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UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

MISSISSIPPIAN POLITICAL CULTURE: CONTRASTING HISTORICAL TRAJECTORIES IN SOUTHEASTERN NORTH AMERICA

A Dissertation

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

Doctor of Philosophy

By

MARK A. REES
Norman, Oklahoma
2001

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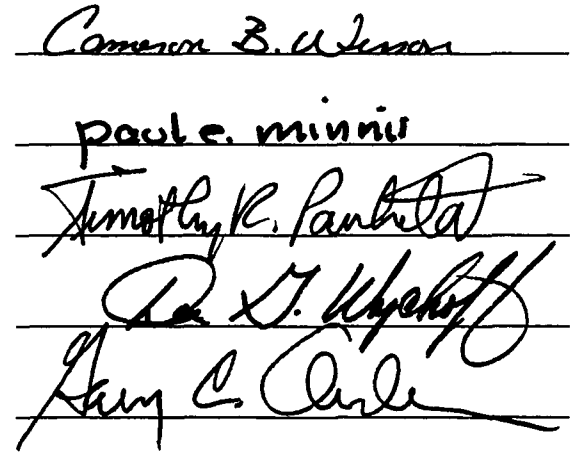
MISSISSIPPIAN POLITICAL CULTURE: CONTRASTING HISTORICAL TRAJECTORIES IN SOUTHEASTERN NORTH AMERICA

A Dissertation APPROVED FOR THE
DEPARTMENT OF ANTHROPOLOGY

BY



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for Johanna,

Sarah and Jennifer

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Abstract

The development and decline of politically-consolidated societies is a topic of abiding interest among archaeologists, cultural anthropologists, and historians. Polities that developed and declined in the absence of written documentation fall under the purview of archaeology, whereas political formations of the historic era are generally the focus of historians, political scientists, or cultural anthropologists. Prehistoric political development is typically explained in terms of cultural or sociopolitical evolution, based on the concept of culture as a systemic, integrated phenomenon. Sociopolitical evolution has been characterized as a response to the managerial-administrative needs of society or arising out of unresolved social contradictions and conflict. Developmental changes are consequently viewed as a systemic function involving the adaptive (and less often, maladaptive) tendencies of a culture or society. Native American polities have long been categorized within such schemes of cultural evolution. In contrast, European explorers and colonists arrived in the New World bearing lethal pathogens, dynamic political histories of imperialism, and the capacity to destroy cultures or institute long-term change.

Within the past few decades, archaeologists have begun to question the explanatory potential of cultural evolution, recognizing that categories such as "chiefdom" and "redistribution" have not directly addressed changes in social inequalities or the dynamics of power relations. Interest in political economy and the manifestations of power has begun to replace sociopolitical taxonomy and generalizations regarding cultural evolution. An alternative approach is forwarded by examining the ways in which sociopolitical evolution and political economy have been applied to the study of prehistory. Advancements in archaeological research involving more fine-tuned regional chronologies have gradually brought theories of human agency to bear in studies of prehistoric political development.

Native American societies in late prehistoric and protohistoric southeastern North America, what are commonly referred to as the Mississippi Period (ca. AD 800-1700) and Mississippian culture, have been the subject of research for well over a century. The meanings of "Mississippian" have correspondingly changed during this time, reflecting both the accrual of new data and diverse models drawn from culture history, neoevolutionism, processualism, and political economy. Since the 1980s, emphasis has been placed on the delineation and examination of regional polities, with increased recognition that political development and decline did not follow a uniform, simultaneous process of cultural expansion, adaptation, evolution, and decline. Mississippian political economy and political dynamics have been described in terms of central places, prestige goods economies, the mobilization of tribute, and provisioning of foods. Developmental changes in Mississippian political economy nonetheless continue to be explained largely in terms of the material prerequisites and structural constraints of cultural evolution and "pristine" cultural systems. Recent studies have proposed that structural instabilities were an underlying factor in the recurrent development of simple and complex chiefdoms, what is referred to as political cycling.

The present study argues for an alternative approach to explaining the development and decline of regional polities. The concept of *political culture* is adopted in referring to an *historical process* of structural power and political-symbolic actions. Mississippian political culture can be examined in terms of gifts of food and feasting, craft goods, and monumental landscapes as opportunities for the negotiation of symbolic capital in the formation of alliances, coalition building, and political consolidation. Symbolic violence and coercion were also part of the regional, historical trajectories of Mississippian political culture.

The central focus of this study is the Moundville polity in the Black Warrior Valley of west-central Alabama. Previous investigations of Moundville and outlying mound sites are reexamined in light of recent chronological refinements, in order to arrive at a

more detailed understanding of its political development and decline. Fieldwork conducted as part of this research adds to the existing knowledge of Moundville's countryside during an era of unprecedented political consolidation (ca. AD 1200-1300) and subsequent decline. An examination of the mound construction histories at outlying sites also contributes to an understanding of Moundville's historical trajectory. Although Mississippian political culture in the Black Warrior Valley was increasingly decentralized after AD 1350, the site of Moundville retained its singular importance as a ceremonial center and mortuary facility.

Moundville's political consolidation and decentralization are contrasted with protohistoric polities in the Southern Appalachians and Central Mississippi Valley. It is argued that the problems posed by ceramically-defined phases and assumptions regarding cultural discontinuity must be surmounted through multiple lines of evidence, including archaeological, ethnographic, and historical sources. Protohistoric polities in the Southern Appalachians were drawn together through coalition building and alliance formation, resulting in the integration of a regional polity much larger than Moundville. In contrast, polities in the Eastern Lowlands of the Central Mississippi Valley did not achieve a similar level of regional integration, despite more than a century of interaction. These regional polities provide contrasting evidence for coalition building, political consolidation, and coercive violence in the Mississippian Southeast.

Contrasting historical trajectories suggest that the development and decline of Mississippian polities can be understood in terms of regionally-variable political culture. The political consolidation of Moundville was followed by more than two centuries of decentralization, in which the ceremonial center endured as an integral part of the monumental landscape. The Moundville polity had already been transformed when the inhabitants of the Southeast were afflicted with Old World diseases. Mississippian polities dealt with sixteenth-century European intrusion differently, based on indigenous expectations and political exigencies. The differential persistence of

protohistoric Mississippian polities can likewise be understood in terms of antecedent political culture. Beyond a critical reassessment of cultural evolution, cultural discontinuity, and collapse, this research has broader implications for a rapprochement of archaeology and contemporary anthropological theory through the pursuit of a historical anthropology.

Finally, theoretically informed history and historically informed theory must be joined together to account for populations specifiable in time and space, both as outcomes of significant processes and as their carriers.

– E. Wolf (1982:21), *Europe and the People Without History.*

CHAPTER ONE:

Introduction

For nearly seven centuries following AD 1000, Native Americans throughout southeastern North America constructed earthen platform mounds, plazas, and densely-populated towns, what were at various times the ceremonial centers and thriving communities of innumerable politically-integrated societies. Europeans migrating westward into the Ohio and Mississippi river valleys during the eighteenth and nineteenth centuries were struck by the imposing earthen mounds and elaborate material culture. Like those geometric earthworks built during preceding millennia, the platform mounds and plazas had been intentionally and purposefully designed by earlier generations of Native Americans. By the time of European colonization, most of the well-planned towns and ceremonial centers had been abandoned and fallen into ruin, leaving the earthworks and plazas overgrown and enigmatic to those who "discovered" them. The development of archaeology in the United States can be traced to this period, partly as an attempt to account for these prehistoric monuments (Trigger 1989a:104-108; Willey and Sabloff 1993:12-36).

Earlier descriptions of Native American mound construction and use were summarily overlooked in favor of unfounded speculation regarding their non-indigenous origin (e.g., Bartram 1996:561-567 [1789]). It was thought by many that earthworks of such size and ingenuity must have been built by Europeans, Egyptians, Israelites, Toltecs, or even an earlier, yet "lost race" of Native Americans (Griffin 1985:41-42; Silverberg 1968; Willey and Phillips 1993:22-28; Williams 1991:28-76). As part of an emerging nationalist history, these myths of non-indigenous mound builders were in accord with claims to recently settled territories, a political ideology expressed in the concept of manifest destiny and belief in the inevitable progress of civilization (Trigger 1989a:104-108, 125-126). The separation of "primitive" from civilized peoples paralleled

an era of colonization and forced removal, disenfranchising Native Americans from history as well as their land.

Irrefutable evidence that the builders of the mounds were the ancestors of recently dispossessed Native Americans came during the late nineteenth century with the work of Cyrus Thomas (1894) and the Division of Mound Exploration of the Bureau of American Ethnology. Jones (1973[1873]) had arrived at similar conclusions based largely on historic documents. Yet such efforts provided little impetus toward consideration of a Native American past in terms comparable to United States social or political history (Patterson 1995:54-55; Willey and Sabloff 1993:39-49). Antiquarians and early archaeologists instead described the naturalistic expansion and contraction of an indigenous, aboriginal culture. In response to a more temperate climate and abundant natural resources, it was thought by some that the earlier inhabitants of the Southeast had been "relieved of those perpetual struggles for covering and food" and could thus enjoy relatively more "gentle lives," focusing on the manufacture of crafts and "erection of tumuli" (Jones 1973:523).

Even though Thomas (1973 [1898]:152) had confirmed the indigenous origin of the mounds, he had little understanding of the antiquity, complexity, and diversity of the various societies that had built them (I. Brown 1981; Smith 1981). Truncated, pyramidal mounds were distinguished from other earthworks as sub-structural platforms, but were mistakenly thought to have been contemporaneous with effigy mounds and earthen enclosures (Thomas 1973:53-60, 149). While he recognized that Native Americans had continued to construct and use mounds during the early historic era, Thomas (1973:143) concluded that there had been no attainment of a "higher culture." Mound-building traditions were instead thought to have resulted from Native American migrations, or simply the "prehistoric movements of populations."

Subsequent archaeological research focused more specifically on the description and classification of monumental architecture and material culture (e.g., Brown 1973

[1926]; Holmes 1903; Moore 1905, 1908), culminating in more precise culture-historical chronologies (e.g., Ford 1936; Ford and Willey 1941; Griffin 1952a; Phillips et al. 1951). Regarded by many as the final florescence of a mound building tradition, Mississippian culture was conceived of in terms of a homogeneous and uniform natural history. Subsequent interpretations of the expanding archaeological data base would be forwarded through a momentous paradigm shift in anthropology that began following the Second World War. The ensuing theoretical reorientation was brought to bear in the New Archaeology of the 1960s and 1970s.

Yet well into the twentieth century, the Native Americans who had constructed platform mounds were romanticized as a peaceful, "natural" people, in contradistinction to western civilization. This contradicted previous myths of a civilized race of mound builders having been conquered and vanquished by the more "war-like" historic Indian tribes. In a popular overview of the mound builder myth, Silverberg (1968) portrayed the architects of late prehistoric platform ("temple") mounds in terms of the naturalistic ebb and flow of an ancient, instinctual tradition:

> In essence, then, mound building came to an end in the United States in the Seventeenth Century and what followed was a kind of convulsive reflex action. For a thousand years the Adenas had heaped up earth; for five centuries more after their passing, the Hopewells had reared their elaborate enclosures and embankments; and then, while Europe passed through the crises of the crusades and the Black Death and the tumultuous Renaissance, the builders of the temple mounds had constructed their titanic platforms. After that, a swift and puzzling decline, and a slow fading out of the old mound-building urge . . . Those in whose veins ran the blood of Hopewells or Temple Mound folk

slipped into sleepy ruralism or into something not far from savagery [Silverberg 1968:336].

The genetic continuity between mound builders and Native Americans having been established, the concept of cultural discontinuity persisted. Even after the Mississippi Period (ca. AD 800-1700) had been distinguished from earlier mound building traditions (e.g., Griffin 1952a), the entire span of North American prehistory seemed oddly disconnected from the histories of "living peoples" (Phillips et al. 1951:347). It was thought that native population loss and displacement due to disease and colonization were accompanied by further changes, so that culturally, if not biologically, those people who constructed the mounds could be viewed as "distinct and different from the historic Indians" (Shetrone 1939:479). This breach between Native American prehistory and history contributed to a new mound builder myth, one in which Mississippian cultural expansion was viewed as the result of gradual migrations or diffusion, culminating in a cultural florescence and ultimately the cultural "degeneration" of the Mississippian decline (Smith 1984).

By the 1970s, changes in the discipline of archaeology laid bare this second myth. The New Archaeology brought anthropological theory to bear on the political and economic organizations of Mississippian societies, distinguishing discrete regional polities from a formerly homogenous culture area concept (e.g., Larson 1971, 1972; Peebles 1971; Peebles and Kus 1977; Smith, ed. 1978). Consequently, the historical trajectories of Mississippian societies are no longer sufficiently explained in terms of a single, pan-regional process of cultural expansion and contraction.

In addressing the processes involved in the regional development and decline of Mississippian polities, the present work is an extension of earlier anthropological archaeology. "Polity" refers here to a politically-integrated society incommensurate with the concepts of "culture" or "community." Mississippian polities developed in different

areas of southeastern North America at different times, beginning as early as AD 800. These societies were characterized in part by ascribed or inherited social statuses, some degree of centralized authority, and large political-administrative and religious centers. These characteristics are what anthropologists and archaeologists have referred to as chiefdoms (Service 1962:133-143; Smith, ed. 1990; Steponaitis 1978). Regional polities were typically located in and around major river valleys in the Southeast, and frequently endured for no more than a few generations. Yet the size and duration of political-administrative centers and polities varied considerably (Hally 1999; Payne 1994). As with other intermediate-level societies in North America, the Mississippian Southeast did not comprise a singular political entity, continuously-integrated community, or pre-Columbian state (Neitzel, ed. 1999; Pauketat 1998; Scarry 1996c).

Regional political development in the Mississippian Southeast was not inherently progressive or unilinear. In contrast to explanations that conflate culture with civilization, the historical trajectories of different regional polities are not adequately understood in terms of cultural expansion, adaptation, or evolution. Such accounts tend to portray prehistoric social interactions as both apolitical and non-historical. As in other regional polities throughout the World, factional conflicts and political instabilities occurred in the Mississippian Southeast. However, it would also be inaccurate to describe all regional polities as inherently constrained or determined by incessant social conflict.

The scale and duration of larger Mississippian polities attests to the abilities of individuals and coalitions to forge long-lasting alliances, establish and maintain legitimate authority, and reach some level of consensus or compliance. In this sense, the present volume is a study of regional political dynamics, of the processes associated with the changeable dimensions of power, authority, conflict, and identity. Perhaps the most demanding line of inquiry, and the approach explored here, is to address the

regional development and decline of Mississippian societies as a politically-negotiated, historical process.

Anthropology, Progress and Culture

Anthropological theories concerning political dynamics, processes, and power are also the product of distinct histories. As in other humanistic and historical sciences, archaeological studies of political development and decline continue to be influenced by the views of earlier social philosophers. A contemporary theory of politics was foreshadowed long ago by Machiavelli (1961 [1513]), who described the pursuit of political power through the use and threat of coercive force. The Machiavellian philosophy of nationalist history represented a clear forerunner of twentieth-century social theory, in distinguishing morality and ethics from government and politics, as well as in arguing that a "collective will" emerged through the actions (i.e., agency) of individuals (Gramsci 1971:125-133 [1949]).

In fact, many of the central problems still being debated in contemporary anthropology were recognized centuries ago. As defined by scholars during the Enlightenment, the development of social inequalities, political economy, and the institution and growth of government were approached through reasoning from "natural laws," rather than the revealed knowledge of religious orthodoxy (Hobbes 1996 [1651]; Locke (1947 [1690]). The social contract from which political authority developed was interpreted as both a consensual form of government necessary for civilization (Hobbes 1996:114), and an imposed, ongoing struggle to remedy nascent social inequalities (Rousseau 1984 [1751]:110-128). The political histories of European nations were interpreted as evidence of such progress, in stark contrast to then prevalent assumptions regarding the decline of western civilization from classical antiquity and portrayals of history as cyclical (Breisach 1994: 201-214; Mandelbaum 1971; Mathiopoulos 1989:7-14; e.g., Montesquieu 1949 [1748]).

Gibbon's (1960 [1788]) *Decline and Fall of the Roman Empire* represented a departure of sorts from more speculative historiography and raised the standard for subsequent research in the form of a detailed, historical narrative. However, he was not particularly interested in social theory and did not pursue a comparative explanation of political decline (Bowersock 1988:166-168). He instead attributed the decline of Rome to numerous causes spanning more than a millennium, concluding his monumental work with the paradoxical comment that "the decline of Rome was the natural and inevitable effect of immoderate greatness" (Gibbon 1960:524-525). He thus implied that political decline was rooted in moral decay and the erosion of human virtue, affirming earlier assumptions regarding human nature and progress (Breisach 1994:216-217). In *The Decline of the West*, Spengler (1918-22) implied similarly vague notions concerning the spiritual growth and cyclical degeneration of civilizations, based on the concept of a "universal mind." Toynbee (1946) characterized collapse as the destiny of civilizations, based on a "breakdown of creative spirit" (Breisach 1994:397-400; Voget 1973:8-9; Yoffee 1988:2-4).

In contrast to speculative historiography, the establishment of anthropology in Europe and the United States represented a culmination of Enlightenment interests in discovering and expounding on natural law, in order to understand the "condition of mankind" (Hobbes 1996:82-106; Harris 1968:8-52; Leaf 1979:13-59; Malefijt 1974). There was consequently renewed interest in examining geographic variation in human societies and the successive stages of cultural development through which European nations had ostensibly emerged. Social and political typologies had been proposed by scholars such as Turgot and Ferguson, amounting to historical-developmental stages crowned by Western civilization (Harris 1968:25-38; Trigger 1989a:55-58). Such perspectives of political development and human nature represent a "morally ethnocentric" or Eurocentric theory of progress (Cohen 1973:862).

Centuries would pass, however, before ethnographic and archaeological fieldwork would be marshaled to address such issues. Western concepts regarding civilization and historical progress are nonetheless embedded in the origins of anthropological science (Service 1975:21-70, 1978; Voget 1973). Subsequent theories of cultural evolution were similarly influenced by preconceived notions regarding the history of civilizations and the nature of "primitive," prehistoric societies. In fact, the separation of prehistory from history, at one time assumed to reflect essential differences in human nature, continues to influence the practice of American archaeology (Lightfoot 1995).

Although Darwin is credited with forwarding biological evolution, Spencer (1857, 1860, 1862) was instrumental in promulgating the concept of social evolution. Despite an explicit biological and racial determinism, Spencer played a major role in advancing a comparative sociological and anthropological method (Harris 1968:128-136). In what came to be known as Social Darwinism or Spencerism, he explained the progressive development of society in terms of universal social evolution. Spencer (1988:14-15 [1876]) applied the concepts of organic evolution and "survival of the fittest" to social aggregation and the "superorganic" growth of society. As an "entity . . . formed of discrete units," those societies that were more functionally differentiated were seen as more highly evolved (Spencer 1988:7). While some societies were described as having become extinct, Spencer emphasized social evolution and aggregation in terms of organic growth, a concept that found immediate acceptance in the political ideologies of nineteenth-century industrialized nations (Mathiopoulos 1989:119-123).

During the second half of the nineteenth century, Lewis Henry Morgan and Edward Tylor formulated cross-cultural generalizations in support of unilinear cultural evolution, based on more substantive and systematic ethnographic research. For Morgan (1963:5, 263 [1877]), political development represented a series of solutions to the problems posed by economic diversification, the growth of private property, and the increased complexity associated with successive stages in cultural evolution. While

Tylor (1960:246, 272 [1881]) expounded on the concept of culture as a "superorganic entity" and complex whole, his concept of "survivals" relegated non-western, "primitive" societies to a timeless, prehistoric past, one that European societies had passed through "long ago." Political power was accorded a fairly benign origin in consensual forms of government, and the sovereign authority of the state (Tylor 1865, 1958 [1871], 1960:272-274).

In contrast, Morgan (1963: 350-351, 535-563) affirmed Rousseau's thesis that the origin of private property was associated with increased social inequalities. He maintained that the transition to "political society" was a gradual development, as the authority of kin-ordered institutions was transferred first to a confederation, and finally to the state. Thus defined, Morgan maintained that political society had not fully developed in most regions of native North America. Morgan (1963:12, 65-66) associated various ethnical periods with specific technological conditions, such as the invention of pottery, plant and animal domestication, and iron tools.

Marx and Engels (1978 [1848]) were influenced by Morgan when they argued that class conflict had played a principal role in historical development. Consequently, they viewed pre-capitalist society as egalitarian, and in another sense, pre-political (cf. Engels 1986 [1884]). Nearly a century later, these views had a direct influence on theories of cultural evolution (e.g. White 1949:377). Rousseau's concept of the "noble savage" was reintroduced as the "primitive" in cultural evolution, from which anthropologists would further elaborate on the development of inequalities in pre-capitalist societies (Bloch 1983:141-172).

Throughout the early twentieth century, the issue of regional political development and decline was either overlooked or was misconstrued in terms of Social Darwinism and cultural evolution (Mandelbaum 1971:77-111; Mathiopoulos 1989:119-123). Methodological advances in archaeology had meanwhile improved the abilities of prehistorians to construct more detailed culture histories. The establishment of

archaeology as an academic discipline was followed by advances in methods and techniques that produced a revolution in the comparative study of prehistoric societies (Trigger 1989a:186-205; Willey and Sabloff 1993:96-149). Yet a shift toward cultural relativism and rising criticism of cultural evolution in the founding of American anthropology redirected attention away from comparative analysis.

Boas (1988:243-280 [1940]) made a precipitous break with cross-cultural comparison and the broad generalities of cultural evolution by emphasizing the historical permutations of cultural variation. Boas (1988:305-311) and many of his students were critical of racial and biological determinism, voicing a general discontent with nineteenth-century evolutionism and stereotypes of "primitive" society. They instead suggested that past and present cultural variation should be addressed in light of the particular histories of a culture (e.g., Kroeber 1935, 1963a, 1963b:5-10; Mead 1951). While archaeologists were influenced by this descriptive, culture historical approach, general assumptions regarding cultural evolution and technological progress continued to play a more implicit role in studies of prehistory (Lyman and O'Brien 1997; Lyman et al. 1997:207-225). Explanations of prehistoric cultural development were couched in terms of diffusion, migration, acculturation, and innovation, emphasizing broad geographic connections and continuity, instead of historical distinctions or variation.

Students of Boasian culture history did not completely rule out comparative explanations of cultural development however, particularly in the context of the emerging sub-field of political anthropology. In *The Origin of the State*, Lowie (1927) advanced a more explicit definition of political development as an historical process. Lowie (1927:112) rejected hyper-diffusionist explanations of cultural expansion and addressed the problem of political development in terms of territoriality and coercion. He suggested that certain "associations" had led to political centralization and social inequality. By "associations," he meant groups not based exclusively on kinship or

territoriality yet "consolidated by a common end," what might today also be referred to as interest groups or coalitions (Lowie 1927:74).

According to Lowie (1927:112-117), authority was at first "situational," non-institutionalized, and locally integrated, then intensified, legitimized, and permanently concentrated in society. He concluded that the "germs of all possible political development" existed in every society, and that the "agencies" of development were found in "associational activity" and the assertion of "sovereign authority." Following Engels (1978:732 [1874]), he suggested that social autonomy and subordination to authority were historically-interrelated. Due to his interest in state formation, as well as the limited availability of comparative archaeological data, Lowie was not able to pursue a more in depth explanation of regional political development.

While the inevitability of cultural progress (and collapse) has often been assumed, it is only recently that the culture concept has become a subject of closer scrutiny. During the twentieth century, archaeologists achieved the distinct advantages wrought by familiarity with the tangible remains of prehistoric societies, organizing material culture, architecture, and monuments in more precise chronological frameworks (Daniel 1967:79-98, Daniel and Renfrew 1988:60-78; Trigger 1989a:73-109; Willey and Sabloff 1993:96-148). Although the application of political theory to the archaeological record is still in its infancy, there are countless examples of ancient societies that developed complex political institutions and subsequently declined, ostensibly due to stochastic or unknowable factors. The earliest archaeological studies in the Americas provided incontrovertible evidence of pre-Columbian civilizations and their eventual demise (Squier and Davis 1848; Stephens 1843). Yet explanations of political development and decline continue to rely on notions of cultural progress, growth, and endemic decay, reiterating earlier organic analogies (Tainter 1988:74-86). In considering the archaeological evidence in light of contemporary political anthropology, the historical trajectories of regional polities emerge as the central focus of study.

The Present Study

Profound theoretical disparities in representations of the past stem in part from the divergent epistemologies and methodologies of historians and anthropologists. Explanations of political development and decline are today distinguished by different perspectives regarding the role of human intention and agency, ecological and cultural factors, and issues of causality and historical determination. The separation of history from prehistory has inevitably been drawn along lines of cultural or ethnic identity, political economy, and power: the colonizers write histories and reinvent civilization, while the colonized are viewed as passive recipients and caretakers of a "pristine" culture, ultimately the victims of civilization (Sahlins 1994:381, 1999:ii-vi). Because written documentation is not available for the greater part of past human social existence, archaeologists clearly have the potential to contribute substantially to both anthropological and historical knowledge of political development and decline.

At the center of the debate lies the potential role of an historical approach in archaeological explanations of the past. In this case, whether explanation of regional political development and decline can be both historically and anthropologically relevant. Political anthropologists recognized decades ago the significance of an historical approach. Many anthropologists today commonly refer to the collusion of history, power, and cultural practice in understanding social interaction and change (e.g., Dirks et al., ed. 1994; Kertzer 1996). Yet the rupture between history and prehistory persists, exemplified by the admonition that archaeology should become an evolutionary science and leave the historical particulars to the historians (Dunnell 1989; Leonard 1995). This dilemma is made all the more needless by the growth of ethnohistory, historical anthropology, and the loosening of conventional boundaries between anthropological and historical disciplines. Uniquely poised to address regional political development and decline as an historical process, archaeologists are today faced with the task of reinventing culture history.

As an investigation of regional political development and decline, this study argues for the rapprochement of archaeology, historical anthropology, and political theory. The viewpoint is both political and historical, recognizing the pervasive nature of political dynamics on varying spatial scales throughout past human social experience. Anthropological perspectives of historical production argue against history as consisting simply of well-documented facts or ideographic events (Sahlins 1985; Trouillot 1995). Rather, such an approach recognizes the centrality of both human agency and long-term, structuring principles (i.e., Giddens 1979, 1987), particularly in regards to the historical trajectories of political consolidation, regional centralization, and decentralization. Since political identity and meaning are invariably culturally constructed and contested, a theory of political-symbolic action (practice, or praxis) is recognized as fundamental to understanding regional political development and decline (Bourdieu 1977:3-9, 1990:80-97, 1991:163-202; Gramsci 1971:381-419; Kertzer 1996:153-171). In short, culture history should not be dismissed as overly particularistic or inadequate for an archaeological science, since the production of history constitutes power (Trouillot 1995; Wolf 1990, 1999).

The principle focus of this research is late prehistoric and protohistoric southeastern North America, or regional polities associated with the Mississippian Southeast. There is considerable variation in geology, physiography, and biota throughout this area, from the Coastal Plain and Lower Mississippi River Valley, to the Appalachian Highlands and Piedmont (Figure 1). The entire Mississippian Southeast, along with the preceding Woodland Stage (1000 BC - AD 800), is typically described as a distinct culture area (e.g., Bense 1994; Sears 1964). During the Mississippi Period (AD 800-1700), the distribution of exotic or finely-crafted goods and the mobilization of certain foods provide evidence of social inequalities and regionally centralized political economies (Barker and Pauketat, ed. 1992; J. Brown 1985; Steponaitis 1978; Welch and Scarry 1995). The monumental earthworks, architecture, and design of Mississippian

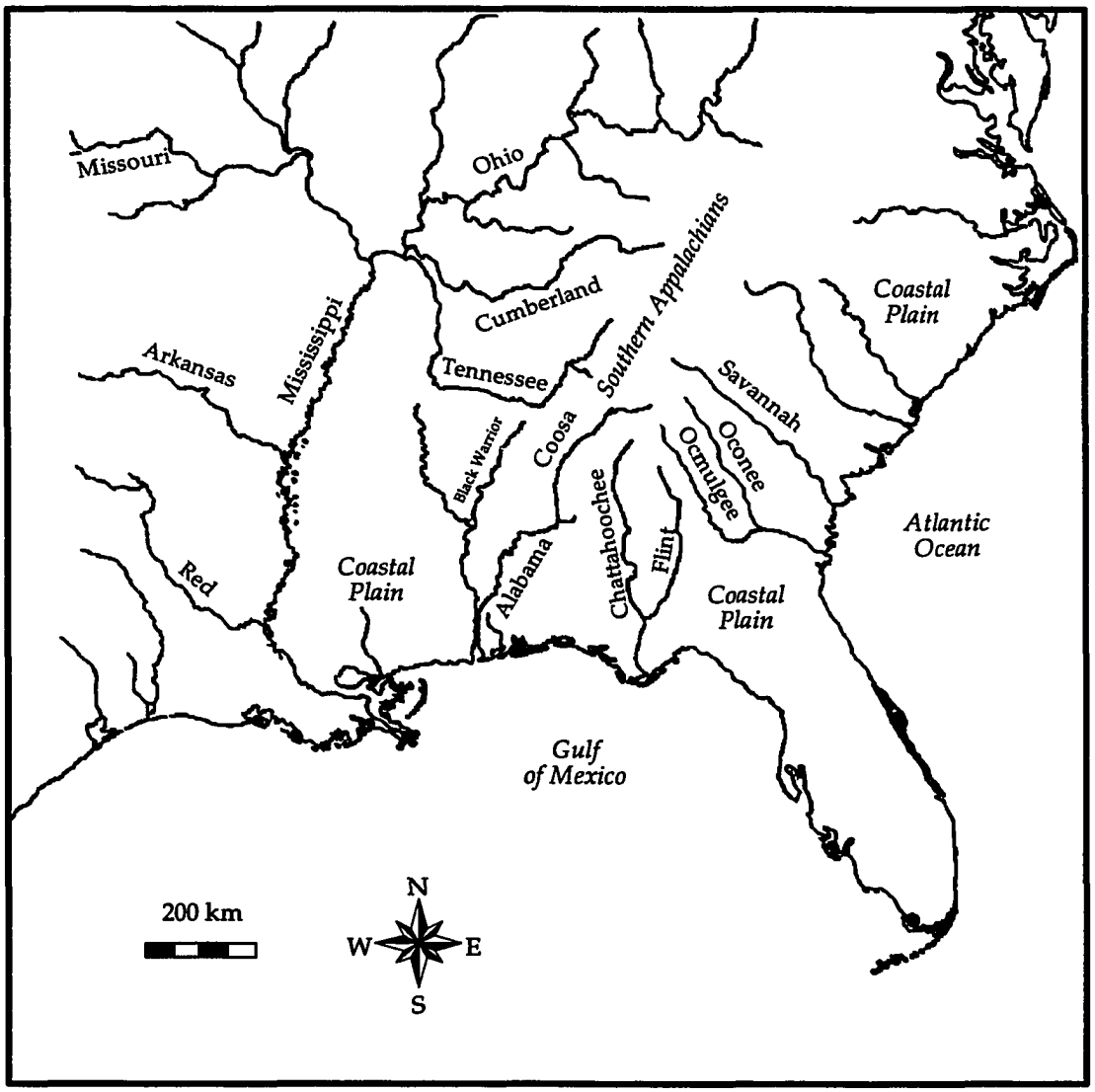


Figure 1. Major Physiographic Provinces and Rivers in the Southeast.

sites in turn provide an indication of the political and cosmological significance of these centers (Lewis and Stout, ed. 1998; Knight 1998; Payne 1994).

While Mississippian societies have been characterized in culture evolutionary terms as an intermediate-level or "middle range" in complexity, a comparative investigation of polities provides an opportunity to reevaluate regional development and decline as an historical process. Rather than further delineating taxonomic levels of cultural complexity, the challenge here is to broaden our understanding of historical variation as an intrinsic part of regional political development and decline. Comparative studies of regional polities can contribute a more detailed understanding of political development and decline. Until fairly recently however, archaeologists have tended to lump late prehistoric polities in the Southeast under the generalized categories of Mississippian culture or cultural adaptation, overlooking a more detailed investigation of political dynamics and historical variation.

The natural history of Mississippian culture thus stands in marked contrast to the agentive and dynamic histories of subsequent European conquest and colonization. Studies associating indigenous depopulation and demographic collapse with cultural discontinuity have only begun to address what was a variegated, historical process (e.g., Dobyns 1983; Ramenofsky 1987, 1990; M. Smith 1987, 1994). Just as Mississippian culture can no longer be regarded as a static, homogeneous entity, arguments for a synchronous demographic and cultural collapse do not account for regional political decline centuries prior to European contacts. Nor is there adequate consideration of regional historical variation, political process, or Native Americans as agents in historical production.

As it pertains to the late prehistory and protohistory of southeastern North America, this work is intended to be a comparative study of the historical trajectories of Mississippian polities. Yet there is no overriding reason that Mississippian culture history, political dynamics, or process should be presented as disconnected phenomena. Representations of history as a jumble of idiosyncratic events and process as ahistorical

generalization belie the fact that Mississippian culture represents the product of distinct, regional histories. Recognition of the historicity of cultural practices introduces historical process as the negotiation of authority and power relations that involved a wide range of conflict, coercion, accommodation, and compliance. The principal objective of this study is to explain the regional development and decline of Mississippian polities in terms of this political, historical process. Related to this is the problem of delineating and identifying the archaeological correlates of coalition building, factionalism, alliance formation, and coercive relations, as represented in political consolidation, regional centralization, and decentralization.

The following study is organized into five chapters. Cultural and political theory are taken up again in Chapter Two, with particular attention as to how sociocultural anthropologists and archaeologists have addressed the development and decline of regional polities. A reconsideration of political anthropology forms the necessary historical background for this study. While in one sense a prelude to the present work, a thorough understanding of how political theory has previously been applied (or overlooked) sets the stage for advancing new research. It might otherwise be tempting to retreat to earlier, more familiar theories of cultural evolution, devolution, and collapse.

Archaeologists are today still strongly influenced by theories of sociopolitical evolution set forth during the three decades following the Second World War. Of particular interest here is the concept of the chiefdom as it has been applied to archaeological interpretations of political dynamics. In forwarding a comparative, historical approach to political development and decline, it is first necessary to recognize the contributions and critiques of earlier studies. The impetus toward a systemic-processual viewpoint in archaeology, and subsequent neoevolutionary critique it has produced, are framed in terms of a regional approach to political development and decline.

The interrelated concepts of political economy and process are explored in the second half of Chapter Two. Previous archaeological studies of prehistoric political economy and regional political dynamics have been strongly influenced by neo-Marxist political theory and economic theories of historical development. Building on Johnson and Earle's (1987) study of political economy in prehistory, it is argued that consideration of non-capitalist political economy in archaeology should be rooted in the delineation of regional polities as focal points in multiscalar interactions. Central place theory, peer polity interaction, and prestige goods economy are among the various models that have been used to describe regional and interregional interactions.

