restricted Rim Bowl	Bell Plain - Hale	6	16	18.98	SH/GG
A941.1.546	44+50-45+00	Restricted Rim Bowl	Bell Plain - Hale	10	S	9.20	SH/GG
A941.1.534	44+00-44+50	Restricted Rim Bowl	Bell Plain - Hale	12	12	9.90	HS
A939.1.131	45+00-45+50	Restricted Rim Bowl	Bell Plain - Hale	18	12	26.40	SH/GG
A939.1.131	45+00-45+50	Restricted Rim Bowl	Bell Plain - Hale	18	9	18.60	SH/GG
A939.1.133	45+00-45+50	Restricted Rim Bowl	Bell Plain - Hale	18	×	13.80	HS
A939.1.131	45+00-45+50	Restricted Rim Bowl	Bell Plain - Hale	18	12	36.70	HS
A941.1.583	44+10-44+50	Restricted Rim Bowl	Bell Plain - Hale	20	S	112.00	HS
A941.1.1259	44+00	Restricted Rim Bowl	Bell Plain - Hale	33	6	116.28	SH/GG
A939.1.241	44+75	Restricted Rim Bowl	Bell Plain - Hale	20-30	ŝ	14.80	HS
A939.1.132	45+00-45+50	Restricted Rim Bowl	Bell Plain - Hale			10.70	HS
A939.1.135	45+50-46+00	Restricted Rim Bowl	Bell Plain - Hale			13.70	HS
A941.1.1128	44+40	Restricted Rim Bowl	Bell Plain - Hale			11.05	HS
A941.1.550	44+90	Restricted Rim Bowl	Bell Plain - Hale			5.50	HS
A941.1.051	44+20	Resurcted Kim BOWI	Bell Flain - Hale			61.8	НС

Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A939.1.25	45+50-46+00	Restricted Rim Bowl	Bell Plain – Goldsmith	22		6.00	SH/GG
	44+50	Restricted Rim Bowl	Bell Plain - Goldsmith				SH/GG
A939.1.80	45+50-46+00	Restricted Rim Bowl	Carthage Incised - Akron	13	7	8.40	SH/GG
A939.1.75	45+00-45+50	Restricted Rim Bowl	Carthage Incised - Akron	26	9	14.04	SH/GG
A941.1.296	44+50-45+00	Restricted Rim Bowl	Carthage Incised - Summerville	13	10	24.34	SH
	45+00-45+50	Restricted Rim Bowl	Carthage Incised - Summerville	16	10		SH
A941.1.796	44+00-44+50	Restricted Rim Bowl	Carthage Incised - Summerville	18	8	5.75	SH/GG
A941.1.294	44+50	Restricted Rim Bowl	Carthage Incised - Summerville				SH/GG
A939.1.238	44+45	Restricted Rim Bowl	Mississippi Plain - Warrior	16	14	26.40	HS
A941.1.1141	44+90	Restricted Rim Bowl	Mississippi Plain - Warrior	20	6	57.73	SH
A941.1.1123	44+00-44+50	Restricted Rim Bowl	Mississippi Plain - Warrior	22	6	53.08	HS
A941.1.1136	44+50-45+00	Restricted Rim Bowl	Mississippi Plain - Warrior			15.36	HS
A939.1.77	45+00-45+50	Restricted Rim Bowl	Mazique Incised	22	16		SH/GG
A941.1.550	44+90	Short Neck Bowl	Bell Plain - Hale			13.10	SH
A939.1.243	45+00-45+50	Simple Bowl	Bell Plain - Hale	8	13	2.16	SH
	44+50-45+00	Simple Bowl	Bell Plain - Hale	6	6	6.00	SH
A939.1.243	45+00-45+50	Simple Bowl	Bell Plain - Hale	12	12	7.62	SH/GG
A939.1.132	45+00-45+50	Simple Bowl	Bell Plain - Hale	15	10	17.60	HS
A939.1.245	45+00-45+50	Simple Bowl	Bell Plain - Hale	15	12	23.21	SH/GG
A941.1.544	44+50-45+00	Simple Bowl	Bell Plain - Hale	15	10	12.70	HS
A939.1.243	45+00-45+50	Simple Bowl	Bell Plain - Hale	16	6	8.35	SH
A939.1.134	45+50-46+00	Simple Bowl	Bell Plain - Hale	16	б	10.00	SH/GG
A939.1.249	45+50-46+00	Simple Bowl	Bell Plain - Hale	16	6	8.31	SH
A939.1.245	45+00-45+50	Simple Bowl	Bell Plain - Hale	18	5	6.18	SH/GG
A941.1.422	45+50	Simple Bowl	Bell Plain - Hale	18	8	27.26	SH
A941.1.630	44+50	Simple Bowl	Bell Plain - Hale	18	25	36.51	SH
A941.1.1131	44+50	Simple Bowl	Bell Plain - Hale	20	S	22.65	HS
A939.1.129	44+50	Simple Bowl	Bell Plain - Hale	30	S	8.60	HS
A939.1.134	45+50-46+00	Simple Bowl	Bell Plain - Hale	30	ę	20.80	SH/GG
A939.1.243	44+80	Simple Bowl	Bell Plain - Hale			14.94	SH/GG
A939.1.243	45+00-45+50	Simple Bowl	Bell Plain - Hale			4.53	HS
A939.1.243	45+00-45+50	Simple Bowl	Bell Plain - Hale			14.14	SH
A939.1.131	45+00-45+50	Simple Bowl	Bell Plain - Hale			12.00	None
A939.1.245	45+00-45+50	Simple Bowl	Bell Plain - Hale			1.00	SH/GG
A939.1.245	45+00-45+50	Simple Bowl	Bell Plain - Hale			5.03	SH/GG
A939.1.246	45+50-46+00	Simple Bowl	Bell Plain - Hale			12.36	SH/GG
A939.1.79	45+50-46+00	Simple Bowl	Bell Plain - Hale			13.59	SH/GG
A939.1.249	45+50-46+00	Simple Bowl	Bell Plain - Hale			8.24	SH/GG
A939.1.249	45+50-46+00	Simple Bowl	Bell Plain - Hale			5.69	SH
A939.1.249	45+50-46+00	Simple Bowl	Bell Plain - Hale			11.17	HS
A941.1.534	44+00-44+50	Simple Bowl	Bell Plain - Hale			6.60	SH
A941.1.537	44+35-44+50	Simple Bowl	Bell Plain - Hale			16.16	SH
A941.1.539	44+40	Simple Bowl	Bell Plain - Hale			27.40	HS
A941.1.541	44+50	Simple Bowl	Bell Plain - Hale			25.19	SH
A941.1.542	44+50	Simple Bowl	Bell Plain - Hale			13.28	SH

Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.546	44+50-45+00	Simple Bowl	Bell Plain - Hale			12.73	HS
A941.1.546	44+50-45+00	Simple Bowl	Bell Plain - Hale				SH
A941.1.1130	44+65	Simple Bowl	Bell Plain - Hale			12.11	SH/GG
A941.1.1139	44+65	Simple Bowl	Bell Plain - Hale			12.11	SH/GG
A941.1.1141	44+90	Simple Bowl	Bell Plain - Hale			4.37	HS
A941.1.1190	44+05	Simple Bowl	Bell Plain - Hale			9.81	SH
A941.1.584	44+25	Simple Bowl	Bell Plain - Hale			5.39	HS
A941.1.594	44+95	Simple Bowl	Bell Plain - Hale			29.49	SH
A941.1.627	43+50	Simple Bowl	Bell Plain - Hale			5.85	SH
A941.1.1259	44+00	Simple Bowl	Bell Plain - Hale			7.23	SH/GG
A941.1.631	44+20	Simple Bowl	Bell Plain - Hale			14.37	HS
A941.1.633	44+30	Simple Bowl	Bell Plain - Hale			12.60	HS
A941.1.634	44+40	Simple Bowl	Bell Plain - Hale			16.67	SH
A941.1.532	44+25-44+50	Simple Bowl	Bell Plain - Hale			17.60	HS
A941.1.805	44+50	Simple Bowl	Carthage Incised – Akron	16	11	15.74	HS
A941.1.299	44+65	Simple Bowl	Carthage Incised – Akron	22	9	8.42	SH/GG
	45+00-45+00	Simple Bowl	Carthage Incised – Akron	24	9		Shell
A939.1.77	45+00-45+50	Simple Bowl	Carthage Incised – Akron			38.71	SH
A939.1.80	45+50-46+00	Simple Bowl	Carthage Incised – Akron			3.55	SH
A939.1.81	45+50-46+00	Simple Bowl	Carthage Incised – Akron			10.93	SH/GG
A941.1.1122	43+50-44+00	Simple Bowl	Carthage Incised – Akron			24.28	SH
A941.1.801	44+40	Simple Bowl	Carthage Incised – Akron			7.89	SH/GG
A941.1.805	44+50	Simple Bowl	Carthage Incised – Akron			8.74	SH
A941.1.295	44+50-45+00	Simple Bowl	Carthage Incised – Akron			5.71	HS
A941.1.297	44+50-45+00	Simple Bowl	Carthage Incised – Akron			46.80	SH/GG
A939.1.75	45+00-45+50	Simple Bowl	Carthage Incised – Akron			5.24	SH/GG
A939.1.77	45+00-45+50	Simple Bowl	Carthage Incised – Akron			1.91	HS
A939.1.77	45+00-45+50	Simple Bowl	Carthage Incised – Moon Lake			14.72	HS
A939.1.73	44+50-45+00	Simple bowl	D'Olive Incised			7.30	SH/GG
A939.1.241	44+75	Simple Bowl	Mississippi Plain - Warrior	12	13	9.20	HS
A939.1.135	45+50-46+00	Simple Bowl	Mississippi Plain - Warrior	14	20	36.10	HS
A939.1.243	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior	19	2	10.92	HS
A941.1.1123	44+00-44+50	Simple Bowl	Mississippi Plain - Warrior	22	16	57.70	HS
A941.1.1123	44+00-44+50	Simple Bowl	Mississippi Plain - Warrior	40	7	53.44	SH
A941.1.1127	44+40	Simple Bowl	Mississippi Plain - Warrior	40	2	60.80	SH
A939.1.245	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior	48	9	73.06	SH
A939.1.244	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior	48	6	104.25	SH
A941.1.1141	44+90	Simple Bowl	Mississippi Plain - Warrior	50		93.28	HS
A941.1.1141	44+90	Simple Bowl	Mississippi Plain - Warrior	>48		83.72	HS
A941.1.1259	44+00	Simple Bowl	Mississippi Plain - Warrior	48+			HS
A939.1.243	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior			52.30	HS
A939.1.243	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior			16.75	SH
A939.1.245	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior			23.28	HS
A939.1.249	45+50-46+00	Simple Bowl	Mississippi Plain - Warrior			24.85	HS
A939.1.249	45+50-46+00	Simple Bowl	Mississippi Plain - Warrior			25.99	SH
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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1123	44+00-44+50	Simple Bowl	Mississippi Plain - Warrior			12.02	HS
A941.1.1123	44+00-44+50	Simple Bowl	Mississippi Plain - Warrior			15.50	HS
A941.1.1141	44+90	Simple Bowl	Mississippi Plain - Warrior		S	66.74	HS
A941.1.1201	44+85	Simple Bowl	Mississippi Plain - Warrior			6.06	HS
A941.1.1204	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior			8.53	HS
A941.1.259	44+00	Simple Bowl	Mississippi Plain - Warrior			22.50	HS
A941.1.1264	44+40	Simple Bowl	Mississippi Plain - Warrior			10.59	HS
A939.1.245	45+00-45+50	Simple Bowl	Mississippi Plain - Warrior			16.00	HS
A941.1.1137	44+50-45+00	Simple Bowl	Mississippi Plain - Hull Lake	30	5	10.89	SH/GG
A941.1.1064	44+10	Simple Bowl	Mississippi Plain - Hull Lake			5.65	SH/GG
A939.1.246	45+50-46+00	Simple Bowl	Pinchpot			19.12	None
A941.1.1188	44+00-44+50	Simple Bowl	Plain-SH/GG			12.64	SH/GG
A939.1.42	44+00-44+50	Simple Bowl	RS-SH	11	13	7.64	HS
A939.1.42	44+00-45+00	Simple Bowl	RS-SH	13	10	7.70	SH
A941.1.1262	44+25-44+50	Simple Bowl	HS-SM			10.58	HS
	45+50-46+00	Terraced Bowl	Bell Plain - Goldsmith	12		173.00	SH/GG
	45+00-45+50	Terraced Bowl	Moundville Engraved - Chapman	'		14.00	SH/GG
	45+00-45+50	Terraced Bowl	Moundville Engraved - Chapman	'		11.00	SH/GG
A939.1.186	45+00-45+50	Terraced Bowl	Moundville Engraved - Chapman	'		63.00	SH/GG
	45+00-45+50	Terraced Bowl	Moundville Engraved - Chapman			44.70	SH/GG
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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A939.1.129	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale	28	7		SH
A939.1.130	44+80	Flaring Rim Bowl	Bell Plain - Hale	28	4	28.60	SH
A939.1.245	45+00-45+50	Flaring Rim Bowl	Bell Plain - Hale	28	7	53.31	SH/GG
A941.1.582	44+05	Flaring Rim Bowl	Bell Plain - Hale	28	9	36.82	SH
A941.1.545	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale	31	9	24.66	SH
A939.1.135	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale	32	15	113.70	SH
A941.1.581	44+00	Flaring Rim Bowl	Bell Plain - Hale	32	7	59.92	SH
A939.1.134	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale	34	S	49.80	SH
A941.1.583	44+10-44+50	Flaring Rim Bowl	Bell Plain - Hale	34	S	22.20	ΗS
A941.1.540	44+45	Flaring Rim Bowl	Bell Plain - Hale	37	S	111.40	SH
A941.1.592	44+75	Flaring Rim Bowl	Bell Plain - Hale	39	9	64.19	SH/GG
A939.1.133	45+00-45+50	Flaring Rim Bowl	Bell Plain - Hale	43	4	30.85	SH/GG
A941.1.583	44+10-44+50	Flaring Rim Bowl	Bell Plain - Hale			22.00	SH
A941.1.594	44+95	Flaring Rim Bowl	Bell Plain - Hale	48+		47.67	SH
A939.1.240	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			15.16	SH/GG
A939.1.129	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			19.20	SH
A939.1.130	44+80	Flaring Rim Bowl	Bell Plain - Hale			7.80	SH/GG
A939.1.132	45+00-45+50	Flaring Rim Bowl	Bell Plain - Hale			18.90	SH
A939.1.132	45+00-45+50	Flaring Rim Bowl	Bell Plain - Hale			17.70	SH
A939.1.248	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale			23.51	SH
A939.1.249	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale			20.98	HS
A939.1.136	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale			92.5	SH
A939.1.249	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale			17.77	HS
A939.1.249	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale			12.36	HS
A941.1.482	44+10	Flaring Rim Bowl	Bell Plain - Hale			27.77	SH
A941.1.535	44+25	Flaring Rim Bowl	Bell Plain - Hale			20.37	SH
A941.1.542	44+50	Flaring Rim Bowl	Bell Plain - Hale			9.96	SH
A941.1.1132	44+50	Flaring Rim Bowl	Bell Plain - Hale			38.23	SH
A941.1.545	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			15.80	SH
A941.1.546	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			9.70	SH
A941.1.187	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			18.87	SH
A941.1.546	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			1.30	HS
A941.1.546	44+50-45+00	Flaring Rim Bowl	Bell Plain - Hale			27.80	HS
A941.1.548	44+65	Flaring Rim Bowl	Bell Plain - Hale			8.44	SH
A941.1.580	44+00-44+50	Flaring Rim Bowl	Bell Plain - Hale			13.95	HS
A941.1.580	44+00-44+50	Flaring Rim Bowl	Bell Plain - Hale			14.60	SH
A941.1.589	44+55	Flaring Rim Bowl	Bell Plain - Hale			13.68	SH
A941.1.590	44+55	Flaring Rim Bowl	Bell Plain - Hale			8.48	SH
A941.1.629	44+00	Flaring Rim Bowl	Bell Plain - Hale			17.83	SH
A941.1.630	44+00-44+50	Flaring Rim Bowl	Bell Plain - Hale			7.00	SH/GG
A941.1.631	44+20	Flaring Rim Bowl	Bell Plain - Hale			11.11	SH
A941.1.1262	44+25-44+50	Flaring Rim Bowl	Bell Plain - Hale			9.15	SH
A941.1.1262	44+25-44+50	Flaring Rim Bowl	Bell Plain - Hale			36.43	SH
A941.1.633	44+30	Flaring Rim Bowl	Bell Plain - Hale			14.42	SH
A941.1.633	44+30	Flaring Rim Bowl	Bell Plain - Hale			17.00	SH/GG
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Table A.3	Flaring rim	bowls from Re	Table A.3 Flaring rim bowls from Roadway Blocks 43+50 to 46+00	5+00.			
Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.633	44+30	Flaring Rim Bowl	Bell Plain - Hale			14.19	SH
A939.1.136	45+50-46+00	Flaring Rim Bowl	Bell Plain - Hale			19.40	SH
A939.1.133	45+00-45+50	Flaring Rim Bowl	Carthage Incised - Akron			30.33	SH
A941.1.539	44+40	Flaring Rim Bowl	Carthage Incised - Akron			47.54	SH
A941.1.297	44+50-45+00	Flaring Rim Bowl	Carthage Incised - Fosters	28	9	12.99	SH
A939.1.80	45+50-46+00	Flaring Rim Bowl	Carthage Incised - Moon Lake	30	6	39.65	SH/GG
A939.1.74	44+75	Flaring Rim Bowl	Carthage Incised - Moon Lake	32	9	12.56	SH
A939.1.73	44+50-45+00	Flaring Rim Bowl	Carthage Incised - Moon Lake			33.74	SH
A941.1.295	44+50-45+00	Flaring Rim Bowl	Carthage Incised - Moon Lake			11.44	SH
A941.1.298	44+50-45+00	Flaring Rim Bowl	Carthage Incised - Moon Lake			7.97	SH
A941.1.312	44+25	Flaring Rim Bowl	Carthage Incised - Moon Lake			8.82	SH
A941.1.900	44+20	Flaring Rim Bowl	Carthage Incised - Moon Lake			10.33	SH
A939.1.78	45+50-46+00	Flaring Rim Bowl	Carthage Incised - Summerville			30.79	SH/GG
A941.1.292	44+45	Flaring Rim Bowl	Carthage Incised - Unspecified	32	7	98.03	SH
A939.1.74	44+75	Flaring Rim Bowl	Carthage Incised - Unspecified	33	5	12.76	SH
A939.1.188	45+00-45+50	Flaring Rim Bowl	Carthage Incised - Unspecified			21.10	SH
A941.1.294	44+50	Flaring Rim Bowl	Carthage Incised - Unspecified			17.37	SH
A941.1.310	44+05	Flaring Rim Bowl	Carthage Incised - Unspecified			6.83	SH
A941.1.1261	44+20	Flaring Rim Bowl	Carthage Incised - Unspecified			19.08	SH
A941.1.296	44+50-45+00	Flaring Rim Bowl	D'Olive Incised			41.30	SH/GG
A939.1.79	45+50-46+00	Flaring Rim Bowl	Moundville Engraved - Unspecified				SH/GG
A939.1.243	45+00-45+50	Flaring Rim Bowl	Mississippi Plain - Warrior			18.96	SH
A939.1.245	45+00-45+50	Flaring Rim Bowl	Mississippi Plain - Warrior			17.60	SH
A941.1.1124	44+25	Flaring Rim Bowl	Mississippi Plain - Warrior			16.38	SH
A941.1.1129	44+45	Flaring Rim Bowl	Mississippi Plain - Warrior			61.26	SH
A941.1.1136	44+50-45+00	Flaring Rim Bowl	Mississippi Plain - Warrior			17.16	SH
A941.1.1194	44+40	Flaring Rim Bowl	Mississippi Plain - Warrior			13.18	SH
A941.1.1196	44+50-45+00	Flaring Rim Bowl	Mississippi Plain - Warrior			16.26	SH
A941.1.1202	44+95	Flaring Rim Bowl	Mississippi Plain - Warrior			27.35	SH
A941.1.1260	44+00-44+50	Flaring Rim Bowl	Mississippi Plain - Warrior			10.20	SH
A941.1.1262	44+25-44+50	Flaring Rim Bowl	Mississippi Plain - Warrior			16.66	SH
A939.1.245	45+00-45+50	Flaring Rim Bowl	Mississippi Plain - Hull Lake	34	7	60.67	SH/GG
A939.1.240	44+50-45+00	Flaring Rim Bowl	Unclassified Engraved	36	9	38.20	SH/GG