While the pursuit of regional political economy in prehistory has in one sense outstripped earlier taxonomic and neoevolutionary perspectives, economic determination remains implicit in systems-centered perspectives of political development (Brumfiel 1992). The issue of political power has more recently been broached through investigations of various sources of wealth and staple finance, ideological legitimation, and control (e.g., Blanton et al. 1996; Earle 1997; Earle, ed. 1991). The reorientation of archaeological political economy toward historical process has benefited from the further refinement of regional chronologies and holds considerable potential in explanations of political development and decline. Consideration of power and process alongside earlier theories of political economy promises to advance archaeological studies of regional political development and decline by incorporating contemporary perspectives from historical anthropology. As such, Chapter Two outlines the theoretical background and orientation for the present study.

The history and practice of archaeology in southeastern North America are taken up in Chapter Three, focusing on Mississippian research, past and present. The literature on Mississippian archaeology has increased dramatically during the past few decades, representing what is perhaps the most intensively studied time period in southeastern prehistory (see Peregrine 1996; Smith 1986:57). The concepts of

Mississippian culture and Mississippi period have been outlined and redefined through research employing culture historical, systemic processual, and political-economic models. As theoretical perspectives have changed, so too have understandings of Mississippian culture been transformed. In reexamining these changes, it is possible to recognize some of the more implicit theoretical trends and their influence on archaeological research.

Increased knowledge of the historical trajectories of Mississippian polities has been forwarded by contemporary perspectives of political economy, particularly models involving prestige goods economies, the mobilization of food or tribute, and regional centralization. Archaeological research has more recently focused on Mississippian political dynamics as incorporating, and at the same time transcending, the determinative structures of systemic processualism and political economy, most notably studies of the Cahokian polity in the American Bottom of Illinois. Reconsideration of Mississippian culture history in terms of political and symbolic actions is overturning earlier preconceptions regarding the detachment of process from history, pointing the way toward an *historical process* of Mississippian political development and decline (e.g., Knight and Steponaitis 1998; Pauketat 1992, 1995, 1998; Pauketat and Emerson 1991, 1997a).

A concern for the interrelatedness of political-economic structures, historical context, and authority has fomented interest in the role of factional competition and conflicts in the historical trajectories on Mississippian polities. The apparent cyclical development and decline of regional polities has consequently been forwarded as a characteristic of political instabilities in the Mississippian Southeast. While studies of political cycling continue to be framed in terms of neoevolutionary anthropology and sociopolitical taxonomy, there is a clear parallel with earlier scholarship concerning conjunctures, or medium-term historical structures and events. The *regional* development and decline of Mississippian polities was not inherently cyclical or

repetitive, but points toward the central importance of political dynamics, in which factional competition was only one potential dimension of an historical process.

Archaeologists, historical anthropologists, and social historians have thus converged on unique, yet seemingly recurrent, historical trajectories in which structure and political-symbolic action were interrelated through social relations of authority. The term "political culture" is introduced as a concept more amenable to consideration of social relations of authority as an actively negotiated, historical process of compliance and coercion. The archaeological correlates of political culture are outlined in the final section of Chapter Three, focusing specifically on regional polities in the Mississippian Southeast. Political consolidation, regional centralization, and decentralization are discussed in relation to the distribution of authority and meaning, comprising unique historical trajectories of development and decline. Craft production, food provisioning and feasting, the construction of monumental landscapes, and coercive, symbolic violence are among the common practices that reproduced Mississippian political culture on local and regional scales. These archaeological correlates comprised a political currency or symbolic capital, through which political economy, ideology, and human agency were interrelated (i.e., Bourdieu 1977:171-183).

A comparative study of Mississippian political culture is launched in Chapter Four, beginning with a review of previous investigations of the Moundville polity in the Black Warrior Valley of west-central Alabama. Moundville is one of the most intensively studied Mississippian polities in the Southeast and has contributed significantly to present-day understanding of Mississippian culture. At the same time, knowledge of Moundville has been profoundly influenced by theoretical trends in Mississippian archaeology. The result has been a gradual synthesis of an earlier culture historical approach, systemic processual perspectives, and recent interest in understanding political development and decline as an historical process. Comparison of earlier and contemporary perspectives regarding the emergence and collapse of the Moundville

polity highlights the importance of approaching political culture as an historical process. The refinement of a regional chronology is culminating in a new understanding of Moundville's political history (Knight 1997; Knight and Steponaitis 1998; Steponaitis 1998; Welch 1996, 1998; Welch and Scarry 1995).

The archaeological evidence from outlying mound sites in the Moundville countryside is reviewed in the second part of Chapter Four. Previous explanations of Moundville's historical trajectory have relied considerably on the information available from these sites. Yet much still remains to be done. One outlying mound site in particular, Fosters Landing, was examined as part of this research. The results of the survey and test excavations at Foster Landing during the Winter of 1997-1998 and Summer of 1998 are presented, along with a survey conducted at Hills Gin Landing. Investigation of Fosters Landing yielded evidence of Mississippian habitation from both ends of Moundville's political history dating from the early Moundville II phase (AD 1250-1300) and Moundville IV phase (ca. AD 1550-1650). Evidence for mound construction and use suggests that Fosters Landing was not only a focal point for actions and events involving decentralization, but that its earlier residents were actively engaged in the political consolidation of the region. Investigations of mound and non-mound, domestic contexts contribute additional information regarding Moundville's historical trajectory.

Comparative archaeological and historical sources are marshaled in Chapter Five in order to shed light on regional variations in Mississippian political culture spanning late prehistory and protohistory. Two interrelated issues currently confront the study of Mississippian protohistory. The first issue involves the definition and application of archaeological phases in regions characterized by intense interaction and conflict between polities. The second issue deals with polarizing assumptions concerning cultural continuity and discontinuity along with the methodological impacts for studying Mississippian protohistory. Each of these issues are considered in light of

contemporary archaeological and anthropological theory. Previous studies of two distinct regions are then examined: the Southern Appalachians and the Central Mississippi Valley. Although roughly contemporaneous, Mississippian political culture in these regions varied considerably. Furthermore, these variations were played out in different historical trajectories across the epistemological divide of prehistory and history.

A comparative, regional analysis of Mississippian political culture is drawn from multiple lines of evidence in the second half of Chapter Five. As outlined in Chapter Three, variations in Mississippian political culture are examined in terms of feasting and food provisioning, craft goods production, the construction and alteration of monumental landscapes, and coercive violence. Each of these practices involved negotiations of symbolic capital in which social relations of authority ranged from compliance and accommodation, to factional conflicts, warfare, and resistance. When Mississippian political culture is examined from this viewpoint, the formation of coalitions, alliances, and confederations is identified as a decisive factor in the historical trajectories of Mississippian polities. The process of political consolidation reflects the abilities and actions of coalitions in successfully appropriating and redefining Mississippianism. Regional decentralization as well reflects the exigencies of consolidation and coalition building. These practices were further transformed during protohistory, not by acculturation or a terminal, cultural collapse, but by communities and coalitions of Native Americans in confronting, and in some instances surmounting, a range of potentially virulent new circumstances.

The findings of the present study are summarized in Chapter Six, beginning with a brief recapitulation of the arguments and evidence set forth in earlier chapters. This is followed by a review of the contrasting historical trajectories of Mississippian polities in the Black Warrior Valley, Southern Appalachians, and Central Mississippi Valley. It is argued that political development and decline in these regions can best be explained in

terms of historical variations in political culture, variations that were not simply the systemic outcomes of different adaptations, or consequences of culture contact, European exploration, or colonization. It is argued that the further advancement of knowledge regarding the development and decline of Mississippian polities will require the continued refinement of regional chronologies and pursuit of multiple lines of evidence. It is impossible to understand the development or decline of Mississippian polities without addressing Mississippian political culture on its own terms as an *historical process* of cultural production. In explaining regional political development and decline in the Mississippian Southeast or elsewhere, it becomes necessary to redress one final dilemma: the uneasy relationship between culture and history in archaeological practice.

The study of politics, then, is the study of *processes* involved in determining and implementing public goals and in the differential achievement and use of power by the members of the group concerned with those goals ... To put this another way, political anthropology no longer exclusively studies – in structural-functionalist terms – political institutions of cyclical, repetitive societies. Its unit of space is no longer the isolated "society"; it tends to be the political "field." Its unit of time is no longer "structural time"; it is historical time.

– M. Swartz, V. Turner, and A. Tuden (1966:7-8), Introduction to *Political Anthropology*.

CHAPTER TWO:

Political Anthropology and Prehistory

By the mid-twentieth century two trends emerged in anthropological theories about political development and political dynamics. The first trend marked a profound re-examination and revision of nineteenth-century evolutionism as a coherent paradigm for understanding long-term change in a cross-cultural, comparative sense. With the tenets of culture history and cultural relativism firmly entrenched, neoevolutionary perspectives did not gain broad acceptance in anthropology until the 1950s (Harris 1968:250-392, 634-653). The second major trend stemmed in part from a critique of the sociological functionalism of Malinowski and Radcliffe-Brown, generating increased interest in social interactions in terms of structure, political action, and process (Keesing 1974:79; Lewellen 1983:6-12; Vincent 1990:313). Working from the normative assumptions of culture historical research, archaeologists were more gradually influenced by theoretical directions in social anthropology (Patterson 1995:86-92; Trigger 1989a:289-328; cf. Willey and Sabloff 1993:152-231).

By the 1970s, theories of cultural evolution were associated with a wide range of approaches, from cultural materialism and cultural ecology to general systems theory (Keesing 1974:74-77; Orlove 1980:239-245). Cultural materialists de-emphasized the problem of political development and decline by producing synchronic or timeless explanations of different cultural practices in reference to technological, economic, or environmental determinants (e.g., Harris 1974:51-69, 94-113; 1977:101-143; Price 1982; cf. Orlove 1980:240-241). Harris' (1979:56) "principle of infrastructural determinism" was a distillation of materialist inclinations to explain function, stability, and change in terms of unequivocal cultural categories (Wolf 1999:58-59). Ecological anthropologists were initially concerned with the functional evolution of cultures, primarily emphasizing the outcomes of adaptive strategies as resulting from variables such as environmental

circumscription or demographic pressure (Anderson 1973; Orlove 1980; e.g., Rappaport 1967; Vayda 1969). Cultural ecology thus initially tended to reinforce the contradiction of nature *versus* culture, emphasizing the ecological functions (ecofunctionalism) of culture. Culture as a "summation of coping devices" was soon an acknowledged limitation of cultural ecology (Netting 1977:93). Influenced by subsequent culture theory, ecological anthropologists have more recently sought to incorporate political factors (political ecology), historical contingency (historical ecology), and socially transformed (anthropogenic) landscapes (Biersack 1999; Crumley 1994; Patterson 1994; Kottak 1999).

General systems theory became popular in the social sciences during the 1960s, yet systemic views of culture were advocated decades earlier (e.g., Buckley, ed. 1968; Grinker 1967; Redfield, ed. 1942; White 1943). Anthropologists applied systems theory to both cultural materialism and cultural ecology, but a systems approach had a more profound impact on the study of political development as related specifically to theories of cultural evolution (Orlove 1980:241; e.g., Flannery 1968, 1972). Adopting a systemic approach to culture change, anthropologists and archaeologists expanded on sociopolitical types and described a wide array of evolutionary paths to complexity (e.g., Binford 1965, 1983:214-232; Sahlins and Service, ed. 1960; Sanders and Price 1968). The study of political systems was subsumed under the broad, generalizing framework of neoevolutionary anthropology, with the principal areas of inquiry being cultural adaptation (or maladaptation) and the refinement of sociopolitical taxonomies. The culture historical approach in archaeology was profoundly influenced by this ecosystemic, neoevolutionary turn (Brumfiel 1992). Given its close association with the study of political development and decline, systemic perspectives of cultural evolution are considered here at length.

The second trend in the study of political development began with a critique of sociological functionalism. Malinowski (1945:41-51) had viewed social institutions as

satisfying biological functions or cultural necessities. "Primitive" societies were regarded as existing in a state of dynamic equilibrium, down-playing internal conflict and producing often ahistorical caricatures of non-European peoples (Malinowski 1944, 1948; cf. Radcliffe-Brown 1952a). The resulting dichotomy of "dynamic" versus "stationary" cultures involved simplistic assumptions regarding the direction of culture change, acculturation, and assimilation, thus affirming the Eurocentric notion that history was somehow less relevant to non-western societies (Faubion 1993; e.g., Barnett et al. 1954; Herskovits 1938; Malinowski 1945:14-18, 27-31; Redfield et al. 1936). In situations of contact or diffusion, social change was thought to have occurred as a dynamic interchange between conflict and cooperation, producing a "compromise" or new state of social equilibrium (Malinowski 1945:26). Radcliffe-Brown (1952b:1-14, 178-187, 204) decried "idiographic" culture history, suggesting instead that the normative structures of society were advanced through "the process by which wide-range systems of social structure have grown out of, or replaced, narrow range systems."

With the publication of such works as *African Political Systems* (Fortes and Evans-Pritchard, ed. 1940), *Political Systems of Highland Burma* (Leach 1954), and *Custom and Conflict in Africa* (Gluckman 1955), anthropologists shifted toward a greater emphasis on political process and conflict instead of function, normative structures, or social equilibrium (Lewellen 1983:8-12; Vincent 1990:335-357). Evans-Pritchard (1950, 1962) argued early on for an interdisciplinary synthesis of anthropology and history, noting that the segregation of "primitive" societies from history had implied a specious and deterministic functionalism. The prospects of anthropology as comparative history were similarly explored by Eggan (1954) and Swartz (1958). Increased interest in social interactions as an historical process rather than structural or functional coherence ultimately implicated political actions in both indigenous and colonial histories (Balandier 1970:19-21; Lewellen 1983:6-9).

Turner (1957) and Swartz (1966, 1968a) were among those who advanced a process approach that focused on the political flux or "social dramas" of particular historical contexts, local-level action, and decision making (see also Swartz et al., 1966). Political factionalism, ritual, and the legitimization of authority emerged as central topics of interest, influenced by the sociological writings of Weber (e.g., Swartz, ed. 1968; Swartz et al., ed. 1966; Weber 1947). A process approach emphasized political actions and the configurations of power relations among interest groups in specific historical contexts rather than structural constraints or long-term, sociopolitical evolution (e.g., Bailey 1969; Gluckman 1965; Nicholas 1966; Swartz 1968b; Tuden 1966; Turner 1966, 1974). Process alluded to the social manifestations and negotiations of power throughout history as a changeable, political "field," rather than determinative structures or imposed, retrodictive taxonomies (Swartz et al. 1966:7-8).

The origins of political anthropology can be traced to these two parallel, yet distinct, intellectual trends: neoevolutionary rejection of culture history and the movement from structure and function to political action, conflict, and process (Lewellen 1983:5-12; cf. Vincent 1990:308-387). While the former eschewed the study of historical particulars and political action for adaptive, systemic development, the latter focused increasingly on local-level historical context, political process, and action, without a clear agenda for addressing long-term political development and decline. Ironically, what became known as processual archaeology initially had little to do with political process or processual theory as defined in political anthropology (Swartz et al 1966:7; Vincent 1990:353-367). Process in archaeology referred instead to a neoevolutionary, systems approach. Application of an agentive, process approach in the study of prehistoric political development is a relatively recent trend that has benefited from a more chronologically-precise, historical perspective. This seminal link between process and history is often overlooked by critics of the culture historical approach (e.g.,

Lyman et al. 1997), yet holds considerable potential for advancing archaeology as an historical science.

A third, less well defined source of political theory originated outside of anthropology in the historical materialism of Marx. It influenced both schools of thought during the second half of the twentieth century under the broad heading of political economy. This entailed such diverse interests as structural Marxism, theoretical critiques of capitalism and underdevelopment, dependency, the World System, and modes of production (e.g., Bloch, ed. 1975; Frank 1966; Friedman 1974, 1975; Godelier 1972, 1977; Meillassoux 1981; Rey 1975; Wallerstein 1974a, 1974b). Although general syntheses of cultural evolution and neo-Marxist political economy were advocated by White (1959b) and Childe (1951, 1958), by the 1970s neo-Marxist theory was being applied to economy and structure on a global scale, to local-level histories, political authority, and legitimacy. Neo-Marxist political economy has maintained close ties to culture historical research, generally down-playing the significance of cultural evolution and adaptation (Ortner 1984:138-160; Roseberry 1988:161-173; e.g., Mintz 1974, 1977; Wolf 1969).

Oriented toward histories of global capitalist expansion or local political economies, neo-Marxist perspectives were in turn de-emphasized in neoevolutionary anthropology as overly particularistic, ideological, and non-scientific (Roseberry 1989:49-54). The study of historical conflicts, structural contradictions, and ideologies found even less of an audience among archaeologists, being confined mostly to the emerging sub-discipline of historical archaeology (e.g., Deetz 1977; Leone 1982, 1984). The influence of historical materialism and neo-Marxist theory is nonetheless evident in archaeological studies of political economy and social inequality (Paynter 1989; Paynter and McGuire 1991; McGuire 1993; Spriggs 1984). The rapprochement of political anthropology and prehistoric archaeology thus presents the intersection of divergent interests in contemporary anthropological and archaeological theory, distinctions that

have been somewhat inappropriately labeled as processual and post-processual archaeologies (i.e., Binford 1968c; Hodder 1985).

Cultural Evolution and Collapse

Cultural evolution entered the mainstream of American archaeology through a formidable revision of the culture concept and pursuit of a comprehensive science of human behavior. White and Steward were among the leading proponents of cultural evolution during the 1940s and 1950s. The general evolutionism of White (1949, 1959b:3) was based on culture as an "extrasomatic," systemic phenomenon. In correlating the evolution of culture with increased technological efficiency in the harnessing of energy, he advocated "culturology" or the "science of culture." White (1959a:248, 1959b:ix) closely identified with the general cultural evolution of Tylor, rejecting the term "neo-evolutionism." White was consequently not expressly concerned with political dynamics, aside from long-term cultural development and general "*laws* of cultural phenomena." According to White (1949:364-365, 376), culture was comprised of technological, sociological, and ideological systems, each of which could be broken down into various sub-systems. As part of a larger cultural system, political organization and development were secondary, dependent variables "determined by systems of technology" (White 1949:365).

White's influence on cultural anthropology and archaeology in the Americas was primarily through this broad, culture-as-a-system perspective (e.g., Binford 1965; Meggers 1960). In the time span of general cultural evolution, political dynamics were of such insignificance that the "disintegration of political structures" was not regarded as interfering with global cultural development (White 1959b:369-370). An underlying tautology soon became apparent, however, in that sub-systems of culture were determined "*sui generis*" — by culture itself (White 1959a:239; cf. Steward 1955:21). In its most abstract form, "higher and lower" cultures were thought to operate according to

the law of cultural dominance, or the "the rise and spread of dominant culture types" (Kaplan 1960:92). Political dynamics and social interactions were obfuscated by this reified view of culture and general evolutionism, particularly in the contexts of colonial encounters, capitalism, and the expansion of European hegemony.

The cultural ecology and multilinear evolutionism of Steward (1955) had a more profound and lasting impact on the direction of archaeological research, promulgating a search for sociocultural integration and causality ostensibly exogenous to cultural systems. As "features which are more closely related to subsistence activities and economic arrangements," Steward (1955:37) advocated that a "cultural core" be given precedence over culture-historical factors such as diffusion or innovation. Different cultural cores might in turn exhibit rough similarities or differences under particular environmental conditions, following parallel or multilinear paths to complexity. Steward (1955:29) proposed that increased cultural complexity could be understood through examination of particular (or historical) phenomena that "recur cross-culturally." He proposed that by moving from the particular to the general, anthropologists might discover evolutionary principles more relevant to individual cultures. Political and economic changes were explained in reference to cultural systems, but emphasis was shifted from *Culture* as a uniform system to *cultures* as variably determined within different environments (Steward 1955:18-29). Multilinear cultural evolution continues to influence studies of political economy and sociopolitical development (e.g., Earle 1997:208-209; Johnson and Earle 1987).

Following White and Steward, cultural evolution was even more broadly defined by Carneiro (1973:90) as "change from a relatively indefinite, incoherent homogeneity to a relatively definite, coherent heterogeneity, through successive differentiations and integrations." Throughout the 1960s and 1970s the political and economic implications of these "differentiations and integrations" were explored in greater detail (e.g., Cohen and Middleton, ed. 1967; Cohen and Service, ed. 1978; Fried 1967; Sahlins and Service,

ed. 1960; Service 1975). An earlier attempt to redress the disparities between historical development and cultural evolution was made by Sahlins (1960a), in distinguishing specific and general evolution. Steward (1955:15-19) had recognized a similar discrepancy in the contrast between multilinear and unilinear evolution. Yet the antagonism between history and evolution has persisted, as a wide range of historical variation is subsumed under the generalized framework of cultural evolution.

Cultural evolution was applied more directly to the problem of comparative sociopolitical development by Service (1962, 1975), Fried (1960, 1967, 1978) and Sahlins (1961, 1963, 1968), based on mounting ethnographic data. This research played a formidable role in the direction of subsequent archaeological research. Sociopolitical evolution was framed in terms of functionalist taxonomies, cultural adaptation, levels of complexity, and successive stages of social integration and differentiation. The chiefdom was introduced as a "middle range" sociopolitical type and evolutionary stage intermediate between geographically smaller tribes and more expansive, archaic states (Service 1962:133-134, 1975:15-16; Upham 1987).

The chiefdom soon became a pivotal, intensely scrutinized concept in understanding the evolution of complex political organizations, especially in explaining the origins of the state (e.g., Carneiro 1981; Earle 1977, 1978; Peebles and Kus 1977; Wright 1977, 1984). A wide range of societies in North and South America have been characterized as chiefdoms, accentuating the evolutionary distance between European nations and the New World. There has been considerably less agreement on the precise mechanisms and causes of sociopolitical evolution, which in turn have been broadly characterized as managerial versus control (or integration versus conflict, and voluntaristic versus coercive) perspectives (Carneiro 1970; Earle 1987a:292-297; Haas 1982; Lenski 1966; Service 1978; Tainter 1988:33-37). As the positions of Service and Fried have had a lasting influence on subsequent anthropological theories of regional political

development, a review of their respective contributions provides a concise introduction to the ensuing debate.

Influenced by the substantive economic classifications of Polanyi (1957), as well as the works of Steward (1955), Oberg (1955), and Steward and Faron (1959), Service (1962, 1975) proposed that the pre-state sociopolitical types of band, tribe, and chiefdom were organized and integrated by the economic principles of kinship, reciprocity, and redistribution. The basis for the substantivist position rested on the assertion that economic behavior in societies organized by kinship was fundamentally different from capitalist and market economies (Sahlins 1960b:391). Band-level society was thought to exist without a "formal economy," tribes were comprised of "economically self-sufficient residential groups" and chiefdoms transcended localized autonomy in establishing centralized authority and "unequal control over goods and production" (Service 1962:98, 103, 164). In short, chiefdoms were seen as "redistributional societies with a permanent central agency of coordination" (Service 1962:134). Social organization provided the elementary building blocks in "evolutionary changes," characterized by "adaptive selection of cultural rules of social behavior" (Service 1962:202). The primary mechanism in sociopolitical evolution was adaptation to an environment or "habitat" that encouraged economic diversification, specialization, and growth (Service 1962:136). State-level political dynamics were regarded as qualitatively distinct, having evolved beyond the social structures and statuses of more "primitive" social organizations (Service 1975:3-15).

Essentially restating the Hobbesian social contract in evolutionary terms, Service (1975:3) suggested that political power and hierarchy were derived under ideal circumstances through consent, to "integrate and protect" society. Regional political authority evolved out of hunter-gatherer egalitarianism, where humans in a state of nature lacked the hierarchical political institutions for direct enforcement or mediation of social order. For Service (1975:71-102), the institutionalization and development of

regional political power was based on gradual changes in social relations through the redistribution of food, especially staples (Figure 2). Chiefdoms were thus distinguished from tribes and states by the very economic principles responsible for their sequential development.

Economic inequalities in chiefdoms were thought to be associated with "hereditary kin groups" rather than class-struggle or internal social conflicts (Service 1975:45-46). Adding an ecological emphasis to this argument, Sahlins (1958:252-253) suggested that certain forms of social stratification (in Polynesia) corresponded with "the adaptational feature of resource distribution" and that social differentiation, centralization, and complexity were a result of technological and cultural adaptation to environmental diversity. Political dynamics were seen as secondary or epiphenomenal to economic intensification and its driving forces, adaptation and cultural evolution (Harding 1960:45-50; Sahlins 1958:247-248; Service 1962:134, 1975:319-322).

This view of politics as "the power of either authority or force . . . to solve problems for the maintenance of the society as a whole" entailed an explicitly functionalist, normative view of culture as a widely successful environmental adaptation (Service 1975:14). There was consequently little consideration of maladaptation, devolution, competition, or internal conflict within groups (i.e., Service 1962, 1975:311-324). While the adaptive tendencies of culture were often assumed to be self-evident, the potential for sociopolitical development as the product of "previous history" was less apparent (Sahlins 1958:247, 253). Nonetheless, it was this line of reasoning that brought political dynamics to the forefront of debate, where an all-encompassing culture concept had previously subsumed historical variation.

Fried (1967) approached sociopolitical evolution in a different fashion, focusing instead on social control and conflict in the development of political power and complexity. In contrast to Service's typology, Fried described non-egalitarian societies as ranked and stratified. The pristine state represented a particular type of stratified

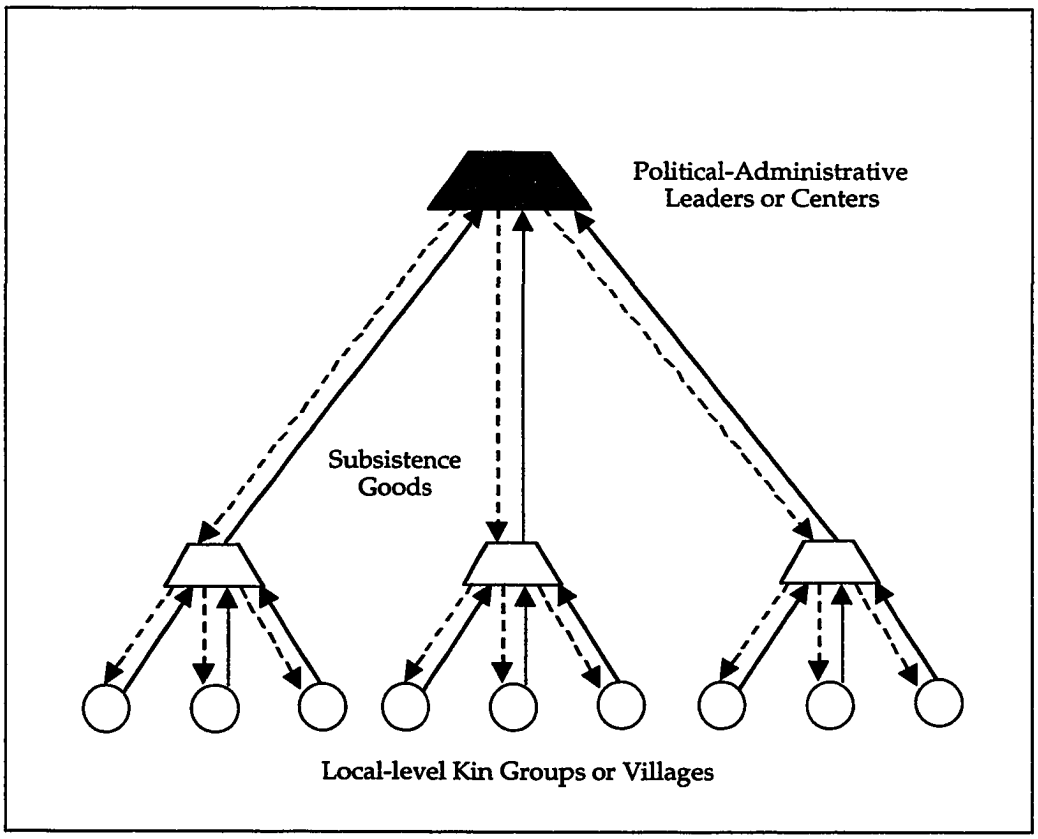


Figure 2. Hypothetical Model of a Redistributive Economy.

society, in which the institutionalization of mechanisms for social control had resulted in a permanent military force and administrative bureaucracy (Fried 1967:227-240). While there were no permanent political powers and few economic disparities in ranked societies, Fried (1960, 1978) held that political hierarchy, economic control, and social inequalities had become firmly established in stratified societies. The passage from egalitarian to ranked, and ranked to stratified society, was not necessarily a conscious undertaking, but a product of increased inequalities in prestige, social status, and the institutionalization of political hierarchies, reflected in subsistence intensification and redistribution (Fried 1967:183).

Fried (1967:3-4) recognized the inherent problems in idealized cultural types, yet his sociopolitical taxonomy also carried the formidable weight of evolutionary stages, with the implicit notion that sociopolitical development might be explained by reducing historical variation to unequivocal categories (McGuire 1992:150-157; O'Shea and Barker 1996). In contrast to Service's managerial approach, Fried's emphasis on social inequality held greater potential for consideration of conflict and coercion in political development. Although the taxonomy proposed by Service was more widely disseminated, studies of social inequalities and conflict continue to challenge managerial perspectives (e.g., Hastorf 1990; Hayden 1995; Redmond 1994b, 1998a). The contrast between managerial and conflict theories of political development thus fundamentally restated in neoevolutionary terms the philosophical debate of the Enlightenment regarding the origin of government and the "natural" condition of human society. There was a crucial distinction, however, in that ethnographic and archaeological evidence could now be called upon to support or disprove explanations of political development.

The subsequent focus of much archaeological research has been to refine and explain the cross-cultural development of sociopolitical complexity as a systemic, evolutionary process, ultimately leading to the emergence of the state (Flannery 1972; Jones and Kautz, ed. 1981; Sanders and Webster 1978; Webster 1975). Since

neoevolutionary anthropology tended to present political organization as part of a culturally adaptive system, regional political decline under the headings of maladaptation, devolution, and systemic collapse remained of secondary importance. Partly in reaction to an earlier historical particularism, neoevolutionary anthropology was positioned in direct opposition to culture history and historical inquiry. Under the rationale of cultural evolution, explanations of historically-situated political economy and process were passed over in favor of cross-cultural generalizations accorded the status of a positivist science (Hodgen 1974:65-72). The dichotomy of anthropology as a science producing law-like generalizations versus a humanistic, historical discipline has continued to engage much of contemporary archaeology (Trigger 1989a:372-379; Wolf 1974:11-13). Dealing in tangible material remains that could be arranged in progressive temporal sequences, American archaeologists joined in the neoevolutionary pursuit of cultural systems.

Systemic Processualism

Just as some anthropologists were beginning to explore political process, human agency, and a new historicism (e.g., Swartz, ed. 1968; Swartz et al., ed. 1966; Wolf 1969, 1974), many archaeologists embraced a neoevolutionary, systemic perspective under the guise of the New Archaeology (e.g., Binford 1962, 1968; Martin 1971). Although his work initially went unrecognized, Walter Taylor (1983:41 [1948]) provided further impetus for the divergence of history and a science of culture in American archaeology, suggesting that history was limited to the "construction of cultural contexts" while anthropology was the comparative study of culture. Archaeologists, according to Taylor, should aspire beyond data collection, description, and "mere chronology," the subject matter of ethnography and historiography (cf. Deetz 1988). If an anthropological archaeology was to be attained, archaeologists should follow the example of cultural anthropologists and study "the nature of culture and cultural dynamics" (Taylor 1983:202). Following

Kluckhohn (1940:50), the "flashes of intuition" of historians were seen as inferior to the "inductive generalizations of science."

In defining history as the "mere scissors-and-paste chronicle" of Rankean historiography, the possibility of uniting the study of political development with *historical process* in a comparative, generalizing fashion was overlooked (Hudson 1973:112; Swartz 1958). Although Taylor's characterizations of history and historiography were overly restrictive, *A Study of Archaeology* influenced later generations of archaeologists in the rejection of an historical approach as necessarily idiosyncratic, particularistic, and nonscientific (e.g., Binford 1962; 1968c; Flannery 1967, 1973; Longacre 1964). Following the neoevolutionism of Steward and White, it was thought by some archaeologists that the adoption of an evolutionary perspective and the scientific pursuit of "laws of cultural dynamics" would transcend historical explanation, as well as cultural relativism (Binford 1968a, 1972:105-113; cf. Willey and Phillips 1958:71). Just as cultural evolution had long been implicit in prehistoric chronologies, scientific methods had already contributed to a revised understanding of culture history (Spaulding 1960; D. Wilson 1975). Beginning in the 1960s however, archaeologists focused increasingly on cultural science as opposed to culture history (Willey and Sabloff 1993:216-231). Ironically, many historians were at the same time also drawn towards the more explicit, analytical reasoning of social science and had already broadened the scope of their study as the "science of men in time" (Bloch 1953:47; Carr 1961:70-143; Greenberg 1968; Hecht 1968).

Perhaps more than any other archaeologist, Binford (1962) was critical of the culture historical approach then current in American archaeology. Influenced by the systemic, evolutionary views of White, Binford (1965) called for a study of cultural process as "systematics" (see also Binford 1978; Binford and Sabloff 1982). He presented culture as an ecologically adaptive system, in which technological and economic factors interacted with the environment in determining the nature and direction of culture

change. Cultural variation was to be explained in reference to the explicit formulation and testing of hypotheses. "Archaeology as anthropology" referred to neoevolutionary anthropology (i.e., Binford 1962), rather than anthropological political economy or political process (cf. Bailey 1969; Swartz et al. 1966; Wolf 1959).

In contrast to the agentive, historical perspectives of an emerging process approach in political anthropology, the processualism of the New Archaeology amounted more closely to systemic processualism (Binford 1965, 1968c; Flannery 1967, 1968; Fritz 1972; Glassow 1972; cf. Vincent 1990:335-362). Brumfiel (1992:551-553) refers to this as the "ecosystem" approach, based on the notion that cultural systems and adaptation take precedence over historical variation and human agency in explaining the prehistoric past. A normative view of culture-as-a-system was advocated, with emphasis on the explanation of adaptation and evolutionary change rather than political conflict, coercion, or specific historical contexts. Process from this perspective refers to the recurrent interaction of cultural factors, as an underlying structure throughout prehistory (Carneiro 1960:147-155). The study of political development and decline was once again subsumed under a systemic concept of culture.

The estrangement of historical and systemic-processual perspectives in archaeology was due not merely to the ascendancy of a neoevolutionary approach, but to the perceived inadequacy of culture history as an explanatory framework. The culture historical approach in archaeology had not produced comprehensive explanations of sociopolitical change, relying instead on the indirect and often assumed mechanisms of migration, diffusion, and acculturation (e.g., Herskovits 1948:505-541; Willey 1953; Willey and Sabloff 1993:208). The lack of explicit theoretical advancement ultimately contributed to what Trigger (1989a:312-319) refers to as "anti-historicism" in American archaeology. Based on the accumulation of decades of ethnographic and archaeological research, neoevolutionary perspectives responded to the demand that anthropology and archaeology in particular, become a cultural science (Flannery 1973; Martin 1971; cf.

White 1949:3-21). Systemic processualism was heralded as "genuine" science, in that the "relative simplicity of primitive societies" could be objectively studied without the "historical guesswork" demanded of history or other social sciences (Muller 1943:209). The marginalization of history entailed the search for systemic processes within the comparative generalizations of neoevolutionism, unhindered by "messy details" or native perspectives (Thomas 1989:9-11; e.g., Watson et al. 1971). Perceived antagonism between generalizing evolution and a particularizing historical approach in turn produced simplistic caricatures that could be easily criticized and dismissed (McGuire 1992:13).