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A939.1.129	44+50	Bottle	Bell Plain - Hale	11	11	11.8	SH/GG
A939.1.240	44+50-45+00	Bottle	Bell Plain - Hale			5.40	SH/GG
A939.1.244	45+00-45+50	Bottle	Bell Plain - Hale			8.00	SH
A941.1.546	44+50-45+00	Bottle	Bell Plain - Hale	7	14	4.18	SH
A941.1.582	44+05	Bottle	Bell Plain - Hale	10	5	26.18	SH/GG
A941.1.583	44+10-44+50	Bottle	Bell Plain - Hale			13.00	SH/GG
	44+10-44+50	Bottle	Bell Plain - Hale	8	12	12.80	SH/GG
A941.1.628	43+90	Bottle	Bell Plain - Hale			3.80	SH
A941.1.543	44+50	Bottle	Bell Plain - Hale	6	17	8.00	SH
A939.1.247	45+50-46+00	Bottle	Bell Plain - Goldsmith	5	17	20.20	SH/GG
	45+50-46+00	Bottle	Bell Plain - Goldsmith	10		37.00	SH/GG
	45+00-45+50	Bottle	Moundville Engraved - Chapman	8		11.20	SH/GG
A939.1.247	45 + 50 - 46 + 00	Bottle	Moundville Enoraved - Chanman	10	×	6.00	SH/GG

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	е %	Wt(g)	Paste
A941.1.874	30+50	Jar	х		Moundville Incised - Moundville	(1		44.24	ΗS
A941.1.791	30+45	Jar	х		Moundville Incised - Moundville	(1	22 12	37.38	HS
A941.1.791	30+45	Jar	х		Moundville Incised - Moundville	(1		46.67	ΗS
A941.1.791	30+45	Jar	х		Moundville Incised - Moundville	(1		85.01	HS
A941.1.875	30+75	Jar	х		Moundville Incised - Moundville	сı	4 5		HS
A941.1.837	30 + 40	Jar	х	x	Moundville Incised - Moundville			2.28	HS
A941.1.791	30+45	Jar	х		Moundville Incised - Moundville			28.19	HS
A941.1.874	30+50	Jar	x		Moundville Incised - Moundville			118.27	ΗS
A941.1.875	30+75	Jar	х		Moundville Incised - Moundville			6.15	ΗS
A941.1.876	30 + 80	Jar	x		Moundville Incised - Moundville			14.20	ΗS
A941.1.876	30 + 80	Jar	х	x	Moundville Incised - Moundville			67.73	HS
A941.1.874	30+50	Jar	x	x	Moundville Incised - Oliver			121.24	ΗS
A941.1.874	30+50	Jar	х	х	Moundville Incised - Unspecified	-	5 12	_	ΗS
A941.1.791	30+45	Jar		×	Moundville Incised - Unspecified			7.95	SH
A941.1.874	30+50	Jar	х		Moundville Incised - Unspecified			9.65	ΗS
A941.1.874	30+50	Jar	x		Moundville Incised - Unspecified			35.67	SH
A941.1.1118	30+60	Jar	х		Moundville Incised - Unspecified			21.78	ΗS
A941.1.1227	30+50	Jar	x	×	Mississippi Plain - Warrior	-	5 11	14.84	ΗS
A941.1.1117	30+50-31+00	Jar			Mississippi Plain - Warrior	(1	22 11	29.97	SH
A941.1.1227	30 + 50	Jar	х		Mississippi Plain - Warrior	(1			ΗS
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior	(1			ΗS
A941.1.1115	30 + 30	Jar			Mississippi Plain - Warrior			-	ΗS
A941.1.1115	30 + 30	Jar			Mississippi Plain - Warrior	(.,	-		SH
A941.1.1227	30+50	Jar	х		Mississippi Plain - Warrior	сı,		27.40	SH
A941.1.1227	30+50	Jar	х		Mississippi Plain - Warrior	с, ) (	-		SH
A941.1.1227	30+50	Jar	х		Mississippi Plain - Warrior	сı,			SH
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior				ΗS
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior		36 13	-	ΗS
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior	7	42 4	89.55	SH
A941.1.1114	30+00	Jar	х	x	Mississippi Plain - Warrior			17.99	HS
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior			12.43	ΗS
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior			43.16	SH
A941.1.1116	30+45	Jar			Mississippi Plain - Warrior			13.63	SH
A941.1.1227	30+50	Jar			Mississippi Plain - Warrior			11.75	SH
A941.1.1227	30+50	Jar	x		Mississippi Plain - Warrior			29.74	ΗS
A941.1.1227	30+50	Jar	х		Mississippi Plain - Warrior			5.02	HS
A941.1.1227	30+50	Jar	x		Mississippi Plain - Warrior			10.82	ΗS
A941.1.1227	30+50	Jar	х		Mississippi Plain - Warrior			8.23	HS
A941.1.838	30+50-31+00	Jar	х		Mississippi Plain - Warrior			13.45	ΗS
A941.1.1118	30+60	Jar			Mississippi Plain - Warrior			11.45	SH
A941.1.1118	30+60	Jar			Mississippi Plain - Warrior			43.01	SH
A941.1.1118	30+60	Jar	х		Mississippi Plain - Warrior			18.83	SH
A941.1.1119	31+00	Jar	х		Mississippi Plain - Warrior			8.85	HS
A941 1 1118	30+60	Jar			Mississippi Plain - Warrior			14.29	SH

Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.611	30+50	Restricted Rim Bowl	Bell Plain - Hale	27	9	16.00	SH
A941.1.1174	31+00 - 31+50	Restricted Rim Bowl	Bell Plain - Hale			4.72	SH/GG
A941.1.1115	30 + 30	Simple Bowl	Bell Plain - Hale			5.02	SH
A941.1.1115	30 + 30	Simple Bowl	Bell Plain - Hale	26	S	9.60	SH
A941.1.1117	30 + 50 - 31 + 00	Simple Bowl	Bell Plain - Hale			10.30	SH
A941.1.612	30+75	Simple Bowl	Bell Plain - Hale	28	4	7.47	SH
A941.1.1229	30 + 80	Simple Bowl	Bell Plain - Hale			6.12	SH/GG
A941.1.1174	31+00 - 31+50	Simple Bowl	Bell Plain - Hale			30.15	SH
A941.1.1227	30+50	Simple Bowl	Mississippi Plain - Warrior			12.95	SH
A941.1.1227	30+50	Simple Bowl	Mississippi Plain - Warrior			7.79	SH
A941.1.1118	30+60	Simple Bowl	Mississippi Plain - Warrior			12.31	SH
A941.1.611	30+50	Bowl	Bell Plain - Hale			5.00	SH

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.527	30 + 30	Flaring Rim Bowl	Bell Plain - Hale	22	12	16.13	SH
A941.1.528	30 + 45	Flaring Rim Bowl	Bell Plain - Hale	34	9	28.49	SH
A941.1.611	30 + 50	Flaring Rim Bowl	Bell Plain - Hale	36	9	45.00	SH/GG
A941.1.1227	30 + 50	Flaring Rim Bowl	Bell Plain - Hale			10.40	SH/GG
A941.1.611	30 + 50	Flaring Rim Bowl	Bell Plain - Hale			13.00	SH/GG
A941.1.206	30 + 75	Flaring Rim Bowl	Bell Plain - Hale			4.42	SH/GG
A941.1.1118	30+60	Flaring Rim Bowl	Mississippi Plain - Hull Lake			39.27	SH/GG

Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.316	0+10	Jar			Autauga Plain	30	8	38.34	Sand
A940.6.266	0+50-1+00	Jar	х		Baytown Plain			18.59	GG
A940.6.39	0+00	Jar			Baytown Plain			14.53	GG
A940.6.370	0+00	Jar			Bell Plain - Hale			9.61	SH
A940.6.337	0+75-1+05	Jar			Bell Plain - Hale			39.03	SH
A940.6.122	0+50-1+00	Jar			Carthage Incised – Summerville	18	13	29.24	SH/GG
A940.6.252	0+50-0+75	Jar	Х	X	Carthage Incised – Summerville	46	4	90.48	HS
A940.6.122	0+50-1+00	Jar			Carthage Incised – Summerville			17.67	SH/GG
A940.6.21	0+10	Jar			Late Savannah S. Stamped			50.84	GT
A940.6.244	0+00	Jar			L'Noire Incised	8	18	21.85	SH/GG
A940.6.112	0+25	Jar	Х	x	Moundville Incised - Carrollton	16	15	27.59	SH
A940.6.130	0+00-1+00	Jar	×		Moundville Incised - Carrollton	26	8	99.28	SH
A940.6.133	0+25	Jar	X		Moundville Incised - Carrollton	36	10	59.78	SH
A940.6.131	0+20	Jar	X		Moundville Incised - Carrollton	40	6	74.07	SH
A940.6.119	0+50-1+00	Jar	X		Moundville Incised - Carrollton			118.19	SH
A940.6.125	0+00	Jar		X	Moundville Incised – Carrollton			62.94	SH
A940.6.82	0+50-1+00	Jar			Moundville Incised - Carrollton			44.78	SH
A940.6.239	0+50-1+00	Jar	×	×	Moundville Incised - Carrollton			15.33	SH
A940.6.296	3+25	Jar	×		Moundville Incised – Moundville	10	15	14.93	SH
A940.6.91	0+00-0+75	Jar	х		Moundville Incised – Moundville	22	19	53.19	SH
A940.6.117	0+00-0+75	Jar	X		Moundville Incised – Moundville	24	7	46.57	SH
A940.6.133	0+25	Jar	X		Moundville Incised – Moundville	28	10	46.04	SH
A940.6.100	3+25	Jar	X		Moundville Incised – Moundville	30	6	61.68	SH
A940.6.82	0+50-1+00	Jar			Moundville Incised – Moundville	30	2	25.28	HS
A940.6.83	0+00	Jar	X		Moundville Incised – Moundville	30	6	27.82	SH
A940.6.132	0+20-1+00	Jar	Х		Moundville Incised – Moundville	30	11	103.82	HS
A940.6.130	0+00-1+00	Jar	X		Moundville Incised – Moundville	30	11	128.5	HS
A940.6.109	0+10	Jar	Х		Moundville Incised – Moundville	34	2	41.36	SH
A940.6.130	0+00-1+00	Jar	х		Moundville Incised – Moundville	34	8	51.25	HS
A940.6.130	0+00-1+00	Jar	Х		Moundville Incised – Moundville	34	12	65.51	HS
A940.6.133	0+25	Jar	X		Moundville Incised – Moundville	34	165	61.51	HS
A940.6.105	0+00	Jar	X		Moundville Incised – Moundville	36	7	26.97	SH
A940.6.104	0+00	Jar	×		Moundville Incised – Moundville	38	11	54.97	SH
A940.6.105	00+0	Jar	X		Moundville Incised – Moundville	39	9	74.76	SH
A940.6.106	0+00	Jar	X					11.37	SH
A940.6.106	0+00	Jar	X		Moundville Incised – Moundville			25.13	SH
A940.6.108	0+00	Jar	X		Moundville Incised – Moundville			17.36	HS
A940.6.109	0+10	Jar	X		Moundville Incised – Moundville			15.33	SH
A940.6.109	0+10	Jar	X		Moundville Incised – Moundville			12.44	SH
A940.6.111	0+10	Jar	X		Moundville Incised – Moundville			9.52	SH
A940.6.111	0+10	Jar	Х					18.00	HS
A940.6.111	0+10	Jar	X					12.40	SH
A940.6.115	0+25-0+75	Jar	Х		Moundville Incised – Moundville			31.08	HS
A940.6.122	0+50-1+00	Jar	Х		Moundville Incised – Moundville			10.53	SH
A940.6.122	0+50-1+00	Jar	X		Moundville Incised – Moundville			14.59	SH
A940.6.126	0+00	Jar	X		Moundville Incised – Moundville			6.46	SH

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.126	00+0	Jar	X		Moundville Incised – Moundville			6.61	SH
A940.6.127	00+0	Jar	×		Moundville Incised – Moundville			18.86	SH
A940.6.128	00+0	Jar	X		Moundville Incised – Moundville			16.57	HS
A940.6.133	0+25	Jar	×		Moundville Incised – Moundville			20.89	SH
A940.6.134	0+25	Jar	X		Moundville Incised – Moundville			12.66	HS
A940.6.134	0+25	Jar	×		Moundville Incised – Moundville			10.25	SH
A940.6.135	0+50-0+75	Jar	х		Moundville Incised – Moundville			38.41	SH
A940.6.88	0+75-1+00	Jar	X		Moundville Incised – Moundville			23.11	SH
A940.6.89	3+25	Jar	х		Moundville Incised – Moundville			6.90	SH
A940.6.92	3+25	Jar	×		Moundville Incised – Moundville			28.70	SH
A940.6.94	3+25	Jar	X		Moundville Incised – Moundville			65.34	HS
A940.6.132	0+20-1+00	Jar	X		Moundville Incised – Moundville			64.88	HS
A940.6.223	00+0	Jar	×		Moundville Incised – Moundville			6.79	SH
A940.6.246	0+00-1+00	Jar	X	X	Moundville Incised – Moundville			5.50	SH
A940.6.372	0+10	Jar	Х		Moundville Incised – Moundville			18.74	SH
A940.6.90	3+25	Jar		X	Moundville Incised – Oliver			23.41	SH
A940.6.114	0+25-0+50	Jar			Moundville Incised – Unspecified			14.72	SH/GG
A940.6.327	0+30	Jar	X	X	Moundville Incised – Unspecified			38.95	SH
A940.6.310	00+0	Jar	×		Mississippi Plain - Warrior	12	ŝ	10.03	HS
A940.6.307	00+0	Jar			Mississippi Plain - Warrior	14	~	5.33	HS
A940.6.358	0+50-0+75	Jar	X	Х	Mississippi Plain - Warrior	14	11	5.80	SH
A940.6.351	0+00-1+00	Jar	Х	Х	Mississippi Plain - Warrior	15	6	4.84	SH
A940.6.332	0+50-1+00	Jar	Х		Mississippi Plain - Warrior	16	8	7.31	SH
A940.6.197	0+50-1+00	Jar	Х		Mississippi Plain - Warrior	20	7	28.78	HS
A940.6.308	00+0	Jar	X	X	Mississippi Plain - Warrior	20	7	9.78	HS
A940.6.335	0+50-1+00	Jar	Х		Mississippi Plain - Warrior	20	6	19.50	HS
A940.6.269	00+0	Jar	Х			22	7	25.00	SH
A940.6.302	3+25	Jar	Х			22	9	9.10	HS
A940.6.356	0+25	Jar	Х			22	6	31.07	SH
A940.6.308	00+00	Jar	Х			23	S	23.35	HS
A940.6.355	0+25	Jar	X			23	8	11.51	HS
A940.6.345	00+0	Jar	X		Mississippi Plain - Warrior	24	2	10.07	HS
A940.6.295	3+25	Jar	X		Mississippi Plain - Warrior	25	13	60.54	HS
A940.6.336	0+75-1+00	Jar	X		Mississippi Plain - Warrior	26	×	32.67	SH
A940.6.303	00+0	Jar	X			27	7	24.72	HS
A940.6.354	0+20-1+00	Jar	Х		Mississippi Plain - Warrior	27	7	25.19	HS
A940.6.308	00+0	Jar	X		Mississippi Plain - Warrior	28	9	17.58	SH
A940.6.308	00+0	Jar	Х		Mississippi Plain - Warrior	28	9	20.10	SH
A940.6.308	00+0	Jar			Mississippi Plain - Warrior	30	7	18.60	SH
A940.6.332	0+50-1+00	Jar	Х		Mississippi Plain - Warrior	30	7	64.37	SH
A940.6.352	0+20	Jar	Х		Mississippi Plain - Warrior	30	8	19.81	HS
A940.6.375	0+20	Jar	Х		Mississippi Plain - Warrior	30	S	7.55	SH
A940.6.304	00+0	Jar		Х	Mississippi Plain - Warrior	32	S	26.44	SH
A940.6.345	00+0	Jar	Х	X	Mississippi Plain - Warrior	32	5	10.41	HS
A940.6.354	0+20-1+00	Jar	Х		Mississippi Plain - Warrior	32	9	42.81	HS
A940.6.390	0+50-1+00	Jar			Mississippi Plain - Warrior	32	S	19.99	SH