Acceptance of systemic processualism within archaeology was in turn facilitated by the explicitness with which ethnographically-derived types could be applied to the interpretation of archaeological data, culminating in general prehistoric stages (or periods) of sociopolitical evolution. While archaeological research clearly benefited from scientific methods and techniques such as radiocarbon dating, it was soon apparent that chronology building and the working out of space-time syntheses were inadequate as the ultimate goals of an anthropological discipline (Willey and Sabloff 1993:182-187). As in cultural anthropology, archaeologists applied evolution in explaining perceived changes in human societies. In formulating cultural stages that could be applied across successively larger geographic regions, increased political and economic complexity was subsumed under functional-developmental or historical-developmental schemes (Willey and Phillips 1958:61-199; Willey and Sabloff 1993:204-208). Archaeologists played a major role in devising and promulgating neoevolutionary models, as culture historical periods and chronologies could readily be "transformed into a developmental sequence indicating both determinism and direction" (Carneiro 1973:96).

Spaulding (1960:454) pointed out the relationship between the temporal-spatial units of a culture historical approach and the "unidirectional" tendencies of culture change: "The concept of a stage of cultural development is a combination of the ideas of

unidirectionality and the key invention mode of change; there are stair-steps in culture change, and the steps lead consistently upward." In considering unidirectional change in the form of the "explosive development of chiefdoms," Carneiro (1981:52) went so far as to assert the independence of archaeological data from theoretical underpinnings. Thus animated as *the* intermediate sociopolitical stage in the origin of states, the archaeological correlates of chiefdoms throughout prehistory could be explored in further detail (e.g., Earle 1977; Peebles and Kus 1977; Renfrew 1974; Sanders and Webster 1978; Wright 1984).

The more explicit theoretical orientation and analytical approach of systemic processualism were nonetheless associated with formidable methodological advances, contributing to its widespread popularity over descriptive culture history. Efforts to redress epistemological shortcomings through the material sciences contributed to the substantive advancement of social, behavioral, and environmental archaeologies (Binford 1967, 1968b; Butzer 1971, 1982; Clarke 1978; Redman 1973; Renfrew 1977, 1978a; Schiffer 1976). Following Binford (1964), among the more significant contributions were the advancement of more explicit research designs and methods such as statistical sampling. Clear advances were also made in understanding archaeological formation processes and correlating the archaeological record with theories concerning past human behavior, what is referred to as middle-range theory (Raab and Goodyear 1984; Schiffer 1987). Explanations of political development were largely geared toward the archaeological identification and delineation of sociopolitical types (e.g., Creamer and Haas 1985; Earle 1987a; Hatch 1987). Consequently, there continue to be discrepancies concerning the description of specific types. There is disagreement, for example, over whether chiefdoms were more similar to tribal societies or states, truly intermediate, "prestate political formations," or merely an evolutionary "dead end" (Johnson and Earle 1987; Kristiansen 1991:17; Wright 1984).

In their seminal study of the organizational correlates of chiefdoms, Peebles and Kus (1977:431-433) recognized ascribed social ranking in mortuary differentiation, the organization of productive activities beyond households, and a "hierarchy of settlement types and sizes" with a "high degree of local subsistence sufficiency." The organization of production included the construction of monumental architecture and part-time craft specialization. In accord with Earle (1977), they indicated that redistribution was "not the dominant mode of economic exchange," suggesting instead that the administrative roles of chiefdoms provided ritual and regulatory networks for managing social conflict and environmental factors (Peebles and Kus 1977:424, 433).

Wright (1984:43-44) characterized complex chiefdoms by three dimensions of spatial organization: settlement hierarchy, residential segregation, and mortuary segregation. Spencer (1987) likewise provided a concise summary of the "archaeological manifestations" of chiefdoms (cf. Carneiro 1981:52-54; Earle 1978:7):

> Regional settlement hierarchies of two or three levels according to occupation size and also public architecture; pronounced differentiation among residential structures in terms of size, degree of elaboration, and relative quantity of "high cost" items; marked differentiation in burial treatment among individuals of the same age and sex; differential association between surplus storage facilities and elite residences; differential association between the residences of the elite and important loci of ceremonial and/or administrative activities (Spencer 1987:371-372).

The political and economic organization of these societies was shown to be highly centralized, with settlements of varying sizes geographically positioned around the monumental architecture of an administrative center. Degree of centralization in

decision-making became a major focus of research, highlighting the hierarchical sociopolitical and administrative organization of nonstate, sedentary societies (e.g., Flannery 1972; Johnson 1978; Peebles and Kus 1977; Steponaitis 1978, 1981b; Wright 1977, 1984). Research has focused on the evolution of political controls, such as the mobilization of subsistence goods and labor, resource and land rights, control over trade, inequalities in wealth, and the production of prestige goods (e.g., Earle 1978, 1991b; 1994; Earle and D'Altroy 1982, 1989; Friedman and Rowlands 1978). Neo-marxist political economy was thus once again influenced by neoevolutionary theory, an issue that will be returned to shortly.

From a systemic-processual perspective, political centralization and social stratification were either the result of resource imbalances or followed the requirements of an ecologically adaptive economic sub-system. A systemic view of cultural adaptation suggests that economic organization altered with environmental diversification, depletion, or risk, accompanied by subsequent sociopolitical and ideological changes (Flannery 1972). Chiefdoms were thought to emerge either gradually or more abruptly from politically and economically less complex, egalitarian societies, through the consistent management or control of surplus resources, labor, or wealth. Successive cultural adaptations led to new levels of sociopolitical "differentiation and integration" (Carneiro 1973:90; cf. Sanders and Webster 1978). This *cultural* process was thought to have in some instances been exacerbated by warfare, environmental or social circumscription, and technological developments. Given enough subsistence intensification, differential access to resources, and productive specialization, tribes developed into chiefdoms and chiefdoms into states (Carneiro 1970, 1981:56-65; Flannery 1972:405-407; Webster 1975).

Ample archaeological evidence for political decline and collapse has necessitated additional, alternative explanations. Yet among both cultural anthropologists and archaeologists such issues have received only cursory treatment. When political decline

was initially considered, it was included almost as an afterthought, expressed in more facile terms of unsuccessful adaptation or over-adaptation (e.g., Service 1975:311-322; cf. Yoffee 1988:6-11). Although White's (1959b) treatise on cultural evolution was subtitled *The Development of Civilization to the Fall of Rome,* comparatively little space was devoted to the decline or fall of civilizations. Extraneous to the general trends of cultural evolution, the "disintegration of political structures" was viewed as relatively inconsequential and exceptional (White 1959b:370). The developmental stages of culture history were interpreted as evidence of this unidirectional tendency of culture change, with causal mechanisms exogenous to culture. "It is quite true that backsliding can occur, but it would be expected only under unusual circumstances such as climatic change" (Spaulding 1960:454).

In his discussion of the fall of civilizations, Service (1975:314) suggested that "adaptive success" was also related to sociopolitical decline, of either the polity in question or a neighboring, more expansive polity. Cultural collapse, it was thought, was a product of over-adaptation. Service (1960:97) referred to this as the Law of Evolutionary Potential: "the more specialized and adapted a form in a given evolutionary stage, the smaller is its potential for passing to the next stage." Since internal political antagonisms would contradict the argument for sociopolitical evolution as progressive problem-solving, Service (1975:321) suggested instead that the causes for the decline of a polity "lies within its environmental sphere but outside itself." Dumond (1965:319-320) similarly suggested that "cultural devolution may be attributable to nothing more complex than extensive depopulation caused by elements beyond the immediate control of the society involved."

As Service (1962, 1975) was concerned with the tendencies toward sociopolitical hierarchy and increased social complexity in a broadly comparative sense, he regarded political decline as exogenous and inconsequential to the grand sweep of cultural evolution. He compared the centralization of government and institutionalization of

political hierarchy to the growth of an organism, where the "important determinants of the direction of its growth lay within itself" (Service 1993:133). This organic analogy parallels arguments made earlier by Spencer (1857, 1860, 1988 [1876]) in his interpretation of the natural, progressive growth of society. The role of political conflict and process are minimized in portraying the course of history as inevitable (McGuire 1992:155). However, by locating the ultimate causes for decline outside of society, an adaptive, stasis-seeking perspective of cultural evolution could be retained. Consequently, this line of reasoning implied that collapse was an anomalous or comparatively rare event, for which there can be no clearly satisfactory explanation.

The counterpart to Service's managerial argument was that adaptation inevitably involves adaptive failures rather than invariable success, and that these failures were internalized by various cultures. Fried (1967) did not deal at length on decline, yet his emphasis on political control and inequality clearly recognized the potential for something akin to cultural devolution. Turning cultural evolution on its head, the essentially maladaptive, deleterious qualities of cultural systems and increased complexity became the focus of research (e.g., Rappaport 1978; cf. Yoffee 1988:5-11). As the antithesis of the managerial approach, it was argued that inevitable mismanagement and decline resulted from incompetent or self-seeking individuals and groups. It might be noted that such line of reasoning essentially resembles the historical determinism of Montesquieu (1949 [1748]), who attributed both the rise and fall of civilizations to unbridled ambition and unconstrained desire (Breisach 1994:213-214).

The maladaptive effects of self-interest seeking was compared by Johnson and Earle (1987:311) to the "tragedy of the commons," in which individuals pursued personal material gains at the risk of resource depletion and potential ecological disaster (cf. Hardin 1968). While solutions to such problems may have in one sense been necessary, it does not follow that inappropriate actions were always pursued, or that collapse was infrastructurally determined. From this perspective, opportunistic

individuals are positioned in opposition to a communal and idealized culture concept, just as maladaptation is regarded as the antithesis of adaptation. Emphasis on such maladaptive opportunism implies that sociopolitical evolution proceeded only through "higher degrees of cooperation," in which regional political economy subsumed self-interest on the local level. Political conflicts and antagonisms were minimized, while devolution and decline were forestalled, since the general trend in cultural evolution was toward "cooperative solutions" (Johnson and Earle 1987:325). Just as increased sociopolitical complexity was thought to have evolved through cultural adaptation, collapse was regarded as the uncommon, albeit expected consequence of maladaptive or over-adapted cultures, ostensibly involving environmental perturbations and resource depletion (e.g., Culbert 1988; Fowler 1975; Rappaport 1978; Sanders 1973). Political decline and collapse, however, are ubiquitous in history and prehistory (Tainter 1988).

In one of the most wide-ranging studies to date, Tainter (1988) marshaled evidence from societies throughout the World in examining the various theories for the collapse of complex societies. Resource depletion, natural catastrophes, insufficient response to environmental or social circumstances, external conflict or invasion, internal conflict, social dysfunction, and various "mystical" factors are among the numerous explanations that he considers inadequate (Tainter 1988:39-90). Tainter begins his critique by stating that explanations for collapse must be logical, scientific, and generally applicable to the global evidence of societal collapse. He concludes that the trend toward declining returns in economic productivity has global applicability, accordant with observations that sociopolitical complexity inevitably entails declining advantages and increased costs (Tainter 1988:208-209). Following Service (1962), the underlying assumptions of his argument reflect a managerial, functionalist perspective of economic organization. Yet Tainter's theory of declining marginal productivity is based on a neoclassical, formalist understanding of economics.

The central premise in *The Collapse of Complex Societies* is that "investment in sociopolitical complexity as a problem-solving response often reaches a point of declining marginal returns" (Tainter 1988:194). It is noteworthy that the general evolutionary trends and outcome of cultural adaptation (via economic intensification) are not apparent here, or even implied as universal (cf. Clark 1953). According to Tainter, the evolution of increased social differentiation and economic integration ultimately reaches a point of stagnation, reversing itself in situations where productivity fails to meet or exceed levels required for the continued operation of such specialized systems. In contrast to maladaptive opportunism, the collapse of complex societies is viewed as an economically-determined, inevitable process of insufficient productivity. As Tainter (1988:107) states, "there is in complex societies a recurrent and seemingly inexorable trend toward declining marginal productivity in hierarchical specialization." A similar line of reasoning was advanced by Culbert (1977:525-528) in explaining productive failures in the Maya collapse. Population growth, resource scarcity, increased competition between regional centers, class conflict, and over-exploitation were brought about by "the earlier success of the Maya economy and the trends of growth that it nurtured" (Culbert 1977:528).

According to Tainter (1988:91-123), the growth curve predicated by marginal productivity is preceded by a gradual increase in resource procurement, production, subsistence intensification, and information processing, followed by declining productivity and a rather precipitous, economically-induced collapse. Although Tainter (1988:4) suggests that collapse resulting from economic shortfalls is "a general process not limited to any type of society or level of complexity," the evidence for regional political decline does not conform to this expectation, nor does marginal productivity easily account for non-capitalist modes of production (cf. Wolf 1982:79-100). In fact, a marginal productivity curve does not correspond with the historical trajectories of a wide range of regional polities (e.g., Adams 1966; Hassig 1985, 1996; Knight 1997;

Kristiansen 1991; Patterson 1991; Sharer 1991; Skinner 1985). In order to arrive at a universally-applicable explanation of collapse, all political economies must be viewed from the perspective of formalist economic theory, with little consideration of historical context, social interactions, or conflict (Wilk 1996:43-71). As with other managerial perspectives of sociopolitical evolution, complex societies are seen as "problem-solving" organizations that superseded, or in this case failed to supersede, the economic requirements for its continued operation. Tainter effectively redirects the managerial argument for cultural evolution with an account of economically-induced collapse. As a consequence, expectations of economizing behavior and utilitarian practice are imposed on all (extant) regional polities, with insufficient consideration of political process and the "informal" nature of non-capitalist economies (Halperin 1994).

Cultural collapse and sociopolitical decline were also examined through the terminology of general systems theory, entering the mainstream of American archaeology by the early 1970s (Flannery 1968, 1972; Plog 1975). Sometimes referred to as cybernetic models or information theory, systems perspectives were broadly influential in the social and behavioral sciences throughout the 1960s. This culminated in attempts to synthesize diverse information in the social, biological, mathematical, and computer sciences, generating interest in conceptual schemes such as decision-making and game theory (e.g., Buckley, ed. 1968). As mentioned earlier, the concept of culture as a homeostatic or equilibrium-seeking system (with a series of interacting sub-systems) was not new to anthropology (e.g., Redfield, ed. 1942; White 1943). Nor was the correlation between social systems and cultural evolution inevitable (Vincent 1990:315-319). By the 1970s however, general systems theory was applied by archaeologists to cultural evolution in more explicit fashion, incorporating such concepts as adaptive equilibrium, maladaptive disequilibrium, and devolution.

As applied to cultural collapse and devolution, systems theory provided to that point the most direct consideration of political decline. As one of the most intensively-

studied examples of decline, the Maya collapse of ca. AD 800-900 was reinterpreted through a systems theory perspective (Culbert, ed. 1973). The Post-Classic Maya collapse was addressed through a functionalist, neoevolutionary model of Maya culture, as part of a larger Mesoamerican ecosystem. In contrast to earlier interpretations of Maya civilization as highly-integrated and peaceful, cultural collapse was explained in terms of a wide-sweeping, systemic decline involving increased conflicts over resources (e.g., Cowgill 1964; Hosler et al. 1977; Rathje 1973; Sabloff and Willey 1967; Shimkin 1973). Emphasis on the inevitability of crisis and collapse has in turn been characterized as "cataclysmic archaeology," comparable to managerial perspectives that cast doubt on the progressive stages of cultural evolution (Trigger 1989a:319-326; e.g., Renfrew 1978b).

In a summary review, Willey and Shimkin (1973) provided a systemic-processual explanation for the collapse of the Late Classic Maya that effectively combined earlier culture historical concern for "external" factors, such as invasion and disruption of trade, with "internal" factors such as class conflict, intersite warfare, malnutrition, and disease (Adams 1973; Sabloff 1973; Sharer 1977; Thompson 1966; Willey 1977). The ultimate causes of collapse however, were essentially systemic:

> The success of the system produced growths of population and of competing centers which led to increasing rigidity in the system as it was subjected to internal stresses and external pressures. The system failed through inadequate recognition of these stresses and pressures and through inappropriate responses to them. The economic and demographic bases of the society were weakened; the consequences were the collapse of the system, the decimation of the population, and a retrogression to a simpler level of sociopolitical integration (Willey and Shimkin 1973:490).

Willey and Shimkin (1973:500) indicated that the evidence for internal sociopolitical conflict clearly ruled out "simple environmental causation" or a single prime mover (cf. Culbert 1988; Rathje 1971; Sanders 1973). Both the origin and collapse of Maya civilization were viewed as examples of the widespread, systemic effects of social conflict in cultural evolution.

Flannery (1972:409) elaborated even more widely on the language of general systems theory in a critical review of cultural evolution. According to Flannery, numerous "socio-environmental" variables selected for increased sociopolitical hierarchy and centralization through the evolutionary mechanisms of "promotion" and "linearization." "Segregation" and "centralization" were subject to evolutionary mechanisms, as well as multivariate environmental conditions, whereby a particular social institution within a sub-system emerged from "its place in the control hierarchy," or subsumed "lower-order controls" (Flannery 1972:413). Segregation referred to the "amount of internal differentiation and specialization," while centralization was the "degree of linkage between the various subsystems and the highest order controls in the society" (Flannery 1972:409). According to Flannery, the ultimate goal of cultural systems was survival:

> Each subsystem is regulated by a control apparatus whose job it is to keep all the variables in the subsystem within appropriate goal ranges – ranges which maintain homeostasis and do not threaten the survival of the system (Flannery 1972:409).

Flannery (1972:409) argued that evolutionary mechanisms placed the entire system in a kind of "homeostatic equilibrium-seeking" motion. These mechanisms were determined by internal socio-environmental factors such as warfare, population growth, trade, and even "unsettled political conditions." Sociopolitical evolution was punctuated

by episodes of systemic disequilibrium and homeostatic equilibrium, eventually resulting in the emergence of the state.

Flannery (1972:421) stated that various socio-environmental conditions were not universal, but might "select for" evolutionary mechanisms or social "pathologies." Following Rappaport (1969), he described pathologies as systemic stress such as "meddling, usurpation, and hypercoherence." The first two were essentially maladaptive evolutionary mechanisms, in that particular sub-systems or "lower order controls" were elevated to higher levels. Hypercoherence or "hyperintegration" referred to a systemic breakdown caused by the highly centralized and integrated nature of the "larger system" (Flannery 1972:414, 420-421). While cultural evolution was ostensibly an adaptive, systemic process, political hierarchy and complexity were paradoxically regarded as maladaptive, since more highly integrated systems were more prone to collapse (Rappaport 1978:67).

Drawing on an organic analogy, Rappaport (1978:58) suggested that maladaptation was largely an internal systems response, not unlike disease in a living organism (cf. Whyte 1978):

> If adaptive responses are those which tend to maintain homeostasis in crucial variables in the fact of perturbation, maladaptations are factors internal to systems interfering with their homeostatic responses. They reduce the survival chances of a systems not, in the first instance, by subjecting the system to stress, but by impeding the effectiveness of its responses to stress (Rappaport 1978:58).

In contrast, Butzer (1980:522) viewed organic, cyclical approaches to collapse as opposed to systemic models of adaptation, suggesting that while the former were overly deterministic, cultural systems were subject only to the increased "probability" of

collapse. The only distinction between an inexorable, organic decline and inevitable, systemic collapse being the "social disequilibrium" or "progressive social pathology" of energy flow through a cultural system, in the forms of information and food. Among the other key variables in systemic collapse, Butzer (1980:518, 521-522) suggested "poor leadership ... external political stress, and environmental perturbation."

In retrospect, the distinction between organic and systemic models of collapse has hinged primarily on terminology. Collapse is viewed as inevitable in both instances, being structurally determined in the first case by the eventual decay of the cultural "organism," and in the second by a widespread, systemic disequilibrium. More importantly, concepts such as homeostatic equilibrium, systemic pathology, and hypercoherence tend to gloss over specific political processes and social interactions by attributing causal primacy to an ecologically adaptive (or maladaptive) cultural system (or organism). Meddling, usurpation, poor leadership, and foreign intervention refer to processes that can be more clearly understood in terms of specific historical trajectories and human agents (i.e., Butzer 1980; Flannery 1972).

The concept of hypercoherence is especially non-explanatory and teleological, attributing collapse to the overall efficiency of systemic integration. As a result, all regional political decline is misconstrued as catastrophic collapse (Yoffee 1988:9), much like Tainter's (1988:194) theory of declining marginal productivity. Renfrew (1978b, 1979) drew on the concept of hypercoherence or "overcentralization" as an underlying process in catastrophe theory, producing mathematical models of collapse by substantially reducing the number of critical variables. As with other systemic perspectives, collapse is portrayed as relatively abrupt (Friedman 1982). Modeling political decline through one or more causal variables is clearly an oversimplification, overlooking political process and historical context in favor of a more uniform, systemic explanation (Yoffee 1988:10).

Neoevolutionary Critique

During the ensuing decades there has been an ongoing reappraisal of cultural evolution, adaptation, and the use of sociopolitical taxonomies, particularly those types situated between egalitarian societies and the state (e.g., Drennan and Uribe, ed. 1987; Earle 1987a, 1991c; Feinman and Neitzel 1984; Spencer 1990). Since cultural evolution was initially characterized as systemic and functional, debate centered more generally on the opposition between process (as ecosystemic) and history (as particularistic), or scientific realism and relativism (Binford 1968c, 1982 1989; Hodder 1982, 1985; Trigger 1984, 1989b). These distinctions continue to be emphasized by some as a fundamental problem confronting archaeology (e.g., Dunnell 1989; Leonard 1993). Much of the earlier debate centered on causality and confirmation, producing simplistic caricatures of archaeology as either a processual, materialist science or post-processual, relativist enterprise (Kelley and Hanen 1988:29-59).

Beyond merely reiterating the philosophical dualism of materialism versus idealism, a critique of systemic processualism has made more explicit the earlier assumptions upon which models of cultural evolution and adaptation were based. The resulting exegesis has ushered in a wider range of contemporary theoretical concerns, such as anthropological political economy, neo-Marxism, cognition, and gender (e.g., Conkey and Spector 1984; D'Altroy and Earle 1985; Patterson and Gailey, ed. 1987; Hodder, ed. 1982; Leone 1982, 1986; Spriggs, ed. 1984). In short, a proliferation of perspectives stemming from a critique of cultural evolution and systemic processualism has shifted attention to historical variation and *political* process. Most scholars who study regional polities would now agree with Arnold's (1996:2) observation that "the explanation of significant cultural *variability* is as important as the identification of broad repetitive patterns of cultural change in the past." The ultimate challenge is in understanding how these different scales of analysis are interrelated (Chapman 1996).

A rapprochement between archaeology and history was taken up some time ago by advocates of post-processual archaeology, most notably by Hodder (1982, 1986, 1987) in his discussions of historical context, symbolic meaning, and long-term history. That this critique has been most tenacious in England and Western Europe is not surprising, given the closer institutional affiliations of archaeology and history (Courbin 1988; Hodder, ed. 1992). Archaeologists associated with post-processualism have in turn been criticized for advocating extreme forms of relativism and participating in post-modernist, anti-scientific nihilism (Binford 1989; Muller 1991; Yoffee and Sherratt 1993:8). While more extreme forms of epistemological relativism in post-modernist social science and revisionist history certainly challenge received knowledge, it is worth noting that even Hodder (1999:20-29, 80-104) has subsequently tempered his constructivist philosophy in terms of a reflexive, humanistic science. Combined with the fact that post-processual archaeologies were from the beginning theoretically eclectic and did not present a cohesive school of thought, it is easy to conclude that much of the post-processual concern with being both socially and theoretically relevant actually represents the ongoing refinement of what were essentially the goals of the New Archaeology (e.g., Fritz and Plog 1970; Preucel 1995; VanPool and VanPool 1999). It has also been suggested that underlying common ground between processual and post-processual approaches has facilitated a more productive synthesis of archaeological practice and anthropological theory (Preucel 1991; Kosso 1991; Whitley 1992).

Even more significantly, the critique of cultural evolution and systemic processualism was launched early on from within (e.g., Flannery 1973; Leone 1971; Service 1971:15-26). The result has been a more definitive terminology, increased analytical rigor, and a greater understanding of political and economic dynamics (Cowgill 1993). The capacity for information gathering and explanation in archaeology has escalated appreciably since the early 1960s, due in large part to the adoption of more exacting field techniques and analytical methods. Critical theory and methodological

advances have in turn facilitated the more detailed understanding of culture histories, including knowledge of the historical trajectories of regional polities. The ultimate goal of such critique then, is not to trivialize the contributions of earlier research, but to build on the groundwork of earlier studies and thereby arrive at a clearer understanding of political development and decline (Cowgill 1993:568).

An early critic of managerial political theory, Fried (1967:21) suggested that the purpose of political organization is not merely the coordination of group interests, but also "to control the appointment or action of those individuals or groups." Restating in part Rousseau's thesis of social inequality, Fried emphasized that sociopolitical evolution involved the establishment of social inequalities through unequal control of resources. Critique of the chiefdom as a type of social and economic management accelerated with evidence that redistribution was not an integral or invariable aspect of nonstate, sedentary societies (Earle 1977; Peebles and Kus 1977). Earle (1978:158-162, 1987a:292) demonstrated that staple redistribution was an unlikely causal mechanism in sociopolitical evolution, as Polynesian societies formerly classified as complex chiefdoms were "largely self-sufficient in subsistence goods" (cf. Kirch 1984). It should be noted that similar critiques were made of managerial explanations for the origin of the state, such as Wittfogel's (1957) irrigation hypothesis (Steward 1977; Wright 1978, 1986). Apparent weaknesses in the managerial argument contributed to investigations of regional political development as control or profit-oriented. Rather than the altruistic managers of shared resources, certain individuals and groups were seen as taking advantage of resource imbalances, becoming "productive monopolists" (Binford 1983:215-227).

Paralleling this internal critique was a waning interest in the search for prime movers — unitary causal factors that were held to recur cross-culturally in the evolution of sociopolitical complexity (e.g., Service 1971:25-26). Explanations for the emergence of chiefdoms and states focused on a wider range of ecological, economic, and political

factors, including social and environmental circumscription, intensification and specialization in production, warfare, and exchange (Brumfiel and Earle 1987; Earle 1987b; Redmond 1994b, 1998b). The origin of the chiefdom has remained a central issue in understanding the evolution of sociopolitical complexity however, since it is still regarded by many to represent the earliest form of institutionalized social inequality (e.g., Redmond, ed. 1998; Wright 1977:380-381).

In his review of the chiefdom concept, Carneiro (1981:56-65) was critical of technological development, increased social stratification, and inequalities as possible causes of sociopolitical evolution. Instead, Carneiro (1981:63-64) implicated warfare as a principal causal mechanism in the evolution of chiefdoms and states, precipitated by increased population density, social circumscription, and the limited availability of resources. He acknowledged that warfare may not have always been prevalent, but suggested that regional centralization may have also proceeded through coercion or the "threat of force." Accordingly, managerial perspectives of political development seem less tenable given the apparent ubiquity of organized violence within regional polities (Carneiro 1990; Keeley 1996). Yet there are no simple explanations or historical determinants for warfare (Cohen 1984; Ferguson 1984, 1990; Robarchek 1990).

Carneiro (1981:55) acknowledged that the explanation for the emergence of chiefdoms may be "multicausal," yet maintained that it might also be "monocausal in the sense that only one theory was required to account for all chiefdoms." This reflects the general tenor of debate among supporters and critics of prime mover theories (cf. Flannery 1972:407-408). With the successive accumulation of archaeological and ethnographic data, the popularity of prime mover arguments has continued to wane, though the engaging simplicity of such "unitary theories" continues to attract attention (Carneiro 1998:36; cf. Drennan 1996). Following Binford's (1983:231) assessment, most scholars came to the conclusion long ago that "there might well be many different stages and characteristic patterns of change associated with different paths to complexity."

Conceptual overlap between the chiefdom (i.e., Service 1962) and ranked and stratified societies (i.e., Fried 1967) has been further complicated by a continued proliferation of sociopolitical types, including group-oriented and individualizing chiefdoms (Renfrew 1974), minimal, typical, and maximal chiefdoms (Carneiro 1981), and simple, complex, and paramount chiefdoms (Anderson 1996b; Steponaitis 1978; Taylor 1975; Wright 1984). The distinction between complex and paramount chiefdoms has remained particularly vague, despite the definition of the latter in terms of a broader range of political relationships and more expansive geographic scale (Earle 1991b:74; Hally 1994b:249; King 1999; Kirch 1991:124; Kristiansen 1991:27-28; Steponaitis 1991:194). By emphasizing contrasting notions of political leadership and centralized decision-making, Johnson (1982) proposed the concepts of "sequential" and "simultaneous" hierarchies. These sociopolitical types were meant to distinguish between impermanent and situational big-man leadership and the institutionalized office of hereditary chiefs (cf. Redmond 1998a:3-6; Spencer 1987:369-371). With greater recognition of multicausality and the different historical trajectories of regional polities, there has been a corresponding explosion of typologies. The practice of classifying societies and thinking in terms of cultural and sociopolitical types has implied that the ambiguities of overgeneralization can be remedied by distinguishing new, more specific sub-types (e.g., Hayden 1995:70-78; Stein 1998:8).

As Feinman and Neitzel (1984:42-43) suggest in their overview of sedentary, nonstate societies, the lack of agreement between neoevolutionary types is not simply a matter of fine-tuning terminology with levels of complexity. Rather, it reflects fundamental differences in how sociopolitical organization is thought to develop. Feinman and Neitzel make a convincing argument that further definition and formalization of sociopolitical types is counterproductive. "Instead, alternative approaches focusing on societal variation and change are necessary" (Feinman and Neitzel 1984:43). Over-reliance on typological concepts such as the chiefdom ultimately

interferes with explanations of regional political development, compartmentalizing and constraining historical variation in the very social relations of authority that characterize political dynamics, identity, and inequality (McGuire 1992:149-157; O'Shea and Barker 1996:20).

In his theoretical overview of the chiefdom, Earle (1987a:280) noted that typological concepts tend to "obscure both the variation within the types and the evolutionary changes between them." Subsequent studies have similarly suggested that prehistoric political dynamics and the historical trajectories of regional polities were characterized by social heterogeneity, as well as variation in hierarchy and centralization (McGuire 1983; Ehrenreich et al., ed. 1995). Greater acknowledgement of temporal and spatial variation has been paralleled by finer distinctions being made between complexity, hierarchy, and inequality, along with a further critique of neoevolutionary typologies (Crumley 1995; Feinman 1995). Continued use of the chiefdom concept in broad cross-cultural comparisons effectively glosses over the historical variation necessary for understanding the political, ideological, and economic factors intrinsic to a specific regional polity.

Renfrew (1984 [1973]) alluded to this problem some time ago in understanding prehistoric polities in southern England:

> To use the model of chiefdom for societies such as neolithic Wessex will be useful only so long as it establishes meaningful relationships between hitherto unrelated features of them, and suggests a search for new regularities in the material. Once it has done so, like the 'three age system' for the classification of artefacts, it will have to make way for, or be refined to yield, *subtler and less inclusive concepts* (Renfrew 1984:244; emphasis added).

Coincidentally, there has been a call by some archaeologists to retain the terminology as a useful heuristic, while jettisoning sociopolitical types as discrete evolutionary stages (e.g., Earle 1991b; Yoffee 1993). Muller (1997:41) argues for the retention of sociopolitical types as "convenient analytical labels," corresponding merely to "rough levels of developmental organization" (emphasis in original). "Chiefdom" nonetheless refers to a general stage in cultural evolution, tending to conflate historical variation and political process with social taxonomy (Vincent 1990:325-335). The emphasis on culture and cultural adaptation as systemic, homeostatic concepts over intrinsically political and economic factors is thus a recurring problem in archaeology. As Earle (1978:196) pointed out in his study of Polynesian chiefdoms, "in order to understand this [evolutionary] process, it is necessary to understand the internal organization of a culture in addition to its adaptation."

Johnson and Earle (1987) have proposed an ambitious interpretation of cultural evolution, redressing some of the pitfalls of systemic-processual models and reflecting the growing influence of political economy. In *The Evolution of Human Societies*, Johnson and Earle (1987:17) organized ethnographic, historical, and archaeological evidence from societies throughout the World into a graduated scheme of increased population growth, subsistence intensification, economic and political integration, and social stratification. Among the most useful distinctions made by Johnson and Earle is their emphasis on the production and intensification of political economy as an alternative to sociopolitical types. Regional political economy as a unit of analysis is broadly defined, in terms of a wide range of social interactions that transcend local-level social relations. Johnson and Earle's model of regional political economy introduces historical variation not accounted for in systemic-processual models of the chiefdom, yet remains tethered to the framework of cultural evolution.

Johnson and Earle (1987:19) interpret political economy in terms of a multiscalar typology that coincides with three "critical levels of socioeconomic integration," from

family-level and local groups, to regional polities. These socioeconomic categories subsume the typological concepts of band, tribe, chiefdom, and state, but are more directly associated by Johnson and Earle with political control, economic interactions, regional centralization, and geographic expansion. Emphasizing the shift from subsistence economy to political economy, they suggest that the self-sufficiency of a domestic mode of production was transformed into a regional political economy when it was "geared to mobilizing a surplus from the subsistence economy" (Johnson and Earle 1987:11-13):

> Ultimately, however, the long-term intensification of the subsistence economy gives rise to opportunities for investment and control that permit further increases in population but only at the cost of institutionalized leadership and social stratification. It is at this point that the subsistence economy gives way to the political economy as the main locus of evolution . . . (Johnson and Earle 1987:325).

Combining a critical application of both managerial and control perspectives, Johnson and Earle suggest that regional political economies (including simple and complex chiefdoms, archaic and agrarian states) were based on the management of problems caused by population growth, as well as a "highly competitive political domain" that tended to be "inherently unstable." Political leaders in turn "provide services to the commoners" in exchange for "some measure of economic control." The heightened potential for internal political conflict ultimately contributed to a "cyclical pattern" of expansion and collapse (Johnson and Earle 1987:13-15, 325). Political and economic organization were transformed in successive fashion, as environmental and social constraints were surpassed, leading to increased centralization, stratification, and social inequality.

Straying from a neo-Marxist political economy, Johnson and Earle (1987:16) assert that population growth was the "primary motor" in the evolution of regional political economy, and that increased population pressure on the resource base was alleviated by social solutions, eventually leading to subsistence intensification and additional population growth. Retracing an argument set forth earlier by Dumond (1965), Johnson and Earle link population growth with political development as cause and effect, as both independent and dependent variables. Dumond (1965:302) similarly suggested that when "balanced," fertility, mortality, and migration resulted in overall population growth. Subsistence intensification and social changes were the "effects of population growth" that led "in the direction of increasing centralization," constrained by factors such as warfare and depopulation (Dumond 1965:318).

According to Johnson and Earle (1987:324), regional polities have a characteristic demographic threshold of more than 10 persons per square mile. While precise demographic thresholds for different levels of political and economic integration seem unwarranted, considerable attention is devoted to increased population size and its association with political economy. In contrast, Johnson and Earle do not explore the connection between depopulation and regional political decline. Pressed into the mold of cultural evolution, the historical conflicts and fragmentation of regional political economy are largely discounted. Johnson and Earle (1987:13) consequently disregard the very historical variation that they set out to address, namely the development of social complexity in terms of political economy and a "cyclical pattern" of expansion and collapse.