Table A.8		Jars from the Museum Parking Area (MPA)	n Park	ang A	rea (MPA).				
Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.270	00+0	Jar			Mississippi Plain - Warrior	34	12	73.87	SH
A940.6.315	0+10	Jar	×		Mississippi Plain - Warrior	34	8	29.90	HS
A940.6.355	0+25	Jar	Х		Mississippi Plain - Warrior	34	11	35.13	$\mathbf{SH}$
A940.6.282	3+25	Jar	X		Mississippi Plain - Warrior	36	2	19.00	HS
A940.6.355	0+25	Jar	X		Mississippi Plain - Warrior	36	4	9.44	HS
A940.6.357	0+60-0+75	Jar	X	X	Mississippi Plain - Warrior	38	4	21.71	HS
A940.6.308	0+00	Jar	X	Х	Mississippi Plain - Warrior	38	S	14.49	SH
A940.6.305	00+0	Jar	X		Mississippi Plain - Warrior	40	6	46.15	HS
A940.6.351	0+00-1+00	Jar	X		Mississippi Plain - Warrior	40	9	36.97	HS
A940.6.362	0+80	Jar	X		Mississippi Plain - Warrior	42	S	22.11	HS
A940.6.332	0+50-1+00	Jar	X	X	Mississippi Plain - Warrior	44	9	33.61	HS
A940.6.363	0+75-1+00	Jar	×	×	Mississippi Plain - Warrior	52	~	154.40	SH
A940.6.197	0+50-1+00	Jar	X		Mississippi Plain - Warrior			5.10	SH
A940.6.264	0+20	Jar	X	X	Mississippi Plain - Warrior			32.54	$\mathbf{SH}$
A940.6.266	0+50-1+00	Jar	X	X	Mississippi Plain - Warrior			101.89	SH
A940.6.266	0+50-1+00	Jar	X					12.48	$\mathbf{SH}$
A940.6.266	0+50-1+00	Jar	×		Mississippi Plain - Warrior			18.89	SH
A940.6.269	00+0	Jar	×		Mississippi Plain - Warrior			9.13	SH
A940.6.272	0+50-1+00	Jar	X	X	Mississippi Plain - Warrior			16.87	SH
A940.6.272	0+50-1+00	Jar	X		Mississippi Plain - Warrior			30.95	HS
A940.6.272	0+50-1+00	Jar	X		Mississippi Plain - Warrior			23.98	SH
A940.6.272	0+50-1+00	Jar	Х		Mississippi Plain - Warrior			21.51	$\mathbf{SH}$
A940.6.273	00+0	Jar	X		Mississippi Plain - Warrior			1.55	SH
A940.6.276	0+00-0+55	Jar	X		Mississippi Plain - Warrior			17.55	HS
A940.6.276	0+00-0+55	Jar			Mississippi Plain - Warrior			4.15	SH
A940.6.276	0+00-0+55	Jar	X		Mississippi Plain - Warrior			57.37	HS
A940.6.276	0+00-0+55	Jar	X		Mississippi Plain - Warrior			8.84	$\operatorname{SH}$
A940.6.276	0+00-0+55	Jar			Mississippi Plain - Warrior			12.49	$\mathbf{SH}$
A940.6.277	0+00-0+50	Jar	×		Mississippi Plain - Warrior			14.29	SH
A940.6.279	0+75-1+00	Jar	X		Mississippi Plain - Warrior			50.30	HS
A940.6.289	0+75-1+50	Jar			Mississippi Plain - Warrior			21.42	SH
A940.6.291	3+25	Jar	X	X	Mississippi Plain - Warrior			17.11	SH
A940.6.296	3+25	Jar	X		Mississippi Plain - Warrior			11.33	SH
A940.6.296	3+25	Jar	X		Mississippi Plain - Warrior			9.08	SH
A940.6.297	3+25	Jar	X		Mississippi Plain - Warrior			7.23	SH
A940.6.305	00+0	Jar	X	X	Mississippi Plain - Warrior			19.65	SH
A940.6.307	00+0	Jar	X		Mississippi Plain - Warrior			16.17	SH
A940.6.307	00+0	Jar	×	×	Mississippi Plain - Warrior			13.75	SH
A940.6.308	00+0	Jar	Х	X	Mississippi Plain - Warrior			26.28	$\mathbf{SH}$
A940.6.308	00+0	Jar	X		Mississippi Plain - Warrior			13.68	SH
A940.6.308	00+0	Jar	Х		Mississippi Plain - Warrior			13.76	$\mathbf{SH}$
A940.6.308	00+0	Jar	x		Mississippi Plain - Warrior			6.54	$\mathbf{SH}$
A940.6.308	00+00	Jar			Mississippi Plain - Warrior			31.20	$\mathbf{SH}$
A940.6.308	0+00	Jar	X	X	Mississippi Plain - Warrior			9.25	$\operatorname{SH}$
A940.6.310	0+00	Jar	X		Mississippi Plain - Warrior			16.72	SH
A940.6.310	00+0	Jar	Х	Х	Mississippi Plain - Warrior			13.87	SH

Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	% W	Wt(g)	Paste
A940.6.310	00+0	Jar	Х		Mississippi Plain - Warrior		36	39.39	ΗS
A940.6.311	00+0	Jar	Х	×	Mississippi Plain - Warrior		16	16.52	HS
A940.6.311	00+0	Jar	Х	X	Mississippi Plain - Warrior		15	15.50	SH
A940.6.311	0+00	Jar	Х		Mississippi Plain - Warrior		15	5.60	SH
A940.6.313	00+0	Jar	Х		Mississippi Plain - Warrior		Ξ	1.92	ΗS
A940.6.315	0+10	Jar	Х		Mississippi Plain - Warrior		5	24.30	HS
A940.6.315	0+10	Jar	Х		Mississippi Plain - Warrior		15	15.07	ΗS
A940.6.315	0+10	Jar	Х		Mississippi Plain - Warrior		0,	9.35	ΗS
A940.6.315	0+10	Jar			Mississippi Plain - Warrior		v	6.60	SH
A940.6.316	0+10	Jar	Х	×	Mississippi Plain - Warrior		53	23.11	SH
A940.6.316	0+10	Jar	Х		Mississippi Plain - Warrior		(1	21.5	SH
A940.6.317	0+10	Jar	Х		Mississippi Plain - Warrior		1	17.70	SH
A940.6.319	0+20	Jar	Х		Mississippi Plain - Warrior		U,	9.48	HS
A940.6.332	0+50-1+00	Jar	Х		Mississippi Plain - Warrior		16	16.73	HS
A940.6.332	0+50-1+00	Jar	Х	X	Mississippi Plain - Warrior		I	0.72	SH
A940.6.334	0+50-1+00	Jar	Х	×	Mississippi Plain - Warrior		11	13.30	SH
A940.6.334	0+50-1+00	Jar	Х	X	Mississippi Plain - Warrior		1	17.10	HS
A940.6.334	0+50-1+00	Jar			Mississippi Plain - Warrior		53	53.45	HS
A940.6.334	0+50-1+00	Jar	Х		Mississippi Plain - Warrior		35	9.30	HS
A940.6.334	0+50-1+00	Jar	Х		Mississippi Plain - Warrior		12	12.36	SH
A940.6.334	0+50-1+00	Jar	Х	×	Mississippi Plain - Warrior		0,	9.80	SH
A940.6.335	0+50-1+00	Jar			Mississippi Plain - Warrior		10	10.10	HS
A940.6.335	0+50-1+00	Jar	Х		Mississippi Plain - Warrior		15	19.10	SH
A940.6.338	0+75-1+05	Jar			Mississippi Plain - Warrior		5	17.19	ΗS
A940.6.338	0+75-1+05	Jar	Х		Mississippi Plain - Warrior		E	0.50	ΗS
A940.6.339	3+25	Jar			Mississippi Plain - Warrior		12	2.50	SH
A940.6.339	3+25	Jar	Х	X	Mississippi Plain - Warrior		4)	5.06	ΗS
A940.6.343	0+00-0+25	Jar	X		Mississippi Plain - Warrior		×	8.14	SH
A940.6.346	00+0	Jar	Х		Mississippi Plain - Warrior		1	17.87	SH
A940.6.346	0+00	Jar	Х		Mississippi Plain - Warrior		~	8.10	ΗS
A940.6.348	00+00	Jar	Х				1	12.07	ΗS
A940.6.351	0+00-1+00	Jar	Х		Mississippi Plain - Warrior		1	4.45	ΗS
A940.6.351	0+00-1+00	Jar	Х		Mississippi Plain - Warrior		Ξ	11.78	SH
A940.6.352	0+20	Jar	X		Mississippi Plain - Warrior		52	29.80	SH
A940.6.354	0+20-1+00	Jar			Mississippi Plain - Warrior		4	40.64	SH
A940.6.354	0+20-1+00	Jar	X		Mississippi Plain - Warrior		15	15.92	SH
A940.6.354	0+20-1+00	Jar	Х		Mississippi Plain - Warrior		Ξ	11.67	SH
A940.6.354	0+20-1+00	Jar	Х		Mississippi Plain - Warrior		×	8.59	SH
A940.6.355	0+25	Jar	Х		Mississippi Plain - Warrior		17	14.74	HS
A940.6.355	0+25	Jar	Х	×	Mississippi Plain - Warrior		22	22.37	ΗS
A940.6.355	0+25	Jar	Х		Mississippi Plain - Warrior		Ξ	11.19	ΗS
A940.6.356	0+25	Jar	Х		Mississippi Plain - Warrior		13	13.61	HS
A940.6.356	0+25	Jar	Х	X	Mississippi Plain - Warrior		U,	9.26	SH
A940.6.356	0+25	Jar	Х		Mississippi Plain - Warrior		Ξ	10.99	ΗS
A 040 6 350								0.20	CIT

Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.361	0+50-1+00	Jar	х		Mississippi Plain - Warrior			27.70	ΗS
A940.6.362	0+80	Jar	X		Mississippi Plain - Warrior			24.67	HS
A940.6.365	0+00	Jar	Х		Mississippi Plain - Warrior			6.48	SH
A940.6.365	00+0	Jar			Mississippi Plain - Warrior			11.60	$\mathbf{SH}$
A940.6.366	0+00-0+50	Jar	Х		Mississippi Plain - Warrior			11.19	SH
A940.6.366	0+00-0+50	Jar	X		Mississippi Plain - Warrior			11.19	ΗS
A940.6.366	0+00-0+50	Jar	Х		Mississippi Plain - Warrior			72.57	ΗS
A940.6.366	0+00-0+50	Jar	х		Mississippi Plain - Warrior			72.57	HS
A940.6.372	0+10	Jar	Х		Mississippi Plain - Warrior			7.99	ΗS
A940.6.372	0+10	Jar	Х		Mississippi Plain - Warrior			25.05	ΗS
A940.6.376	125	Jar	Х		Mississippi Plain - Warrior			11.26	HS
A940.6.376	0+25	Jar	х		Mississippi Plain - Warrior			11.26	ΗS
A940.6.383	0+30	Jar	X		Mississippi Plain - Warrior			20.19	SH
A940.6.383	0+30	Jar	Х		Mississippi Plain - Warrior			20.19	HS
A940.6.383	0+30	Jar	Х		Mississippi Plain - Warrior			29.71	ΗS
A940.6.383	0+30	Jar	Х		Mississippi Plain - Warrior			29.71	ΗS
A940.6.384	0+50-0+75	Jar	х		Mississippi Plain - Warrior			16.02	ΗS
A940.6.384	0+50-0+75	Jar	×		Mississippi Plain - Warrior			10.40	ΗS
A940.6.384	0+50-0+75	Jar	X		Mississippi Plain - Warrior			10.19	SH
A940.6.385	0+00	Jar	X		Mississippi Plain - Warrior			6.48	HS
A940.6.385	0+00	Jar			Mississippi Plain - Warrior			11.60	ΗS
A940.6.387	0+50-1+00	Jar	X		Mississippi Plain - Warrior			17.61	HS
A940.6.387	0+50-1+00	Jar	X		Mississippi Plain - Warrior			17.30	ΗS
A940.6.389	0+50-1+00	Jar			Mississippi Plain - Warrior			13.96	HS
A940.6.390	0+50-1+00	Jar	×		Mississippi Plain - Warrior			18.55	ΗS
A940.6.390	0+50-1+00	Jar			Mississippi Plain - Warrior			12.74	SH
A940.6.392	0+50-1+00	Jar	×		Mississippi Plain - Warrior			15.23	ΗS
A940.6.392	0+50-1+00	Jar			Mississippi Plain - Warrior			91.44	SH
A940.6.75	0+20	Jar	×		Mississippi Plain - Warrior			20.31	ΗS
A940.6.86	0+00-0+50	Jar	X		Mississippi Plain - Warrior			17.77	HS
A940.6.277	0+00-0+50	Jar		×	Mississippi Plain - Warrior				ΗS
A940.6.338	0+75-1+05	Jar	X	×	Mississippi Plain - Hull Lake	35	8		SH/GG
A940.6.266	0+50-1+00	Jar		×	Mississippi Plain - Hull Lake			12.41	SH/GG
A940.6.62	0+50-1+00	Jar			Mississippi Plain - Hull Lake			22.98	SH/GG
A940.6.354	0+20-1+00	Oversized Jar	×		Mississippi Plain - Warrior	50	9		HS
A940.6.282	3+25	Oversized Jar	×	×	Mississippi Plain - Warrior	56			HS
A940.6.370	71+30	Oversized Jar	X		Mississippi Plain - Warrior	>48		167.3	HS
A940.6.299	0+25	Oversized Jar	X	×	Mississippi Plain - Warrior	48+		45.61	HS
A940.6.269	0+00	Oversized Jar	X	x	Mississippi Plain - Warrior			52.82	HS
A940.6.276	0+00-0+55	Oversized Jar	X	×	Mississippi Plain - Warrior			73.85	HS
A940.6.276	0+00-0+55	Oversized Jar	X		Mississippi Plain - Warrior			39.00	HS
<b>A</b> 940.6.332	0+50-1+00	Oversized Jar	X		Mississippi Plain - Warrior			14.17	$\mathbf{SH}$
A940.6.338	0+75-1+05	Oversized Jar	Х		Mississippi Plain - Warrior			36.34	SH
<b>A</b> 940.6.340	0+00	Oversized Jar	X	×	Mississippi Plain - Warrior			36.71	ΗS
A940.6.342	0+00	Oversized Jar	X		Mississippi Plain - Warrior			28.10	SH

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Catalog#	Square	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.179	3+25	Restricted Rim Bowl	Bell Plain - Hale	11	17	22.78	SH/GG
A940.6.161	3+25	Restricted Rim Bowl	Bell Plain - Hale	26	9	9.23	SH/GG
A940.6.178	3+25	Restricted Rim Bowl	Bell Plain - Hale			6.20	SH/GG
A940.6.208	0+20	Restricted Rim Bowl	Bell Plain - Hale			19.66	HS
A940.6.245	00+0	Restricted Rim Bowl	Carthage Incised - Unspecified	23	5	19.43	SH/GG
A940.6.288	0+00-0+75	Restricted Rim Bowl	Mississippi Plain - Warrior	12	10	24.67	SH
A940.6.369	00+0	Restricted Rim Bowl	Mississippi Plain - Warrior			17.38	HS
A940.6.122	0+50-1+00	Simple Bowl	Addis Incised?			11.87	i
A940.6.49	0+10	Simple Bowl	Baytown Plain		:	19.19	00
A940.6.16	0+20-1+00	Simple Bowl	Bell Plain - Hale	10	11	7.19	None
A940.6.144	0+00-0+50	Simple Bowl	Bell Plain - Hale	11	6	5.49	Burnished
A940.6.144	0+00-0+50	Simple Bowl	Bell Plain - Hale	12	×	5.54	HS
A940.6.211	0+25	Simple Bowl	Bell Plain - Hale	12	×	7.98	SH/GG
A940.6.356	0+25	Simple Bowl	Bell Plain - Hale	15	6	34.79	SH/GG
A940.6.253		Simple Bowl	Bell Plain - Hale	16	7	6.27	None
A940.6.307	00+0	Simple Bowl	Bell Plain - Hale	16	8	2.86	SH/GG
A940.6.335	0+50-1+00	Simple Bowl	Bell Plain - Hale	16	10	7.40	HS
A940.6.10	0+20	Simple Bowl	Bell Plain - Hale	22	7	38.13	SH/GG
A940.6.276	0+00-0+55	Simple Bowl	Bell Plain - Hale	22	9	14.28	HS
A940.6.348	0+00	Simple Bowl	Bell Plain - Hale	22	S	12.68	HS
A940.6.354	0+20-1+00	Simple Bowl	Bell Plain - Hale	24	8	16.58	SH/GG
A940.6.354	0+20-1+00	Simple Bowl	Bell Plain - Hale	26	11	63.86	SH/GG
A940.6.31	3+00-3+35	Simple Bowl	Bell Plain - Hale	28	×	19.10	SH/GG
A940.6.156	0+00-0+50	Simple Bowl	Bell Plain - Hale	30	9	11.94	SH/GG
A940.6.153	0+00	Simple Bowl	Bell Plain - Hale			6.30	SH/GG
A940.6.162	3+25	Simple Bowl	Bell Plain - Hale			7.41	HS
A940.6.164	0+00-0+75	Simple Bowl	Bell Plain - Hale			10.04	SH/GG
A940.6.183	00+0	Simple Bowl	Bell Plain - Hale			8.60	SH/GG
A940.6.192	0+50-0+75	Simple Bowl	Bell Plain - Hale			5.82	HS
A940.6.192	0+50-0+75	Simple Bowl	Bell Plain - Hale			5.22	HS
A940.6.266	0+50-1+00	Simple Bowl	Bell Plain - Hale			6.14	HS
A940.6.288	0+00-0+75	Simple Bowl	Bell Plain - Hale			10.13	SH/GG
A940.6.3	00+0	Simple Bowl	Bell Plain - Hale			5.93	SH/GG
A940.6.307	00+0	Simple Bowl	Bell Plain - Hale			6.48	SH/GG
A940.6.352	0+20	Simple Bowl	Bell Plain - Hale			19.90	HS
A940.6.354	0+20-1+00	Simple Bowl	Bell Plain - Hale			7.97	SH
A940.6.354	0+20-1+00	Simple Bowl	Bell Plain - Hale			8.11	HS
A940.6.366	0+00-0+50	Simple Bowl	Bell Plain - Hale			27.76	SH
A940.6.366	0+00-0+50	Simple Bowl	Bell Plain - Hale			27.76	HS
A940.6.380	0+25-0+50	Simple Bowl	Bell Plain - Hale			10.36	HS
A940.6.380	0+25-0+50	Simple Bowl	Bell Plain - Hale			10.36	HS
A940.6.393	0+50-1+00	Simple Bowl	Bell Plain - Hale			4.29	SH/GG
A940.6.48	0+00	Simple Bowl	Bell Plain - Hale			7.71	SH/GG
A940.6.72	00+0	Simple Bowl	Bell Plain - Hale			30.38	SH/GG
A940.6.228	0+10	Simple Bowl	Carthage Incised - Akron	15	9	12.99	SH/GG