In attempting to resolve this discrepancy, Johnson and Earle return to the distinction made earlier by Sahlins (1960a) between general and specific evolution. Johnson and Earle (1987:23) state in their introduction that "a unilinear theory of universal stages of development can be fruitfully combined with a multilinear theory of alternative lines of development arising from unique environmental and historical

conditions." Based on increases in population, the various historical "lines of development" of multilinear evolution are condensed into "universal stages" or rough *levels* of development in steadily increasing social complexity. This synthesis of political economy and cultural evolution has been interpreted by some as suggesting that the global economy itself, is a product of evolutionary processes (cf. Carneiro 1978; Roudometof and Robertson 1995; Sanderson 1990, 1995; Sanderson and Hall 1995). Yet the portrayal of cultural evolution and population growth as a process of global homogenization, political-economic development, and successive demographic nucleation is undermined by histories of colonialism, resistance, diaspora, ethnogenesis, and the politics of identity, not to mention studies of local-level political economy (Comaroff and Comaroff 1991, 1992; Friedman 1989, 1992; Hill, ed. 1996; Scott 1985).

Another source of problems in linking population growth with the evolution of political economy are the numerous factors potentially mitigating population levels (Carneiro 1967; Dumond 1965). At the very least, the relationship between population growth, subsistence intensification, and social complexity is "reciprocal," tied to a host of "non-economic as well as economic" variables (Dumond 1965:320). As a general assertion correlating population growth with cultural evolution, this view tends to marginalize indigenous histories, in which the coming together of dissimilar groups involved social fragmentation and coercion, instead of successive population growth (e.g., Hill, ed. 1996). The relationship between human agency and systemic-processual characterizations of cultural evolution lies at the center of the problem (Johnson 1989; Spencer 1993). Considering the wide range of potential mediating factors, there is no reason to conclude that population growth itself was a *causal* factor in the development of regional political economy (Cowgill 1975; Drennan 1987; Feinman 1991, 1995).

Rather than historically determinative, population increase and decrease are characteristics of social interaction. Both an increase and decrease in the size of a population may involve migrations induced by political consolidation or conflict.

Portraying political economy as stemming from population growth and consequent social circumscription produces an oversimplified, teleological explanation of regional political development (Feinman 1991:259, 1995:259-261). Nor does it actually account for the historical process by which it occurred. As Earle (1991c:5) has subsequently noted, "population growth rates are so highly variable in prehistory that changing rates must themselves be explained." Although framed within neoevolutionary anthropology, Johnson and Earle's (1987:302-325) study of political economy points toward an alternative to cultural evolution, a perspective more amenable to explaining the development and decline of regional polities. Such an approach has already been examined in greater detail by Earle (e.g., 1990, 1991b, 1997). More in depth considerations of regional political economy have subsequently emerged as a central focus of archaeological research (e.g., Earle, ed. 1991; Hirth 1996; Pauketat 1997a; Saitta 1997).

Before proceeding with a consideration of political economy, the various theoretical perspectives pertaining to political development and decline can be briefly summarized (Table 1). The explicit theorizing and methods of systemic-processual archaeology presented clear advances over the unexamined assumptions of the culture historical approach and earlier historiography. Nevertheless, one of its most serious shortcomings has been a tendency to misconstrue political dynamics as a reflexive component of cultural systems and adaptation. Sociopolitical types have been correlated with evolutionary stages that do not always occur and are not necessarily sequential, tending to compartmentalize polities in a synchronic or step-ladder analysis. Different theories of cultural evolution have forwarded universal causality in sociopolitical development, while development has been shown to be increasingly multilinear, historically variable, and rarely unidirectional. Among the omissions of systemic processualism has been a tendency to discount human agency and political process, in

Table 1. Theories Pertaining to Political Development and Decline.

Theoretical Perspective	Characterization of Regional Political Development and Decline	References
Organic and Cyclical History	Natural or spiritual cycles of growth and decay	Gibbon 1960 [1788]; Spengler 1918-22; Toynbee 1946
Spencerism/Social Darwinism	Inconsequential or peripheral to social evolution	Spencer 1857, 1988 [1876]
Historical Materialism/ Marxism	Consequence of private property, capitalist appropriation, and class conflict; identified by historical epochs	Marx 1964 [1858] 1978d [1846]; Engels 1986 [1884]
Culture History	Indirect result of cultural diffusion, migration, acculturation, associational activity, or innovations	Kroeber 1963a, 1963b; Lowie 1927; Herskovits 1948
General/Unilinear Evolution	Inconsequential or peripheral to technological advances and overall cultural evolution	Tylor 1865; Morgan 1963 [1877]; White 1949, 1959b
Multilinear Evolution	Determined by a combination of demographic, ecological, economic, or technological factors	Steward 1955; Johnson and Earle 1987
Sociopolitical Evolution	Sociopolitical types result from management of economic and social problems, unequal control of resources and wealth, or conflict	Service 1962, 1975, 1993 ; Fried 1967, 1978; Carneiro 1981, 1998
Systems Theory	Sociopolitical evolution is systemically determined, as adaptive equilibrium or maladaptive disequilibrium	Flannery 1972; Rappaport 1978
Formalist, Neoclassical Economics	Collapse inevitably caused by the declining marginal returns of complexity, since development is a result of increased productivity	Tainter 1988
World Systems Theory	Determined by political and economic relations between core and peripheries (see political economy)	Wallerstein 1974a, 1980; Chase-Dunn and Hall, ed. 1991; Peregrine 1992
Structural Marxism and Neo-Marxist Historical Materialism	Defined and constrained by structural contradictions or intrinsic, ideological conflicts	Sahlins 1972; Friedman 1975; Gilman 1991
Political Economy	Result of economic interactions and political relations (prestige goods, tribute) as sources of power	Wolf 1982; Wright 1984, 1986; Johnson and Earle 1987; Earle 1997

positing cultural adaptation and evolution as the central, unifying characteristics of historical change (McGuire 1992:150-157; Roseberry 1989:50-51).

Although Tainter's (1988) study is a notable exception, managerial perspectives have tended to emphasize "emergent complex societies" as characteristic of a general scheme of increased "intensification, integration, and stratification," relegating decline to systemically-determined social pathology, maladaptation, or devolution (Johnson and Earle 1987:243; Rappaport 1978; Service 1993:112-13). *The Rise and Fall of Civilizations*, an edited volume on cultural evolution, thus included surprisingly few articles addressing cultural collapse or decline (Lamberg-Karlovsky and Sabloff, ed. 1974). Even so, such studies were framed largely in terms of cultural "decadence" or "maladaptive" responses to environmental stress (e.g., Hutchinson 1974; Willey and Shimkin 1974). In contrast, regional political decline was more ubiquitous than portrayed in studies of cultural evolution. The *historical process* of political development and decline has meanwhile gone largely unexamined, explained in terms of overly systemic, teleological arguments concerning adaptive or maladaptive tendencies.

Systemic-processual theories of sociopolitical evolution have yielded unrealistically normative interpretations of culture and prehistory, without sufficient consideration of internal political conflicts, negotiations, and social heterogeneity. As Yoffee (1988:11) points out, the tendency has been to "assume that sociocultural entities are normally highly integrated – highly systemic – with well developed mechanisms for self-regulation." Yoffee has also maintained that systemic perspectives may yet lead to a clearer understanding of sociopolitical development, albeit with clear limitations:

> Nevertheless, the vague language and terminology of systems theory ... tends to invite increasingly elaborate abstractions that often impede our ability to break down complex data and may prevent the examination of social institutions that are normally not well integrated (Yoffee 1988:11).

In contrast, Vincent (1990:319) notes that applications of systems theory have largely ignored "individuals, agency, and groupings" in political process. Hodder (1986:18-33) similarly points out that (systemic) processualism has failed to account for historical variation in terms of meaningfully-negotiated political actions. In short, the combination of systemic processualism and neoevolutionary theory has portrayed regional political development and decline as part of an historically inevitable, widespread, and determinative classificatory scheme.

One outcome of this ongoing critique of neoevolutionism has been an increased interest in the potential developmental variations of different historical trajectories, influenced by historical materialism and neo-Marxist political economy (e.g., Earle, ed. 1984, 1991). In order to explain regional political development as distinct from emergent social complexity, archaeologists have sought greater temporal resolution and an understanding of the "particulars of historically-situated cases" (O'Shea and Barker 1996:21). There has consequently been a concerted de-emphasis of cultural systems and a shift from the managerial-economic position of Service (1962) to variants of a political control or conflict perspective (e.g., Redmond, ed. 1998). Following O'Shea and Barker (1996:21), instead of "seeking some mystical threshold where tribes 'become' chiefdoms," it will be more productive to examine "the actual, historically-constituted cultural trajectories described by a group over time."

Recognition of the historically contingent qualities of political dynamics has contributed to a further reevaluation of systemic processualism and greater interest in the role of human agency in the historical trajectories of regional polities (Marcus and Flannery 1996; Spencer 1993, 1997). Observations by Trigger (1989b, 1990b) and others (e.g., Lightfoot 1995; McGuire 1992) that archaeology and historical anthropology have common interests points toward a yet more productive approach. A wide range of studies suggest that regional political development and decline can be understood from

a combined historical and political perspective (e.g., Comaroff 1985; Comaroff and Comaroff 1991, 1992; Hassig 1992; Ohnuki-Tierney, ed. 1990; Sahlins 1985; Wolf 1982, 1999). Among the most influential catalysts for this approach has been political economy.

Political Economy and Process

The critique of cultural evolution and systemic processualism has not left archaeologists without a comparative approach to studying prehistoric political dynamics, development, or decline. Political anthropologists largely abandoned systemic arguments and neoevolutionary taxonomy decades ago (Vincent 1990:313-319). Although initially concerned almost exclusively with emergent sociopolitical complexity and the origin of the state (Balandier 1970:3; e.g. Lowie 1927), political anthropology has been more broadly described as the "analysis of the dynamic processes involved in the institutionalization and symbolisation of power relationships" (Cohen 1974:17). Attention has turned to unpacking the concept of cultural complexity and examining the various forms of inequality, sources of power, political conflict, and trajectories of domination and resistance (e.g., Comaroff 1982; Friedman 1992; Hale 1994; Hannerz 1992; Kertzer 1996; Mach 1993; Scott 1990; Wolf 1990, 1999). In contrast to systemic processualism, a concern for the relationships between political-symbolic action (praxis), power, and identity emphasizes variation and contingency as an historically-situated process, within specific temporal and geographic contexts (Wolf 1990).

These approaches have a common derivation in the historical materialism of Marx (1964 [1858], 1978c [1859], 1978d [1846]), and following the sociological perspective of Weber (1978 [1922]), anthropologists have incorporated agent-centered theories of culture, ideology, and society. Reified classifications of "primitive" cultures as the isolated "other" have consequently been called into question (Fabian 1983; Keesing 1994). Acknowledging the global influences of colonialism and capitalism,

anthropologists have turned instead to a critique of culture, history, and power (Geertz 1973:3-54; Marcus and Fischer 1986:77-110; Ortner 1984). Since the 1960s, political process and social action have become central themes in this reflexive, critical anthropology (Hymes 1969; Scholte 1969).

Anthropologists and comparative social theorists alike have focused on the politics of identity, cultural production, and human agency as underlying conditions in the historical development of political economy (e.g., Bourdieu 1977; Geertz 1973:311-341; Giddens 1979; Kertzer 1988; Roseberry 1989; Sahlins 1985). Stemming from a post-processual critique of the systemic-processual paradigm (i.e. Hodder 1982, 1985), similar issues have only recently been raised in archaeology (e.g., Brumfiel 1992; Marquardt 1992; Miller et al. 1989; McGuire and Paynter, ed. 1991). Yet the programmatic adoption of Marxism and historical materialism has rarely characterized anthropological discourse (Bloch 1983). A brief review of anthropological political economy illustrates the relevance of such neo-Marxist perspectives to investigations of political development and decline in prehistory (see Cobb 1993; McGuire 1993; Trigger 1993).

Preceding the establishment of disciplines such as anthropology, political science, and sociology, political economists advanced the inter-relatedness of political and economic factors in social interactions (Roseberry 1988:162; Wolf 1982:7-13). In contrast to the supply-and-demand political economy of neoclassical economists, Marx (1964, 1978b [1932]) linked the historical development of the capitalist state with social relations of production and the material conditions of human social existence (see also Marx and Engles 1978 [1848]). Marx and Engels (1986 [1884]) drew on the ethnological works of Morgan to account for the historical development of pre-capitalist political economy (Bloch 1983:1-62). As proponents of historical materialism, they were primarily concerned with explaining the emergence of capitalist relations of production and the impending economic transformations produced by class conflict. While Marx and Engels believed that class struggles stemming from disparities in wealth were a central

motivating force in human history, they referred explicitly to social formations in capitalist, industrialized nations. Subsequent work by Engels (1986:51-57) extended their analysis to the development of private property in non-capitalist, pre-state societies, further influenced by Morgan's theory of unilinear cultural evolution. The historical development of kin relations did not neatly conform to these stages however, and the role of socioeconomic class has been mitigated by other factors such as social race, ethnicity, and nationalism (Bloch 1983:63-94; Giddens 1995).

In his Preface to *A Contribution to the Critique of Political Economy*, Marx (1978c) has been interpreted by some as stating that the material and economic conditions of society *determine* ideological superstructure (e.g., Harris 1979:55-56). Marx (1978d:137-138) dismissed such vulgar materialism as overly reductionist, since it ignores the fact that economic structures are themselves "*transitory and historical*," negotiated through often volatile social relations of production that are in turn transformed through political action (emphasis in original; cf. Block 1983:27, 131-135; McGuire 1992:124-126). In fact, Marx's theory of social change presupposed an interplay between "historic social relations" and material conditions, worked out through a series of historical contradictions (Marx 1978d:140). Consciousness, ideology, and social relations of production were integral processes in this ongoing, historical dialectic. Marx and Engels' (1939:7-13, 16-21) pre-capitalist stages or "epochs" of social development were consequently meant to substantiate a political philosophy concerning private property and production, rather than cultural adaptation or evolution (e.g., Marx 1978a [1867]). Nonetheless, the relevance of Marx's writings to contemporary anthropological and comparative political theory outstrips inaccurate assessments regarding the course of human history. It would be shortsighted therefore, to portray neo-Marxist historical materialism as either entirely materialist or evolutionary (Giddens 1995:69-89).

Anthropological political economy from early on was implicitly neo-Marxist, influenced by different interpretations of Marx (Block 1983; Roseberry 1988). Political

economy has not been confined to Marxism, but has been defined more broadly within anthropology as starting from "an analysis of social relations based on unequal access to wealth and power" (Roseberry 1988:44). In both cultural anthropology and archaeology, the wide-ranging influence of neo-Marxist social theory has transformed, rather than displaced, existing schools of thought. For example, neo-Marxist theory since the 1970s entailed such diverse perspectives as structural Marxism, local-level politics, the global expansion of capitalism, underdevelopment, dominant ideologies, and non-capitalist modes of production (e.g., Amin 1976; Bloch, ed. 1975; Coquery-Vidrovitch 1977; Friedman 1974; Godelier 1977; Leone 1986; Sahlins 1972, 1976; Spriggs, ed. 1984). Of these, Roseberry (1988) suggests that anthropological political economy has developed primarily along the lines of mode of production, underdevelopment theory, and the World System (cf. Clammer 1985:7-11).

Anthropological critiques of Marxism have been advanced as a means of understanding non-capitalist social formations and relations of production. According to Wolf (1982:75), a mode of production is "a specific, historically occurring set of social relations through which labor is deployed to wrest energy from nature by means of tools, skills, organization, and knowledge." The term "non-capitalist" is meant to highlight the fact that regional political economies did not merely evolve through a series of pre-capitalist stages, or comprise neatly bounded, cultural categories (Cobb 1993). Non-capitalist social formations are defined somewhat antithetically in terms of a mode of production that lacks the capitalist exploitation, economic contradictions, and class conflict described by Marx (1978a [1867]).

The anthropological study of non-capitalist modes of production was advanced during the 1970s through a structural Marxist treatment of local-level political economies. Ortner (1984:141) thus distinguished structural Marxism from the political economy of "large-scale regional political/economic systems." Combining the historical materialism of Marx with the cognitive structuralism of Lévi-Strauss (e.g., 1963, 1968),

structural Marxist studies tended to produce synchronic or non-historical interpretations of culture as inflexible representations of dominant ideologies. Failure to transcend the polarization and determinism of a materialist base and ideological superstructure would prove to be just as limiting however, when applied to the study of prehistory (Friedman 1975:198; Ortner 1984:140-141). Structural Marxist studies thus tended to compartmentalize the mechanisms of culture change, replicating the historical determinism and functionalist arguments of cultural materialism and general systems theory (Friedman 1975:198-199; Harris 1974, 1979). Structural Marxism has been applied more widely in historical anthropology and historical archaeology, due to its emphasis on elucidating ideologies through ethnographic and historical research. Such models demonstrated the interdependence of social structures, symbolic action, and ideology in social reproduction, and offer an important critique of political economy as separate and distinct from cultural evolution (e.g., Friedman and Rowlands 1978:267-272; Leone 1982, 1984; Sahlins 1976, 1981).

Sahlins (1972) in particular, shed light on the cultural structures of non-capitalist political economy in social reproduction and various modes of production. In *Stone Age Economics* he contrasted the social transformation of domestic economies with larger-scale regional interactions (cf. Sahlins 1976). According to Sahlins (1972), subsistence sufficiency involved ideological constraints and finite needs in egalitarian or kinship-structured societies, making an economic surplus unnecessary, excessive, and practically unattainable. This "structure of underproduction" in the domestic economy was seen as precluding and mitigating against regional political centralization, since "maximum dispersion is the absence of interdependence and a common authority" (Sahlins 1972:97). A domestic mode of production was transformed through the "expropriation" of social relations of production and expansion of political controls in the intensification of production (Sahlins 1972:92-95). The emergence of a "public economy" and production of a surplus depended upon *politically* instituted leadership, through

subversion of the principle of reciprocity and creation of indebtedness (Sahlins 1972:123-148). Reciprocity refers here to an exchange that is accompanied by variable meanings having to do with compensation (cf. Dalton 1977; Polanyi 1957, 1959). Sahlins (1972:182) based his argument for regional political-economic development on the "spirit of the gift," wherein the "burden of political reconciliation" is lifted and social contradictions are resolved (cf. Mauss 1967).

Since the central premise of Sahlins' argument hinges on underlying structural contradictions and constraints, it implies an analytical compartmentalization subsequently criticized by Ortner (1984:140-141) as overly deterministic. However, Sahlins makes a critical distinction in focusing on non-capitalist relations of production and suggesting that regional political economy must also be understood in terms of the political dynamics of individuals and groups. Following Marx (1978b:109-125), an emphasis on ideological structures does not mean that individuals were necessarily conscious of the long-term consequences of their actions. Regional political economies were instituted on the local level within a domestic mode of production, subsequently transforming the principles of kinship and reciprocity (cf. Johnson and Earle 1987:199-203). Moving beyond the ideological structures of specific social formations to global economic structures, anthropological political economy has subsequently turned toward larger-scale interactions.

World System theory is today perhaps the most well-defined and recognizable school of neo-Marxist political economy, although its application in anthropology and archaeology continues to be sporadic (Kohl 1987b; Rowlands et al., ed. 1987; Stein 1998). The concept of a World System became widely influential in the social sciences in describing global capitalist expansion as an economic relationship between core and periphery. As conceived by Wallerstein (1974a, 1974b, 1980), World System theory built on earlier dependency theory, which in turn presented a critique of economic development, underdevelopment, and modernization (Frank 1966, 1995; see Wolf

1982:22-23). As such, World Systems theorists have launched a cogent critique of social relations of production, neoclassical economics, and cultural evolution (Frank 1993; Wallerstein 1987, 1995).

Archaeologists have occasionally sought to apply World Systems theory in explaining the development of regional political economies prior to the fifteenth century. In archaeology, as well as historical anthropology, this has encouraged a further critique of neoevolutionism (e.g., Blanton and Feinman 1984; Chase-Dunn 1989; Chase-Dunn and Hall, ed. 1991; Kohl 1984, 1987b; Peregrine 1992). Consideration of core-periphery systems in prehistory (and history) has been based in part on minimizing the contradictions between the emergence of a World capitalist economy and social relations in non-capitalist modes of production (cf. Schneider 1977). Political power and emergent inequality in both nonstratified and tributary social relations do not easily conform to the social relations of capitalism (Cobb 1993:62; Wolf 1982). World System theory as applied to prehistory has subsequently resulted in often unrealistic core-periphery models merely being imposed upon interregional exchange networks (McGuire 1992:79-80, 136-138; e.g., Dincauze and Hasenstab 1989). Furthermore, World System studies tend to portray colonialism, cross-cultural encounters, and prehistoric social interactions from an unrealistically econocentric perspective. At the very least, applications of World System theory in studies of pre-Columbian political economy demand different levels of analysis in order to account for social relations of authority on different geographic scales (Peregrine 1995).

In a widely read adaptation of World System theory to historical anthropology, Wolf (1982:80) described the development and expansion of the capitalist mode of production in terms of social labor and power. *Europe and the People Without History* has had a formidable influence on anthropological political economy and culture history, accounting for global processes described by Wallerstein, without recourse to the infrastructural determinism of a World economic system. Wolf (1982:24-100) situated the

political geography of the fifteenth century in capitalist, tributary, and kin-ordered modes of production as historical "connections," rather than rigid economic structures. In explaining historical interactions with non-capitalist political economies, Wolf's contrast between tributary and kin-ordered social relations provides an alternative understanding of prehistoric political development and decline.

Contrasted with capitalism, tributary and kin-ordered modes of production represented different ways in which the social labor of regions and communities was organized and appropriated. In the latter, "social labor is 'locked up,' or 'embedded,' in particular relations between people. This labor can be mobilized only through access to people, such access being defined symbolically" (Wolf 1982:91). The most obvious forms of social relations are "filiation and marriage," or "consanguinity and affinity," although the symbolic construction of kinship may transcend biological relations (Wolf 1982:90). A tributary mode of production, in comparison, involves larger-scale political relationships and economic interactions, although not involving a capitalist expropriation of labor.

In a tributary mode of production, "social labor is ... mobilized and committed to the transformation of nature primarily through the exercise of power and domination-*through a political process*" (Wolf 1982:80, emphasis added). A kin-ordered mode of production is likewise political and symbolic, characterized by factional conflicts and the formation of alliances and coalitions (Wolf 1982:93). Kin-ordered and tributary modes of production thus subsume the chiefdom typological concept, although modes of production are not adaptive, and as such, do not evolve (Wolf 1982:100). The historical development of various modes of production involved global interactions ("connections") that frequently culminated in European political and economic dominance.

While providing a ground-breaking critique of World history and political economy, *Europe and the People Without History* has been criticized for glossing over

political actions and local-level histories (Ortner 1984:141-144), by making capitalist expansion seem inevitable. In the preface to the second edition however, Wolf (1997) recognized the inherent difficulties in simultaneous representations of large-scale (macroregional) connections and a multitude of local-level and regional histories, a problem not directly addressed by World System theorists. While anthropological studies of political economy have exposed the "unevenness" of local-level and regional interactions in the context of capitalism, such perspectives are generally overlooked in studies that correlate the development of a World System with the cultural evolution of civilizations (Roseberry 1989:50-51; e.g., Sanderson, ed. 1995).

In her review of anthropological theory since the 1960s, Ortner (1984:142) characterized political economy as concerned primarily with World System theory and global capitalist expansion, asserting that it was "not political enough." But in addressing non-capitalist political economy from quite different perspectives, Sahlins (1972:123-148) and Wolf (1982:80) both suggested that changes in social relations of production should be approached as an intrinsically political process. The conflation of World System theory and "world-historical change" with the history of western civilization, especially when applied to the study of prehistory, tends to disregard the indigenous histories of non-capitalist political economy, not to mention political process in local and regional contexts, however "tenable" the reconstruction (Ortner 1984:142-143; cf. Roseberry 1988:173; e.g., Roudometof and Robertson 1995; Sanderson, ed. 1995). Following Wolf (1982), this calls into question the appropriateness of a World Systems approach to non-capitalist contexts in prehistory. The resulting exegesis of economic development and core-periphery relations supplants regional political process to such an extent that the relevance of World System theory is at best ambivalent (cf. Peregrine 1995:257-261).

In terms of prehistoric political economy, an alternative approach can be explored that does not presuppose the historical inevitability and determinism of structural

Marxism or World System theory. Research should instead focus on explaining the historical relationships between political actions and structural power in non-capitalist social relations (Roseberry 1988:170-172; Wolf 1990, 1999; cf. Ortner 1984:141-144). What such an approach elicits is clearly less World System than regional social relations of authority, what has been referred to in eastern North America as the historical development of "nonstate political hegemonies" (Pauketat 1994:11). Political economy as applied to prehistory is clearly not confined to structural Marxism, nor should it be misconstrued as a World System.

Prehistoric Political Economy

Just as structural Marxism and World System theory have had an uneven influence in cultural anthropology, studies of political economy have ranged widely among archaeologists (e.g., D'Altroy and Earle 1985; Muller 1997; Pauketat 1997a; Saitta 1997; Stein 1998). Neo-Marxist perspectives of political economy in prehistory are a relatively recent trend that gained efficacy during the 1980s, paralleling the critique of neoevolutionism (Gilman 1989:63-65; McGuire 1992:73-83, 1993; Saitta 1989; Spriggs 1984). However, systemic processualism provided the initial stimulus for a socially relevant archaeology that could productively advance anthropological theory, including the study of prehistoric political economy. Archaeological studies of non-capitalist political economy have consequently been advanced through systemic-processual perspectives of cultural evolution, while culture-historical issues such as diffusion, innovation, and culture area have played a more implicit role (Cobb 1993:44). The connection between political economy and cultural evolution thus poses a recurrent, yet often unrecognized conflict in the history of archaeology.

Childe (1936, 1939) was one of the first archaeologists to consider the significance of neo-Marxist historical materialism in social evolution. His works initially had a limited influence in North American archaeology, where first Marxism and then

historicism were downplayed as inadequate propositions for a social science (Trigger 1980b, 1993). Working from a neo-Marxist critique of World prehistory, Childe attempted a cross-cultural study of the political and economic development of civilizations. Childe described social evolution as intrinsically historical, involving a wide range of variation in sociopolitical differentiation and development. Childe's evolutionary theory paralleled in some respects the multilinear cultural evolution advocated by Steward (1955). To this end, Childe was concerned not simply with delineating evolutionary stages, but with social relations of production, class, and ideology as changeable, historical conditions (Childe 1942, 1951:162-163, 1958; cf. Trigger 1980b, 1989a:259-263).

Pointing out the shortcomings (and historical determinism) of unilinear cultural evolution, Childe (1951:13-27, 175) argued that "the circumstances that provoke innovations" and "their social acceptance" were in each instance historically negotiated. He suggested that such historical processes were the ultimate sources of social change. While he acknowledged the general veracity of evolutionary trends throughout World prehistory, Childe argued that cultural evolution alone did not account for the direction of change, or the specific social conditions that defined human needs. For this task he suggested that archaeology as an historical discipline could contribute a unique perspective (Childe 1951:27). Childe sought to expose the unrealistic dichotomy between history and evolution, arguing that the former had a measurable effect on the latter. This ultimately led him to seek out the various historical mechanisms of social change. According to Childe (1951:164), "historical evolution" involved diffusion, assimilation, and independent inventions, processes not clearly accounted for by cultural or biological evolution.

The unrealized historicism of cultural evolution addressed by Childe reflects a central, recurring problem implicit in the writings of Marx and subsequent studies of prehistoric political economy (Giddens 1979:111-120, 1995:1-25; e.g., Johnson and Earle

1987). In ascribing causality and functionalist directionality retrospectively, theories of cultural evolution and adaptation tend to gloss over the historical contexts of political and economic interactions, in terms of both local and regional-level social relations. This problem was addressed by Adams (1966) in *The Evolution of Urban Society*, in which he explored a multilinear, comparative approach to the evolution of regional polities in Mesopotamia and central Mexico (cf. Adams 1956). While Adams (1966:172-173) described developmental similarities in "cumulative patterns of change," he suggested that alternative models of change were necessitated due to differences in each "individual historical sequence."

Adams described the developmental trajectories of regional polities in Mesopotamia and central Mexico according to a wide range of categories: monumental architecture, artistic styles, social differentiation and socioeconomic class, militarism, trade, and tribute. He suggested that regional development was a product of distinct historical sequences that had played out in the evolution of urban societies:

> There are, in short, differences as well as similarities in the course of development followed in the two areas, and the objective of systematic comparison would not be advanced by ignoring the former and overstressing the latter . . . In that sense, early urban societies in Mesopotamia and Mexico were regionally specialized variants built around a common processual "core," and there are aspects of the two specializations whose essential features may still elude us. In that sense also, these are *historical sequences whose determinate relationships can only be discovered or imposed retrospectively* and surely were never apparent to their protagonists (Adams 1966:173-174, emphasis added).

Adams' synthesis of multilinear and historical perspectives allowed him to recognize that "determinate relationships" did not follow a "predetermined pattern." Consequently, he concluded that it would not always be advantageous to reconcile the social mechanisms of specific historical sequences with multilinear cultural evolution (Adams 1966:173-174). Adams thus pointed the way toward an alternative approach to regional political economy, in which it was possible to generalize about comparative historical processes.

Just as Steward (1955:18-29) described multilinear cultural evolution in terms of "parallel developments" in cultural ecology and adaptation, consideration of prehistoric political economy has entailed diachronic similarities in comparative social relations (McGuire 1992:174-175). As discussed earlier, Johnson and Earle (1987) described the historical trajectories of regional political economy in terms of multilinear cultural evolution, attempting a synthesis of neo-Marxism and neoevolutionism. According to Johnson and Earle (1987:15), the evolutionary process of increased complexity, integration, diversification, and population growth comprised an "upward spiral" of development. The potential inclinations of subsistence economy and regional political economy are thus subsumed within the course of global, comparative history, as the fruition of cultural evolution. Yet neo-Marxist perspectives of political economy characterize history as fraught with contradictions and conflicts, and not simply the successive evolution of culture (cf. Earle 1997:208-211). As McGuire (1992:155) notes, cultural evolution ignores political process and makes the historical trajectories of regional political economy appear inevitable.

Some scholars have consequently suggested discarding cultural evolution all together, since it obscures integral political and economic processes by lumping together homologous examples of historical variation and disregarding others (e.g., McGuire 1992:155; Shanks and Tilley 1988:137-185; Sahlins 1976:53). Presenting strong criticism of the functionalist logic underpinning cultural evolution, Giddens (1995:23) suggests that

divested of its adaptationist rationale, "limited multilinear evolution" retains an analytical relevance akin to historical materialism and comparative history. This raises, once again, the distinction between specific and general evolution (i.e., Sahlins 1960a), with the implication that divorced from its ecofunctionalist, adaptationist rationale, multilinear cultural evolution might yet incorporate sufficient historical context for understanding regional political economy.

While multilinear evolution provides a model *for* historical development on macroregional and global scales, its relevance becomes less apparent when applied to regional political economy. Conflation of political economy and class formation with evolutionary stages presents a shortsighted account of regional political dynamics that is ultimately detached from historical context (Gailey and Patterson 1987:16-17; Hirth 1996; Kohl 1987a). In short, cultural evolution and political economy do not adequately coincide as a model *of* historical development. Following Adams (1966:173-174), in as much as it is recognized that determinate relationships are "discovered or imposed retrospectively" regional political economy should be viewed as a product of variable social interactions and political processes, rather than determinative historical structures, stages, or systems.

Comparative generalizations regarding the development and decline of non-capitalist political economy should not be disassociated from discrete historical trajectories, but instead address the dynamics of power and authority in distinct political and symbolic contexts (McGuire 1992:13; Wolf 1999:289-290). Similar admonitions have been made by social historians, in that "a historical phenomenon can never be understood apart from its moment in time" (Bloch 1953:35; cf. Carr 1961:84). Multilinear evolution in its former ecofunctionalist, systemic framework is consequently retained only superficially in recent studies of prehistoric political economy, with considerably less emphasis on culture and adaptation (e.g., Earle 1997:13-14, 208-211; Hirth 1996; Muller 1997:389). Freed from its emphasis on class struggle, capitalist expansion, and

evolutionary epochs, historical materialism may likewise contribute to explanations of non-capitalist political development and decline (Giddens 1995:1-2). The resulting synthesis represents a departure from the multilinear evolutionism of Steward and historical materialism of Marx, yet presents a cogent, anthropological critique of history (Roseberry 1989; Wolf 1990, 1999).

One of the first steps in this direction is the adoption of a more appropriate terminology, especially in regard to concepts entailing political economy and interregional interaction. As mentioned earlier, this is evident in Johnson and Earle's (1987) use of the term "region" in referring to both non-stratified and macroregional political economy, a unit of analysis that encompasses a wide array of polities otherwise regarded as simple, complex, and paramount chiefdoms, as well as archaic and agrarian states. In adopting the "regional polity" concept as a heuristic unencumbered by neoevolutionary assumptions, it must be taken into consideration that political-economic interactions (i.e., functional regions) will not always neatly correspond to uniform (or homogeneous) regions, or more well-defined, geographic boundaries (Burton et al. 1996; Hassig 1996). As Crumley (1979:143) points out, a region is "an arbitrary areal classification whose limits are defined by the researcher, for the purpose of studying a phenomena within its boundaries." Trigger (1989a:333) has similarly observed that "the social entity to be studied is determined by the problem that is being investigated." The relevance of a multiscalar, spatial analysis is apparent in locational models of regional political economy, detached from cultural evolution and historical-developmental trajectories (Crumley 1995; Marquardt 1985; Nassaney and Sassaman 1995).

Locational Models

During the past two decades there have emerged two interrelated approaches to the study of regional political economy in prehistory. The first has focused on describing

regional and macroregional interactions in terms of discrete locational models, based on specific modes of production, exchange, or consumption. In many of these models, power relations are delimited or circumscribed by economic structure. The second approach has sought to frame the actual sources of power in terms of various forms of finance, coercion, or legitimization (Preucel and Hodder 1996:100; Hirth 1996). As it connects more directly with historically-situated political process, the latter of these approaches will be considered separately in the final section of this chapter.

Locational models of regional and macroregional political economy are based largely on substantivist principles, portraying societies as highly-integrated economic systems (Halperin 1988:7-24, 1994:59, 144-145; Polanyi 1957; 1968:3-25). Archaeologists have for some time studied the spatial integration and segregation of socioeconomic organization in terms of settlement patterns, resource availability, information and resource exchange, and long-distance interactions (e.g., Brumfiel and Earle, ed. 1987; Butzer 1982:211-229; Chang, ed. 1968; Earle and Ericson, ed. 1977; Johnson 1977; Renfrew 1975, 1977; Willey, ed. 1956). While various models have been proposed, studies of prehistoric political economy have been greatly influenced by central place theory, including tributary modes of production, prestige goods economies, and what Earle (1994) refers to as wealth and staple finance.

Central place theory actually involves a series of locational models that describe the appropriation, accumulation, distribution, and exchange of subsistence goods, resources, craft goods, and/or information, within an associated range or network of interaction (Christaller 1966, 1972; Crumley 1979; Smith, ed. 1976). A major goal in applying these models has been to highlight the influence of geography and economic structures on regional polities, as well as the potential long-term affects on regional political development and decline. One drawback has been that locational, economic systems have subsequently been portrayed as idealized, static templates, for which cultures (and cultural practices) are expected to conform.

Central place theory as such, has had a relatively limited application in non-market and non-capitalist contexts, due in part to the fact that corresponding spatial models are viewed as overly restrictive, and do not adequately incorporate mitigating political and economic factors (Crumley 1979:151-157). As a means of modeling the political-administrative structure of regional interactions, the concept of central places has nonetheless proven to be a useful spatial heuristic (e.g., Collis 1986; Renfrew 1975; Steponaitis 1978:418). Central Place theory has greatly influenced interpretations of regional centers in prehistoric political economy. A hierarchical, hinterland model has typically been adopted, based largely on the dendritic-mercantile pattern (Figure 3). In the dendritic pattern, "lower-level centers are tributary to one and only one higher-level center" (Smith 1976:34). Alternatives, such as the solar system and gateway models, have found less application in non-market contexts (Hassig 1996:1083).

Central place models have been applied to tributary modes of production, describing the movement of crafted items, wealth, or tribute through a settlement hierarchy (e.g., Frankenstein and Rowlands 1978; Welch 1991:16-17; Wright 1977:381-385, 1984:43-51). In contrast to capitalist appropriation or mercantilism, this amounts to what Wolf (1982:80) has referred to as an intrinsically *political* process. Another distinction should be made, in that "tribute" accordingly involves access to information, obligations, and labor through social relations, although archaeologists have by and large adopted central place theory to model the spatial flow of material goods (Figure 4). A regional analysis of central place systems can provide a useful critique of social relations in prehistoric political economy, yet the spatial correlates of dendritic-mercantile systems are often conflated with tributary modes of production, with little consideration of competing centers of power, or the ways in which relations between centers may have changed over time (Smith 1976:34-36). The resulting analysis portrays regional political economy as based solely on the accumulation of wealth, surplus resources, or subsistence goods, whereas incipient political power was in many

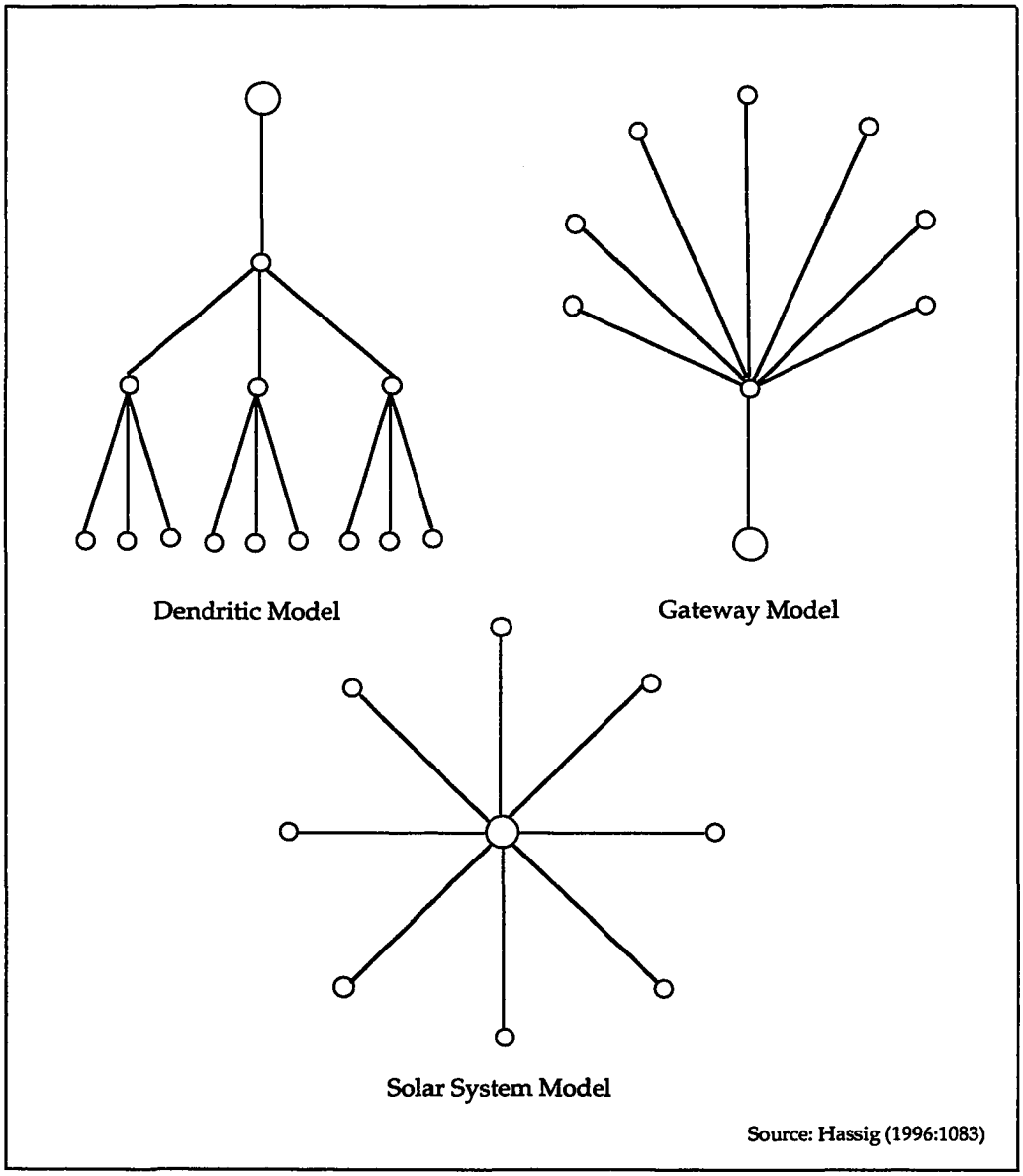


Figure 3. Three Spatial Patterns in Regional Analysis.

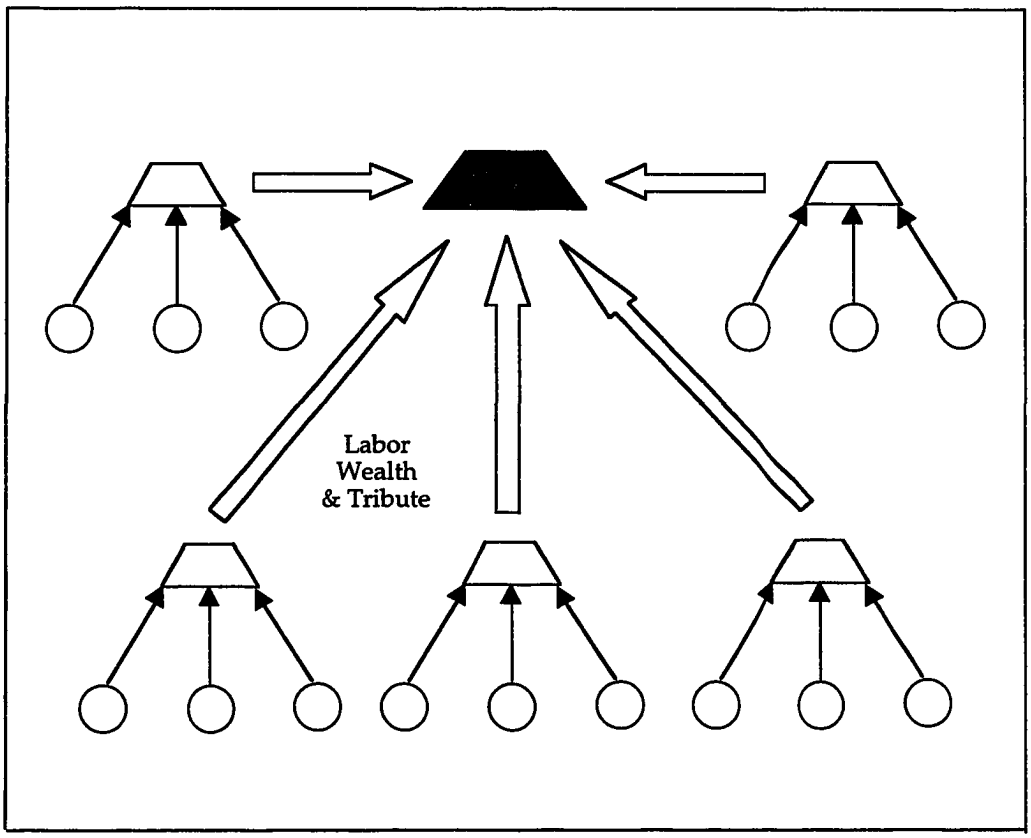


Figure 4. Tributary Mode of Production in Regional Political Economy.

instances obtained (and maintained) through coercion, genealogical rank, or kin-ordered social relations (Wolf 1982:97).

While central place theory situates political-economic interactions within a distinct region, peer polity interaction has referred to macroregional connections between different, yet interrelated polities (Renfrew and Cherry, ed. 1986). If central place theory presumes the spatial dimensions of regional political economy and downplays change, the peer polity interaction model presupposes an inter-polity dynamic, with less definite spatial correlates. Nevertheless, peer polity interaction provides another alternative to cultural evolution, in explaining regional development in terms of political and economic competition, increased trade, and variation in shared material culture (Renfrew 1986:5-7). Systemic-processual explanations of exchange have in contrast emphasized the adaptive requirements of economic structures, centralized management of resource diversity, or the need to manage long-distance trade (Brumfiel and Earle 1987:2-3). Peer polity interaction has had relatively few ties with neo-Marxist political economy and is similar in many respects to earlier cluster-interaction, interaction sphere, and network analyses (e.g., Boissevain and Mitchell, ed. 1973; Caldwell 1964; Price 1977; Struever 1964).

The peer polity model has been applied to situations of political and economic interaction between two or more "autonomous" yet interrelated regional polities, in order to explain simultaneous (or uneven) historical development (Renfrew 1982, 1986:117). Peer polity interaction draws attention to the importance of macroregional analysis, emphasizing the role of political opposition and power relations in transforming economic structures. However, interactions between autonomous political systems must be explained rather than assumed, especially in instances of warfare, tribute, or coercion. As it is often unrealistic to assume that political autonomy existed between neighboring polities, peer polity interaction has proven useful only in certain well-documented contexts. As such, peer polity interaction does not provide an

explanation of prehistoric political development. Peer polity studies have thus adopted a wide range of approaches, including structuralist, materialist, and ecological perspectives (e.g., Braun 1986; Freidel 1986, Sabloff 1986). As with interaction spheres and central place theory, the peer polity model must be refined and explained according to specific spatial and temporal contexts. Without investigating the actual dynamics of macroregional interaction, the peer polity model contributes little to the study of regional political economy in prehistory (cf. Cobb 1993:49-52).

In contrast, the prestige goods model has had a much wider application in explaining interactions both within and between regional polities. The prestige goods economy as described by Friedman and Rowlands (1978:224-225) represents a sequential development that either succeeded or paralleled a tributary mode of production, making the latter social relations more "reciprocal" (cf. Ekholm 1978). In consideration of certain goods offered to a political-administrative center, a residential elite compensated subordinates in peripheral locations by providing goods invested with prestige (Figure 5). Prestige goods, as such, are regarded by some as "luxury" items, symbolic markers of social position and status that were at the same time necessary for political, ceremonial, and ritual transactions. Acceptance, display, and distribution of such goods amounted to a "tribute of allegiance," involving political subordination within and between polities (Ekholm 1972:21).

Access to prestige goods may in turn have been dependent on the "establishment of alliances to the centre, either directly or through subordinate local centres" (Friedman and Rowlands 1978:224). While the prestige goods economy as described by Friedman and Rowlands (1978) represented a systemic or "epigenetic" component in social evolution, archaeologists working in eastern North America have since explored its relevance to the historical development and decline of regional political economy (e.g., Brown et al. 1990; Peregrine 1991, 1992:47-84; Welch 1991). In contrast to Friedman and

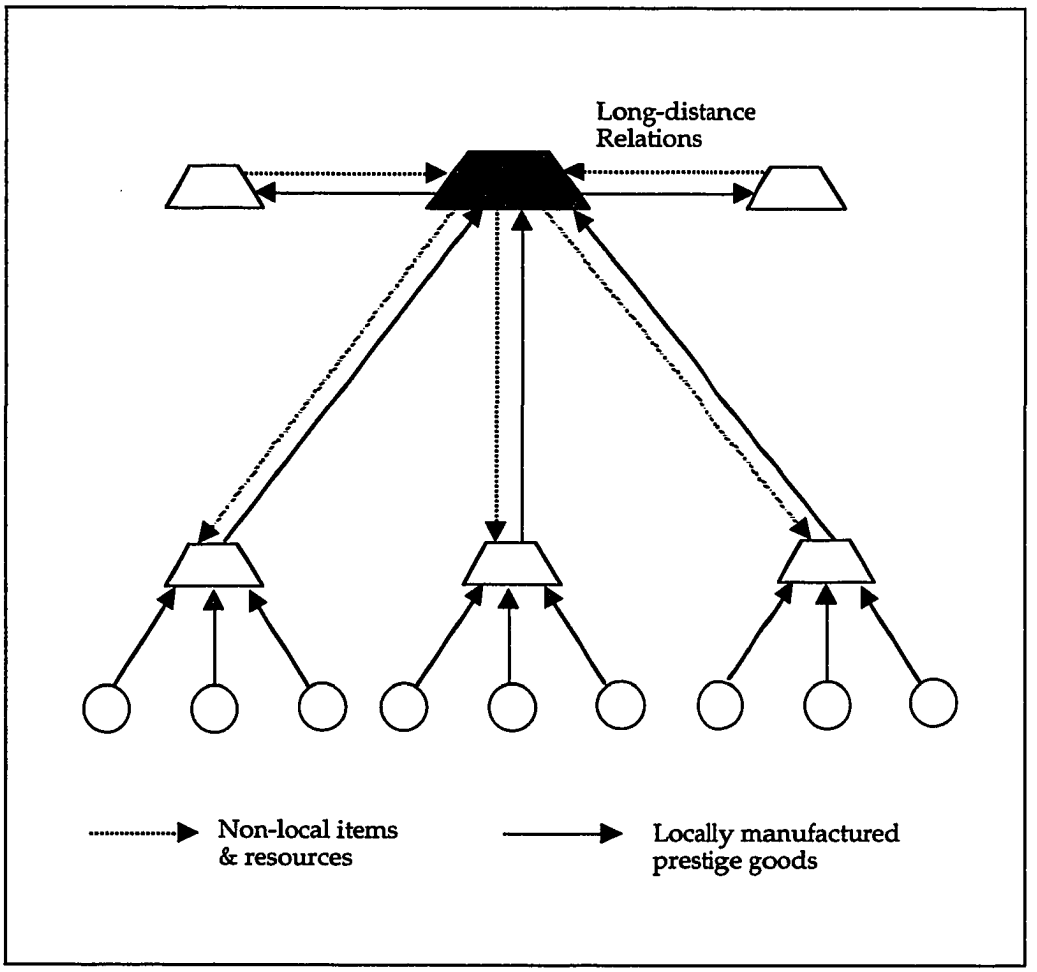


Figure 5. Hypothetical Model of a Prestige Goods Economy.

Rowlands (1978), Peregrine (1992:47-84) describes the social evolution of prestige goods systems in late prehistoric southeastern North America in terms of a non-capitalist World System. In an ongoing attempt to meet the requirements of successive political alliances, the expansion of prestige good systems has more generally been associated with the intensification of production and exchange, including regional and long-distance trade relations. Prestige goods were controlled in both instances from a primary or secondary center. As a consequence, prestige goods economies have been described as moving increasingly toward productive intensification, craft specialization, and the expansion of long-distance exchange. Restricted access to non-local or "exotic" items has in turn been referred to as a "monopoly," in that elite control of macroregional exchange may have ultimately constrained access to such items on the local-level (Brown et al. 1990:255).

Archaeologists have fine-tuned the prestige goods model based on regional data, demonstrating variations in the exchange of craft items, non-local resources, and subsistence goods (e.g., Peregrine 1992; Welch 1991). Drawing on central place theory, a prestige goods economy can be described as a hierarchical pattern of exchange, similar in some respects to the redistributive model (Figure 2). The regional settlement hierarchy is characterized by monumental architecture, differentiation in material culture, and residential space (Wright 1984:43-44). Although political centralization is not a necessary precondition, differential appropriation and distribution of non-local resources and craft items is though to serve the economic interests of some groups over others (Brown et al. 1990:256). This form of prestige-oriented appropriation and distribution is thought to be particularly relevant in non-market contexts, where there is little or no evidence for tribute in the form of taxes, or the institutionalized appropriation of wealth (cf. Wolf 1982:79-88).

As an alternative to managerial theories of redistribution, the prestige goods model focuses attention on the political aspirations and machinations of individuals and

groups. However, the intensification of prestige goods exchange need not be subsumed by commodity exchange or cultural evolution. In fact, the commodification and categorization of prestige actually undermines the analytical relevance of a prestige goods model. Following Ekholm (1972, 1978), the prestige goods model delineates a process of cultural value negotiated not merely in terms of wealth or luxury items, but political expedience and legitimacy. Prestige goods economies incorporate regional and macroregional interactions, social relations that should not be confused with economic dependency (Cobb 1993:60-70).

In applying the prestige goods model to prehistoric political economy, there is nonetheless a potential for reifying hierarchical economic structures, with less concern for how prestige (and cultural value) may have actually been produced and transformed through time, or over long distances (Helms 1993). This structuralist approach results in a form of methodological individualism, positing self-interested profit-seeking over political expediency and social relations (Halperin 1994:20-21). Applications of the prestige goods model thus run the risk of replicating on regional and macroregional scales the structural determinism of World System theory, with core and periphery represented by political-administrative centers and households (Preucel and Hodder 1996:103). In contrast to World System theory however, the prestige goods model provides a scale more appropriate to political economy in prehistory, describing non-capitalist social relations based on the evidence for regional and macroregional interactions.

Friedman and Rowlands (1978:228) suggested that prestige goods economies were extremely unstable, since control over long distance trade could be easily circumvented. Furthermore, the localized manufacture of crafted items and cultural production of value (not to mention prestige) would have been difficult to control from a regional political-administrative center. Yet this dynamic of political and economic change is rarely accounted for in the prestige goods model, which presents an essentially static

economic system. Halperin (1994:203) addresses this problem in both capitalist and non-capitalist systems in positing the existence of an "informal economy" or "heuristic device designed to handle variability, pluralism, and change in economic systems." The prestige goods model must similarly be viewed as an informal, cultural economy of non-capitalist social relations, emphasizing "the variable principles operating within and between groups" (Halperin 1994:109). In the final analysis, the value of prestige is contingent on the historical contexts of political and symbolic actions, comprising the various configurations of social relations (Halperin 1994:205-212). As with other locational models, this underlines the importance of addressing structural power in regional political economy.

Structural Power

While locational models of regional and macroregional interaction provide useful analytical frameworks for the study of political economy, archaeologists have also begun to investigate the various sources and manifestations of power in the historical trajectories of regional polities. Earle (1987a:279) noted this general trend when he suggested that "research has shifted away from schemes to classify societies as chiefdoms or not, towards considerations of the causes of the observed variability." Locational models such as prestige goods, peer polities, and central places fall short of considering historically-situated political process, applying static economic structures to prehistory. There has consequently been a de-emphasis of economic structure and systems, with greater interest in prehistoric political economy as involving power relations and process (Brumfiel and Earle 1987). As noted earlier, a similar trend has characterized political anthropology since the 1960s (Swartz et al. 1966; Vincent 1990:335-375). In particular, anthropological political economy has been shaped and redefined through considerations of structural power, political process, and praxis

(Kertzer 1996; Ortner 1984:141-144; Roseberry 1988, 1989; Swartz et al. 1966a; Wolf 1969, 1982, 1999).

Dynamic changes in prestige good economies and central place settlement hierarchies suggest that various strategies of negotiation, coercion, and resistance influenced the development and decline regional political economies, in contrast to those instances in which production, distribution, and accumulation were defined by existing social relations of authority (Cobb 1993:46-52). As Sahlins (1972) pointed out, regional political economies emerged in rudimentary form based on labor and expectations that were organized and constrained on the domestic or kin-level by social relations. In contrast to views of political economy as growth oriented, there was no inherent tendency toward intensification in situations where kinship "simultaneously presented the means to and constraints on the accumulation of wealth and power" (Cobb 1993:48; cf. Clark 1953; Johnson and Earle 1987). Social expectations based on kin relations may have effectively constrained the exploitation of labor, appropriation of surplus, and accumulation of resources, not to mention the acquisition of wealth or tribute. In this light, social relations of authority – and not economic structures or systems – were necessarily the underlying catalyst in the development of regional political economy.

Social relations of authority, or power relationships, were thus central to the political economies of non-capitalist, sedentary societies. The extension or abrogation of kinship ties and social obligations, coercive tactics, and pursuit of legitimacy by other means represented alternative courses of action by expanding on pre-existing social relations (Cobb 1993:46-49). The competition for political power and emergence of social inequalities, while closely associated, have been distinguished as interdependent factors in the historical trajectories of regional political economy (Feinman 1995). Even in smaller-scale, local-level societies, power relations are recognized as crucial in understanding the emergence of social inequalities and political control (e.g., Bender

1990; Brumfiel 1992; Redmond 1998a; Upham 1990). Consideration of the potential sources of incipient authority and power dovetails with the study of political economy as a series of multiscalar interactions, particularly in contexts where the control of production, distribution, and consumption were ultimately geared toward political consolidation and regional centralization (Brumfiel and Earle 1987:3-4).

Although the various strategies for augmenting and maintaining power were not wholly dependent on resource accumulation or a subsistence surplus, archaeologists have framed regional political economy primarily in terms of productive intensification, or the control of staple and wealth finance (D'Altroy and Earle 1985; Earle and D'Altroy 1989; Hirth 1996:206-220; cf. Ekholm 1972:7). More recently, purported "non-economic" or ideological relations have been proposed as sources of political legitimation and historical constraint (e.g., Demarest and Conrad, ed. 1992; DeMarrais et al. 1996; Joyce and Winter 1996). As will be argued below, such categorical distinctions seek to dislodge economic from ideological (or ideological from economic) sources of power and are based on a fundamental misinterpretation of prehistoric political economy and the historical trajectories of regional polities. This distinction is crucial, as efforts to categorize or compartmentalize power effectively replicates the taxonomic arguments of neoevolutionary anthropology and undermines the study of power as an historical process (Wolf 1990).

Based on a collaborative seminar on chiefdoms, Earle (1989:85, 1991c:5) has summarized various arguments for the centrality of power in the development of regional political economy. In contrast to systemic-processual and neoevolutionary perspectives, emphasis is placed on the role of power relations, grounded in the understanding that the "political processes of chiefdoms are linked to available options for power and control" (Earle 1991c:15). In the introduction to *Chiefdoms: Power, Economy, and Ideology*, Earle (1991c:5) lists ten different strategies that fall under the headings of economic, political, and ideological sources of power. The economic factors

relate directly to the intensification of production and exchange. These include: "(1) giving (inflicting debt), feasting, and prestations" and "(2) improving [the] infrastructure of subsistence production." Political factors involve conflicts and negotiations between groups, such as warfare, alliances, and the use of coercive tactics. These are represented by strategies such as: "(3) encouraging circumscription," "(4) outright force applied internally," "(5) forging external ties," and "(6) expanding the size of the dependent population" (Earle 1991c:5).

The pursuit of political legitimacy through ideological factors is based on the concept of "an ideology of religiously sanctioned centrality symbolized by the ceremonial constructions and exchanges in foreign objects of sacred significance" (Earle 1991c:8). Potential ideological sources of power are characterized by a wide range of strategies that include: "(7) seizing control of existing principles of legitimacy (the past, supernatural, and natural)" and "(8) creating or appropriating new principles of legitimacy." The final two sources of power bridge the economic-political-ideological classification and are described as: "(9) seizing control of internal wealth production and distribution" and "(10) seizing control of external wealth procurement" (Earle 1991:5). "Internal" and "external" sources of wealth refer to a wide range of activities that include craft specialization and long-distance exchange, issues addressed earlier in relation to central place theory and prestige goods economy.

Common to all of these strategies is the notion that political consolidation and development are the product of different historical contexts, with less concern for supporting overly restrictive spatial models, prime movers, or a narrow range of causal factors. Archaeologists are consequently united with political anthropologists in studying the processual dynamics and historical variation that contributed to power relations, social inequality, and regional political development (e.g., Price and Feinman, ed. 1995; Redmond, ed. 1998).

In a yet more recent study, Earle (1997) similarly characterizes regional political economy in terms of the three principle strategies of individuals and groups who have acquired power. He marshals a wide range of archaeological and documentary evidence from Peru, Denmark, and Hawaii, in describing the potential sources of power as economic, military, and ideological. By distinguishing these strategies as discrete sources of power, Earle (1997:209-210) is able to argue that each historical instance of political economy corresponded with a different type of regional polity: staple-finance chiefdoms, hill-fort chiefdoms, and prestige-goods chiefdoms. Contrasting the historical trajectories of these three different regions over a millennium, he concludes that the development of political complexity was determined by "the nature of the developing political economy" (Earle 1997:194). In short, economic strategies resulted in staple-finance chiefdoms, military strategies produced hill-fort chiefdoms, and ideological sources of power characterized prestige-goods chiefdoms. Yet as Earle (1997:193, 207) also points out, "the sources of power are intertwined and interdependent" and the "strategic uses of each power source depend on historical circumstances and immediate political objectives." The sources of power are connected through the actions of individuals and groups in controlling and investing in an "inherently growth oriented" political economy, in terms of staple and wealth finance, warfare, and the ideological legitimation of a social order (Earle 1997:203-205).

Unlike previous sociopolitical typologies, Earle's three types of regional polities and corresponding sources of power introduce considerable historical variation and human agency. Nonetheless, it maintains the primacy of idealized, synchronic structures in the development of regional political economy. Earle suggests that the "structure of power strategies" in regional political development involved attempts by a limited number of individuals to exert control over the political economy and corresponding social relations. In each of the case studies discussed, the various sources of power assumed roles of deferential, defining importance that ultimately led to characteristic

historical expressions, leading Earle (1997:209) to suggest that regional political development and centralization followed "multiple routes" to complexity.

In summarizing the developmental trajectories of regional polities, Earle reverts to a slightly revamped theory of multilinear cultural evolution, in which each of the three sources of power (and types of polities) are portrayed as historically determined. The sources and "nature of political power" that Earle set out to identify are in the end distilled into a tripartite division of regional political economy. Regional polities and the chiefs at the pinnacle of political hierarchies are consequently viewed as the product of one of three different structures that persisted for a millennium. Although the strategic manipulation of power relations by certain individuals and groups is central to understanding the development of regional political economy, it is unclear how actions that were either economic, political, or ideological might have transformed (or failed to transform) the existing structure of power relations (cf. Wolf 1990).

Another approach that has recently been explored is referred to as a "dual-processual theory" of political evolution (Blanton et al. 1996; Rosenwig 2000). Proponents of dual-processual theory have argued that the development of regional political economy can be explained in terms of individual-centered and group-oriented political actions (cf. Blanton et al. 1996). Such "network" and "corporate" strategies are similar in many respects to Renfrew's (1974) earlier discussion of individualizing and group-oriented chiefdoms. However, emphasis has been shifted to the relationship between potential sources of power, human agents, and external constraints. That the various sources of power are categorized as "objective" and "symbolic" or "wealth-based" and "knowledge-based" reintroduces the problem of separating economic and ideological behavior, a somewhat ambiguous distinction, since both network and corporate strategies are based on "collective representations" (Blanton et al. 1996:3-6). As becomes evident in Earle's (1997) study, in order to tie the sources of power to an evolutionary typology it is necessary to derive political structures from political process.

Nevertheless, power relations do not so easily conform to narrow categories of one or more types of strategies, but instead also redefine the existing political structure, as part of an ongoing, historical process (Hodder 1992:1-6; cf. McGuire 1992:84).

Additional problems become apparent in distinguishing discrete sources of power in the context of coercive force and legitimate authority. Economic factors such as staple and wealth finance are clearly interrelated with the production of dominant ideologies through ritual and political symbolism (Giddens 1995:103; Kolb 1999). Earle (1991b:98) acknowledged this very dilemma in addressing resource control in the form of territorial divisions and property rights in regional polities, noting once again that economic and ideological factors are interdependent. Yet the possible connections (or interdependence) between various strategies and ideologies are in fact overlooked in order to sustain a taxonomy of manifest power. In the end, less emphasis is placed on the "transformation and interrelation" of *power relations*, than identifying the structural constraints of power strategies as a series of unequivocal constants throughout history (Gellner 1988:21). While distinct sources of power can certainly be distinguished, it seems unrealistic to imply that economic strategies such as gift-giving were not also fully ideological, or that ideological sources of power such as creating "principles of legitimacy" were non-economic. In both instances, economy and ideology were not only interdependent, but historical constructs and negotiations that ultimately hinged on social relations of authority.

If the sociopolitical typology and neoevolutionism are removed from Earle's (1997) study of regional political economy, his discussion of the different sources of power retains an analytical relevance similar to a comparative, historical anthropology. In fact, Earle's characterization of power strategies closely parallels Gellner's (1988) discussion of production, coercion, and cognition in historical development. Gellner (1988:39-144, 277) was careful to recognize however, the permeation of ideological legitimacy (the "authority of concepts") in human affairs throughout history, in what he referred to as

the cognitive spheres of ritual and doctrine. There were likely similar opportunities throughout prehistory for the transformation and reconfiguration of production, coercion, and cognition. As Gellner (1988:19) suggested, in order to further advance historical knowledge and understanding, it is essential that the application of cultural categories and classifications is not deemed "straightforwardly true or false" (see also Wolf 1990:587).

The historical connection between political ideologies, cosmologies, and practical consciousness suggests that ideology did not simply function as a tool of elite legitimation or unequivocal source of power (Marquardt 1992; cf. Wolf 1999). To assert a priority of rationales between ideological and economic factors is to portray power as one-dimensional and historically determined. Although frequently difficult to discern from material culture and the archaeological record, archaeologists need not dismiss ideology as a "relatively transparent artifice" (*contra* Hayden 1995:75). As Pearson (1984:60) points out, "ideology is an active part of human practice and is not external to what humans actually do. It should be clear that ideology is not the spiritual as opposed to material reality but is present in all material practice." Furthermore, while coercion and economic sanctions may in some instances be discerned, "the most effective form of political control is essentially ideological" (Pearson 1984:61). Cultural representations in the form of political-symbolic action (praxis) and the materialization of practical consciousness are simultaneously economic and ideological (Kristiansen 1984; Kus 1984:106). Similarly, categorical distinctions between managerial and control (or voluntaristic and coercive) theories of political development are less apparent in the context of praxis (i.e., Carneiro 1970; Service 1978).

Structural power was ultimately associated with sacred or cosmological referents in the development of regional political economies, involving social relations that ranged from compliance and accommodation, to coercion and symbolic violence (Wolf 1990, 1999). The various sources of power considered by Earle (1997) fall under what

Wolf (1990; 1999:285-291) referred to as structural power, including (but not limited by) control over social relations of production. According to Wolf (1990:587), it is the "power to deploy and allocate social labor" which structures the political economy. "Structural power shapes the social field of action so as to render some kinds of behavior possible, while making others less possible or impossible" (Wolf 1990:587). Wolf contrasts structural power with power relations characterized by personal influence, abilities, and relationships between individuals.

Yet there is still another dimension to power, what Wolf (1990) referred to as organizational or tactical power. The concept of tactical power is meant to address the ways in which social actions "circumscribe the actions of others within determinate settings" (Wolf (1990:586). As such, tactical power includes political-symbolic action, or praxis. Praxis in the sense used here refers to the political manipulation of symbols in the struggle over meaningful representations of social reality (Kertzer 1996:153; Wolf 1999:54-57). The various sources of power may structure praxis, but do not have the "final word" in historical production (Cohen 1987; cf. Foucault 1980, 1984; Giddens 1979). The historical relationships ("connections") between structural power and praxis have in turn become the focus of study in a comparative, historical anthropology (Comaroff and Comaroff 1991, 1992; Sahlins 1985; Wolf 1982; 1990:587, 1999:64-67, 289).

Archaeologists should similarly seek to explain regional political development and decline in terms of how structural power was articulated in different places at different times. Rather than further categorizing or delimiting the productive constraints of structural power in prehistory, it will be more worthwhile to explain how human agents and coalitions actually transformed social relations of authority and in the process, reinvented and transformed regional political economy. Such an approach focuses on the changing configurations of power relations, bringing to light the "processual character of historical production" (Trouillot 1995:28). Political economy, ideology, and coercion are interconnected in this historical process. Before proceeding, it is necessary

to establish the historical context and background for the case studies to be examined. This is the subject of the next chapter: "Mississippian Archaeology."

We have, therefore, deemed it advisable to substitute for Middle Mississippi the more general term Mississippi, carrying (we hope) a minimum of cultural and typological implication.

– P. Phillips, J. Ford, and J. Griffin (1951:240), *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-47.*

CHAPTER THREE:

Mississippian Archaeology

A wide range of archaeological sites in southeastern North America have been described as "Mississippian," or representing Mississippi Period (ca. AD 800-1700) culture (e.g., Morse and Morse 1983:201-303; Rogers and Smith, ed. 1995; Smith, ed. 1978, 1990). The boundaries of a Mississippian or late prehistoric, Southeast culture area are based loosely on the geographic distributions of associated material culture and monumental architecture, early historic Native American linguistic groups, and tribal confederacies (Figure 6). However, discrepancies persist as to exactly where such prehistoric boundaries should be drawn (e.g., Bense 1994:184; Sears 1964:280; Smith 1986:1-2; Steponaitis 1986:363-364). Understanding of the term "Mississippian" have changed during the past century, partly in response to the accumulation of new information, and due in part to the variable research interests of archaeologists. As American archaeology has been transformed by the introduction of new theoretical perspectives and methodologies, so too have the meanings of Mississippian been rethought and revised (Griffin 1985, 1990; Peebles 1990:25-29; Scarry 1996c). For the sake of brevity, the study of Mississippi Period sites, material culture, and societies is referred to here as Mississippian archaeology.