Catalog#	Square	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.218	0+00-0+50	Simple Bowl	Carthage Incised - Akron	22	S	5.84	SH/GG
A940.6.249	0+25	Simple Bowl	Carthage Incised - Akron	22	7	8.02	SH/GG
A940.6.220	0+50-1+100	Simple Bowl	Carthage Incised - Akron			9.94	HS
A940.6.221	00+0	Simple Bowl	Carthage Incised - Akron			21.34	HS
A940.6.230	0+10	Simple Bowl	Carthage Incised - Akron			14.92	SH/GG
A940.6.236	0+50-1+00	Simple Bowl	Carthage Incised - Akron			10.86	HS
A940.6.243	0+75-1+05	Simple Bowl	Carthage Incised - Akron			8.16	SH/GG
A940.6.243	0+75-1+05	Simple Bowl	Carthage Incised - Akron			9.31	SH
A940.6.248	0+20-1+00	Simple Bowl	Carthage Incised - Akron			13.60	SH/GG
A940.6.248	0+20-1+00	Simple Bowl	Carthage Incised - Akron			5.41	SH
A940.6.246	0+00-1+00	Simple Bowl	Carthage Incised - Unspecified	28	8	27.41	ΗS
A940.6.118	0+50-1+00	Simple Bowl	Moundville Incised - Moundville			29.94	HS
A940.6.266	0+50-1+00	Simple Bowl	Mississippi Plain - Warrior	18	10	13.28	HS
A940.6.386	0+50-1+00	Simple Bowl	Mississippi Plain - Warrior	18	7	36.33	HS
A940.6.276	0+00-0+55	Simple Bowl	Mississippi Plain - Warrior	22	10	31.53	SH
A940.6.366	0+00-0+50	Simple Bowl	Mississippi Plain - Warrior	24	6	12.15	HS
A940.6.366	0+00-0+50	Simple Bowl	Mississippi Plain - Warrior	24	6	12.15	HS
A940.6.389	0+50-1+00	Simple Bowl	Mississippi Plain - Warrior	24	6	51.80	HS
A940.6.276	0+00-0+55	Simple Bowl	Mississippi Plain - Warrior			72.10	HS
A940.6.322	0+25-0+50	Simple Bowl	Mississippi Plain - Warrior			17.40	HS
A940.6.354	0+20-1+00	Simple Bowl	Mississippi Plain - Warrior			8.71	SH
A940.6.384	0+50-0+75	Simple Bowl	Mississippi Plain - Warrior			68.83	HS
A940.6.71	0+00	Simple Bowl	Mississioni Plain - Warrior			5.69	SH

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Table A.10	10 Flaring	rim bowls from	Flaring rim bowls from the Museum Parking Area (MPA)	vrea (MP	A).		
Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.196	0+50-1+00	Flaring Rim Bowl	Addis Inc?			10.45	SH/GG
A940.6.307	00+0	Flaring Rim Bowl	Bell Plain - Hale			4.37	SH
A940.6.192	0+50-0+75	Flaring Rim Bowl	Bell Plain - Hale			5.55	SH
A940.6.308	0+00	Flaring Rim Bowl	Bell Plain - Hale			7.72	SH/GG
A940.6.32	0+75-1+50	Flaring Rim Bowl	Bell Plain - Hale			7 <i>.</i> 77	HS
A940.6.272	0+50-1+00	Flaring Rim Bowl	Bell Plain - Hale			9.51	SH/GG
A940.6.277	0+00-0+50	Flaring Rim Bowl	Bell Plain - Hale			10.70	GG
A940.6.174	0+50-1+00	Flaring Rim Bowl	Bell Plain - Hale			11.29	SH/GG
A940.6.332	0+50-1+00	Flaring Rim Bowl	Bell Plain - Hale			13.41	SH/GG
A940.6.216	0+80	Flaring Rim Bowl	Bell Plain - Hale			15.54	SH
A940.6.6	0+00	Flaring Rim Bowl	Bell Plain - Hale			15.75	SH/GG
A940.6.157	0+00-0+50	Flaring Rim Bowl	Bell Plain - Hale			15.97	SH
A940.6.190	0+25-0+75	Flaring Rim Bowl	Bell Plain - Hale			16.30	SH
A940.6.354	0+20-1+00	Flaring Rim Bowl	Bell Plain - Hale			18.18	SH
A940.6.25	0+00	Flaring Rim Bowl	Bell Plain - Hale			20.90	SH/GG
A940.6.334	0+50-1+00	Flaring Rim Bowl	Bell Plain - Hale			21.40	SH/GG
A940.6.209	0+20-1+00	Flaring Rim Bowl	Bell Plain - Hale	38	9	30.78	SH
A940.6.335	0+50-1+00	Flaring Rim Bowl	Bell Plain - Hale	44	S	36.87	HS
A940.6.324	0+25-0+50	Flaring Rim Bowl	Bell Plain - Hale	40	8	45.83	HS
A940.6.195	0+50-1+00	Flaring Rim Bowl	Bell Plain - Hale	34	8	62.71	SH
A940.6.109	0+10	Flaring Rim Bowl	Carthage Incised - Moon Lake			90.6	HS
A940.6.247		Flaring Rim Bowl	Carthage Incised - Moon Lake	8	16	23.48	HS
A940.6.249	0+25	Flaring Rim Bowl	Carthage Incised - Moon Lake			25.97	HS
A940.6.234	0+50-0+75	Flaring Rim Bowl	Carthage Incised - Moon Lake			32.01	SH/GG
A940.6.212	0+50-0+75	Flaring Rim Bowl	Carthage Incised - Unspecified			13.43	HS
A940.6.154	0+00	Flaring Rim Bowl	Carthage Incised - Unspecified			19.61	SH/GG
A940.6.234	0+50-0+75	Flaring Rim Bowl	Carthage Incised - Unspecified			20.55	SH/GG
A940.6.180	0+00	Flaring Rim Bowl	Carthage Incised - Unspecified			26.92	HS
A940.6.219	3+25	Flaring Rim Bowl	Carthage Incised - Unspecified	30	6	69.07	HS
A940.6.208	0+20	Flaring Rim Bowl	Carthage Incised - Unspecified			82.24	HS
A940.6.212	0+50-0+75	Flaring Rim Bowl	M. Eng - Unspecified			20.95	SH/GG
A940.6.192	0+50-0+75	Flaring Rim Bowl	M. Eng - Unspecified			24.74	SH/GG
A940.6.310	0+00	Flaring Rim Bowl	Mississippi Plain - Warrior			7.16	HS
A940.6.381	0+25-0+75	Flaring Rim Bowl	Mississippi Plain - Warrior			8.78	SH
A940.6.381	0+25-0+75	Flaring Rim Bowl	Mississippi Plain - Warrior			8.78	SH
A940.6.352	0+20	Flaring Rim Bowl	Mississippi Plain - Warrior			10.83	SH
A940.6.45	0+00	Flaring Rim Bowl	Mississippi Plain - Warrior			15.05	SH
A940.6.369	0+00	Flaring Rim Bowl	Mississippi Plain - Warrior			16.64	HS
A940.6.338	0+75-1+05	Flaring Rim Bowl	Mississippi Plain - Warrior			25.83	HS
A940.6.355	0+25	Flaring Rim Bowl	Mississippi Plain - Warrior	40	9	28.30	HS
A940.6.308	0+00	Flaring Rim Bowl	Mississippi Plain - Warrior			28.98	HS
A940.6.104	00+0	Flaring Rim Bowl	Unclassified Engraved			34.24	

Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A940.6.174	0+50-1+00	Bottle	Bell Plain - Hale	8	13	8.75	SH/GG
A940.6.193	0+50-1+00	Bottle	Bell Plain - Hale			7.00	SH/GG
A940.6.199	0+50-1+00	Bottle	Bell Plain - Hale	8	12	14.76	SH/GG
A940.6.202	0+00-0+25	Bottle	Bell Plain - Hale	7	17	4.40	SH/GG
A940.6.308	0+00	Bottle	Bell Plain - Hale	10	7	16.44	SH/GG
A940.6.59	0+50-1+00	Bottle	Bell Plain - Hale	18	11	39.11	SH/GG
A940.6.76	0+20-1+00	Bottle	Bell Plain - Hale	8	7	5.44	SH/GG
A940.6.283	3+25	Bottle	Mississippi Plain - Warrior	4	29	11.88	SH

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Catalog #	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt. (gm)	Paste
A940.3.153		Jar	х		Autauga Plain			26.40	GT
A940.3.154	0+10	Jar	X		Autauga Plain			10.71	Sand
A940.3.9	30 + 40	Jar			Baytown Plain			8.96	GG
A940.3.152		Jar	X		Bell Plain - Hale			21.02	SH
A940.3.17		Jar	X		Moundville Incised - Carrollton	18	15	53.67	Sand
A940.3.159	10 + 20	Jar	X		Moundville Incised - Carrollton	20	6	11.76	HS
A940.3.10	40 + 50	Jar			Moundville Incised - Carrollton			17.80	HS
A940.3.32	0+10	Jar	Х		Moundville Incised - Carrollton			24.30	HS
A940.3.39	20 + 30	Jar	Х	X	Moundville Incised - Carrollton			4.98	HS
A940.3.43	30 + 40	Jar	Х		Moundville Incised - Carrollton			10.90	HS
A940.3.20	40+50	Jar	х		Moundville Incised - Carrollton			136.20	HS
A940.3.22	10 + 20	Jar	Х		Moundville Incised - Moundville	12	11	7.11	HS
A940.3.100	40 + 50	Jar	X		Moundville Incised - Moundville	15	10	12.80	HS
A940.3.185	10+20	Jar	Х	X	Moundville Incised - Moundville	18	8	15.42	HS
A940.3.22	10+20	Jar	Х		Moundville Incised - Moundville	22	8	16.65	HS
A940.3.36	10+20	Jar	Х	Х	Moundville Incised - Moundville	22	7	16.30	HS
A940.3.41	20 + 30	Jar	X		Moundville Incised - Moundville	22	16	45.66	HS
A940.3.19	30 + 40	Jar	Х		Moundville Incised - Moundville	24	8	63.21	HS
A940.3.33	10+20	Jar	Х		Moundville Incised - Moundville	26	8	58.43	HS
A940.3.33	10+20	Jar	Х	Х	Moundville Incised - Moundville	30	9	17.06	HS
A940.3.378	10+20	Jar	Х		Moundville Incised - Moundville	30	9	35.37	HS
A940.3.17		Jar	X		Moundville Incised - Moundville	34	11	51.05	HS
A940.3.48	40+50	Jar	X	×	Moundville Incised - Moundville	38	9	57.30	SH
A940.3.25	30 + 40	Jar	Х		Moundville Incised - Moundville			10.67	ΗS
A940.3.31	0+10	Jar	X		Moundville Incised - Moundville			8.45	SH
A940.3.32	0+10	Jar	X		Moundville Incised - Moundville			17.20	HS
A940.3.40	20 + 30	Jar	Х		Moundville Incised - Moundville			15.56	HS
A940.3.47	40 + 50	Jar	X		Moundville Incised - Moundville			8.78	SH
A940.3.47	40+50	Jar	х		Moundville Incised - Moundville			8.95	SH
A940.3.57	40+50	Jar	Х		Moundville Incised - Moundville			11.50	SH
A940.3.17		Jar	X		Moundville Incised - Moundville			45.71	SH
A940.3.19	30 + 40	Jar	Х		Moundville Incised - Moundville			21.10	SH
A940.3.378	10+20	Jar	Х		Moundville Incised - Moundville			23.89	SH
A940.3.378	10+20	Jar	X		Moundville Incised - Moundville			10.70	SH
A940.3.378	10+20	Jar	Х		Moundville Incised - Moundville			18.02	SH
A940.3.378	10 + 20	Jar	X		Moundville Incised - Moundville			25.47	HS
A940.3.378	10+20	Jar	Х	х	Moundville Incised - Moundville			14.66	HS
A940.3.41	20+30	Jar	Х	Х	Moundville Incised - Moundville			16.65	ΗS
A940.3.41	20+30	Jar	Х	X	Moundville Incised - Moundville			8.18	SH
A940.3.41	20 + 30	Jar	Х		Moundville Incised - Moundville			10.24	ΗS
A940.3.50	40+50	Jar	Х		Moundville Incised - Moundville			5.85	ΗS
A940.3.140	40+50	Oversized Jar	Х		Moundville Incised - Moundville			62.47	ΗS
A940.3.155	30+40	Jar	Х	X	Moundville Incised - Moundville			11.86	SH
A940.3.155	30+40	Iar	X	>	Moundarille Indiad Moundarille				
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Catalog #	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt. (gm)	Paste
A940.3.27	40+50	Jar	Х		Moundville Incised - Moundville			21.68	SH
A940.3.33	10+20	Jar	Х	Х	Moundville Incised - Oliver	28	10	34.78	ΗS
A940.3.19	30 + 40	Jar	Х	Х	Moundville Incised – Oliver			8.75	HS
A940.3.32	0+10	Jar			Moundville Incised – Unspecified	14	11	28.45	SH
A940.3.40		Jar	Х	Х	Moundville Incised – Unspecified	22	7	13.05	SH
A940.3.39	20+30	Jar	X	Х	Moundville Incised – Unspecified	34	6	43.49	SH
A940.3.24	20 + 40	Jar			Moundville Incised – Unspecified	36	×	88.63	ΗS
A940.3.17		Jar	X		Moundville Incised – Unspecified			11.86	HS
A940.3.185	10+20	Jar			Moundville Incised – Unspecified			22.47	ΗS
A940.3.185	10+20	Jar			Mississippi Plain - Warrior	11	14	22.59	ΗS
A940.3.378	10+20	Jar	Х		Mississippi Plain - Warrior	18	11	41.90	SH
A940.3.185	10+20	Jar	Х		Mississippi Plain - Warrior	22	13	42.87	HS
A940.3.153		Jar		Х	Mississippi Plain - Warrior	23	14	72.78	ΗS
A940.3.155	30 + 40	Jar	Х	Х	Mississippi Plain - Warrior	26	7	30.06	HS
A940.3.153		Jar	Х		Mississippi Plain - Warrior	28	10	73.85	ΗS
A940.3.26	0+25-0+75	Jar			Mississippi Plain - Warrior	30	S	23.60	ΗS
A940.3.153		Jar	Х		Mississippi Plain - Warrior	36	8	49.04	ΗS
A940.3.124	0+10	Jar	Х		Mississippi Plain - Warrior			8.42	ΗS
A940.3.151		Jar	Х		Mississippi Plain - Warrior			6.27	ΗS
A940.3.151		Jar	Х		Mississippi Plain - Warrior			15.63	HS
A940.3.151		Jar	Х		Mississippi Plain - Warrior			15.79	HS
A940.3.153		Jar	Х	Х	Mississippi Plain - Warrior			16.65	HS
A940.3.153		Jar			Mississippi Plain - Warrior			125.44	HS
A940.3.153		Jar	×		Mississippi Plain - Warrior			43.86	HS
A940.3.153		Jar	×		Mississippi Plain - Warrior			11.60	ΗS
A940.3.154		Jar	Х		Mississippi Plain - Warrior			9.05	SH
A940.3.155	30 + 40	Jar	Х	Х	Mississippi Plain - Warrior			7.36	SH
A940.3.155	30 + 40	Jar	Х		Mississippi Plain - Warrior			6.25	SH
A940.3.155	30 + 40	Jar	Х		Mississippi Plain - Warrior			4.01	SH
A940.3.155	30 + 40	Jar	Х		Mississippi Plain - Warrior			8.35	SH
A940.3.156	40+50	Jar	Х		Mississippi Plain - Warrior			21.35	SH
A940.3.158	0+10	Jar	X		Mississippi Plain - Warrior			10.21	SH
A940.3.160	20+30	Jar	Х	Х	Mississippi Plain - Warrior			8.17	ΗS
A940.3.161	20 + 40	Jar	Х		Mississippi Plain - Warrior			10.06	ΗS
A940.3.161	20 + 40	Jar	Х		Mississippi Plain - Warrior			33.80	HS
A940.3.162	30 + 40	Jar	Х		Mississippi Plain - Warrior			38.46	ΗS
A940.3.162	30 + 40	Jar	Х		Mississippi Plain - Warrior			21.38	HS
A940.3.172	0+10	Jar	X		Mississippi Plain - Warrior			8.99	HS
A940.3.172	0+10	Jar		Х	Mississippi Plain - Warrior			7.73	ΗS
A940.3.172	0+10	Jar	Х	Х	Mississippi Plain - Warrior			13.03	HS
A940.3.172	0+10	Jar	×	х	Mississippi Plain - Warrior			8.97	HS
A940.3.178	20+30	Jar			Mississippi Plain - Warrior			55.78	ΗS
A940.3.185	10+20	Jar	Х		Mississippi Plain - Warrior			10.87	SH
A940.3.185	10+20	Jar	Х		Mississippi Plain - Warrior			5.91	SH
940.3.185	10+20	Jar	×		Mississippi Plain - Warrior			16 74	ΗS

atalog #	Block	Catalog # Block Basic Shape Fold Flat Type/Variety	Fold	Flat	Type/Variety	Orifice	%	% Wt. (gm)	Paste
940.3.26	0+25-0+75	Jar	Х		Mississippi Plain - Warrior			16.96	HS
940.3.26	0+25-0+75	Jar			Mississippi Plain - Warrior			12.21	SH
940.3.48	40 + 50	Jar	Х		Mississippi Plain - Warrior			34.52	HS
940.3.153		Jar			Mississippi Plain – Hull Lake	21	16	108.92	SH/GG
940.3.153		Jar		Х	Mississippi Plain - Hull Lake	29	S	93.00	SH/GG