Mississippian archaeology has been influenced to varying degrees by the theoretical trends discussed in Chapter Two. Various historical overviews touch on the interrelatedness of archaeological theory, methodology, and knowledge of prehistory (e.g., Brose 1993; Brown 1994; Dunnell 1986; Griffin 1976; Peebles 1988; Stoltman 1973; Watson 1990). The participation of southeastern archaeologists in systemic-processual research has been characterized as sporadic, particularly in contrast to the Southwest (Brown 1994:71-72; Dunnell 1990). A culture historical approach, including stratigraphic excavation, chronology-building, and regional synthesis, has had a more lasting

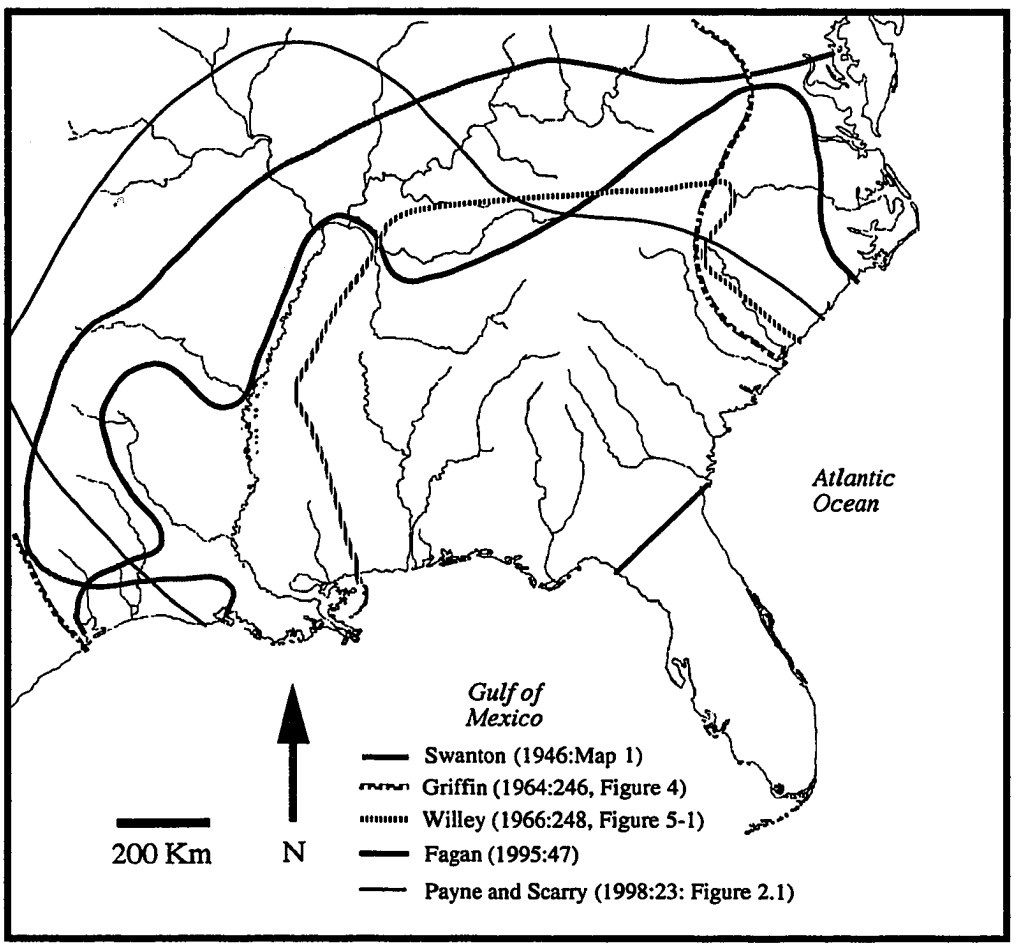


Figure 6. Approximate Boundaries of a Mississippian Southeast Culture Area.

influence. Yet both neoevolutionary anthropology and a normative, culture concept have profoundly shaped the overall direction of research (cf., Lyman et al. 1997:219).

The late prehistoric Southeast, perhaps more than any other area in the U.S., seemed an ideal candidate for investigating (and consequently demonstrating) the successive stages of cultural evolution. In few areas outside of the Mississippi River valley had pre-Columbian societies produced comparable population densities, concentrated in and around large, often fortified, centers. Nor are there commensurate examples north of Mexico of pyramidal, platform mounds constructed on the scale as at sites such as Cahokia or Moundville. The association of ornate burial offerings and monumental architecture with social ranking and sociopolitical complexity distinguished the Mississippian Southeast early on as unparalleled in terms of the intensification of regional political economy and the evolution of chiefdoms (Fowler 1975; Peebles 1971; Peebles and Kus 1977; Trigger 1990a).

Numerous authors have summarized the emergence and development of Mississippian traditions, subsistence practices, economic organization, and sociopolitical structure from Woodland stage precursors (e.g., Bense 1994; Griffin 1983; McNutt 1996; Muller 1983; Smith 1986; Smith, ed. 1990; Steponaitis 1986). It is apparent from a survey of these works that elements of a culture historical approach have endured, despite shortsighted pronouncements regarding the stagnation and fall of culture history (i.e., Lyman et al. 1997; O'Brien 1995). Issues ranging from subsistence and settlement patterns to political economy and social inequality have been combined with earlier studies of artifact typology, chronology, regional synthesis, population movements, and diffusion (Brown 1994; Scarry, ed. 1996; Watson 1990). In fact, the synthesis of culture history and political process represents one of the most promising and productive areas of inquiry in Mississippian archaeology, what has been referred to as an *historical process* (Barker and Pauketat 1992; Pauketat 2001).

In examining the historical trajectories of Mississippian polities, it is useful to first consider how the concept itself developed in relation to changing theoretical perspectives. An awareness of the historical production of "Mississippian" as an underlying conceptual framework sheds light on ambiguities inherent in designations such as Mississippian culture, Mississippian adaptation, and Mississippian political economy. From this critical reexamination, new insight can then be forwarded.

Following a culture historical approach prevalent in late nineteenth and early twentieth centuries, antiquarians and archaeologists referred to the presence or absence of certain culture traits associated with the Middle Mississippi region. "Middle Mississippi" as originally coined by Holmes (1886) referred to the distribution of a specific "group" of (predominantly shell-tempered) pottery found in the Eastern Woodlands, especially centered around the Mississippi River valley of present-day eastern Missouri, Arkansas, and western Tennessee (Griffin 1985:44-48). The geographic distribution of sites with Middle Mississippi pottery stretched from the Great Lakes to the Gulf of Mexico and was one of five different aboriginal pottery groups or provinces (Figure 7). Middle Mississippi valley pottery was contrasted stylistically with South Appalachian, Middle and Northern Atlantic slope, Iroquois, and Northwestern groups (Holmes 1903:20-22). Holmes recognized that these distinctions in pottery style and manufacture and style were representative of more localized, cultural practices, yet more specific social implications remained largely unexamined.

On his groundbreaking expeditions through the lower and central Mississippi River valley, C. B. Moore (1909:13, 1910:259) recognized the Middle Mississippi pottery group distinguished by Holmes. An archaeologist by avocation rather than a trained anthropologist, Moore was primarily interested in obtaining items for museum display through successive, exploratory excavations throughout the Southeast. Accordingly, he did not pursue a regional synthesis or comparative analysis of collections. In documenting a large number of mound sites and enormous amount of material culture,

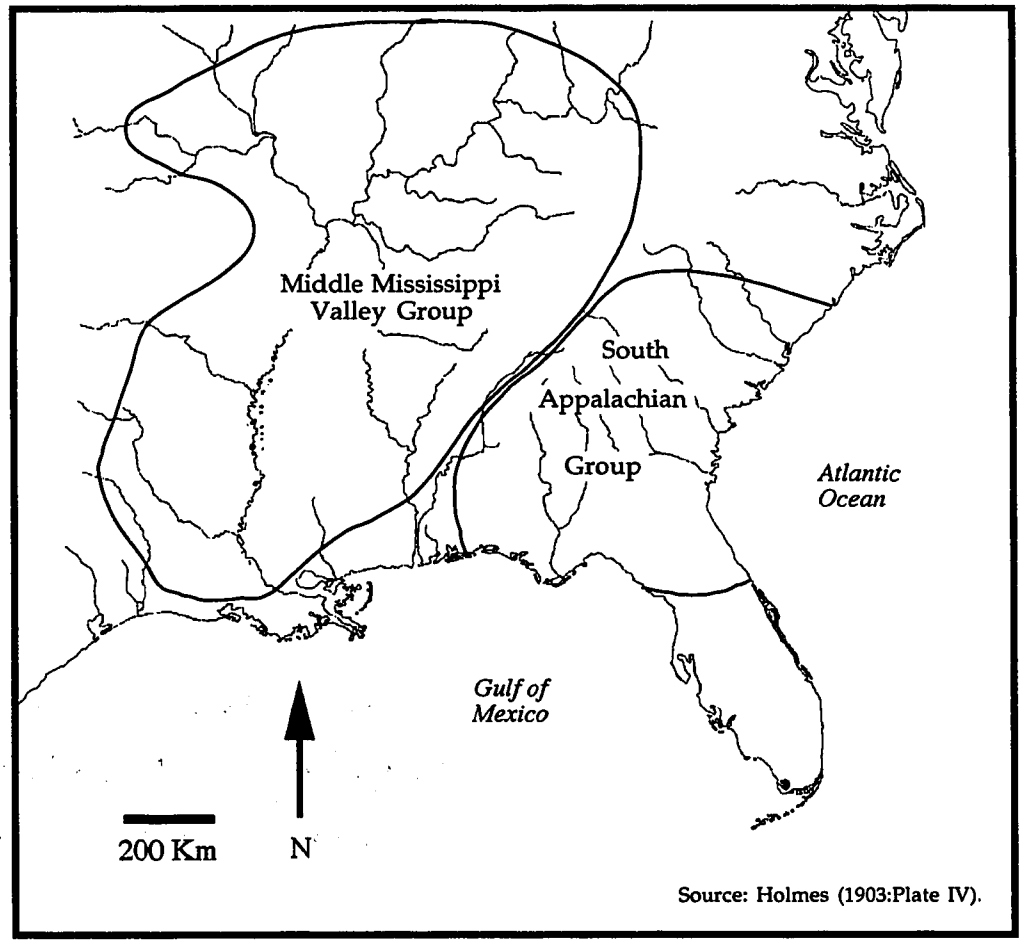


Figure 7. Southeastern Pottery Groups Described by W. H. Holmes.

Moore drew attention to the unrivaled accomplishments of Native Americans in the late prehistoric Southeast. At the very least, his lavishly illustrated publications pointed out the need for more systematic survey, excavation, and analysis.

In *Archaeology of Mississippi*, Brown (1973[1927]:3) distinguished the pyramidal, sub-structural "domiciliary mounds" of Mississippian societies from conical burial mounds. Yet like Moore, his studies of mounds and material culture were predominantly descriptive. Little attempt was made at chronological organization or comparative explanation. During the first half of the twentieth century, understanding of the Middle Mississippi pottery group was only gradually broadened to incorporate a general "Mississippi pattern," including a larger geographic area and lengthier, more well-defined list of culture traits, phases, and aspects (Deuel 1935a, 1935b; Griffin 1952a; 1985:48-53; McKern 1935; Phillips 1939; Phillips et al. 1951).

The Midwestern Taxonomic Method proposed by McKern (1939:309) described the Mississippi pattern in terms of the presence of traits such as extended burials, predominantly shell-tempered pottery with "incised, trailed, or modeled decoration," and triangular projectile points. Composed of different phases with similar traits, a pattern was defined by McKern (1939:309) as "the cultural reflection of the primary adjustments of peoples to the environment, as modified by tradition." Since maize agriculture was known to have been important, a "sedentary territorial adjustment" was thought to distinguish the Mississippi pattern from the Woodland pattern. The Middle Mississippi pattern thus came to refer to a late prehistoric time period as well as culture traits such as certain types of pottery.

A similar designation had been adopted by Deuel (1937:207-219) in listing the determinants of a Middle Phase of the Mississippi pattern. In his list of culture traits, Deuel reported "truncated pyramidal mounds, often in groups, employed primarily as substructures" and "houses with rectangular floor outlines." Building on the work of Cole and Deuel (1937), DeJarnette and Wimberly (1941:102-107) produced a similarly

comprehensive list of Middle Mississippi traits that they argued would demonstrate the "close relationship" of the Bessemer and Moundville sites in Alabama with late prehistoric sites in the Tennessee valley (Table 2). DeJarnette (1952:280) subsequently referred to the Middle Mississippian Period as the "highest aboriginal cultural stage attained in Alabama, characterized by agriculture, temple mounds, highly developed arts and industries."

By the mid-twentieth century, rudimentary advances had been made in constructing chronological sequences that distinguished the Mississippi pattern from the earlier Woodland and later historic periods. Among the impediments to more detailed chronologies were the paucity of controlled, stratigraphic excavations that could be combined with pottery seriation studies. The likelihood that North American prehistory stretched back only a few millennium still seemed plausible to some, with the Middle Mississippi pattern representing the last few centuries of an "unbroken" cultural tradition in the Southeast (Griffin 1985:52; Thomas 1973[1898]:149-152). As the antiquity of humans in North America was extended back into the late Pleistocene (prior to 10,000 BP), it was recognized that the societies represented by Mississippi culture traits had considerable time depth. By the 1960s, the excavation of deeply stratified sites and application of radiocarbon dating techniques further revolutionized the study of Southeast prehistory (Stoltman 1973:143; Willey and Sabloff 1993:185).

However, the first advances in establishing more refined culture chronologies were made through studies of ceramics. Working on sites and collections from the lower Mississippi valley, Ford (1936:7) was instrumental in determining regional chronological relationships and implementing a direct historic approach in Southeast archaeology. The method that Ford proposed differed from the McKern system in that chronological sequences were based on local pottery types and complexes rather than broad cultural similarities or patterns (Ford 1938; Ford and Willey 1941). Ford (1935a, 1935b) also distinguished historic ceramic complexes such as Caddo, Natchez, Tunica, and Choctaw

Table 2. Mississippian Culture Traits Listed by DeJarnette and Wimberly.

Category	Description
Mound	Rectangular earthen mounds, truncated and pyramidal
	Platforms for houses, with earthen ramps, incidental burials, and associated village sites
	Concoidal burial mounds associated with domilicary mounds
	Ceremonial mounds
Architectural	Houses in mounds and villages, predominantly rectilinear
	Wall posts set in narrow non-convergent trenches to form walls, with corner and interior post holes, mud and wattle walls, shallow clay seats near walls, and prepared floors of clay or sand
	Occasional nonentrenched post-hole rectilinear structure
	Occasional nonentrenched post-hole circular structure
	Stockades surrounding village and/or mounds
	Small stockades or enclosing fence patterns
	Rimmed fire basins
Burials	Extended, single and multiple
	Partly flexed, single and multiple
	Fully flexed, single
	Secondary burials (reburial), single, multiple, and skull
	Stone-lined graves
	Grave goods (see Pottery and Other Artifacts)
Pottery	Predominantly shell-tempered
	Ceremonial, utilitarian, "black-filmed," and effigy forms
	Sand-tempered (likely intrusive)
	Clay-grit-tempered (likely intrusive)
Other Artifacts	Bone
	Animal canine teeth (perforated), awls, beads, turtle shell cup, fish hooks, hairpins, needles, pendants, antler projectile points, spoons
	Clay or Pottery
	Beads, discoidals, pipes, trowels
	Copper
	Axes, beads (rolled cylindrical), breast plate (embossed), circular ear ornaments (on wood), fish hooks, headdress, embossed pendants
	Shell
	Beads (columnella, disc, and pearl), conch shell cups, ear ornaments, perforated mussel shell, pendants or gorgets
	Stone
	Awl sharpeners, ceremonial axes, "boat stones," polished greenstone celts, discoidals, large ceremonial discs (often notched), drills, galena (faceted balls), hammer or "pecking" stones, knives, mortars, lapstones, obsidian, pestle, pipes, projectile points (small triangular), whetstones
Miscellaneous	Dog burial, charred corncobs, matting, mica, paint (mineral pigment), pebble cache, stone pavements, textiles

Source: DeJarnette and Wimberly (1941:102-107).

from late prehistoric pottery types and used historical analogies to interpret the archaeological record. While he was concerned primarily with problems of typology and its relationship to chronology, Ford (1952:381, 1954) also recognized a more pervasive Mississippian complex extending up the Mississippi River valley and throughout much of the Southeast.

The temporal and spatial framework of the Mississippi Period gradually took shape as successive archaeological projects begun during the 1930s demonstrated a wide range of late prehistoric and protohistoric site affiliations (e.g., DeJarnette and Peebles 1970; Webb 1938, 1939; Webb and DeJarnette 1942). Many of these projects were funded by depression-era New Deal programs, involving surveys and excavations on a previously unrivaled scale (Lyon 1996). While data collection accelerated correspondingly, the comparative analysis and interpretation of collections was forthcoming. By the early 1940s, Griffin (1943:258) surmised that "the best available discussion of Middle Mississippi pottery is still to be found in Holmes's [1903] publication." Nonetheless, the classificatory-historical approach of Southeastern archaeologists had resulted in developmental schemes with clear, if somewhat unexamined, evolutionary implications (e.g., Ford and Willey 1941; Griffin 1946; Phillips et al. 1951:228-236; Willey and Phillips 1958:61-199; cf., Willey and Sabloff 1993:204-208). Among these, Ford and Willey's (1941) culture chronology for eastern North America subsumed Middle Mississippian within Temple Mound I and Temple Mound II stages (Willey 1999:xiii; cf., Willey 1966:256-252, 292-310).

However, it was the more widely adopted chronology forwarded by Griffin (1946) that was ultimately incorporated into the temporal and spatial refinement of archaeological phases, complexes, and sub-areas corresponding to the Archaic, Woodland, and Mississippi periods (e.g., Griffin 1952a; Griffin, ed. 1952; McKenzie 1966; Phillips 1970; Phillips et al. 1951; Williams 1954). The Mississippi Period subsequently came to refer to culturally similar late prehistoric components organized in an "area

chronology," or regional sequence of phases (Griffin 1967, 1978a; Phillips and Willey 1953:620-631). Migration and diffusion were among the chief explanations for the appearance of Mississippian culture, which was thought to have spread or expanded from its place of origin. Other cultures were similarly thought to have been influenced by the Mississippian cultural expansion. Griffin (1943:257) had defined the Fort Ancient Aspect in the Ohio River valley in relation to Middle Mississippi, surmising that Fort Ancient peoples were "strongly influenced by Middle Mississippi, both by actual migration of peoples bearing a 'Mississippi' culture . . . and by diffusion of traits from the still functioning culture center."

The Middle Mississippi pottery group described by Holmes (1886) had been transformed into a culture trait list accompanied by a series of geographic and temporal classifications that were in turn associated with Mississippian culture. Griffin (1943:257) thus referred to Middle Mississippi as an "amorphous agglomeration of traits," yet also posited the existence of a "culture center" (cf., Griffin 1946:75-76). Identifying the origins or place of origin of Mississippian culture was identified as a goal of research early on, taken up in grand form by Phillips, Ford, and Griffin (1951) in their monumental *Archaeological Survey in the Lower Mississippi Alluvial Valley, 1940-47*. Yet explanation of the changes involved in the production of Mississippian culture had barely begun. As Griffin (1943:257) recognized, culture change was commonly attributed to migration, diffusion, or acculturation, due partly to the absence of more detailed studies (e.g., Willey 1953). The term "Middle Mississippi" as a geographic designation gradually fell from use, but is still distinguished from the temporal designation, Middle Mississippi Period (e.g., Bense 1994:216; cf., Smith 1975:1). Alternatives proposed for the latter include "mature" or "middle-period" Mississippian (Morse and Morse 1983:237, 1996b:130; Walthall 1980:211).

With the onset of what Willey and Sabloff (1993:214; cf., Stoltman 1973:142) refer to as the "modern period" in American archaeology, "Mississippian" had come to refer to

various lists of culture traits, a geographically expansive cultural tradition or culture area, and a specific period in the prehistory of the Southeast (Griffin 1952b231-236; Jennings 1952:264-267; Sears 1964:275-283; Willey 1966:292-306). Yet it was widely recognized that these classificatory schemes were representative of more discrete social organizations and ceremonial practices. This included the "Southern Cult," a series of shared motifs, finely crafted artifacts, ceremonial objects, and representational designs subsequently referred to as the Southeastern Ceremonial Complex (Brown 1976; Galloway, ed. 1989; Howard 1968; Waring and Holder 1945).

Mississippian culture would subsequently be examined in more detail, as a particular pattern of settlement and subsistence, an ecological adaptation or "way of life," and specific level, or stage, in sociopolitical evolution (e.g., Lewis 1974; Peebles 1974; Peebles and Kus 1977; Smith 1978a, 1978b; Spaulding 1960:456). Changes in theoretical orientation were associated with methodological advances in Mississippian archaeology during the 1960s and 1970s, partly as a result of Federal archaeology programs (Smith 1988). The ensuing redefinition of Mississippian would ultimately lead to even more incisive questions regarding the nature of regional political development and decline.

Mississippian Redefined

The concepts of Mississippian culture and culture area were redefined through studies seeking to explain its indigenous origin, to include politically-integrated societies and *regional* political development. Explanations of an externally-derived culture had suggested that local expressions of Mississippian culture traits were introduced through diffusion, migration, or invasion. Sub-structural platform mounds, representational motifs associated with the Southeastern Ceremonial Complex, and maize agriculture were all interpreted as evidence of probable links with Mesoamerican civilizations such as the Toltec or Maya (Griffin 1952a:353, 361; Phillips 1940; Waring

and Holder 1945). In retrospect, such explanations bore slight semblance to earlier mound builder myths, yet they also attempted to account for the indigenous ancestry of Mississippian culture through external causes.

The material culture and monumental architecture of Mississippian societies are now recognized to have had clear antecedents in Southeast prehistory. Nor is the gradual adoption of maize from Mexico after AD 200 thought to indicate direct interactions or colonization by Mesoamericans (Brown 1994:48-57; Smith 1990:1, Steponaitis 1986:377-388; Watson 1990:44). In fact, the regional development of intensive horticultural practices out of indigenous plant husbandry followed the earlier introduction of cultigens such as maize (Smith 1992b:108-114; Watson 1989).

Explanations of the external derivation of Mississippian culture were initially based on the assumed existence of a proto-Mississippian center from which cultural expansion had originated, thought to lie somewhere in the lower Mississippi valley (e.g., Griffin 1943:257, cf., 1946:75-76). In the widely influential *Archeology of Eastern United States*, Griffin (1952a, 1952b) suggested that widely shared Mississippian culture traits indicated a common cultural expansion. This theory held considerable sway decades later (e.g., Morse 1977). The Mississippi Period was described as a "new cultural expansion" marked by the appearance of sub-structural, flat-topped earthen mounds, associated plaza complex, and the first use of intensive agriculture in the Eastern Woodlands (Griffin 1952a:361). Research in the lower Mississippi valley had meanwhile failed to produce evidence of "an early 'parent' Middle Mississippi assemblage" or a more convincing argument for cultural expansion (Griffin 1985:52). At the same time, the explicit formulation and direction of research in *Archaeological Survey in the Lower Mississippi Alluvial Valley* suggests that simplistic notions of diffusion and acculturation were already regarded as insufficient explanation.

Phillips, Ford, and Griffin concluded that their fruitless search for the point of origin of Mississippian culture pointed toward an alternative explanation:

> As the work proceeded, the problem has become more complex and we can no longer recognize it in terms of a single origin for Mississippi culture . . . In fact, we are becoming increasingly doubtful that a single center for this development exists anywhere. We envisage rather a number of centers in which this culture was developing more or less simultaneously along parallel lines with continuing interaction between them (Phillips et al. 1951:451).

This assessment of Mississippian culture profoundly influenced the direction of future research (e.g., Marshall, ed. 1985; Smith, ed. 1990), although theories regarding more localized migration and diffusion would continue to be entertained (Caldwell 1958:64; Jenkins and Krause 1986:86; Krause 1985:28-31; Walthall 1980:196-197).

The initial origin of Mississippian culture has remained a central focus of research, albeit in substantially redefined terms (e.g., Anderson 1997; Kelly 1990; Morse and Morse 1990a). The concept of a Mississippian expansion reflected normative assumptions regarding a Mississippian heartland, homogeneous culture area, and mechanisms of acculturation (Smith 1984). Following Phillips et al. (1951), less emphasis was placed on identifying a single time or place of Mississippian origins. Archaeologists turned instead toward developing regional chronologies and documenting local expressions of Mississippian culture (e.g., Morse and Morse 1983; P. Morse and D. Morse 1990; Muller 1986; Phillips 1970; Steponaitis 1983a). Mississippian social organization was examined on site and intersite levels. Emphasis on regional contexts through survey and site investigations soon contributed to the redefinition of Mississippian as comprised of discrete societies that were linked by interregional interactions and a shared range of cultural influences (e.g., DeJarnette and Peebles 1970;

Morse 1975; Morse 1981; Peebles, ed. 1983; Price and Griffin 1979:7; Solis and Walling, ed. 1982; Muller 1983:404-405).

In contrast to earlier assumptions regarding a Mississippian cultural expansion, research focused on understanding a process of *in situ* culture change (Dickens 1975; Faulkner 1972; 1975; Steponaitis 1981a). The problem of initial Mississippian cultural development was restated in terms of parallel cultural adaptations, as an "independent and isolated cultural response to similar challenges" (Smith 1990:2). Smith (1990:2) refers to this as the "analogy" position in contrast to earlier assumptions regarding homology or the "historical relatedness" of common origins. Because much of this research involved systemic-processual and eco-functionalist models of culture, explanation of regional political development remained problematic. Smith (1990:3) has aptly referred to this as a series of "nested black boxes" in understanding the Mississippian emergence.

While earlier culture historical research harbored undercurrents of neoevolutionism in terms of historical-developmental schemes, subsequent studies relied on ecosystemic and econocentric assumptions to reinterpret the concept of Mississippian (cf., Lyman et al. 1997:219-224). Since the 1960s, the "explicitly scientific approach" of systemic processualism has had an uneven influence on Mississippian archaeology (Clay 1976; Spaulding 1960; Ward 1965; Watson et al. 1971). The contributions of southeastern archaeologists to the New Archaeology were downplayed by Dunnell (1990:19), who suggested that prevailing interests in the culture historical approach were too deep-seated to be easily overturned. Notwithstanding, systemic-processualism did foment advances in the investigation and explanation of sociopolitical complexity (e.g., Brown, ed. 1971; Peebles 1974; Smith, ed. 1978). Following trends established decades earlier, revised explanations of Mississippian culture were advanced through investigations of large, multiple mound sites such as Cahokia and Moundville (Figure 8).

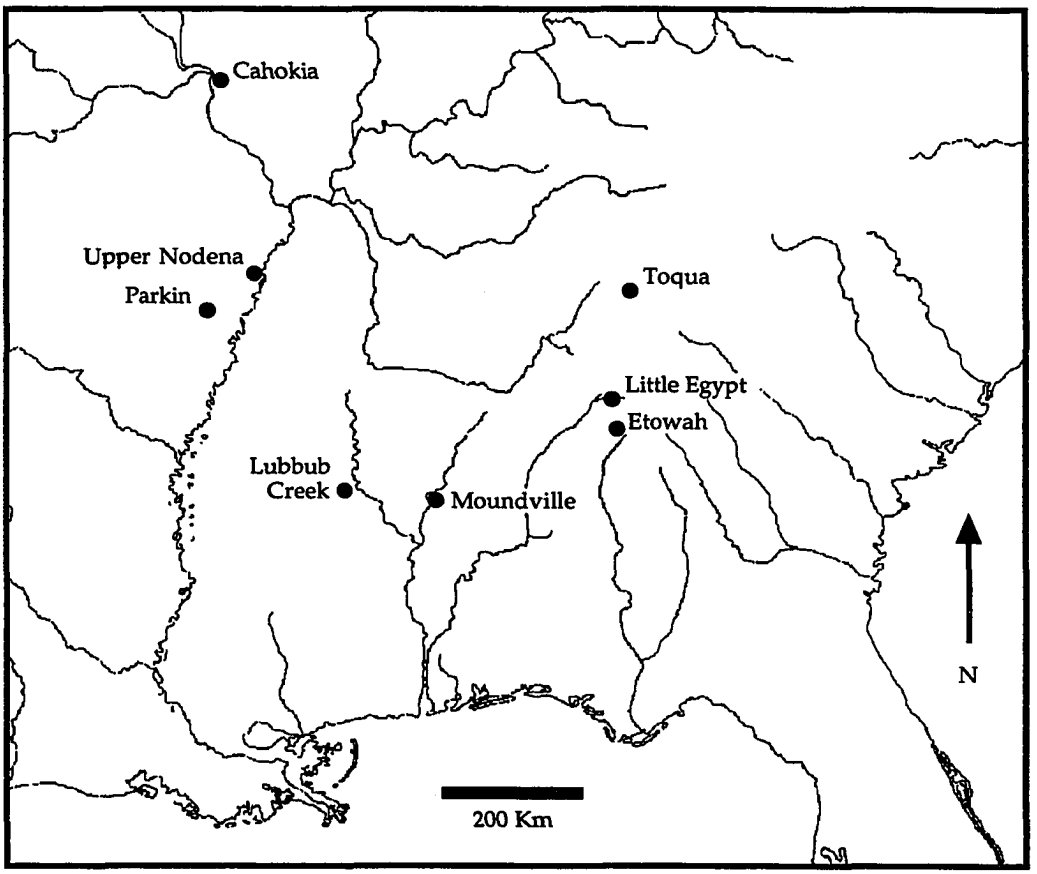


Figure 8. Selected Mississippian Mound Sites in the Southeast.

"Mississippian" soon came to refer to a specific range of complex sociopolitical systems and particularly successful ecological adaptations in the late prehistoric Southeast (Clay 1976; Larson 1971, 1972; Peebles 1971; Peebles and Kus 1977:435; Smith 1975, 1978b, 1985). Mississippian polities were characterized in systemic-processual terms as simple and complex chiefdoms, an intermediate or "middle range" sociopolitical type in the evolution of cultural complexity and differentiation (Peebles and Kus 1977; Steponaitis 1978). Adopting the sociopolitical typology of Service (1962), Mississippian societies were seen as having attained economic advances over preceding Woodland Period societies, circumventing previous arguments regarding the role of diffusion and migration in Mississippian cultural expansion. Descriptions of material culture and sites as representative of a normative cultural tradition or checklist of culture traits were consequently regarded as insufficient explanation of cultural process and function. General patterns of subsistence, settlement, and sociopolitical organization were in contrast thought to characterize a specific Mississippian adaptation (Smith 1986:57).

Advocates of a systemic-processual approach argued that Mississippian societies had adapted to similar environmental conditions as represented by evidence for subsistence strategies and settlement patterns, especially the ecological requirements of maize agriculture and seasonal exploitation of plants and animals (Smith 1974, 1975; Woods 1987). These analogous cultural changes involved similar processes of transformation in economic and political organization (Schroedl et al. 1990:192; Smith 1990:2-3). "Mississippian" was revamped to refer to the adaptive, cultural responses of economic, social, and political systems. In a broadly influential volume, aptly entitled *Mississippian Settlement Patterns*, Smith (1978b:480, 486) defined Mississippian as a "cultural adaptation to a specific habitat situation" and "adaptive niche," involving a "similar subsistence subsystem:"

> I would like to propose that the term "Mississippian" be used to refer to those prehistoric human populations existing in the eastern deciduous woodlands during the time period AD 800-1500 that had a ranked form of social organization, and had developed a specific complex adaptation to linear, environmentally circumscribed floodplain habitat zones. This adaptation involved maize horticulture and selective utilization of a limited number of species groups of wild plants and animals that represented dependable, seasonally abundant energy sources that could be exploited at a relatively low level of energy expenditure (Smith 1978b:486).

The earliest known Mississippian habitat was "within the meander-belt zone of the lower alluvial valley of the Mississippi River" (Smith 1978b:481; cf., Morse and Morse 1990a).

In contrast to the culture historical emphasis on a Mississippian culture area, the above definition has tended to exclude societies that did not fit within the overall ecological model, although considerable variation was acknowledged (Cleland 1976; Ford 1977; Griffin 1978b:xv; Lewis 1974; Smith 1985). No longer simply one of many culture traits, maize agriculture was frequently regarded as characteristic of an adaptive, demographic threshold in cultural evolution (Griffin 1990:9). Yet a consensus is still lacking as to whether maize agriculture was a prerequisite to becoming Mississippian (Bense 1994:184; Milanich 1994:a:398, 1998). In her summary of Southeast archaeology, Bense (1994:184) describes Mississippian subsistence in terms of both riverine and coastal adaptations, concluding that "while maize agriculture was present in some form in most of the Southeast, it was not a requirement for the advancement to the Mississippian level of cultural development" (cf., Larson 1980).

The association of Mississippian sociopolitical organization with particular riverine (or coastal) adaptations, regionally centralized settlement patterns, and subsistence strategies entailed greater analytical precision and methodological advances. Yet much of this research reflected somewhat ambiguous arguments regarding the highly efficient energy expenditure and "homeostatic equilibrium-seeking" qualities of cultural systems (Flannery 1972:409; cf., Ford 1977; see Chapter Two). It was thought that a distinctive Mississippian cultural adaptation could be demonstrated through the relationships between catchment productivity, subsistence strategies, and settlement patterns (Cottier 1975; Fowler 1978; Muller 1978; Price 1978; Sears 1982). Another focus of research was to relate settlement hierarchies and higher population densities with some other measure of economic utility or energy efficiency (Smith 1978b:487-488), whether in terms of tribute flow, resource redistribution, trade, or the optimal maximizing of productivity (Jolley 1983; Peebles 1978; Steponaitis 1978). Many of these spatial-economic models tended to assume contemporaneous site occupation in support of a synchronic cultural system, influenced by applications of central place theory (see Chapter Two).

While Smith (1978b:480-491) argued that the "underlying uniformity" of Mississippian culture could be attributed to a common riverine-floodplain adaptive niche, he also suggested that temporal and geographic variations might be produced through "cultural pressures." It was thought that Mississippian culture and sociopolitical organization might be better understood once archaeologists had described different regional polities in terms of "a scale of complexity and centralization" (Smith 1978b:492-498). Based on the evidence for settlement patterns, monumental architecture, and mortuary status differentiation, the practice of categorizing Mississippian polities within a narrow range of sociopolitical types (i.e., simple and complex chiefdoms) was well established by the late 1970s (Peebles 1978; Peebles and Kus 1977; Steponaitis 1978). A wide range of studies correlating the archaeological record with political hierarchy and complexity subsequently produced a

clearer understanding of regional variations in subsistence, architecture, settlement, and social organization (e.g., Muller 1993; Peebles 1983, 1987b; Polhemus 1985; Scott 1983; Smith 1978a). Yet despite these variations, it was generally thought that Mississippian polities had reached "comparable chiefdom levels of organization, seemingly by roughly similar developmental pathways" (Smith 1990:1; cf., Lorenz 1992).

Evidence for status–related differences in diet and mortuary differentiation indicate that Mississippian societies were hierarchically ranked in contrast to kin-ordered social relations, yet lacking the institutionalized bureaucracies and social stratification of archaic states (J. Brown 1971, 1981; Hatch 1975; Hatch et al. 1983; Larson 1971; Peebles 1971). These studies suggest that social status in Mississippian polities was ascribed at birth, rather than merely an achieved status (Knight 1990). Other prominent archaeological correlates for social ranking and political centralization include evidence of specialized craft production, sub-structural platform mounds, and the segregated use of domestic space (Hatch 1987; Knight 1989b; Lindauer and Blitz 1997; Pauketat 1997b; Peregrine 1991; Steponaitis 1978).

Horticulture continues to be closely associated with the origin of sociopolitical complexity and hierarchy in the Southeast, following the managerial position forwarded by Service (1962). Mississippian chiefdoms are thought to represent the indigenous development of subsistence intensification and population increase in the Southeast (Muller 1987a), yet agriculture and population growth are increasingly viewed as unlikely causal factors in political development (Fritz 1992; Fritz and Kidder 1993; Lopinot 1997; Nassaney 1987). In arguing for "local subsistence autonomy," Peebles and Kus (1977:441-443) suggested that Mississippian chiefdoms were instead organized around the control of long-distance exchange and part-time craft specialization. Subsequent research has moved away from explaining the emergence of Mississippian polities as highly-adapted cultural systems that managed subsistence intensification,

redistribution, or production. Instead, aspects of a control or conflict perspective have been forwarded (e.g., Anderson 1994a; Dye 1994, 1995; Gibson 1974; Steinen 1992).

In contrast to the Mississippian emergence, the problem of sociopolitical decline or cultural collapse has been broached less directly, due in part to assumptions regarding the cataclysmic effects of culture contact and European-introduced epidemics (e.g., Griffin 1952a; Jennings 1952; Phillips et al. 1951:457). The notion of a widespread, pre-Columbian cultural decline is generally inconsistent with ideas regarding progressive cultural development, including theories of cultural evolution. Explanations of sociopolitical decline have thus tended to lean on both culture historical and systemic processual perspectives of culture. The concept of a "Mississippian decline" has implied a pan-regional phenomenon of cultural and sociopolitical disintegration, as represented by site abandonment, the cessation of mound building, decreased demographic nucleation in river valleys, and the disappearance of recognizably Mississippian material culture (DePratter 1991:161-166; Fiedel 1987:255; Steponaitis 1986:392-393). Notions of cultural "degeneration" and "reduction" have been loosely applied, suggesting that an inevitable demise was the natural outgrowth of an earlier cultural climax (e.g., DeJarnette 1952; Jennings 1952; Sheldon 1974).

Based on a hypothesis first articulated by Williams (1982, 1990), pre-contact climatic changes were suggested by Smith (1986:58-59) to have caused a demographic disruption and population loss across a vacant or "empty quarter" in southern Illinois, western Kentucky, and adjacent areas, ultimately leading to sociopolitical decline in that region (cf., Lewis 1990; Morse and Morse 1983:280-283). Yet localized environmental fluctuations cannot account for regional political development and decline. The search for an environmental cause, such as climate, is complicated by the fact that regional political decline was not simultaneous across the Southeast (Anderson 1994b:274-289, 1999:228; O'Brien and Wood 1998:296; cf. Wyckoff 1980:522-530). Smith (1986:59) thus indicated that a "climatic prime mover" was unlikely. He instead recognized the

importance of political factors in explaining the decline of Mississippian polities and called for more "fine-grain temporal control." Subsequent systemic-processual theories of decline have provided no more coherent an explanation, suggesting that some sociopolitical systems may have been unable to cope with regionally-variable environmental conditions. Others have proposed that late prehistoric sociopolitical organization may have inexplicable become maladaptive, or that Mississippian culture simply "contained the seeds of its own destruction" (Krause 1985:39; Peebles 1987a:36; Smith 1986:59).

Following the lead of Phillips et al. (1951), recent studies have suggested that political decline and cultural devolution resulted from demographic upheavals caused by European contacts and the introduction of disease epidemics (e.g., Eisenberg 1991; Ramenofsky 1987, 1990; Smith 1987, 1994; cf., Johnson and Lehmann 1996). Yet the correlation of a rapid and wide-ranging cultural collapse with catastrophic depopulation oversimplifies what was also a regionally-variable process (Kealhofer and Baker 1996; Milner 1996b). In fact, the timing and scale of disease-induced decline are still hotly debated (Henige 1999). As will be discussed in relation to various Mississippian polities, there is little reason to suggest that regional political decline was *necessarily* linked to an epidemiological prime mover.

The lack of consensus over whether disease and depopulation effectively truncated Mississippian political development, or if a Mississippian decline actually began prior to European contact, has resulted in discrepancies concerning the ending dates of the Mississippi Period (Krause 1985:39; Steponaitis 1986:392-393). Related to this problem are differences in opinion regarding the geographic and temporal limits of Mississippian culture; whether or not societies on the fringes of the Southeast such as the Caddo, Natchez, or Florida cultures should be regarded as Mississippian variants or "true" Mississippian (Bense 1994:238-239; Brain 1978; Lorenz 1997; Marquardt 1987, 1988; Mikell 1992; Milanich 1994:355-412; Perttula 1992; Rogers 1996; Scarry 1984). As an era

originating in late prehistory, some archaeologists have suggested that the Mississippi Period drew to a close at approximately AD 1450 or 1500, using the age of European discovery as an approximate terminal date (Bense 1994:251-253; Smith 1978b:486). Smith (1986:53-63) placed Mississippian culture within the time frame of 1000 BP to 500 BP (AD 950-1450), suggesting that Mississippian polities were in decline prior the arrival of Europeans.

The dates AD 1500 and AD 1550 have been proposed as the end of the Mississippi Period in Alabama, Georgia, and the southern Appalachians, the latter presumably based on the arrival of the de Soto expedition a decade earlier (Hally and Rudolph 1986:63; McKenzie 1966:54; Peebles 1983:192-193; Walthall 1980:187). Still other scholars have stated that the Mississippi Period extended as late as AD 1650 or 1700, indicating that the sixteenth-century de Soto narratives described thriving Mississippian polities (Morse and Morse 1983:271-303; Steponaitis 1986:387-393). According to this view, early historic groups such as the Natchez can be associated with (and closely resembled) hierarchically-ranked Mississippian polities, having survived centuries of European intrusion in essentially intact, yet amalgamated form (Brown 1985a; DePratter 1991; Hally 1994b; Hudson 1976:77-97, 1994; cf., Lorenz 1997). This protohistoric-Mississippian time frame presents the most inclusive and realistic assessment, because it is recognized from ethnographic sources that Mississippian cultural practices incorporated geographic and temporal variations not simply obliterated by the presence or absence of Europeans (Griffin 1985:63; Howard 1968; Knight 1990).

Although many mound and village sites in the Southeast were abandoned prior to AD 1500, others continued to be occupied and constructed after the arrival of European explorers and colonists (e.g., Anderson 1996a; Brown and Fuller 1993; Brain 1978; Kidder 1992b, 1993; Williams and Shapiro 1996). The shift away from a nucleated, floodplain settlement pattern occurred in some regions well before the arrival of the earliest Europeans (e.g., Johnson 1997; Johnson and Lehmann 1996). Protohistoric Mississippian

societies did not emerge from prehistory unaffected by disease or European intrusion, but it would be equally unrealistic to suggest that disease was the sole cause of political decline, or that indigenous culture was suddenly and irrevocably terminated. Diet, health, and disease were likely to have been associated with agricultural production and demographic changes, yet these factors alone cannot account for regional political development and decline (Armelagos and Hill 1990; Bridges 1989, 1991; Goodman et al. 1984; Milner 1991). In short, lack of agreement concerning the appropriate ending dates for the Mississippi Period reflects general assumptions regarding a uniform, pan-regional collapse of sociopolitical organization and culture, ostensibly caused by indigenous or European-introduced disease epidemics, wide sweeping environmental changes, or exogenous prime movers (Smith 1986:59). The archaeological recognition of regional polities requires differentiating discrete historical trajectories from this all-encompassing Mississippian decline.

While the premise underlying the "fundamental similarity of Mississippian groups" focused attention on subsistence and settlement as evidence of long-term cultural adaptations (Smith 1978b:488-498, 1985:67), subsequent research has highlighted a wider range of variation in regional political development and decline (Peebles 1987b; Steponaitis 1991). Factors such as political alliances and warfare were likely to have had as profound an effect on settlement patterning as "environmental variables" (Smith 1978b:498). While the potential for variation in "social and ideological subsystems" was recognized early on, the initial focus of research was "the interrelationships between habitat, adaptive niche, and settlement patterning," an "environmental possibilism" that leaned toward historical determinism (Smith 1978b:486-488). Smith (1990:1) has more recently pointed out that recognition of the "surface similarity" of Mississippian sociopolitical organization masked underlying regional variations in "historical developmental sequences." Research has subsequently moved from characterizations of

Mississippian polities as products of cultural evolution and adaptation to explaining divergent historical trajectories in terms of regional political economy.

Polities and Political Economy

Consideration of Mississippian culture in terms of politically-integrated societies initiated a multiscalar approach that began with systemic-processual assumptions but soon advanced to studies of Mississippian political economy, political dynamics, and power (e.g., Anderson 1990, 1994a; Barker and Pauketat, ed. 1992; Pauketat 1992, 1997a; Scarry 1996a, 1996b; Welch 1991). Research on sociopolitical organization, subsistence strategies, and settlement patterns thus set the stage for subsequent studies geared toward understanding regional political development and decline. Following Griffin's (1985:63) succinct appraisal, *Mississippian* can be tentatively defined as "regional and temporal variations of a hierarchical social, political, and religious structure" that existed between approximately AD 800 and 1700 in parts of the present-day southeastern United States (cf., Griffin 1990:7-9; Scarry 1996c:13). Similarities and differences between these societies are represented in the archaeological remains of material culture, daily activities, domestic and monumental architecture, and cultural landscapes. Current evidence indicates that characteristically Mississippian communities were in existence by ca. AD 800 in the central Mississippi valley, developing centuries later in other areas of the Southeast (Morse and Morse 1990a; Smith, ed. 1990). While ethnographic linkages exist between Mississippian traditions and historic tribal confederacies, the indigenous development of regionally-centralized, Mississippian polities is thought to have ended by ca. AD 1700 (Hudson 1976:184-257).

Relating Griffin's definition to material culture and macroregional connections, *Mississippian culture* can be further defined as "a material expression of the enlarged interregional exchange of knowledge, materials, and people" (Pauketat 1994:6). The political and economic interactions involved in this exchange were not merely cultural

or ecological consequences, but social interactions and relations that produced the archaeological correlates of Mississippian culture. Since the 1980s, culture historical and neoevolutionary perspectives have been influenced by a critical reassessment of theories concerning sociopolitical development, particularly relating to the structure and dynamics of political and economic interactions, or what has been referred to as Mississippian political economy (Muller 1997; Pauketat 1997a). Unlike areas where middle-range societies were characterized by "pristine" or secondary state development, the late prehistoric Southeast has provided examples of the indigenous development of regional political economy (Cobb 1993). The historical trajectories of Mississippian political economy are central to understanding regional political development and decline in the late prehistoric and protohistoric Southeast.

Studies of Mississippian political economy have been influenced by models of prestige goods economy (Brown et al. 1990; Welch 1991), tributary modes of production (Steponaitis 1978), and World System theory (King and Freer 1995; Peregrine 1992). Archaeological investigations of large, multiple mound sites have profoundly effected the direction of this research. As each of these theoretical perspectives have already been discussed in some detail (see Chapter Two), their relevance to Mississippian political economy will be considered here only briefly. A peer polity interaction model has been applied less often in explaining competition between polities, since the model itself implies a high degree of interregional interaction at the expense of local-level and regional political dynamics (King and Freer 1995:267; cf., McKivergan 1995). Political and economic interactions between neighboring Mississippian polities clearly occurred, but this does not account for interregional variation or the differential development of political economy in the late prehistoric Southeast (Hally 1999; Steponaitis 1991). As discussed in Chapter Two, the political dynamics upon which the peer polity model is based must be explained, rather than assumed.

There has similarly been only limited interest in applying World System theory to Mississippian political economy, perhaps due to the recognition that regional polities in the late prehistoric Southeast were not integrated on a scale commensurate with macroregional, capitalist economies (Pauketat 1994:11). When the concept of a pre-Columbian World System has been adopted, it has reflected often unrealistic assessments regarding the breadth and influence of Mississippian political economy (Griffin 1993; e.g., Dincauze and Hasenstab 1989; O'Brien 1989, 1991). Even when applied to the largest of Mississippian polities, World System theory does not account for the regional dynamics of political consolidation (Anderson 1997; Knight 1997). When Mississippian political economy is framed in terms of World System theory, the structures of core and periphery must be modified in order to account for power relations in non-capitalist, regional polities (e.g., Peregrine 1992, 1995).

Combining aspects of different models, Peregrine (1992:5) has suggested that a "pre-capitalist world-system" is applicable to Mississippian political economy through the concept of prestige goods. In considering prestige goods economy as "another arena of world-system process," the direction of non-state political dynamics is ascribed by Peregrine (1992:4-6) to the "prestige-goods themselves," through a system of macroregional economic organization. Economic competition and connections are viewed as overriding issues in understanding interactions between polities. Drawing on ethnographic examples, Peregrine (1992:25) suggests that the control of prestige goods represented the primary source of political power and means of social reproduction. Prestige-good systems developed in situations where "emergent political leaders" were able to control the means of social reproduction and distribution of goods (Peregrine 1992:45-46). Political consolidation and regional centralization are consequently tied by Peregrine directly to the evolution of prestige good systems and the ability of leaders to control distribution: "It appears that more politically centralized prestige-good systems

tend to use more ornate goods, goods requiring specialized labor, and goods made of rare or exotic materials" (Peregrine 1992:67).

Peregrine (1992:85) further suggests that a Mississippian World System evolved "greater political complexity" as prestige goods became "more exotic or ornate." The development of Mississippian prestige goods economy as a macroregional World System thus assumes the prior existence of "social positions whose members control . . . the means of social production" (Peregrine 1992:46). Somewhat paradoxically, political power was based on the control of a prestige goods system that was in turn based on political power. Even more problematic, the core-periphery relations in this pre-capitalist World System imply a unitary "Mississippian evolution," in which polities throughout the Southeast were inexorably drawn into economic competition over highly valued "exotic" items. Besides assuming a broad spatial and temporal range of interactions for which there is inadequate archaeological evidence, the imposition of World System theory commodifies the value of prestige and makes such economic interactions appear inevitable (Peregrine 1992:98-100; Smith 1990:2-3).

In order to temper the economic determinism of World System theory, Peregrine (1995) has more recently sought to incorporate "networks of power" and different scales of analysis in Mississippian political economy (cf. Caldwell 1964). The various sources of power are in this respect shown to have not been limited to macroregional interactions or prestige goods production and distribution (cf., Blanton et al. 1996; Trubitt 2000). There is consequently little reason to maintain the pretext of a World System in explaining Mississippian political economy (Peregrine 1995:248).

In contrast, Muller (1995, 1997) has proposed an historical materialist approach to Mississippian political economy. In this approach, social relations are attributed to economic production at the household and local levels. *Mississippian Political Economy* falls at the opposite end of the spectrum from World System theory, a contrast which Muller (1995:336, 1997:386) himself has characterized as "minimalist" versus

"exaggerationalist" (cf., Anderson 1997:259-260; Stoltman 1991). In fact, the central, recurring theme in *Mississippian Political Economy* is to assert that the scale and complexity of social relations pertaining to production, distribution, and exchange have been unduly exaggerated. Prestige goods economies, according to this view, represent the "simple exchange" of a communal or kin-ordered mode of production (Muller 1995:335, 1997:262-263; cf., Wolf 1982:79-100). Muller argues that there is a lack of evidence for productive specialization through division of labor, political control, economic exploitation, or significant status differentiation in Mississippian societies. He discounts the involvement of political factors in prestige goods exchange (preferring instead the term "display goods"), and argues instead that such interactions may have been sought in order "to provide more basic needs" (Muller 1997:17, 50). The accumulation of a subsistence surplus in Mississippian communities is accordingly tied to resource availability and the productive potential of different environments. Specialization is described as situational or site specific, and political dynamics are attributed a peripheral role in productive intensification and exchange (Muller 1984, 1987b, 1997:44-52, 385-402; cf., Yerkes 1989).

Muller (1997:385-386) also points out that maize agriculture alone did not make a society Mississippian, instead focusing on agriculture as a particular mode of production. Yet regional polities in the Mississippian Southeast were not confined to kin-ordered modes of production and "the social relations contained in it" (Muller 1997:386; cf., Pauketat and Emerson 1997b:18-21; Wolf 1982:96-100). In maintaining a resolutely materialist stance, Muller implies that political power and the cultural production of value can be divorced from economic factors and the "material conditions of everyday life." Just as Harris (1979:92) sought to isolate and identify the infrastructure of chiefdoms (the "limiting factors" of "demo-techno-econo-environmental conditions"), Muller describes the simplest possible structural constraints in order to account for Mississippian political economy. In categorically separating ideological factors from

material constraints, the dynamic relations of political ideology and human agency are summarily discounted (Muller 1997:26-27; cf., Pauketat 1992:34; Trigger 1991). Human agency is construed as no more than those activities necessarily involved in production, distribution, and consumption (Muller 1997:257; cf., Giddens 1979:49-95).

Although Muller (1997:38-39) is rightfully critical of typological arguments, he characterizes Mississippian political economy as predominantly a domestic or subsistence economy, with a *level of complexity* far less removed from that of historic tribal confederacies. He argues against using the term "tribute" and its "definite implication of state structure" (Muller 1997:14). However, the most compelling problem in regional political economy is not merely in confronting neoevolutionary categories, but in re-conceptualizing and explaining historical variation and change (Feinman and Neitzel 1984; McGuire and Saitta 1996). In emphasizing the minimal complexity and integration of Mississippian polities, the central issues of regional political development and decline are largely overlooked.

Mississippian Political Economy consequently falls short of addressing social relations of production in terms of structural power (e.g., Wolf 1990, 1999). As Ortner (1984:142) has observed in regards to political economy in general, such an approach is "too economic, too strictly materialist" (cf., Cobb 1993; Roseberry 1988; see Chapter Two). Giddens' (1984:243, 1995) critique of historical materialism is perhaps even more relevant here: "The fact that human beings must survive in material environments in which they live tells us nothing about whether what they do in order to survive plays a dominant role in social transformation." In disregarding issues of power and agency in political economy, the development and decline of Mississippian polities is de-emphasized in favor of an invariant and communal prehistory (cf., Giddens 1979:88-95).

Generalizations can be made regarding Mississippian political economy without assuming the macroregional inevitability of a World System or minimalist, econocentric stance of historical materialism. Mississippian political economy involved the

production and distribution of craft goods, long-distance exchange, unequal allocation of certain foods and resources, and "expansion of the inter-peer exchange network" (Brown et al. 1990:255). Yet these factors were not historically invariant and are therefore not adequately accounted for by taxonomic classifications or infrastructural determinism. Political and economic relations were instituted at the local and regional levels through subsistence economy and part-time craft specialization (Ensor 1991; Welch 1996; Yerkes 1989). The regional consolidation of power was in one sense a prerequisite of prestige goods economy, because prestige and social ranking were ultimately the product of social relations among corporate groups and lineages at the local-level. "Prestige" should consequently not be commodified as a value inherent in certain goods (as in wealth), but as social relations that were politically and symbolically negotiated (Pauketat 1997b:1; cf., Prentice 1987).

Brown et al. (1990:264) list the numerous items associated with prestige and elite status in Mississippian societies: "columnella pendants, sheet copper hair ornaments and headdresses, robes, pearls, nonfunctional weapon-derived artifacts (including the mace, axes, and long-sword bifaces), ear ornaments, and discoidals" (cf., Peebles and Kus 1977). Manufacture and control of these items presented various opportunities for group or self-aggrandizement through gift-giving, coalition building, and political consolidation, along with the acquisition of other "exotic" items and non-local, raw materials, the organization and control of subsistence production, and controlled distribution of certain foods. The acquisition and display of rare or finely crafted items represented only one potential dimension of power and status in Mississippian political economy. Social relations of authority were also based on the control of labor, social obligations, and coercion within the context of a legitimate or "dominant ideology" (Cobb 1993; Pauketat 1994:14-16). There is consequently no reason to attribute the development of Mississippian political economy exclusively to long-distance exchange, subsistence production, or the controlled distribution of prestige goods. Viewing both

subsistence and prestige good economies in terms of political-symbolic negotiations emphasizes regional development and decline as an historical process, and not merely the perfunctory result of resource allocation (cf., Brown et al. 1990:256; Brumfiel and Earle 1987:4). Mississippian political economy might accordingly be approached from this regional, political perspective (Pauketat 1994:11-13).

In light of the interrelatedness of political and economic affairs, Mississippian political economy developed through an historical process of consolidation and centralization (Cobb 1993; Pauketat 1994:25-31; Wolf 1982:96-100). As discussed earlier, models of regional centralization have adopted central place theory to the substantivist socioeconomics of chiefdoms (Steponaitis 1978; see Chapter Two). Welch (1991) provides a useful critique of the centralizing tendencies of regional political economy based on evidence from Moundville and outlying sites in the Black Warrior Valley of west-central Alabama (Figure 8). He states that "political economy is a material manifestation of political relations," and marshals archaeological data to examine the appropriateness of four different models of regional political economy (Welch 1991:2). Welch frames this analysis in terms of redistribution, tribute, subsistence goods mobilization, and prestige goods economy, each model involving a slightly different range of social relations (see Chapter Two).

A brief review of the models discussed in *Moundville's Economy* sheds light on the inherent difficulties of investigating Mississippian political economy as an historical process. Not surprisingly, the managerial, redistributive model as presented by Service (1962) does not correspond with the data for Moundville. Following Earle (1977, 1978) and Peebles and Kus (1977), Welch (1991:13) argues that redistribution does not appear to have been an integrating mechanism in the Moundville polity and that it "does not accurately describe the structure of some, perhaps most, chiefdom economies." Nonetheless, evidence from other regional polities does suggest that *informal* redistribution through ritualized feasting may have characterized social relations of

authority, particularly in less centralized contexts (Blitz 1993a, 1993b; Wesson 1999; Wolf 1982:97-98). As Blitz (1993a:21) points out, the occasional redistribution of foodstuffs may have been a "desirable strategy for a group of cooperating households," which might in turn have contributed to the emergence of institutionalized social ranking and political consolidation. The historically-appropriate production, accumulation, and consumption of foods and food surpluses were in this respect political-symbolic strategies, as part of informal, cultural economies (Halperin 1994:1, 94-97; Wesson 1999:155-158).

In contrast, a tributary economy is described by Welch (1991:16-18) as a specific range of social relations in which craft items or prestige goods were produced for, and presented to, an elite at primary and secondary centers. Some locally-produced prestige goods and non-local items were in turn distributed to an elite at secondary centers. Thus defined, the tributary model does not fit with the evidence for the Moundville polity, because few prestige goods or craft manufacture are evidenced at outlying sites (Welch 1991:177; cf., Peebles and Kus 1977; Steponaitis 1978). Since the concept of tribute is closely associated with the accumulation of wealth, the formation of economic classes, and state-level political expansion, the terms "provisioning" and "prestation" have instead been used in describing Mississippian political economy (Muller 1997:14; Welch and Scarry 1995; cf., Wright 1977; 1984).

However, if "tribute" is more broadly defined as *social relations* that encompass the preferential provisioning of elite with certain foodstuffs, then evidence exists that tribute may have played a developmental role in Moundville's political economy (Scarry 1998; Scarry and Steponaitis 1997; Welch 1996:89; Welch and Scarry 1995). What Welch (1991) refers to as subsistence goods mobilization might in fact be viewed as tantamount to a tributary mode of production as described by Wolf (1982:79-82). Unencumbered by neoevolutionary types and determinative economic structures, tribute refers merely to

the consolidation of political authority through the asymmetrical allocation of resources or labor (Halperin 1994:34-54; Wolf 1982:79-82).

Welch (1991:179-199) argues that Mississippian political economy in the Black Warrior Valley was characterized by both the mobilization of subsistence goods and controlled distribution of prestige goods. In what he refers to as a "mobilization + prestige goods model", production and distribution were centralized and channeled through the political hierarchy of an elite and non-elite. Political and economic centralization are thought to have involved craft goods production and the distribution of local and non-local prestige goods from the primary center to secondary centers. Subsistence goods such as maize and preferred cuts of deer meat were in turn provided to an elite at the primary center and some of the secondary centers (Welch 1991:76-133; cf., Welch 1996; Welch and Scary 1995). Although the shortcomings of the other models are apparent for Moundville, Welch (1991:201) concludes that the mobilization + prestige goods model is probably not applicable to all regional polities, because "different societies have different histories." He thereby avoids characterizing Mississippian political economy as historically-determined by prestige goods distribution or subsistence goods mobilization.

Welch confronts a more difficult problem in addressing the dynamics of change and "different histories" of Mississippian political economy. He describes the development and decline of Moundville's economy in terms of "secular" and "structural" changes. Secular change is thought to have characterized the dynamic political and economic relationships between individuals and groups. In contrast, structural change is associated with a "fundamental change in the organization of the economy" (Welch 1991:191). The concept of secular change thus parallels the temporal and spatial variations described by Halperin (1994:191-204) as an informal or cultural economy. Structural change involves the transformation of formal or "mainstream" economic institutions (Halperin 1994:193). The shortcomings of these economic

structures in accounting for changes in regional political economy highlight the importance of addressing the political dynamics of group interaction, what has been referred to as tactical power or praxis (Ortner 1984:141-144; Swartz 1968b; Wolf 1990, 1999; see Chapter Two).

Structural transformations in Mississippian political economy were linked to temporal and spatial variations in social relations of authority as a combined political, economic, and ideological process. Structural and secular changes in regional political economy are in this respect similar to the relationship between structural power and praxis, or "enduring forms" and cultural production (Comaroff and Comaroff 1991:30; Giddens 1979:49-95). Welch (1991:183) thus concluded that the mobilization + prestige goods economy, like other models of regional political economy, represents an essentially static, economic structure. Mississippian political economy was likely to have involved various combinations of prestige goods, subsistence mobilization, informal redistribution, and tribute at different junctures in political competition, negotiation, and interaction within the changing contexts of social relations. Emphasis is therefore shifted from outlining a particular mode of production or model of institutionalized political economy to explaining regional political development and decline as an historical process.

Historical Process

In the preceding pages archaeological and anthropological research are argued to have converged over the last few decades toward a substantially revised understanding of political economy and culture history. The notion that regional political development and decline can be explained in terms of a narrow range of ecological causes or economic determination has given way to a greater understanding of the diversity of regional historical trajectories within a formerly homogenous culture area concept (e.g., Johnson 1997; Nassaney 2001; Scarry, ed. 1996; Smith, ed. 1990). Scarry (1996c:19) thus

surmises that explanations for the emergence of complex Mississippian polities have been confounded in part by "the diversity of the specific historical trajectories that led to the individual chiefdoms." In the central Mississippi valley, where some of the earliest archaeological remains of Mississippian polities have been identified, the introduction of maize agriculture is no longer regarded as sufficient explanation for the emergence of social inequalities or regional polities (Morse and Morse 1990a:170, 1996a:18; Nassaney 1987, 1992).

While the concept of Mississippian culture has been examined through both culture historical and systemic-processual studies, it will be unproductive to continue portraying these societies as highly integrated systems with adaptive or maladaptive tendencies drawn forward by a homogenous culture concept, econocentric principles, or the pursuit of dynamic equilibrium within a particular environmental niche. Synchronic cultural similarities and "econothink" have been joined by studies that seek to emphasize historical context by examining variation in the form of regional political dynamics, human agency, and the pursuit of power (Emerson 1997a; Hall 1977:499; Knight 1997; Pauketat 1997a). While ecological relationships of populations and resources represent undeniable constraints (Trigger 1991), archaeologists have begun to account for the fact that cultures and cultural practices are intrinsically historical, "conditioned by specifiable ecological, political-economic, and ideological processes . . . continuously in construction, deconstruction, and reconstruction" (Wolf 1984:396).

Since the 1990s, archaeologists working in the Southeast have begun to address the interrelatedness of political economy, power, and legitimating ideologies as an historical process contributing to a substantially revised understanding of culture history and regional political development (e.g., Emerson 1997a; Nassaney 1992; Pauketat 1992, 1994, 1997a; Pauketat and Emerson 1991). It is important to note at this juncture that the practice of Mississippian archaeology has not conformed to Kuhn's (1962) model of scientific revolutions and paradigm shift (Kelley and Hanen 1988:63-76). Discontinuities

in culture historical and systemic-processual research have produced a juxtaposition of ideas, just as contemporary research has continued to draw on earlier culture historical and systemic-processual contributions. Such synthesis is apparent in explanations of Mississippian origins that draw on a combination of ecological, political, technological, and culture historical issues in explaining the emergence of Mississippianism (e.g., Morse and Morse 1983:202-213, 1990a). Archaeology, perhaps even more so than cultural anthropology, is a cumulative, *historical* science (Wolf 1990:587).

Paralleling advances in archaeological techniques and methods during the past century, it has been argued that the concept of Mississippian has been revised and redefined. Nonetheless, it would be misleading to suggest that each new theoretical perspective has resulted in a complete break with earlier concepts. As the shortcomings of an earlier culture historical approach were reevaluated, elements of "environmental possibilism" and neoevolutionism were grafted onto the existing knowledge of Mississippian societies (Smith 1978b:486-488). Galvanized by systemic-processual perspectives, a culture historical approach continues to unfold and will play an enduring role in the advancement of Mississippian archaeology. While culture historical units such as types and phases remain influential, the focus of explanation has moved beyond cultural traditions and cultural systems, to political economy and process. Recent studies of Mississippian polities have raised questions regarding the connections between regional historical trajectories, the production of traditions, and historical context of political symbolism (e.g., Knight 1997; Pauketat 1998; Pauketat and Emerson 1997b; Steponaitis 1991).

Caricatured by some scholars as "postmodern" and largely misrepresented as "post-processual" archaeology (e.g., Muller 1991, 1997:viii), the study of power relations and political-symbolic action (praxis) pertains directly to the anthropological issues of political and historical process (e.g., Friedman 1992; Kertzer 1996; Trouillot 1995; Wolf 1999). As Barker and Pauketat (1992:3) point out, studies of Mississippian political

dynamics, ideology, and symbolism have built on earlier research on culture history and iconography. A vigorous and influential culture historical approach thus persists in Mississippian archaeology today, urged on by an enduring tradition of ethnohistorical and protohistoric research (e.g., I. Brown 1993, 1998; J. Brown 1990; Emerson 1997a, 1997b; Galloway 1991, 1993, 1997a; Hudson and Tesser, ed. 1994; Kwachka, ed. 1994). Cast in this light, characterizations of unequivocal periods in the history of archaeology reflect unrealistic expectations concerning progress toward a particular conceptual framework or paradigm (Trigger 1989a:4-9; cf., Lyman et al. 1997; Willey and Sabloff 1993:5-10).

Following a comparative, historical approach advocated long ago by Trigger (1970, 1978, 1982), many archaeologists have sought to reconcile systemic-processual and historical perspectives of social change. This subject has been broached most directly within the sub-field of historical archaeology, as scholars working from both the archaeological record and written documents have long grappled with the problem of pursuing *either* anthropology, anthropological science, or history (Deagan 1988; Deetz 1983; Mrozowski 1988; Schuyler, ed. 1979). Schuyler (1988) provided a succinct statement of this unlikely confrontation between process and history in archaeology, what has been portrayed by some as an "agonizing dilemma" (i.e., Dunnell 1982; Leonard 1993). Schuyler referred to the need for a comparative, historical ethnography and "new culture history":

> "Culture history" has been given an almost fatally negative connotation by processual archaeologists (Binford 1968 [1968a]) who arbitrarily and erroneously limited it to time-space systematics (cf. Dunnell 1986). If culture history is recognized in its entirety, which after W. W. Taylor included both chronicle and interpretation of past lifeways, then the development of "historic ethnography" followed by comparative studies

> will help to reestablish a culture historic core to both historical and prehistoric archaeology (Schuyler 1988:42).

The problems entailed in portraying history as opposed to process, not to mention humanism as discordant with "true" science, have proven disadvantageous for archaeology as a whole, leading Trigger (1980a) to call for a synthesis of processual and historical perspectives in the study of Native American history. Lightfoot (1995) similarly suggests that archaeologists apply the insights of historical anthropology in culture contact studies, an approach especially relevant in understanding the pluralistic contexts of colonialism (e.g., Comaroff and Comaroff 1991; Loren 2001). A wide range of research by social historians and anthropologists recognizes the common ground between history, culture history, and process, as well as the interdependence of historiography and theory (Burke 1992, 1997; Chartier 1988; Green 1993; Grew 1993; Grumley 1989; Hastrup, ed. 1992; Heehs 1994; Hill, ed. 1996; Hodgen 1974; Le Goff 1992; Lloyd 1986; Mazlish 1993; Ohnuki-Tierney, ed. 1990; Roseberry 1989; Sider 1997; Sider and Smith 1997; Simmons 1988; Thomas 1989).

Culture history as comparative, historical anthropology should consequently not be misconstrued as the culture historical approach of the early twentieth century. The reinterpretation of cultural process as intrinsically political and historical, rather than systemic and ahistorical (*contra* Flannery 1967), overturns prior notions of culture history and reveals historical development as intrinsically problematical (Swartz et al. 1966; Wolf 1982:21). Such "new" culture history actually represents the rapprochement of archaeological theory with political and historical anthropology. What Barker and Pauketat (1992:3) refer to as "resurgent culture history" is essentially a call for anthropologically-informed studies of prehistoric political dynamics as an historical process (see also Pauketat 2001).

In this light, previous models of Mississippian political economy do not fully account for the temporal and spatial variations in all regional polities in the late prehistoric Southeast, but have identified many of the structural constraints (Trigger 1991). Prestige goods exchange and the mobilization of foodstuffs presented various opportunities for political advancement rather than over-determining structures that necessarily resulted in political consolidation or increased social complexity (Brumfiel and Earle 1987:4). The use or threat of coercive force, control of labor, and social manipulation of resources and symbols presented alternative paths to power in different polities at different times in which praxis was a central factor throughout prehistory and history (Gellner 1988:21; Kertzer 1996:153-162). The study of this historical process holds the potential to contribute to explanations of regional political development and decline, rather than confirm the validity of cultural evolution as a systemic response or portray political economy as infrastructurally determined (Pauketat 1998:52-53). Such an historical approach can contribute as well to a clearer understanding of the contexts in which political consolidation and regional centralization were constrained or resisted (Gellner 1995:27-31).

Recent studies of political dynamics in the late prehistoric Southeast reflect a general interest in advancing Mississippian archaeology by incorporating research in ethnohistory and historical anthropology (e.g., Anderson 1994a, 1994b; Barker and Pauketat, ed. 1992; Scarry, ed. 1996). Social conflict, factionalism, coalition building, and resistance to political consolidation were among the opportunistic, yet potentially decisive factors, in the regional development and decline of polities (Brumfiel 1994). As Nassaney (1992:132) has remarked, "To ignore these contradictions will lead us back to typological frameworks that cannot accommodate history or process, and ultimately hinder our understandings of elite emergence in the prehistoric Southeast." A renewed focus on culture history as historical process, in contrast to neoevolutionism and systemic-processualism, has placed Southeastern archaeologists in the position of

advancing anthropological theories concerning regional political development and decline (Barker and Pauketat 1992:3; Pauketat 1998:46).

Mississippian political economy involved the negotiation of group interests that were simultaneously material and ideological, political dynamics that can best be understood as an historical process on a regional scale. Social relations of authority and the acquisition of power were intertwined with the symbolic production of value and prestige (Kertzer 1988:174-181). Regional political economy entailed heterarchical as well as hierarchical distinctions in the social distribution of authority and meaning, a point that will be returned to shortly (Brumfiel 1995; Crumley 1995; Hannerz 1992:3-39; McGuire 1983). The regional consolidation of authority in Mississippian polities involved the purposeful actions of individuals and groups, but with consequences that may have been unforeseen and unintended (Pauketat 1992, 1994:12). The study of political development and decline as an historical process shifts the focus of explanation from typologies, systems, and structural constraints to the regional contexts of structural power and praxis (e.g., Brumfiel 1992; Brumfiel and Fox, ed. 1994; Wolf 1990, 1999).