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt. (g)	Paste
A940.3.159	10+20	Beaker	Bell Plain - Hale	6	13	10.44	SH/GG
A940.3.129	10+20	Bowl	Bell Plain - Hale			3.67	SH/GG
A940.3.142	40+50	Bowl	Bell Plain - Hale			10.21	SH
A940.3.152		Bowl	Mississippi Plain - Warrior			14.30	SH
A940.3.22	10+20	Bowl	Unclassified Engraved			5.55	GG
A940.3.66	40+60	Restricted Bowl	Carthage Incised - Akron			13.27	SH
A940.3.66	40+60	Restricted Bowl	Carthage Incised - Akron			13.28	SH
A940.3.139	30 + 40	Restricted Rim Bowl	Bell Plain - Hale			8.74	SH/GG
A940.3.155	30+40	Restricted Rim Bowl	Bell Plain - Hale	12	10	7.57	SH
A9403.3142	0+50-1+00	Restricted Rim Bowl	Bell Plain - Hale	×	12	10.10	SH
A940.3.84	20+30	Restricted Rim Bowl	Carthage Incised - Akron			19.83	SH
A940.3.82	30 + 40	Restricted Rim Bowl	Carthage Incised - Summerville	8	16	8.19	SH/GG
A940.3.95	20+30	Restricted Rim Bowl	Carthage Incised - Unspecified			7.85	SH
A940.3.96	30+40	Restricted Rim Bowl	Carthage Incised - Unspecified	18	9	13.00	SH
A940.3.96	30 + 40	Restricted Rim Bowl	Moundville Engraved - Elliots Creek			8.59	SH
A940.3.178	20+30	Restricted Rim Bowl	Mississippi Plain - Warrior			12.25	SH
A940.3.153		Short Neck Bowl	Bell Plain - Hale	13	10	33.25	SH
A940.3.185	10+20	Short Neck Bowl	Bell Plain - Hale	12	6	5.99	SH
A940.3.113	20+30	Simple Bowl	Bell Plain - Hale	10	15	8.67	SH
A940.3.124	0+10	Simple Bowl	Bell Plain - Hale			4.53	SH
<b>A</b> 940.3.127	10+20	Simple Bowl	Bell Plain - Hale			7.63	SH
A940.3.137	30+40	Simple Bowl	Bell Plain - Hale			10.16	SH
A940.3.138	30+40	Simple Bowl	Bell Plain - Hale			8.79	SH/GG
A940.3.139	30+40	Simple Bowl	Bell Plain - Hale	18	10	22.26	SH
<b>A</b> 940.3.140	40+50	Simple Bowl	Bell Plain - Hale			11.18	SH
A940.3.140	40+50	Simple Bowl	Bell Plain - Hale	22	7	6.85	SH
A940.3.141	40+50	Simple Bowl	Bell Plain - Hale			25.09	SH
A940.3.141	40+50	Simple Bowl	Bell Plain - Hale			15.29	SH
A940.3.141	40+50	Simple Bowl	Bell Plain - Hale			13.13	SH
A940.3.150	40+50	Simple Bowl	Bell Plain - Hale	16	12	16.73	SH/GG
A940.3.151		Simple Bowl	Bell Plain - Hale	14	10	6076.00	SH/GG
A940.3.155	30+40	Simple Bowl	Bell Plain - Hale	22	7	16.43	HS
A940.3.159	10+20	Simple Bowl	Bell Plain - Hale			6.96	HS
A940.3.172	0+10	Simple Bowl	Bell Plain - Hale			6.37	SH
A940.3.172	0+10	Simple Bowl	Bell Plain - Hale			9.31	SH/GG
A940.3.185	10+20	Simple Bowl	Bell Plain - Hale			23.63	HS
A940.3.185	30+40	Simple Bowl	Bell Plain - Hale			8.49	SH
A940.3.89	0+20-1+00	Simple Bowl	Bell Plain - Hale	24	7	17.84	HS
A940.3.16		Simple Bowl	Carthage Incised - Akron			9.29	$\mathbf{SH}$
A940.3.391	10+20	Simple Bowl	Carthage Incised - Akron			7.99	SH
<b>A</b> 940.3.80	Top Soil	Simple Bowl	Carthage Incised - Akron			7.10	SH
A940.3.83	10+20	Simple Bowl	Carthage Incised - Summerville			6.26	SH
A940.3.120	0+10	Simple Bowl	Carthage Incised - Unspecified			11.60	SH
A940.3.98	40+50	Simple Bowl	Carthage Incised - Unspecified			14.22	SH
A940.3.155	30 + 40	Simple Bowl	Mississippi Plain - Warrior	44	11	98.23	SH

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atalog#	Block	Basic Shape	Type/Variety	Orifice %	%	Wt. (g)	) Paste
940.3.26	0+25-0+75	Simple Bowl	Mississippi Plain - Warrior	20	12	32.66	ΗS
940.3.31		Simple Bowl	Mississippi Plain - Warrior			19.91	SH
v940.3.73	0+10	Simple Bowl	RS-SH			5.16	SH
A940.3.73	0+10	Simple Bowl	RS-SH			5.17	$\mathbf{SH}$
1940.3.46	40+50	Simple Bowl	Carthage Incised - Unspecified			11.44	ΗS

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt (g)	Paste
A940.3.105		Flaring Rim Bowl	Bell Plain - Hale			20.30	HS
A940.3.105		Flaring Rim Bowl	Bell Plain - Hale			14.50	SH
A940.3.117	40+50	Flaring Rim Bowl	Bell Plain - Hale			25.70	SH
A940.3.123	0+10	Flaring Rim Bowl	Bell Plain - Hale			37.60	SH
A940.3.124	0+10	Flaring Rim Bowl	Bell Plain - Hale			11.39	SH
A940.3.135	20+30	Flaring Rim Bowl	Bell Plain - Hale	28	9	26.98	SH
A940.3.135	20+30	Flaring Rim Bowl	Bell Plain - Hale			11.28	HS
A940.3.139	30 + 40	Flaring Rim Bowl	Bell Plain - Hale			10.12	SH
A940.3.143	40+50	Flaring Rim Bowl	Bell Plain - Hale			21.20	SH
A940.3.150	40+50	Flaring Rim Bowl	Bell Plain - Hale	26	6	36.21	SH
A940.3.185	10+20	Flaring Rim Bowl	Bell Plain - Hale			9.07	HS
A940.3.26	0+25-0+75	Flaring Rim Bowl	Bell Plain - Hale			10.18	SH/GG
A940.3.97	30 + 40	Flaring Rim Bowl	Bell Plain - Hale			34.19	SH
A940.3.87	0+10	Flaring Rim Bowl	Carthage Incised - Carthage			13.10	SH
A940.3.30	0+10	Flaring Rim Bowl	Carthage Incised - Moon Lake			14.90	HS
A940.3.57	40+50	Flaring Rim Bowl	Carthage Incised - Summerville			14.18	HS
A940.3.79	Surface	Flaring Rim Bowl	Carthage Incised - Summerville			5.50	SH
A940.3.138	30 + 40	Flaring Rim Bowl	Moundville Engraved - Elliots Creek	34	5	108.46	HS
A940.3.99	40+50	Flaring Rim Bowl	Moundville Engraved - Elliots Creek			24.20	HS
A940.3.152		Flaring Rim Bowl	Mississippi Plain - Warrior			15.56	HS
A940.3.15	ABS	Flaring Rim Rowl	Unclassified Engraved			17 78	SH

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Table A.	15 Bottl	es from the	Table A.15 Bottles from the Administration Building (ADM).	n Build	ing (/	ADM).	
Catalog#	Square	Basic Shape	Type/Variety	Orifice	%	Wt (g)	Paste
A940.3.125	10+20		Bell Plain - Hale	9	17	4.30	SH
A940.3.144	40+50		Bell Plain - Hale	8	11	15.80	SH
A940.3.124	0+10	Bottle	Bell Plain - Hale	10	8	8.26	SH/GG
A940.3.144	40+50		Bell Plain - Hale	10	9	8.25	SH/GG
A940.3.124	0+10		Bell Plain - Hale	11	6	12.70	HS
A940.3.121	0+10		Bell Plain - Hale			5.40	SH/GG
A940.3.121	0+10		Bell Plain - Hale			4.90	SH/GG
A940.3.134	20+30		Bell Plain - Hale			11.60	SH
A940.3.139	30 + 40		Bell Plain - Hale			25.50	SH/GG
A940.3.71	10+20	Bottle	RS-SH	8	11	13.00	SH
A940.3.70	0+10	Bottle	RS-SH			9.70	SH
A940.3.72	40+50	Bottle	RS-SH			7.32	SH

Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.456	72+00	Jar			Baytown Plain	16		20.09	GG
A941.1.499	71+95	Jar			Bell Plain - Hale	8		31.94	ΗS
A941.1.1077	71+50-72+00	Jar	Х		Bell Plain - Hale	26	5 10	28.00	ΗS
A941.1.1078	71+00-72+00	Jar	х	x	Bell Plain - Hale	44	4	15.00	ΗS
A941.1.725	71+00-71+50	Jar	х		Moundville Incised - Carrollton	36	1	133.20	ΗS
A941.1.726	71+00-71+50	Jar	х		Moundville Incised - Carrollton	38	5 7	63.37	SH
A941.1.720	70+75	Jar	х		Moundville Incised - Carrollton	4	9 1	41.40	HS
A941.1.265	71+20	Jar	x		Moundville Incised - Carrollton	4	9 1	80.11	SH
A941.1.720	70+75	Jar	х		Moundville Incised - Carrollton			35.30	HS
A941.1.726	71+00-71+50	Jar	x		Moundville Incised - Carrollton			42.45	ΗS
A941.1.731	72+00	Jar	х		Moundville Incised - Carrollton			30.81	HS
A941.1.731	72+00	Jar	х		Moundville Incised - Carrollton			10.45	ΗS
A941.1.732	72+05	Jar	х		Moundville Incised - Carrollton			43.43	SH
A941.1.725	71+00-71+50	Jar	x	×	Moundville Incised - Moundville	0,	) 45	48.00	SH
A941.1.760	70+50	Jar	х		Moundville Incised - Moundville	16	5 12	16.00	SH
A941.1.725	71+00-71+50	Jar	x	×	Moundville Incised - Moundville	16	5 10	25.60	SH
A941.1.729	71+70	Jar			Moundville Incised - Moundville	1	11		$\mathbf{SH}$
A941.1.722	71+05	Jar	х		Moundville Incised - Moundville	18	3 12	37.60	HS
A941.1.729	71+70	Jar	х		Moundville Incised - Moundville	20	) 22	89.39	$\mathbf{SH}$
A941.1.760	70+50	Jar	x		Moundville Incised - Moundville	21	11	37.00	ΗS
A941.1.766	71+95	Jar	x		Moundville Incised - Moundville	25	6	92.00	SH
A941.1.764	71+00	Jar	х	x	Moundville Incised - Moundville	26	8	19.00	HS
A941.1.722	71+05	Jar	x		Moundville Incised - Moundville	26	5 7	13.10	HS
A941.1.723	71+30	Jar	х		Moundville Incised - Moundville	26	5 10	66.22	SH
A941.1.723	71+30	Jar	Х		Moundville Incised - Moundville	56	5 10	66.22	ΗS
A941.1.729	71+70	Jar	х		Moundville Incised - Moundville	26	5 12	112.78	SH
A941.1.766	71+95	Jar	x		Moundville Incised - Moundville	26	5 10	39.00	SH
A941.1.729	71+70	Jar	х	x	Moundville Incised - Moundville	27	_	35.70	ΗS
A941.1.728	71+65	Jar			Moundville Incised - Moundville	28	3 10	59.53	HS
A941.1.1029	71+70	Jar	х	x	Moundville Incised - Moundville	28	3 11	112.00	HS
A941.1.766	71+95	Jar	х		Moundville Incised - Moundville	28	9 8	33.00	ΗS
A941.1.763	70+65	Jar	х		Moundville Incised - Moundville	30	12	45.00	ΗS
A941.1.721	70+85	Jar	x	×	Moundville Incised - Moundville	31	5	44.85	ΗS
A941.1.1024	71+00-71+50	Jar	х	x	Moundville Incised - Moundville	31	21	127.34	HS
A941.1.732	72+05	Jar	x		Moundville Incised - Moundville	32	8	51.28	ΗS
A941.1.729	71+70	Jar	х		Moundville Incised - Moundville	33	12	45.01	HS
A941.1.726	71+00-71+50	Jar	x		Moundville Incised - Moundville	34	t 5	36.59	SH
A941.1.1078	71+00-72+00	Jar	х	x	Moundville Incised - Moundville	37	t 5	14.00	HS
A941.1.1028	71+65	Jar			Moundville Incised - Moundville	37	9 1	118.52	ΗS
A941.1.729	71+70	Jar	х	x	Moundville Incised - Moundville	37	14	77.85	HS
A941.1.721	70+85	Jar	х	x	Moundville Incised - Moundville	35	5	13.40	ΗS
A941.1.726	71+00-71+50	Jar	х		Moundville Incised - Moundville	3	3 10	92.54	SH
A941.1.726	71+00-71+50	Jar	x		Moundville Incised - Moundville	38	9	34.50	ΗS
A941.1.731	72+00	Jar	x		Moundville Incised - Moundville	38	6	72.74	$\mathbf{SH}$
A941.1.729	71+70	Jar	х		Moundville Incised - Moundville	4	10	55.98	HS

Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.764	71+00	Jar	х		Moundville Incised - Moundville	42	6	79.00	HS
A941.1.1075	71+35	Jar	x	x	Moundville Incised - Moundville			24.10	HS
A941.1.760	70+50	Jar	х		Moundville Incised - Moundville			16.00	HS
A941.1.760	70+50	Jar	x		Moundville Incised - Moundville			20.00	HS
A941.1.764	71+00	Jar	x		Moundville Incised - Moundville			26.00	HS
A941.1.725	71+00-71+50	Jar	x		Moundville Incised - Moundville			18.00	ΗS
A941.1.726	71 + 00 - 71 + 50	Jar	x		Moundville Incised - Moundville			8.78	HS
A941.1.726	71 + 00 - 71 + 50	Jar	x		Moundville Incised - Moundville			7.69	HS
A941.1.726	71 + 00 - 71 + 50	Jar	x		Moundville Incised - Moundville			72.81	HS
A941.1.728	71+65	Jar	x		Moundville Incised - Moundville			16.58	SH
A941.1.729	71+70	Jar	х		Moundville Incised - Moundville			26.70	HS
A941.1.729	71+70	Jar	x	x	Moundville Incised - Moundville			23.94	SH
A941.1.729	71+70	Jar	x	x	Moundville Incised - Moundville			35.63	SH
A941.1.729	71+70	Jar	x		Moundville Incised - Moundville			29.70	SH
A941.1.729	71+70	Jar	x	x	Moundville Incised - Moundville			30.48	SH
A941.1.729	71+70	Jar	x		Moundville Incised - Moundville			12.93	SH
A941.1.729	71+70	Jar	x	x	Moundville Incised - Moundville			96.71	SH
A941.1.765	71+85	Jar	×	×	Moundville Incised - Moundville			24.39	HS
A941.1.766	71+95	Jar	x		Moundville Incised - Moundville			8.00	SH
A941.1.1083	71+95	Jar	x		Moundville Incised - Moundville			6.88	HS
A941.1.766	71+95	Jar	x		Moundville Incised - Moundville			15.00	SH
A941.1.766	71+95	Jar	x		Moundville Incised - Moundville			21.00	HS
A941.1.1083	71+95	Jar	х		Moundville Incised - Moundville			25.75	SH/GG
A941.1.731	72+00	Jar	х		Moundville Incised - Moundville			19.61	SH
A941.1.731	72+00	Jar	x		Moundville Incised - Moundville			60.18	SH
A941.1.731	72+00	Jar	х		Moundville Incised - Moundville			57.71	SH
A941.1.731	72+00	Jar	×		Moundville Incised - Moundville			20.29	SH
A941.1.732	72+05	Jar	x		Moundville Incised - Moundville			46.83	ΗS
A941.1.732	72+05	Jar	×		Moundville Incised - Moundville			28.75	HS
A941.1.732	72+05	Jar	x		Moundville Incised - Moundville			7.25	SH
A941.1.732	72+05	Jar	×		Moundville Incised - Moundville			50.59	SH
A941.1.732	72+05	Jar	x	x	Moundville Incised - Moundville			47.98	SH
A941.1.725	71 + 00 - 71 + 50	Jar	×		Moundville Incised - Oliver	21	11	77.40	SH
A941.1.270	71+70	Jar			Moundville Incised - Oliver	22	2	25.00	SH
A941.1.765	71+85	Jar	×	×	Moundville Incised - Oliver	24	11	59.74	HS
A941.1.725	71 + 00 - 71 + 50	Jar	x		Moundville Incised - Oliver	30	12	140.00	SH
A941.1.725	71 + 00 - 71 + 50	Jar	x		Moundville Incised - Oliver	36	12	150.50	SH
A941.1.720	70+75	Jar	x		Moundville Incised - Oliver	38	5	27.70	SH
A941.1.725	71+00-71+50	Jar	x	x	Moundville Incised - Oliver			35.05	SH
A941.1.729	71+70	Jar			Moundville Incised - Oliver				SH
A941.1.762	09+02	Jar	х		Moundville Incised - Oliver			20.00	SH
A941.1.721	70+85	Jar	х		Moundville Incised - Unspecified	18	6	36.30	SH
A941.1.721	70+85	Jar	х	x	Moundville Incised - Unspecified	22	10	34.50	SH
A941.1.720	70+75	Jar	x	x	Moundville Incised - Unspecified	28	9	7.70	SH
A941.1.441	70+85	Jar	x		Moundville Incised - Unspecified			10.61	ΗS
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1017	70+85	Jar			Mississippi Plain - Warrior	11	15	33.00	SH
A941.1.1017	70+85	Jar			Mississippi Plain - Warrior	Ξ	22	48.00	SH
A941.1.1029	71+70	Jar	х	x	Mississippi Plain - Warrior	11	18	17.00	HS
A941.1.1079	71+50	Jar	x		Mississippi Plain - Warrior	14	6	7.00	SH
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	14	10	11.00	$\mathbf{SH}$
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	14	18	39.00	SH
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior	15	17	24.00	ΗS
A941.1.1029	71+70	Jar	×	x	Mississippi Plain - Warrior	15	16	47.59	ΗS
A941.1.1087	71+00-71+50	Jar	х	x	Mississippi Plain - Warrior	16	6	14.00	ΗS
A941.1.1029	71+70	Jar	×		Mississippi Plain - Warrior	16	10.5	21.00	HS
A941.1.1031	71+75	Jar			Mississippi Plain - Warrior	16	S	11.00	HS
A941.1.1020	71+15	Jar	x		Mississippi Plain - Warrior	18	15	45.30	SH
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior	18	10	11.00	HS
A941.1.1028	71+65	Jar	×		Mississippi Plain - Warrior	18	10	25.06	HS
A941.1.1028	71+65	Jar	х	х	Mississippi Plain - Warrior	18	11	38.37	HS
A941.1.1028	71+65	Jar			Mississippi Plain - Warrior	19	9	3.92	HS
A941.1.1071	70+50	Jar	х		Mississippi Plain - Warrior	20	17	69.20	ΗS
A941.1.1087	71+00-71+50	Jar	x		Mississippi Plain - Warrior	20	7	34.00	HS
A941.1.1023	71+35	Jar	х		Mississippi Plain - Warrior	20	12	19.00	HS
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	20	6	23.00	HS
A941.1.1082	71+85	Jar	х		Mississippi Plain - Warrior	20	8	40.00	HS
A941.1.1034	72+05	Jar	х	х	Mississippi Plain - Warrior	20	6	13.00	SH
A941.1.1029	71+70	Jar	x	x	Mississippi Plain - Warrior	21	8	21.00	ΗS
A941.1.1087	71+00-71+50	Jar	х	x	Mississippi Plain - Warrior	22	10	57.00	SH
A941.1.1080	71+50	Jar	х		Mississippi Plain - Warrior	22	7	61.00	HS
A941.1.1031	71+50-72+00	Jar	х		Mississippi Plain - Warrior	22	10	28.00	SH
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	22	6	13.00	SH
A941.1.1074	71+00	Jar		x	Mississippi Plain - Warrior	22	20	103.83	SH
A941.1.1029	71+70	Jar	×		Mississippi Plain - Warrior	23	б	25.00	SH
A941.1.1074	71+00	Jar	х	x	Mississippi Plain - Warrior	24	9	7.40	ΗS
A941.1.1024	71+00-71+50	Jar	x	x	Mississippi Plain - Warrior	24	7	12.30	SH
A941.1.1087	71+00-71+50	Jar	х		Mississippi Plain - Warrior	24	12	54.00	HS
A941.1.1078	71+00-72+00	Jar	x	x	Mississippi Plain - Warrior	24	5	9.00	ΗS
A941.1.1078	71+00-72+00	Jar	х	х	Mississippi Plain - Warrior	24	2	15.00	SH
A941.1.1023	71+35	Jar	x		Mississippi Plain - Warrior	24	13	71.00	HS
A941.1.1081	71+55	Jar	х	х	Mississippi Plain - Warrior	24	7	13.30	ΗS
A941.1.1028	71+65	Jar	×	x	Mississippi Plain - Warrior	24	10	77.44	HS
A941.1.1083	71+95	Jar	x		Mississippi Plain - Warrior	24	8	17.81	ΗS
A941.1.1083	71+95	Jar	x	x	Mississippi Plain - Warrior	24	13	183.45	HS
A941.1.1024	71+00-71+50	Jar	х		Mississippi Plain - Warrior	24	7	12.30	HS
A941.1.1024	71+00-71+50	Jar	х	х	Mississippi Plain - Warrior	24	31	139.92	HS
A941.1.1071	70+50	Jar			Mississippi Plain - Warrior	25	8	30.09	ΗS
A941.1.1082	71+85	Jar	х	x	Mississippi Plain - Warrior	25	6	28.00	HS
A941.1.1017	70+85	Jar			Mississippi Plain - Warrior	26	18	101.00	HS
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1025	71+50	Jar	×		Mississippi Plain - Warrior	26	~	28.00	ΗS
A941.1079	71+50	Jar	х		Mississippi Plain - Warrior	26	10	94.28	SH
A941.1.1080	71+50	Jar	x		Mississippi Plain - Warrior	26	8	33.45	HS
A941.1.1029	71+70	Jar	х	x	Mississippi Plain - Warrior	26	8	24.00	ΗS
A941.1.1029	71+70	Jar	×		Mississippi Plain - Warrior	26	8	37.00	HS
A941.1.1029	71+70	Jar	Х	х	Mississippi Plain - Warrior	26	8	107.90	SH
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior	26	11	99.00	ΗS
A941.1.1028	71+65	Jar	х	x	Mississippi Plain - Warrior	27	9	63.34	HS
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	27	10	53.00	HS
A941.1.1082	71+85	Jar	х		Mississippi Plain - Warrior	27	6	51.00	ΗS
A941.1.1071	70+50	Jar	х	x	Mississippi Plain - Warrior	28	9	12.06	HS
A941.1.1071	70+50	Jar	х		Mississippi Plain - Warrior	28	7	26.46	SH
A941.1.1074	71+00	Jar		x	Mississippi Plain - Warrior	28	4	10.10	HS
A941.1.1078	71+00-72+00	Jar	х	x	Mississippi Plain - Warrior	28	S	7.00	SH
A941.1.1025	71+50	Jar	х		Mississippi Plain - Warrior	28	8	50.00	SH
A941.1.1080	71+50	Jar			Mississippi Plain - Warrior	28	12	121.00	HS
A941.1.1080	71+50	Jar			Mississippi Plain - Warrior	28	11	149.00	HS
A941.1.1081	71+50	Jar	х	x	Mississippi Plain - Warrior	28	14	128.00	ΗS
A941.1.1077	71+50-72+00	Jar	х	x	Mississippi Plain - Warrior	28	11	76.00	HS
A941.1.1028	71+65	Jar	×		Mississippi Plain - Warrior	28	6	37.51	SH
A941.1.1029	71+70	Jar	х		Mississippi Plain - Warrior	28	6	37.00	SH
A941.1.1032	72+00	Jar	х	x	Mississippi Plain - Warrior	28	9	19.00	ΗS
A941.1.1031	71+75	Jar	х	x	Mississippi Plain - Warrior	29	6	37.00	ΗS
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior	30	9	18.62	ΗS
A941.1.1072	70+60	Jar	х		Mississippi Plain - Warrior	30	9	6.78	SH
A941.1.1018	71+00	Jar	x	×	Mississippi Plain - Warrior	30	10	58.00	ΗS
A941.1.1018	71+00	Jar	x		Mississippi Plain - Warrior	30	9	22.00	SH
A941.1.1074	71+00	Jar	×	x	Mississippi Plain - Warrior	30	7	53.33	HS
A941.1.1078	71+00-72+00	Jar	х	x	Mississippi Plain - Warrior	30	2	34.00	SH
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior	30	9	23.00	ΗS
A941.1.1079	71+50	Jar	х		Mississippi Plain - Warrior	30	8	42.00	ΗS
A941.1.1029	71+70	Jar	х	x	Mississippi Plain - Warrior	30	9	30.00	ΗS
A941.1.1029	71+70	Jar	х	x	Mississippi Plain - Warrior	30	6	42.00	ΗS
A941.1.1029	71+70	Jar	х	x	Mississippi Plain - Warrior	30	10	48.00	SH
A941.1.1029	71+70	Jar	x	×	Mississippi Plain - Warrior	30	30	12.00	HS
A941.1.1031	71+75	Jar	х	x	Mississippi Plain - Warrior	30	9	45.00	HS
A941.1.1031	71+75	Jar	х		Mississippi Plain - Warrior	30	с	20.00	ΗS
A941.1.1082	71+85	Jar	х	x	Mississippi Plain - Warrior	30	9	18.00	HS
A941.1.1029	71+70	Jar	х		Mississippi Plain - Warrior	31	4	26.80	HS
A941.1.1082	71+85	Jar	х	x	Mississippi Plain - Warrior	31	9	41.00	HS
A941.1.1017	70+85	Jar	×	x	Mississippi Plain - Warrior	32	8	31.00	ΗS
A941.1.1024	71+00-71+50	Jar	х	x	Mississippi Plain - Warrior	32	8	57.50	HS
A941.1.1026	71+00-71+50	Jar	×	x	Mississippi Plain - Warrior	32	S	20.00	HS
A941.1.1026	71+00-71+50	Jar	х	x	Mississippi Plain - Warrior	32	ŝ	20.00	SH
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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.1078	71+00-72+00	Jar	х	x	Mississippi Plain - Warrior	32	6	61.00	SH
A941.1.1080	71+50	Jar	x		Mississippi Plain - Warrior	32	7	32.80	SH
A941.1.1080	71+50	Jar	Х		Mississippi Plain - Warrior	32	6	51.00	ΗS
A941.1.1031	71+50-72+00	Jar	х	x	Mississippi Plain - Warrior	32	6	109.00	SH
A941.1.1077	71+50-72+00	Jar	х		Mississippi Plain - Warrior	32	20	211.00	SH
A941.1.1028	71+65	Jar	х		Mississippi Plain - Warrior	32	5	21.26	HS
A941.1.1029	71+70	Jar	х		Mississippi Plain - Warrior	32	7	97.00	SH
A941.1.1017	70+85	Jar			Mississippi Plain - Warrior	34	4	36.00	SH
A941.1.1024	71+00-71+50	Jar	х		Mississippi Plain - Warrior	34	11	61.50	HS
A941.1.1024	71+00-71+50	Jar	x		Mississippi Plain - Warrior	34	5	14.00	HS
A941.1.1024	71+00-71+50	Jar	x		Mississippi Plain - Warrior	34	2	14.00	HS
A941.1.1078	71+00-72+00	Jar	x		Mississippi Plain - Warrior	34	S	10.00	HS
A941.1.1023	71+35	Jar	х		Mississippi Plain - Warrior	34	14	123.00	HS
A941.1.1031	71+50-72+00	Jar	x	x	Mississippi Plain - Warrior	34		37.00	HS
A941.1.1028	71+65	Jar	х	х	Mississippi Plain - Warrior	34	10	75.70	SH
A941.1.1082	71+85	Jar	x		Mississippi Plain - Warrior	34	9	45.00	HS
A941.1.1073	70+65	Jar	Х		Mississippi Plain - Warrior	36	×	74.45	HS
A941.1.1018	71+00	Jar	x	x	Mississippi Plain - Warrior	36	6	123.00	HS
A941.1.1074	71+00	Jar	x		Mississippi Plain - Warrior	36	6	60.00	HS
A941.1.1018	71+00	Jar	х	х	Mississippi Plain - Warrior	36	14	123.00	SH
A941.1.1075	71+35	Jar	x		Mississippi Plain - Warrior	36	9	50.40	SH
A941.1.1081	71+55	Jar	x	x	Mississippi Plain - Warrior	36	2	17.10	SH
A941.1.1028	71+65	Jar	х	x	Mississippi Plain - Warrior	36	60	567.04	HS
A941.1.1028	71+65	Jar	х	х	Mississippi Plain - Warrior	37	5	20.31	ΗS
A941.1.1029	71+70	Jar	x	x	Mississippi Plain - Warrior	37	10	113.89	HS
A941.1.1018	71+00	Jar	x	x	Mississippi Plain - Warrior	38	2	23.00	HS
A941.1.1074	71+00	Jar	x		Mississippi Plain - Warrior	38	×	67.40	ΗS
A941.1.1078	71+00-72+00	Jar	x		Mississippi Plain - Warrior	38	×	72.00	HS
A941.1.1076	71+40	Jar	x		Mississippi Plain - Warrior	38	12	130.00	ΗS
A941.1.1077	71+50-72+00	Jar	х		Mississippi Plain - Warrior	38	8.5	37.00	ΗS
A941.1.1028	71+65	Jar			Mississippi Plain - Warrior	38	7	37.10	HS
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior	38	6	116.00	ΗS
A941.1.1029	71+70	Jar	x	×	Mississippi Plain - Warrior	39	S	101.00	HS
A941.1.1029	71+70	Jar	Х		Mississippi Plain - Warrior	39	S	101.00	$\mathbf{SH}$
A941.1.1080	71+50	Jar	x		Mississippi Plain - Warrior	40	2	26.10	HS
A941.1.1082	71+85	Jar	х	х	Mississippi Plain - Warrior	40	9	60.00	SH
A941.1.1032	72+00	Jar	x		Mississippi Plain - Warrior	40	9	46.00	SH
A941.1.1017	70+85	Jar	х		Mississippi Plain - Warrior	42	12	211.00	ΗS
A941.1.1078	71+00-72+00	Jar	х	х	Mississippi Plain - Warrior	42	5	27.00	SH
A941.1.1021	71+20	Jar	х		Mississippi Plain - Warrior	42	9	75.73	ΗS
A941.1.1080	71+50	Jar	х	х	Mississippi Plain - Warrior	42	×	139.00	SH
A941.1.1028	71+65	Jar	х		Mississippi Plain - Warrior	42	×	226.00	ΗS
A941.1.1031	71+75	Jar	х		Mississippi Plain - Warrior	42	9	35.00	HS
A941.1.1074	71+00	Jar	x	×	Mississippi Plain - Warrior	42	×	154.00	HS
A941.1.1071	70+50	Jar	Х	х	Mississippi Plain - Warrior	4	2	54.00	HS

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A941 1 1021	71+20	Lar	<b>N N</b>		Mississinni Plain - Warrior	44	ę v	11 00	HS
A941.1.1080	71+50	Jar	<	x	Mississinni Plain - Warrior	: 4		178.00	HS
A941.1.1029	71+70	Jar	×	×	Mississippi Plain - Warrior	4	44	55.00	SH
A941.1.1074	71 + 00	Jar			Mississippi Plain - Warrior	45	4	159.91	ΗS
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	45	9	44.00	ΗS
A941.1.1021	71+20	Jar	х		Mississippi Plain - Warrior	48	5	35.00	SH
A941.1.1021	71+20	Jar	х		Mississippi Plain - Warrior	48	4	22.00	ΗS
A941.1.1021	71+20	Jar	x	×	Mississippi Plain - Warrior	48	4	27.05	SH
A941.1.1071	70+50	Jar	х	x	Mississippi Plain - Warrior	ı		13.00	SH
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior	·		8.00	SH
A941.1.1071	70+50	Jar	х		Mississippi Plain - Warrior	ı		9.00	SH
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior	·		13.00	SH
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior			14.00	HS
A941.1.1017	70+85	Jar	x	x	Mississippi Plain - Warrior			9.00	HS
A941.1.1017	70+85	Jar	x	x	Mississippi Plain - Warrior			6.00	SH
A941.1.1017	70+85	Jar	x		Mississippi Plain - Warrior			31.00	SH
A941.1.1074	71+00	Jar	х		Mississippi Plain - Warrior			20.10	SH
A941.1.1074	71+00	Jar	x		Mississippi Plain - Warrior	ı		14.70	HS
A941.1.1074	71+00	Jar			Mississippi Plain - Warrior	ı		18.40	HS
A941.1.1074	71+00	Jar	х		Mississippi Plain - Warrior	I		14.20	HS
A941.1.1074	71+00	Jar	x	x	Mississippi Plain - Warrior	I		4.00	SH
A941.1.1074	71+00	Jar	х		Mississippi Plain - Warrior	I		10.90	HS
A941.1.1074	71+00	Jar	х	x	Mississippi Plain - Warrior	I		11.20	ΗS
A941.1.1074	71+00	Jar		x	Mississippi Plain - Warrior	I		20.60	HS
A941.1.1024	71+00-71+50	Jar	x	x	Mississippi Plain - Warrior	I		8.60	HS
A941.1.1024	71+00-71+50	Jar	x	x	Mississippi Plain - Warrior	I		20.10	HS
A941.1.1024	71+00-71+50	Jar	x	x	Mississippi Plain - Warrior	I		12.80	HS
A941.1.1024	71+00-71+50	Jar	x	x	Mississippi Plain - Warrior	ı		7.20	SH
A941.1.1024	71+00-71+50	Jar	x		Mississippi Plain - Warrior	ı		14.10	HS
A941.1.1024	71+00-71+50	Jar	x	x	Mississippi Plain - Warrior	I		32.40	HS
A941.1.1024	71+00-71+50	Jar	x	×	Mississippi Plain - Warrior	ı		39.60	SH
A941.1.1026	71+00-71+50	Jar	x		Mississippi Plain - Warrior	I		14.00	HS
A941.1.1026	71+00-71+50	Jar	x	×	Mississippi Plain - Warrior	ı		33.00	SH
A941.1.1078	71+00-72+00	Jar	x	x	Mississippi Plain - Warrior	ı		11.00	SH
A941.1.1021	71+20	Jar	×	×	Mississippi Plain - Warrior	I		45.00	SH
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior			11.00	HS
A941.1.1075	71+35	Jar	x		Mississippi Plain - Warrior	ı		18.10	ΗS
A941.1.1080	71+50	Jar	х	×	Mississippi Plain - Warrior			64.35	SH
A941.1.1080	71+50	Jar			Mississippi Plain - Warrior			12.16	HS
A941.1.1080	71+50	Jar	х	х	Mississippi Plain - Warrior	ı		9.17	HS
A941.1.1080	71+50	Jar	х		Mississippi Plain - Warrior			17.82	HS
A941.1.1080	71+50	Jar	х	×	Mississippi Plain - Warrior			20.30	SH
A941.1.1080	71+50	Jar	х		Mississippi Plain - Warrior	I		9.53	HS
A941.1.1031	71+50-72+00	Jar	x	×	Mississippi Plain - Warrior	ı		39.00	HS
A941.1.1031	71+50-72+00	Jar	х		Mississippi Plain - Warrior			8.00	SH

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Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice %	6 Wt(g)	Paste
A941.1.1081	71+55	Jar		x	Mississippi Plain - Warrior		17.40	HS
A941.1.1081	71+55	Jar	х	x	Mississippi Plain - Warrior	ı	19.20	SH
A941.1.1028	71+65	Jar	x		Mississippi Plain - Warrior		9.03	$\mathbf{SH}$
A941.1.1028	71+65	Jar	х		Mississippi Plain - Warrior		8.03	SH
A941.1.1028	71+65	Jar	х		Mississippi Plain - Warrior		28.08	ΗS
A941.1.1028	71+65	Jar	x		Mississippi Plain - Warrior		17.28	SH
A941.1.1029	71+70	Jar	х		Mississippi Plain - Warrior		14.00	SH
A941.1.1029	71+70	Jar	x	x	Mississippi Plain - Warrior		10.00	
A941.1.1029	71+70	Jar	х	x	Mississippi Plain - Warrior		26.00	SH
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior		13.90	
A941.1.1031	71+75	Jar	х		Mississippi Plain - Warrior		36.00	ΗS
A941.1.1031	71+75	Jar	x		Mississippi Plain - Warrior		33.00	SH
A941.1.1031	71+75	Jar	х		Mississippi Plain - Warrior		10.00	SH
A941.1.1031	71+75	Jar			Mississippi Plain - Warrior		17.00	HS
A941.1.1031	71+75	Jar	х	x	Mississippi Plain - Warrior	ı	9.00	SH
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	ı	63.00	SH
A941.1.1082	71+85	Jar	х		Mississippi Plain - Warrior	ı	19.00	SH
A941.1.1082	71+85	Jar	x	x	Mississippi Plain - Warrior	·	18.00	SH
A941.1.1082	71+85	Jar	х		Mississippi Plain - Warrior	ı	36.00	SH
A941.1.1082	71+85	Jar	х	x	Mississippi Plain - Warrior		23.00	SH
A941.1.1082	71+85	Jar	x	х	Mississippi Plain - Warrior		39.00	HS
A941.1.1082	71+85	Jar	х		Mississippi Plain - Warrior		11.00	
A941.1.1082	71+85	Jar	х	x	Mississippi Plain - Warrior		9.00	SH
A941.1.1082	71+85	Jar	х	х	Mississippi Plain - Warrior		27.00	HS
A941.1.1080	71+50	Jar	х	x	Mississippi Plain - Warrior	30 +	22.59	
A941.1.1080	71+50	Jar	х	x	Mississippi Plain - Warrior	30 +	16.10	
A941.1.1078	71+00-72+00	Jar	x	x	Mississippi Plain - Warrior	$^{48+}$	49.00	
A941.1.1078	71+00-72+00	Jar	х	x	Mississippi Plain - Warrior	48+	48.00	
A941.1.1071	70+50	Jar	×	x	Mississippi Plain - Warrior		6.37	
A941.1.1071	70+50	Jar	х		Mississippi Plain - Warrior		6.42	
A941.1.760	70+50	Jar			Mississippi Plain - Warrior		18.00	
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior		7.01	
A941.1.1071	70+50	Jar	x				14.48	
A941.1.1071	70+50	Jar	х		Mississippi Plain - Warrior		43.81	
A941.1.1071	70+50	Jar	x		Mississippi Plain - Warrior		20.19	
A941.1.1071	70+50	Jar	х		Mississippi Plain - Warrior		37.38	
A941.1.1015	70+55	Jar	x		Mississippi Plain - Warrior		14.00	
A941.1.1015	70+55	Jar	x		Mississippi Plain - Warrior		39.00	ΗS
A941.1.1072	70+60	Jar	х		Mississippi Plain - Warrior		6.32	ΗS
A941.1.1016	70+65	Jar	х		Mississippi Plain - Warrior		11.20	
A941.1.1016	70+65	Jar	х		Mississippi Plain - Warrior		48.55	
A941.1.1073	70+65	Jar			Mississippi Plain - Warrior		12.12	
A941.1.720	70+75	Jar	х		Mississippi Plain - Warrior		61.50	
A941.1.448	71+00-71+50	Jar			Mississippi Plain - Warrior		6.74	
A941.1.1026	71+00-71+50	Jar	х	x	Mississippi Plain - Warrior		33.00	
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Table A.1(	5 Jars from	Table A.16 Jars from Roadway blocks 70+50-72+05	ocks 7(	)+50-	72+05.			
Catalog#	Block	Basic Shape	Fold	Flat	Type/Variety	Orifice %	Wt(g)	Paste
A941.1.1087	71+00-71+50	Jar	х		Mississippi Plain - Warrior		15.00	SH
A941.1.1087	71+00-71+50	Jar	x		Mississippi Plain - Warrior		12.00	HS
A941.1.1026	71+00-71+50	Jar	х		Mississippi Plain - Warrior		14.00	HS
A941.1.1078	71+00-72+00	Jar	х	x	Mississippi Plain - Warrior		43.00	HS
A941.1.1078	71+00-72+00	Jar	х		Mississippi Plain - Warrior		45.00	HS
A941.1.1019	71+05	Jar	х		Mississippi Plain - Warrior		6.00	HS
A941.1.1019	71+05	Jar	х		Mississippi Plain - Warrior		49.00	HS
A941.1.1020	71+15	Jar	x		Mississippi Plain - Warrior		15.03	HS
A941.1.1020	71+15	Jar	х		Mississippi Plain - Warrior		26.18	HS
A941.1.1020	71+15	Jar	x	×	Mississippi Plain - Warrior		57.80	HS
A941.1.1020	71+15	Jar	x	x	Mississippi Plain - Warrior		25.90	HS
A941.1.1020	71+15	Jar	x		Mississippi Plain - Warrior		14.30	HS
A941.1.1020	71+15	Jar	х		Mississippi Plain - Warrior		7.00	HS
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior		19.74	HS
A941.1.1021	71+20	Jar	х		Mississippi Plain - Warrior		8.65	SH
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior		21.83	HS
A941.1.1021	71+20	Jar	х		Mississippi Plain - Warrior		66.52	SH
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior		23.00	HS
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior		29.16	HS
A941.1.1021	71+20	Jar	x		Mississippi Plain - Warrior		11.94	HS
A941.1.1023	71+35	Jar	х		Mississippi Plain - Warrior		18.00	SH
A941.1.1079	71+50	Jar	Х		Mississippi Plain - Warrior		29.00	HS
A941.1.1079	71+50	Jar	х	x	Mississippi Plain - Warrior		9.00	SH
A941.1.1079	71+50	Jar	х		Mississippi Plain - Warrior		33.00	HS
A941.1.1079	71+50	Jar	x		Mississippi Plain - Warrior		14.00	HS
A941.1.1079	71+50	Jar	х	x	Mississippi Plain - Warrior		8.00	HS
A941.1.1079	71+50	Jar	x		Mississippi Plain - Warrior		59.00	HS
A941.1.1077	71+50-72+00	Jar	x		Mississippi Plain - Warrior		8.00	HS
A941.1.1027	71+55-72+00	Jar	x		Mississippi Plain - Warrior		13.00	HS
A941.1.1027	71+55-72+00	Jar	х		Mississippi Plain - Warrior		12.00	HS
A941.1.1028	71+65	Jar	x		Mississippi Plain - Warrior			HS
A941.1.1029	71+70	Jar	х		Mississippi Plain - Warrior		10.00	HS
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior		14.00	SH
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior		28.00	SH
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior			SH
A941.1.1029	71+70	Jar	Х		Mississippi Plain - Warrior		59.20	HS
A941.1.1029	71+70	Jar	x		Mississippi Plain - Warrior		28.60	HS
A941.1.1029	71+70	Jar	x	x	Mississippi Plain - Warrior		92.60	HS
A941.1.1030	71+70	Jar			Mississippi Plain - Warrior		9.00	HS
A941.1.1082	71+85	Jar	x		Mississippi Plain - Warrior		22.00	HS
A941.1.1082	71+85	Jar			Mississippi Plain - Warrior		6.00	HS
A941.1.1082	71+85	Jar	х		Mississippi Plain - Warrior		17.00	HS
A941.1.498	71+85	Jar	х	x	Mississippi Plain - Warrior		4.95	HS
A941.1.1082	71+85	Jar			Mississippi Plain - Warrior		52.00	HS
A941.1.1083	71+95	Jar	х		Mississippi Plain - Warrior		27.37	SH
A941.1.1083	71+95	Jar	х		Mississippi Plain - Warrior		42.17	SH

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Catalog#	Block	Basic Shape	Fold	Flat	Tvpe/Varietv	Orifice	%	Wt(g)	Paste
A941.1.1032	72+00	Jar	x		Mississippi Plain - Warrior			31.00	HS
A941.1.1032	72+00	Jar	x		Mississippi Plain - Warrior			16.00	SH
A941.1.1034	72+05	Jar	x	x	Mississippi Plain - Warrior			33.00	HS
A941.1.1034	72+05	Jar	x	x	Mississippi Plain - Warrior			10.00	SH
A941.1.1034	72+05	Jar	х		Mississippi Plain - Warrior			49.00	SH
A941.1.1034	72+05	Jar	х		Mississippi Plain - Warrior			12.00	SH
A941.1.1034	72+05	Jar	x		Mississippi Plain - Warrior			18.00	SH
A941.1.1070	70+50	Jar			Mississippi Plain – Hull Lake	17	15	119.39	SH/GG
A941.1.1083	71+95	Jar	х		Mississippi Plain – Hull Lake			17.43	SH/GG
A941.1.1034	72+05	Jar	x	x	Mississippi Plain - Hull Lake			18.00	SH/GG
A941.1.263	70+85	Jar			Mazique Incised	20	6	21.30	GG
A941.1.1071	70+50	Oversized Jar	x	x	Mississippi Plain - Warrior	'		54.00	SH
A941.1.1034	72+05	Oversized Jar	х	x	Mississippi Plain - Warrior	45+		59.00	SH
A941.1.1026	71+00-71+50	Oversized Jar	x	×	Mississippi Plain - Warrior	48+		194.00	SH
A941.1.1026	71+00-71+50	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		93.00	SH
A941.1.1024	71+00-71+50	Oversized Jar	x	x	Mississippi Plain - Warrior	48+		138.16	SH
A941.1.1026	71+00-71+50	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		194.00	SH
A941.1.1087	71+00-71+50	Oversized Jar	x	×	Mississippi Plain - Warrior	48+		85.00	SH
A941.1.1087	71+00-71+50	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		160.00	SH
A941.1.1075	71+35	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		137.00	SH
A941.1.1075	71+35	Oversized Jar	x	х	Mississippi Plain - Warrior	48+		41.00	SH
A941.1.1080	71+50	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		207.00	SH
A941.1.1080	71+50	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		225.12	SH
A941.1.1077	71+50-72+00	Oversized Jar	х	x	Mississippi Plain - Warrior	48+		158.00	SH
A941.1.1028	71+65	Oversized Jar	х	х	Mississippi Plain - Warrior	48+		158.22	SH
A941.1.1029	71+70	Oversized Jar	х	х	Mississippi Plain - Warrior	48+		132.80	SH
A941.1.1032	72+00	Oversized Jar	x	×	Mississippi Plain - Warrior	48+		41.00	SH
A941.1.1082	71+85	Oversized Jar	x	x	Mississippi Plain - Warrior			42.00	HS
A941.1.1032	72+00	Oversized Jar	x	x	Mississippi Plain - Warrior			49.00	SH

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.495	71+50	Beaker	Bell Plain - Hale	18	10	20.26	SH
A941.1.1026	71+00-71+50	Bowl	Bell Plain - Hale			16.00	HS
A941.1.1026	71+00-71+50	Bowl	Bell Plain - Hale			16.00	SH
A941.1.1071	70+50	Bowl	Bell Plain - Hale			7.00	SH
A941.1.1074	71+00	Bowl	Bell Plain - Hale	15	10	15.15	SH
A941.1.1078	71+00-72+00	Bowl	Bell Plain - Hale	BS	BS	22.00	SH
A941.1.1080	71+50	Bowl	Bell Plain - Hale	28	11	61.00	SH
A941.1.1080	71+50	Bowl	Bell Plain - Hale			18.71	SH
A941.1.1074	71+00	Bowl	Bell Plain - Hale	19	13	64.42	SH
A941.1.1078	71+00-72+00	Bowl	Bell Plain - Hale	BS	BS	33.00	SH
A941.1.265	71+20	Bowl	Carthage Incised - Summerville				$\mathbf{SH}$
A941.1.263	70+85	Bowl	Moundville Engraved - Elliots Creek			3.90	SH
A941.1.334	71+65	Bowl	Moundville Engraved - Elliots Creek			8.36	None
A941.1.1071	70+50	Bowl	Moundville Incised - Unspecified	22	9	19.00	SH/GG
A941.1.1017	70+85	Bowl	Mississippi Plain - Warrior			38.00	SH
A941.1.1024	71+00-71+50	Bowl	Mississippi Plain - Warrior			59.96	SH
A941.1.1028	71+65	Bowl	Mississippi Plain - Warrior	4	S	64.62	SH
A941.1.1028	71+65	Bowl	Mississippi Plain - Warrior			12.60	SH
A941.1.1031	71+50-72+00	Bowl	Mississippi Plain - Warrior	46	4	50.00	SH
A941.1.1082	71+85	Bowl	Mississippi Plain - Warrior	46	9	80.00	$\mathbf{SH}$
A941.1.1074	71+00	Bowl	Mississippi Plain - Warrior	30	21	270.75	SH
A941.1.451	71+55-72+00	Carinated Bowl	Bell Plain - Hale	14	8	15.65	SH
A941.1.488	70+50	Carinated Bowl	Bell Plain - Goldsmith	40	4	19.45	SH/GG
	71+00-71+50	Carinated Bowl	Moundville Engraved - Chapman	9		11.00	SH/GG
A941.1.455	71+75	Outslanting Bowl	Bell Plain - Hale			17.30	SH
A941.1.498	71+85	Outslanting Bowl	Bell Plain - Hale			14.01	SH
A941.1.448	71+00-71+50	Restricted Rim Bowl	Bell Plain - Hale			9.16	SH/GG
A941.1.488	70+50	Restricted Rim Bowl	Bell Plain - Hale	24	10	23.83	SH
A941.1.726	71+00-71+50	Restricted Rim Bowl	Carthage Incised - Summerville	16	6	21.86	SH
A941.1.1019	71+05	Restricted Rim Bowl	Mississippi Plain - Warrior	12	16	16.00	SH
A941.1.1029	71+70	Restricted Rim Bowl	Mississippi Plain - Warrior	10	10	26.67	SH
A941.1.1075	71+35	Restricted Rim Bowl	Mississippi Plain - Warrior	28	4	16.00	HS
A941.1.1081	71+50	Restricted Rim Bowl	Mississippi Plain - Warrior			30.00	SH
A941.1.454	71+70	Short Neck Bowl	Bell Plain - Hale			6.90	SH
A941.1.1078	71+00-72+00	Short Neck Bowl	Bell Plain - Hale	'		8.00	SH
A941.1.1071	70+50	Short Neck Bowl	Bell Plain - Hale	22	9	19.11	SH/GG
A941.1.1031	71+75	Short Neck Bowl	Mississippi Plain - Warrior	ı		9.00	SH
A941.1.1029	71+70	Simple Bowl	Bell Plain - Hale			10.00	SH
A941.1.453	71+70	Simple Bowl	Bell Plain - Hale	26	9	21.10	SH
A941.1.456	72+00	Simple Bowl	Bell Plain - Hale			6.12	SH
A941.1.487	70+50	Simple Bowl	Bell Plain - Hale	6	20	14.76	SH
A941.1.497	71+55	Simple Bowl	Bell Plain - Hale			17.21	SH/GG
A941.1.498	71+85	Simple Bowl	Bell Plain - Hale			8.64	SH
A941.1.499	71+95	Simple Bowl	Bell Plain - Hale			23.18	SH
A941.1.593	70+85	Simple Bowl	Bell Plain - Hale	22	13	43.85	SH

Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.441	70+85	Simple Bowl	Bell Plain - Hale	10	23	58.51	SH
A941.1.455	71+75	Simple Bowl	Bell Plain - Hale			18.20	SH
A941.1.593	70+85	Simple Bowl	Bell Plain - Hale	26	10	20.42	HS
A941.1.269	71+65	Simple Bowl	Carthage Incised - Akron			60.9	SH
A941.1.273	72+05	Simple Bowl	Carthage Incised - Akron			5.63	SH
A941.1.760	70+50	Simple Bowl	Carthage Incised - Akron			7.00	SH
A941.1.269	71+65	Simple Bowl	Carthage Incised - Akron	22	12	87.81	HS
A941.1.269	71+65	Simple Bowl	Carthage Incised - Akron	30	20	87.74	SH
A941.1.445	71+20	Simple Bowl	Carthage Incised - Unspecified	18	S	4.50	SH/GG
A941.1.1087	71+00-71+50	Simple Bowl	Mississippi Plain - Warrior	45+		55.00	SH
A941.1.1087	71+00-71+50	Simple Bowl	Mississippi Plain - Warrior	42	5	137.00	HS
A941.1.1087	71+00-71+50	Simple Bowl	Mississippi Plain - Warrior			21.00	SH
A941.1.1072	70+60	Simple Bowl	Mississippi Plain - Warrior			15.67	HS
A941.1.495	71+50	Simule Bowl/Beaker	Bell Plain - Hale	17	10	20.25	HS

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.450	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale	24	10	58.20	HS
A941.1.1029	71+70	Flaring Rim Bowl	Bell Plain - Hale	24	8	26.00	HS
A941.1.448	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale	26	10	59.01	HS
A941.1.448	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale	28	13	63.70	HS
A941.1.503	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale	28	23	213.40	HS
A941.1.496	71+05	Flaring Rim Bowl	Bell Plain - Hale	28	2	45.09	SH
A941.1.452	71+65	Flaring Rim Bowl	Bell Plain - Hale	28	12	56.30	HS
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale	29	S	30.91	HS
A941.1.445	71+20	Flaring Rim Bowl	Bell Plain - Hale	30	11	45.77	SH
A941.1.456	72+00	Flaring Rim Bowl	Bell Plain - Hale	30	9	21.74	SH
A941.1.1024	71 + 00 - 71 + 50	Flaring Rim Bowl	Bell Plain - Hale	32	12	82.00	SH
A941.1.503	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale	32	7	31.87	SH
A941.1.496	71+05	Flaring Rim Bowl	Bell Plain - Hale	33	7	84.72	SH
A941.1.1024	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale	34	4	19.51	HS
A941.1.1021	71+20	Flaring Rim Bowl	Bell Plain - Hale	34	S	34.65	HS
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale	48	4	38.19	SH
A941.1.440	70+75	Flaring Rim Bowl	Bell Plain - Hale	34-38		33.53	SH
A941.1.440	70+75	Flaring Rim Bowl	Bell Plain - Hale	34-38		33.56	SH
A941.1.1071	70+50	Flaring Rim Bowl	Bell Plain - Hale	48+		40.00	SH
A941.1.487	70+50	Flaring Rim Bowl	Bell Plain - Hale			13.47	SH
A941.1.487	70+50	Flaring Rim Bowl	Bell Plain - Hale			7.14	HS
A941.1.488	70+50	Flaring Rim Bowl	Bell Plain - Hale			10.79	SH/GG
A941.1.488	70+50	Flaring Rim Bowl	Bell Plain - Hale			35.34	SH
A941.1.488	70+50	Flaring Rim Bowl	Bell Plain - Hale			30.99	SH/GG
A941.1.440	70+75	Flaring Rim Bowl	Bell Plain - Hale			33.40	SH
A941.1.440	70+75	Flaring Rim Bowl	Bell Plain - Hale			51.60	HS
A941.1.442	71+00	Flaring Rim Bowl	Bell Plain - Hale			14.28	HS
A941.1.1074	71+00	Flaring Rim Bowl	Bell Plain - Hale			23.01	SH
A941.1.450	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale				HS
A941.1.503	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale			62.35	HS
A941.1.503	71+00-71+50	Flaring Rim Bowl	Bell Plain - Hale			24.39	HS
A941.1.494	71+00-72+00	Flaring Rim Bowl	Bell Plain - Hale			31.75	SH
A941.1.447	71+35	Flaring Rim Bowl	Bell Plain - Hale			26.00	HS
A941.1.447	71+35	Flaring Rim Bowl	Bell Plain - Hale			24.40	SH
A941.1.495	71+50	Flaring Rim Bowl	Bell Plain - Hale			18.12	SH
A941.1.1080	71+50	Flaring Rim Bowl	Bell Plain - Hale			29.69	SH
A941.1.493	71+50-72+00	Flaring Rim Bowl	Bell Plain - Hale			14.73	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			24.16	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			30.92	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			10.69	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			6.10	HS
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			8.72	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			38.68	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			12.76	SH
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			26.37	SH
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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.453	71+70	Flaring Rim Bowl	Bell Plain - Hale			74.69	ΗS
A941.1.454	71+70	Flaring Rim Bowl	Bell Plain - Hale			36.60	ΗS
A941.1.455	71+75	Flaring Rim Bowl	Bell Plain - Hale			26.90	SH
A941.1.499	71+95	Flaring Rim Bowl	Bell Plain - Hale			56.80	ΗS
A941.1.457	72+05	Flaring Rim Bowl	Bell Plain - Hale			29.30	ΗS
A941.1.1028	71+65	Flaring Rim Bowl	Carthage Incised - Moon Lake	28	7	27.00	ΗS
A941.1.496	71+05	Flaring Rim Bowl	Carthage Incised - Moon Lake	30	6	27.13	ΗS
A941.1.1082	71+85	Flaring Rim Bowl	Carthage Incised - Moon Lake	30	×	57.00	SH
A941.1.496	71+05	Flaring Rim Bowl	Carthage Incised - Moon Lake			20.78	HS
A941.1.1031	71+50-72+00	Flaring Rim Bowl	Carthage Incised - Moon Lake			19.00	HS
A941.1.271	71+75	Flaring Rim Bowl	Carthage Incised - Moon Lake			79.29	HS
A941.1.263	70+85	Flaring Rim Bowl	Carthage Incised - Moon Lake			180.58	SH/GG
A941.1.1021	71+20	Flaring Rim Bowl	Carthage Incised - Unspecified	'		9.00	ΗS
A941.1.488	70+50	Flaring Rim Bowl	Carthage Incised - Unspecified			16.01	ΗS
A941.1.496	71+05	Flaring Rim Bowl	Mississippi Plain - Warrior	24	14	59.93	HS
A941.1.1078	71+00-72+00	Flaring Rim Bowl	Mississippi Plain - Warrior	·		21.00	HS
A941.1.1079	71+50	Flaring Rim Bowl	Mississippi Plain - Warrior	'		41.00	HS
A941.1.1018	71+00	Flaring Rim Bowl	Mississippi Plain - Warrior	48+		46.00	HS
A941 1 1028	71+65	Flaring Rim Bowl	Mississippi Plain - Warrior			27.06	HS

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Catalog#	Block	Basic Shape	Type/Variety	Orifice	%	Wt(g)	Paste
A941.1.442	71+00	Bottle	Bell Plain - Hale			6.28	SH/GG
A941.1.452	71+65	Bottle	Bell Plain - Hale	12	8	17.60	SH
A941.1.452	71+65	Bottle	Bell Plain - Hale	10	16	31.00	SH
A941.1.453	71+70	Bottle	Bell Plain - Hale	10	15	29.80	SH
A941.1.455	71+75	Bottle	Bell Plain - Hale			9.90	SH
A941.1.457	72+05	Bottle	Bell Plain - Hale			13.80	SH
A941.1.1074	71+00	Bottle	Bell Plain - Hale	9	55	43.66	SH
A941.1.271	71+75	Bottle	Carthage Incised - Unspecified			37.82	SH
A941.1.1028	71+65	Bottle	Mississippi Plain - Warrior			7.75	SH
A941.1.1028	71+65	Bottle	Mississippi Plain - Warrior	6	16	11.72	SH
A941.1.1029	71+70	Bottle	Mississippi Plain - Warrior	8	15	25.00	SH
A941.1.1031	71+75	Bottle	Mississippi Plain - Warrior	6	6	12.00	SH
A941.1.1024	71+00-71+50	Bottle?	Mississioni Plain - Warrior	10	14	11.00	SH

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Bottles	
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Type/Variety	counts by type and variety. 43+50 to 46+00	70+50 to 72+05	30+00 to 31+50	ADM	MPA	TOTAL
Addis Plain						7
Anna Incised					4	4
Avoyelle Incised		1				1
Autauga Plain	2	1	1	10	0	16
Baytown Plain	7	3	3	1	15	29
Bell Plain - Hale	542	322	47	353	345	1609
Bell Plain - Goldsmith	28					28
Carthage Incised - Akron	11	5		L	9	29
Carthage Incised - Moon Lake				1	1	2
Carthage Incised - Summerville	1		1	7		4
Carthage Incised - Unspecified	11	4	1	6	6	34
Carter Engraved	1					1
Evansville Punctated	2					2
Gadrooned	11	4		ω	1	19
Langston Fabric Impressed	1					1
Moundville Engraved - Chapman	22	2			1	25
Moundville Engraved - Elliots Creek	8	5		7	1	16
Moundville Engraved - Hemphill					4	4
Moundville Engraved - Maxwell's Crossing					1	1
Moundville Engraved - Northport					1	1
Moundville Engraved - P. Plantation		1			1	2
Moundville Engraved - Tuscaloosa					1	1
Moundville Engraved - Unspecified	5			6	14	28
Moundville Engraved - Wiggins	1			1	7	4
Moundville Incised - Carrollton	19	9	1	19	17	62
Moundville Incised - Moundville	92	51	8	72	73	296
Moundville Incised - Oliver	4	ŝ		-		8
Moundville Incised - Snows Bend		1		1	ω	5
Moundville Incised - Unspecified	18	10	10	20	7	65
Mississippi Plain - Hull Lake	9	2			38	46
Mississippi Plain - Warrior - Warrior	4139	1677	406	1460	2081	9763
Nashville Negative Painted		1	1			7
Owens Punctated				4		4
Unclassified Engraved	9	1		1		8
MS	1			ŝ	4	8
RS	34	1		13	10	58

	б	7	12198	
		1	2643	
	ς		1995	
			479	
		2	2104	
type and variety.		4	4977	
by 1				
Table A.20 Body sherd counts	PLGT	PLGG	TOTAL	

RS=Bell Plain, *variety Hale* sherds that are red slipped; WS=Bell Plain, *variety Hale* sherds that are white slipped; PLGT=Unclassified plain surfaced and grit tempered sherds. PLGG=Unclassified plain surfaced and grog tempered sherds.

Table A.21 Architectural data.

Structure	Area	Length	Width	Floor Area	Class	B.E.	Туре
1	2+50-7+50	4.00	4.00	17.00 Alea	1	<u>D.E.</u> 2	I I I I I I I I I I I I I I I I I I I
2	2+50-7+50	4.00	4.00	14.00	1	2	WT
3	2+50-7+50	3.00	3.00	10.00	1	1	WT
4	2+50-7+50	5.00	5.00	25.00	1	2	WT
5	2+50-7+50	4.00	4.00	16.00	1	2	I
					1	1	I
6	2+50-7+50	4.00	3.00	11.00	1		
7	2+50-7+50					1	H
8	2+50-7+50	4.00	4.00	10.00	1	1	I
9	12+00-14+0	4.00	4.00	19.00	1	1	SP
10	12+00-14+0	4.00	3.00	12.00	1	1	WT
11	12+00-14+0	3.00	3.00	13.00	1	1	WT
12	12+00-14+0	4.00	4.00	14.00	1	1	Н
13	12+00-14+0					1	WT
14	12+00-14+0					1	WT
15	12+00-14+0	3.00	3.00	10.00	1	1	SP/RP?
16	15+00-15+5	8.00	6.00	47.00	2	1	WT
17	17+50-24+5						WT
18	17+50-24+5	8.00	6.00	45.00	2	1	WT
19	17+50-24+5	6.00	5.00	28.00	1	1	WT
20	17+50-24+5	5.00	4.00	23.00	1	3	WT
21	17+50-24+5	6.00	5.00	29.00	1		WT
22	17+50-24+5	6.00	5.00	26.00	1	1	WT
23	26+00-34+0	5.00	4.00	23.00	1	1	WT
23	26+00-34+0	5.00	4.00	20.00	1	2	WT
24	26+00-34+0	7.00	6.00	40.00	2	2	WT
				21.00		2	
26	26+00-34+0	5.00	4.00		1		WT
27	26+00-34+0	4.00	4.00	17.00	1	1	WT
28	43+50-46+5	5.00	5.00	22.00	1	1	WT
29	47+50-49+0	5.00	5.00	24.00	1	2	WT
30	43+50-46+5	4.00	4.00	16.00	1	1	WT
31	43+50-46+5					1	SP
32	43+50-46+5					2	WT
33	43+50-46+5					1	WT
34	43+50-46+5					1	Н
35	43+50-46+5					3	WT
36	35+50-37+6					1	SP
37	35+50-37+6						Н
38	35+50-37+6					1	SP
39	35+50-37+6					1	WT
40	35+50-37+6					2	WT
41	35+50-37+6						I
42	none					1	Н
43	26+00-34+0					1	WT
44	26+00-34+0					2	WT
44	26+00-34+0					1	H
43 46	26+00-34+0 26+00-34+0					1	Н
	26+00-34+0 26+00-34+0						
47						1	H WT
48	26+00-34+0					2	WT
49	26+00-34+0					1	SP
50	26+00-34+0					1	WT
51	26+00-34+0						WT
52	26+00-34+0					2	WT
53	26+00-34+0					2	WT
54	17+50-24+5						Ι
55	17+50-24+5						WT
	17+50-24+5					2	WT
56	17.50 1.5						
56 57	17+50-24+5					2	WT

Structure	Area	Length	Width	Floor Area	Class	B.E.	Туре
59	17+50-24+5	Length	Wittin	1100171100	Class	2	WT
60	17+50-24+5					1	SP
61	17+50-24+5					1	I
62	17+50-24+5					3	WT
63	17+50-24+5 17+50-24+5					5	I
64	17+50-24+5					2	WT
65	17+50-24+5					2	I
66	17+50-24+5	6.00	5.00	30.00	1	2	WT
67	17+30-24+3 17+50-24+5	0.00	5.00	30.00	1	1	
68							WT H
	17+50-24+5					1	
69 70	17+50-24+5					1	WT
70	17+50-24+5					2	H
71	12+00-14+0					2	WT
72	12+00-14+0					2	WT
73	12+00-14+0					1	WT
74	2+50-7+50					-	WT
75	2+50-7+50	6.00	5.00	27.00	1	3	WT
76	2+50-7+50					1	SP
77	2+50-7+50	5.00	4.00	22.00	1	1	WT
78	2+50-7+50	5.00	5.00	25.00	1	1	WT
79	2+50-7+50					2	WT
80	2+50-7+50	5.00	4.00	17.00	1	2	WT
81	2+50-7+50	3.00	3.00	11.00	1	1	WT
82	2+50-7+50					2	WT
83	68+36-70+0	5.00	4.00	22.00	1	2	WT
84	68+36-70+0	6.00	5.00	30.00	1		WT
85	68+36-70+0	8.00	7.00	60.00	3	1	WT
86	68+36-70+0					3	WT
87	66+00-67+0					1	WT
88	66+00-67+0	4.00	4.00	18.00	1	2	SP
89	66+00-67+0	7.00	5.00	39.00	2	1	SP
90	66+00-67+0	8.00	5.00	40.00	2	1	WT
91	47+50-49+0	5.00	5.00	24.00	1	2	WT
92	47+50-49+0	4.00	4.00	18.00	1	3	WT
93	47+50-49+0	11.00	4.00	47.00	2	2	WT
94	47+50-49+0	8.00	5.00	44.00	2	3	WT
95	47+50-49+0	9.00	7.00	64.00	3	5	WT
96	47+50-49+0	9.00	7.00	04.00	5	1	H
90 97	47+50-49+0	5.00	5.00	22.00	1	2	
97 98	47+50-49+0 17+50-24+5	5.00	5.00	22.00	1	2	WT I
98 99	26+00-34+0					2	I WT
						3	
100	26+00-34+0	C 00	5 00	27.00	1	1	WT
101	26+00-34+0	6.00	5.00	27.00	1	3	WT
102	43+50-46+5					4	WT
103	43+50-46+5					2	WT
104	43+50-46+5					1	WT
105	2+50-7+50					1	WT
106	2+50-7+50					2	WT
107	2+50-7+50					1	WT
108	17+50-24+5					1	WT
109	17+50-24+5					2	WT
110	26+00-34+0						WT
111	26+00-34+0						Ι
112	35+50-37+6						WT
113	35+50-37+6					1	WT
114	47+50-49+0	5.00	5.00	23.00	1	1	SP
	ADM	4.00	4.00	14.00	1	1	WT
115							

Table A.22 Architectural data.

tructure	Area	Length	Width	Floor Area	Class	B.E.	Туре
117	ADM	e e				1	SP
118	ADM					3	WT
119	ADM	6.00	4.00	25.00	1	1	WT
120	ADM						Ι
121	26+00-34+0	5.00	5.00	23.00	1		SP
122	47+50-49+0	4.00	4.00	16.00	1		WT
123	47+50-49+0	5.00	4.00	19.00	1	2	SP
124	47+50-49+0	3.00	3.00	8.00	1	1	WT
125	2+50-7+50					1	WT
126	2+50-7+50					1	Ι
127	2+50-7+50	5.00	4.00	21.00	1	1	SP
128	2+50-7+50	5.00	4.00	19.00	1	1	Ι
129	2+50-7+50	6.00	5.00	29.00	1	1	SP
130	2+50-7+50					1	SP
131	2+50-7+50					1	WT
132	2+50-7+50	5.00	5.00	23.00	1	1	SP
133	2+50-7+50	6.00	5.00	29.00	1	1	SP
134	MPK	3.76	3.68	14.06	1	1	WT
135	MPK					1	WT
136	MPK	4.41	4.34	18.85	1	2	WT
137	MPK	3.82	3.82	14.84	1	2	WT
138	MPK	5.71	5.40	30.01	1	2	WT
139	MPK					1	WT
140	MPK	4.15	3.78	15.88	1	1	SP
	ECB					1	SP
	ECB					1	WT
	ECB					1	WT
	PA	6.50	5.00	32.50	1	1	SP
	PA	5.00	4.50	22.50	1	1	SP
	PA	4.00	3.50	14.00	1	1	SP
	PA	4.50	4.00	18.00	1	1	SP
	PA	4.25	4.00	17.00	1	1	WT
	ECB	3.80	3.60	13.70	1	2	WT
	PA	5.00	4.50	22.50	1	2	WT
	ECB	4.50	4.50	20.25	1	4	WT
	ECB						Ι

SP=Single Post; WT=Wall Trench; RP=Ridgid Post; B.E.=Building Episodes

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