Before elaborating further, a particularly compelling example of this approach can be drawn from recent studies of the Cahokia site in the American Bottom of west-central Illinois (Figure 9). Cahokia and outlying sites in the American Bottom region of the Mississippi River valley have been the focus of extensive archaeological investigations during the past four decades, yielding an unparalleled body of literature on Mississippian archaeology (e.g., Bareis and Porter 1984; Emerson 1997a; Emerson and Lewis, ed. 1991; Esarey and Pauketat 1992; Fowler, ed. 1969, 1977; Fowler and Hall 1975; Kelly 1980; Pauketat and Emerson, ed. 1997; Stoltman, ed. 1991). This research has culminated in the refinement of a regional chronology and more detailed understanding of Cahokia's political history (Pauketat 1994, 1998). Several phases spanning four centuries have been subdivided into shorter increments, some as brief as fifty years (Figure 10).

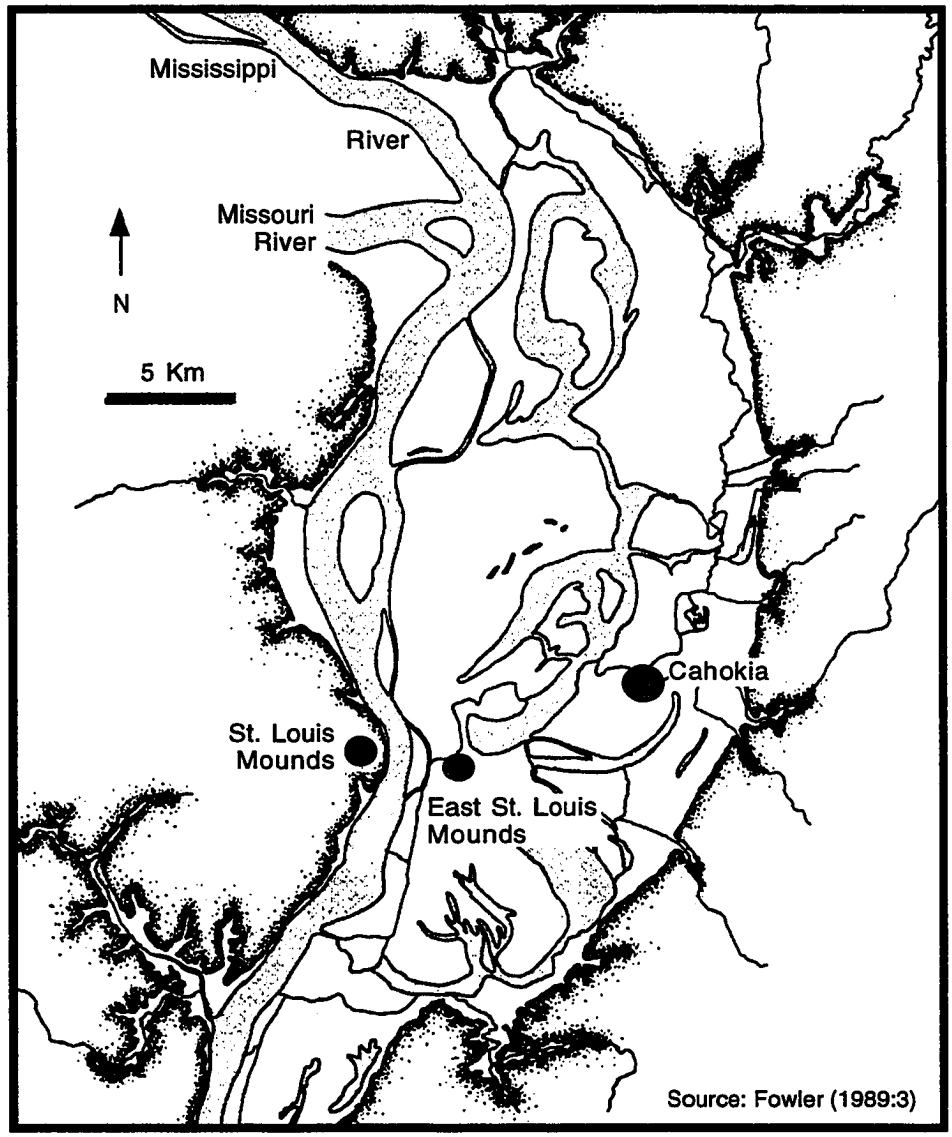
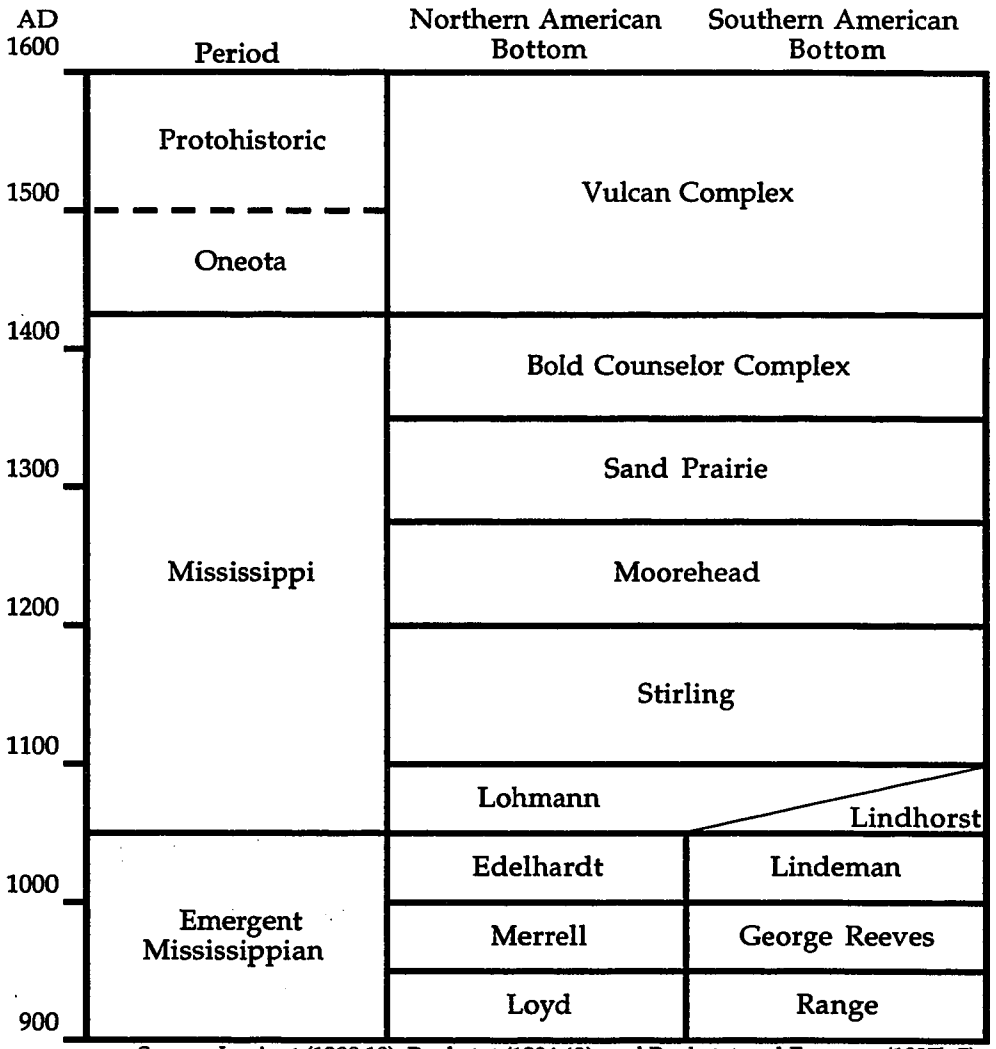


Figure 9. Location of Cahokia in the American Bottom, ca. AD 1800.



Source: Lopinot (1998:18), Pauketat (1994:49), and Pauketat and Emerson (1997b:7).

Figure 10. Regional Chronology for the American Bottom.

Such precise chronological control was facilitated by the recovery of data from sites in outlying areas, as well as the central precinct of the Cahokia site. The Lohmann phase of ca. AD 1050-1100 is of particular importance in understanding the origins of Cahokia, following the first decades of the Mississippian emergence (Kelly 1990; Pauketat 1994:51-57). A wide range of artifactual and architectural information point toward an abrupt political and social transformation associated with the regional consolidation of authority and institution of a hierarchically-ranked social order, what Pauketat (1993a, 1995) has referred to as the "big bang" and "punctuated disequilibrium."

Pauketat (1997a) has shown that rapid organizational changes in regional political economy took place at Cahokia at the end of the emergent Mississippian period, beginning during the final years of the Edelhardt phase (ca. AD 1000-1050). The regional consolidation of political authority in the northern American Bottom was rapid and wide-ranging, as an elite or coalition of elite were able to appropriate labor, resources, and production toward the establishment of a "central political-administrative complex" (Pauketat 1994:80; 1998:62). The Lohmann phase transformation of the Cahokian social order is reflected in the increased acquisition of exotic raw materials, non-local and locally manufactured goods, changes in domestic architecture and community planning, and the construction of an enormous plaza and mound complex:

> This order was not simply the imposition of an elite and their political ideology . . . Instead, a Cahokian order was the alteration of traditional cultural meanings and values along with every facet of social life, expressed in the built environment and in portable material culture (Pauketat 1998:71).

Among the most visible and compelling evidence of this reordering of the social landscape was the massive construction of more than 100 earthen mounds and large, centrally-located plazas (Dalan 1997).

The appropriation and elevation of certain cultural themes and dominant political ideologies is evident in the production and distribution of ceramic vessels and craft goods as expedient political symbols, not the least of which were monumental alterations in the landscape (Pauketat 1997b, 1998:68-72; Pauketat and Emerson 1991). Communities in the hinterland of Cahokia were drawn into this process of regional political consolidation, as indicated by demographic nucleation at the center, the transformation of domestic space, and abandonment of neighboring areas such as Horseshoe Lake (Pauketat 1997a, 1998; Pauketat and Lopinot 1997; Pauketat et al. 1998). Yet even as a Cahokian elite emerged as a political-religious authority unrivaled elsewhere in the Mississippian Southeast, the hegemonic order appears to have been met with resistance to the further centralization of authority (Emerson 1997c; Emerson et al. 1996; Pauketat 1998:71).

The Cahokian political ideology and social order of ca. AD 1050-1100 were neither irreversible or inevitable. Political factionalism may have heightened as the elevation of a Cahokian elite and partitioning of the central political-administrative complex faced increased resistance to appropriations of labor, food, and Mississippian cosmology. In attempting to maintain the established social order across generations, further efforts at political-symbolic consolidation, economic intensification, and coercion appear to have resulted in political disintegration, decentralization, and out-migration (Emerson et al. 1996; Knight 1997:240-241; Pauketat 1992, 1998:71-72). In short, regional political consolidation in the American Bottom was an *historical process* that involved political and economic "hypercentralization," the appropriation of labor, and ideological transformation of cultural landscapes (Pauketat 1998:73). Ideology did not merely serve

as a legitimizing factor in regional political economy, but was instead an intertwined aspect of political actions that produced a Cahokian social order.

Cahokia was a heterogeneous society that entailed both domination and resistance to the cultural production of Mississippianism (Emerson and Hargrave 2000; Pauketat 1992, 1998). The challenge then, is to explain the regional development and decline of Mississippian polities as an historical process (Pauketat 2001), rather than the growth and demise of highly-integrated cultural or economic systems (cf., Milner 1990, 1996a). While the sheer scale and influence of Cahokia calls into question comparisons with other Mississippian polities, it is worthwhile to consider a similar approach to the study of regional political development and decline elsewhere in the late prehistoric and protohistoric Southeast (Anderson 1997; Knight 1997). The social relations of authority and political exigencies implicated in such an approach are considered in the remainder of this chapter, beginning with a further examination of historical process.

History, Structure and Authority

Following Trigger (1970:36; 1989a:329-379), it is argued here that various critiques of cultural evolution, systemic processualism, and political economy are united by a common interest in advancing archaeology as an historical science (cf., Rowlands 1982). A comparative study of political development and decline will allow for the formulation of general theories concerning historical process, without implying systemic or structural determinism (Hodder 1991a; Shanks and Hodder 1995a). Interest in the historical trajectories of regional political development and decline is not simply a concern with chronology or historical particulars. Rather, it involves redefining culture and tradition as a dialectic of structural power and praxis (McGuire 1992:168-170; Wolf 1990, 1999).

Generalizations regarding *historical* process are based on social relations of authority, involving contradictions between structure and a specific range of political-

symbolic actions (Marquardt 1992:104-108). As Marquardt (1992:102) points out, a "truly processual" archaeology should strive to account for this process on different levels. Although strategic power, or praxis, is central to this approach, political-symbolic action should be distinguished from methodological individualism – a series of inherently rational choices made by individuals (*contra* Bell 1992:38-48; Kertzer 1988:181-182). Praxis articulates with structural power in different social contexts, since "humans make history as social beings, and they do so as members of social groups" (McGuire 1992:134). In light of the preceding discussion of systemic processualism (see Chapter Two), it is argued here that historical process provides a more productive synthesis of contemporary anthropological and archaeological theory.

The turn toward history and historical process by anthropologists has been paralleled by increased interest among social historians and social scientists in culture theory and anthropological history (Burke 1992:18-21; Chartier 1988; Ellis and Thompson, ed. 1997; Faubion 1993; Sahlins 1985; Scott 1985; Thompson et al. 1990). Unfortunately, misconceptions regarding the nature of history and historical explanation have hindered a more productive dialogue among archaeologists. As Peebles (1991:113) suggests, in order to further expand on knowledge of the past, "it is important to remove the stigma applied to history by some archaeologists." Far from necessitating a theoretically-incapacitated relativism, the study of regional political development and decline as an historical process draws on a vibrant tradition of ethnohistorical synthesis, the direct historical approach, use of ethnographic analogies, and historical theory (e.g., Axtell 1979; Becker 1955; Berlin 1961; Brain et al. 1974; Charlton 1981; Cohn 1962; Gardiner 1968; Greenberg 1968; Greenberg and Spielbauer 1991; Jennings 1982; Krech 1991, 1996; Simmons 1988; Sturtevant 1966; Trigger 1982, 1984:287-290, 1986; Wood 1990).

Archaeology as an historical science challenges false dichotomies such as history *versus* science, demanding a reinvention of normative culture history (Feinman 1997:374-

375). What Trigger (1989a:338) refers to as "neo-historicism" is based on a growing recognition that causality, prediction, and positivistic certainty have been over-emphasized to the detriment of "understanding how and why specific societies developed as they did in the past." The intersection of political economy and ideology in cultural histories emphasizes historical process as a series of social contradictions and "connections," rather than historically-determined types, structures, or systems (Ortner 1984; O'Shea and Barker 1996; Saitta 1994, 1997). Historical-processual studies of regional political development and decline thus seek to redress the impasse presented by idealist *versus* materialist theories of culture (Hastrup 1992:8; Keesing 1994; Rowlands 1982; Trigger 1989a:339-340, 373).

Historical process refers to culturally-defined trajectories that have been regarded in less critical terms as "tradition" or "custom" (Hodgen 1974:65-71; Pauketat 2001; Sahlins 1994). Sahlins (1981:8) in particular, has argued that the goal of an historical perspective in anthropology is "not merely to know how events are ordered by culture, but how, in that process, the culture is reordered:"

> History is culturally ordered, differently so in different societies, according to meaningful schemes of things. The converse is also true: cultural schemes are historically ordered, since to a greater or lesser extent the meanings are revalued as they are practically enacted. The synthesis of these contraries unfolds in the creative actions of the subjects, the people concerned. For on the one hand, people organize their projects and give significance to their objects from the existing understandings of the cultural order. To that extent, the culture is historically reproduced in action (Sahlins 1985:vii).

Archaeologists are uniquely positioned to reframe the study of cultures as "historical precipitates," involving human agency, interest groups, and innovation (Trigger 1991:559). The culture concept thus remains relevant to archaeology, but is no longer viewed as detached from historical production (cf., Watson 1995). As Sahlins (1985:72) suggested, "the problem now is to explode the concept of history by the anthropological experience of culture." The study of historical process in prehistory is more problematic however, in that events and actions are often less apparent in material residues that might be systematically preserved in the archaeological record. Archaeologists nonetheless stand to benefit from comparative investigations similar to those in historical anthropology (Lightfoot 1995; e.g., Hassig 1992; Hastrup 1992; Helms 1979, 1993, 1994; Wolf 1999).

In pursuing historical process in undocumented contexts, archaeologists are challenged with developing methods and middle-range arguments linking structural power and praxis. The anthropological critique of culture, history, and power is central to this undertaking. In their study of colonialism and Christianity in South Africa, Comaroff and Comaroff (1991:7-39) emphasized four central points that are crucial to archaeology as an anthropological and historical discipline:

> (1) the need to address the *in*determinacies of meaning and action, events and processes in history; (2) the admonition to regard culture not as an *over*determining, closed system of signs but as a set of polyvalent practices, texts, and images that may, at any time, be contested; (3) the invitation to see power as a many-sided, often elusive and diffuse force which is always implicated in culture, consciousness, and representation; and (4) the importance of treating the writing of histories as a generic mode of making both the past and the present (Comaroff and Comaroff 1991:17).

The "indeterminacies" of historical process suggest that temporal and spatial variations in regional political economy involve multiscalar interactions, not the least of which is the capacity of human communities to reproduce and transform social relations of authority (cf., Brumfiel 1992, 1994). The simultaneously ideological and material dimensions of authority shifts the focus of study to political symbolism and the production of identity through praxis, recognizing the veracity of constraints imposed by the cultural production of meaning, as well as the accessibility of resources (Friedman 1989; Sahlins 1985:31; Trigger 1991). Just as the separation of economic factors from political ideologies has produced econocentric caricatures of human behavior in non-capitalist societies, failure to consider the historical connections between symbolism, coercion, compliance, and accommodation glosses over important historical variations (Giddens 1995:125-128; Kertzer 1996:153-157; Wolf 1999:289). Comaroff and Comaroff (1991:30) refer to this process as a dialectic, "whereby the content of dominant ideologies is distilled into the shared forms that seem to have such historical longevity as to be above history."

In approaching regional political development and decline as an historical process, social relations of authority are not reducible to sources of power as distinct economic, ideological, or political categories (cf., Earle 1997). The dialectic of meaning and action, or structural power and praxis, can instead be approached through the concept of political culture (Sahlins 1985:31; cf., Saitta 1989:39, 1994). Following Marquardt (1992:103, 108), this dialectic represents both an historical process and critical method:

> Conflicts inevitably arise within and between human groups because self interests or group interests dispose people to interpret reality in ways that benefit them, placing them in opposition to people with different interests. Human activity thus takes place in specific but ever-changing sociohistorical contexts, in which some actions are countered by the

> actions of others, some actions have unintended consequences, and some actions come into conflict with the outcomes of previous concrete actions. The emergence and resolution of contradictions is *process*, and its investigation is best pursued dialectically (Marquardt 1992:109-110).

This implicates structural power and praxis in regional development and decline as part of an historical process (McGuire 1992:121-122). As a way of knowing the past, it forces archaeologists to confront the interpenetration of ideologies and political economy in culturally-meaningful events (Comaroff 1982; McGuire 1992:91-114). However, recognition of meaningful events is not the same as advocating a search for specific meaning or "emic" interpretation (cf., Hodder 1991a, 1992:164). Nonetheless, such an approach acknowledges the ideational construction of social realities, what Giddens (1984:25) has referred to as the duality of structure and event, or "structuration." The concept of political culture as applied in Mississippian archaeology will be examined in further detail in the final section of this chapter.

The second and third points made by Comaroff and Comaroff (1991:17), that cultural practices are contested, and issues of power pervade social interactions and consciousness, is to recognize the centrality of the political-symbolic field in prehistory, as well as history (Bourdieu 1991:163-172). In accounting for the "institutionalization and symbolization of power relationships," this emphasizes social heterogeneity and variation, rather than cultural homogeneity, systems, or types (Cohen 1974:17; McGuire 1983:101; Wolf 1999:289). Heterogeneity subsumes concepts such as hierarchy and heterarchy in referring to social relations that are not intrinsically hierarchical, but are linked by variable distributions of authority and meaning (Brumfiel 1995; Crumley 1995; White 1995). Crumley (1995:3) refers to heterarchy as "unranked" yet potentially "counterpoised" social relations. Heterogeneity refers even more broadly to "the distribution of people among different groups" (Blau 1977:77).

Heterogeneity calls into question "layer-cake" models of cultural complexity as the incremental growth of social inequalities and stratification (McGuire 1983:99-100; Roosevelt 1999:14). As a gloss for political-administrative hierarchy, the concept of complexity tends to conceal rather than elucidate differential distributions of power (McIntosh 1999:160-163; Pauketat 1996:219-220). Heterogeneity introduces issues such as ethnicity, gender, and political identity into the historical trajectories of regional polities and local-level groups, making it possible to transpose ideal types. McGuire and Saitta (1996:200-201) have accordingly sought to resolve the dichotomy of political hierarchy and egalitarianism in the North American Southwest as a dialectic of "complex *communal* societies."

Consideration of heterogeneity allows for contested views of authority as opportunities for accommodation, compliance, coercion, domination, and resistance in the production of culture, what Comaroff and Comaroff (1991:17-19) refer to as a "hegemonic order." Comaroff and Comaroff (1991:19) define the hegemonic as a "dominant system of lived meanings and values, relations and practices, which shapes experienced reality." From an historical perspective, neither culture or hegemony are ever complete, since both are ultimately "open to contestation" (Comaroff and Comaroff 1991:24, 29; cf., Williams 1977:108). However, the construction of a hegemonic order should not be viewed as a uniform political, economic, or ideological landscape on a par with culture (Lears 1985; cf., Sahlins 1985:36). Nor is hegemony a one-sided artifice of subjugation and dominance. It is therefore misleading to speak of an "elite hegemony." In hegemony there is always the "subaltern," – the accommodation and dissent of those who might otherwise break with, resist, or obstruct pervasive social forms and practices (Gramsci 1971:52-55). A hegemonic order is thus open to various forms of resistance, marginalization, and reinterpretation (Scott 1985:304-350).

The representation of power through a wide array of political-symbolic actions ("polyvalent practices") suggests two interpretations of an ideological-material process.

Earle (1997:143) discusses ideology as structural power, or a "portion of cultural meaning that is used strategically to institute political domination or resistance." Such political ideologies are made concrete or "materialized" through ritual, ceremony, and symbols (DeMarrais et al. 1996; Earle 1997:143-158). Neo-Marxist notions of ideology as a source of "mystification" and product of class formation similarly suggest that political ideologies are mechanisms of domination and resistance, stemming from historically circumscribed social relations. This presupposes a second, alternative definition of ideology as "total conception" or world view – culturally pervasive meanings and representations that embody social realities, or what has been referred to as the cultural production of meaning (Ball and Dagger 1990:7). Ideologies in both instances "arise in particular historical circumstances, and then take shape and change in response to changes in those circumstances" (Ball and Dagger 1990:4). Associated with legitimate authority, ideologies compel both the maintenance and transformation of a social order through association with the supernatural or cosmological (Helms 1999:199).

As a "program for social and political action," both dimensions of ideology represent aspects of an historical process, in which cultural practices were imbued with meaning and social portent (Ball and Dagger 1990:8). In dealing with ideologies as "particular ways of thinking," it is important to recognize that social realities are reinterpreted and symbolically reproduced through material culture, symbols, and ritual (Cohen 1974:138; Geertz 1959; Kertzer 1988:174-184, 1996:153-154; Molino 1992:16; Pauketat 1992:34). Political ideologies are signified and in turn transformed through public rituals and ceremonies that entail the production of a "legitimate language" of symbolic power (Bourdieu 1991:37-65). Bourdieu (1991:164) describes symbolic power as "that invisible power which can be exercised only with the complicity of those who do not want to know that they are subject to it or even that they themselves exercise it" (see also Bourdieu 1977:159-197). Symbolic power thus becomes culturally pervasive in the

second sense of ideology, as a hegemonic construct (Comaroff and Comaroff 1991:24-25).

The final point made by Comaroff and Comaroff (1991:17), regarding the relevance of anthropology in "making both the past and the present," is illustrated in the move to incorporate anthropological theory in the remaking of culture history (Burke 1990b, 1992:17-21, 1997; Foucault 1972:9; Grew 1993; Mazlish 1993). Interest in culture theory among social historians has been encouraged by the advancement of history as a humanistic science (Bloch 1953:27; Burke 1990a; Green 1993; Grumley 1989; Gurevich 1992:20; Hecht 1968; Hobsbawm 1971; Hobsbawm and Ranger, ed. 1983; Knapp 1984; LeGoff 1992:179-216; Lloyd 1986). However, the rapprochement of anthropology and history is no where more apparent than in calls for the historicizing of anthropology (Blok 1992; Heehs 1994; Ohnuki-Tierney 1990:2; Roseberry 1989:5-13; Trigger 1989a:372-379; Wolf 1974, 1982:21). The production of history refers not merely to the accumulation of knowledge, but to the ways in which the past is represented (Sider 1997:63-64; Sider and Smith 1997:13; Trouillot 1995:4-30).

While anthropological critiques of history focus attention on the dialectic of structure and praxis (e.g., Comaroff 1985; Comaroff and Comaroff 1992; Ohnuki-Tierney, ed. 1990; Sahlins 1985), social historians have forwarded a similar critique of culture, most notably through *Annales* (e.g., Burke 1992; Le Goff 1992). Beginning with the journal *Annales d'Histoire Economique et Sociale* in 1929, *Annaliste* historians advocated an holistic, interdisciplinary approach that examined the material, geographic, and ideological structures of social life (Burke 1990b; Hexter 1972; Stoianovich 1976; Trevor-Roper 1972). Popularized as structural history, *Annales* has had a broad influence in anthropology and the social sciences (Frank 1995; Lévi-Strauss 1963; Ohnuki-Tierney 1990; Sahlins 1976, 1985; Sanderson and Hall 1995:95; Wallerstein 1974a). Braudel (1980:64) in particular, espoused the importance of long-term geographic and environmental structures (*la longue durée*) over medium-term social and economic

factors (*conjuncture*), or narrative histories of specific events (*histoire événementielle*). The works of Braudel (1972, 1984, 1993) had such a formidable influence that *Annales* is often misconstrued as a unified school of thought (Burke 1990b; Last 1995:141-142).

Annales has not been confined to Braudelian structural history, but has inspired interdisciplinary critiques of history, historical consciousness, human agency, and the cultural production of meaning, or *mentalite* (Burke 1990a, 1990b, 1997; Chartier 1988; Grumley 1989; Gurevich 1992; Last 1995:145; Le Goff 1992; Ricoeur 1980:12-20; Vovelle 1990). Since Hodder's (1987) discussion of archaeology as "long-term" history, application of *Annales* in archaeology has been fairly sporadic, primarily limited to Braudelian structural history (e.g., Ames 1991; Bintliff, ed. 1991; Cleuziou et al. 1991; Hodder, ed. 1991; Knapp , ed. 1992). Cultural production, structure, and tradition have been reinterpreted as historical processes in pre-Columbian North America (Cobb 1991; Duke 1992). More importantly, *Annales* provides a heuristic for understanding regional political development and decline as an historical process, especially in regard to medium-term conjunctures and a dialectic of structure and event (Knapp 1992; Moreland 1992; Peebles 1991; Galloway 1997a; M. Smith 1992a, 1992b). Archaeologists have already initiated a constructive program of research comparable to *Annales*, through studies of political cycling.

Political Cycling

That regional political development has been episodic and intermittent, rather than progressive, unilinear, or multilinear was recognized long ago (e.g., Leach 1954), yet these seemingly recurrent historical trajectories have only recently become a topic of interest in Mississippian archaeology. Centralized authority in regional polities has been described as incorporating structural instabilities, what Friedman and Rowlands (1978:213) referred to as the "expansion and collapse of conical chiefdoms." The concept of structural instability and cyclical political development parallels earlier organic

analogies regarding the growth, decay, and inevitable demise of civilizations, also referred to in terms of cultural cycles and cyclical history (Breisach 1994:46-48, 210-214, 396-399; Helms 1978:6). An important distinction can be drawn, however, in that the course of regional political development and decline is not viewed as historically determined, as implied by organic analogies (Yoffee 1988:6).

The potential for regional political instabilities has generally been attributed to two sources of social conflict. First is the opposition between local-level subsistence economies (the domestic economy) and the intensification of production in the establishment or maintenance of regional political economy, what has been referred to as a structural contradiction (Johnson and Earle 1987:11-15; Sahlins 1972:101-148). The second possibility stems from social relations of authority as an intrinsic source of conflict and factional competition, what Anderson (1994a, 1994b:50) refers to as the "underlying causes" of cycling. Both sources of contradiction may hinder or promote political consolidation, regional centralization, and the institutionalization of legitimate authority. Both also draw clear distinctions between structure and process, similar to the contrasts discussed earlier between structural and secular change in political economy (i.e., Welch 1991:191).

As framed by archaeologists, political cycling has leaned heavily on sociopolitical types and contrasting levels of complexity. Describing the organizational distinctions between chiefdoms and states, Wright (1986:358) characterized the origin of the state as "following on a period of cyclical conflict and limited growth" (see also Wright 1977, 1984). Chiefdoms were regarded by Wright (1984:42-43) as societies in which either one or two levels of a "control hierarchy" existed above the level of the local group. Complex chiefdoms were fraught with social conflict, in that individuals from different ranked groups "compete with each another for access to controlling positions." Simple chiefdoms were based instead on the advancement of "an ascribed elite subgroup." This contrasts with descriptions of complex chiefdoms as having "two- or three-tiered

political hierarchies," while simple chiefdoms had "only one level of superordinate political offices" (Steponaitis 1978:420; cf., Wright 1977:381).

From either perspective, the emergence of institutionalized social stratification characteristic of the state was not inevitable, since "complex chiefdoms characteristically cycle between one and two levels of control hierarchy above the level of the local community" (Wright 1984:43). The cyclical progression between simple and complex chiefdoms can be illustrated in terms of alternating levels of political-administrative hierarchy (Figure 11). The influence of central place theory is notable, in that the monumental architecture of ceremonial centers serves as the fulcrum between political-administrative hierarchies. The construction and abandonment of centers is interpreted as evidence of regional centralization and dissolution thought to characterize political cycling.

Political cycling has highlighted the structural instabilities of regional political economy throughout the world, especially in terms of factional conflict (Johnson and Earle 1987:13; Pohl and Pohl 1994; Redmond et al. 1999). In Mississippian archaeology, political cycling has been proposed as an explanation for regional political development and decline. This application of political cycles parallels Braudelian structural history in several respects, particularly as defined by Anderson (1990, 1994b, 1994b, 1996b). In *The Savannah River Chiefdoms*, Anderson (1994b) describes political cycling in terms of structural and environmental constraints (Chapter 7), in the context of political-economic conjunctures (Chapters 3 and 4), and events (Chapter 8). Unlike Braudel, Anderson argues that political conflict, rather than long-term environmental structures, was the driving mechanism in regional political development and decline.

Examining evidence for Mississippian polities throughout the Southeast, Anderson (1994b, 1996a, 1996b) describes episodic fluctuations between simple and complex chiefdoms as "chiefly cycling," emphasizing the political relationships and fortunes of an elite. According to Anderson, the expansion and collapse of Mississippian polities

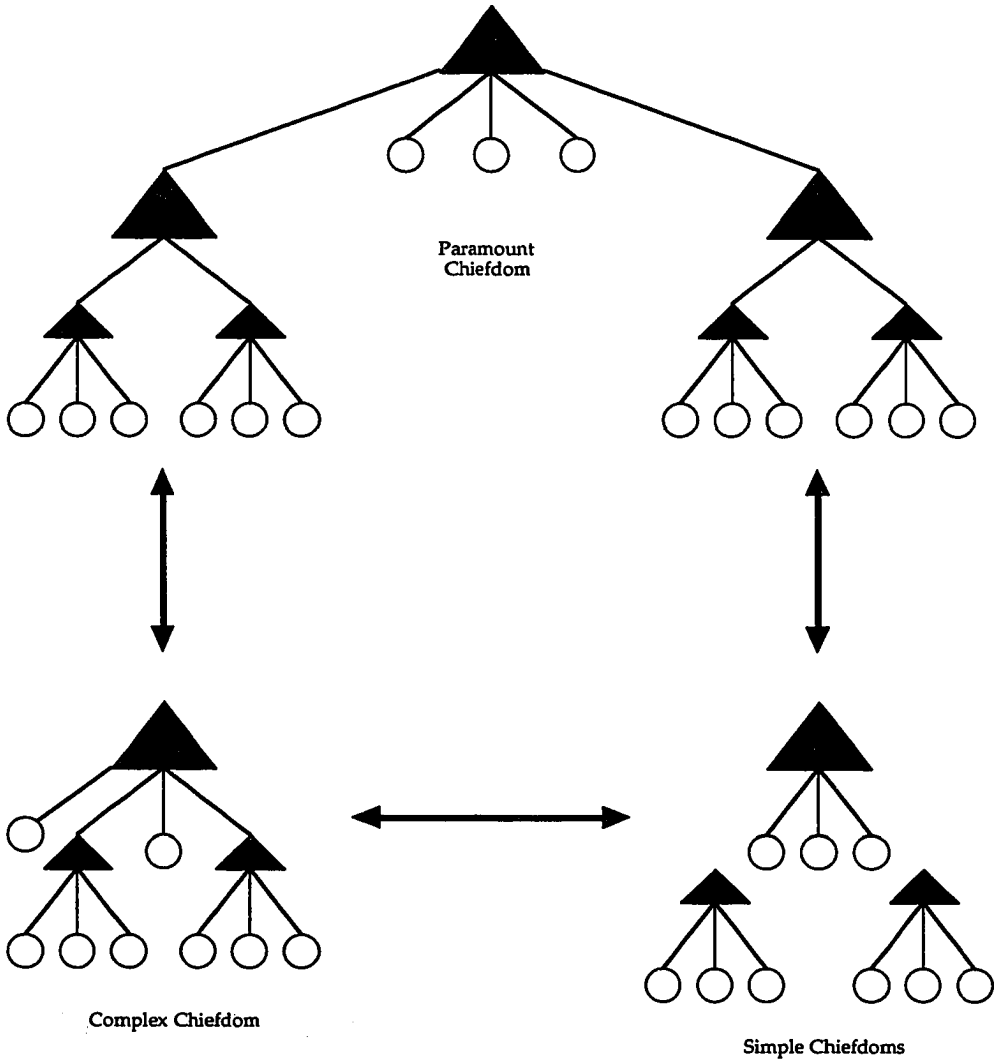


Figure 11. Diagram of Political Cycling

followed a cyclical pattern of regional centralization, "fissioning," and re-establishment of political control at regional centers. Political cycling involved "shifting power relations" between rival interest groups of elite, the "fragmentation of complex chiefdoms over a landscape," and subsequent formation of a new complex chiefdom (Anderson 1994b:50). Following Wright (1977, 1984), Anderson (1994b:48) describes cycling as "changes in administrative levels in the chiefdom."

In order to demonstrate the prevalence of cycling throughout the Mississippian Southeast, Anderson (1994b) examines archaeological evidence for different polities, including Cahokia and Moundville. Reviewing the archaeological evidence from the American Bottom, he interprets the relocation of political-administrative centers as "cycling behavior." The Moundville polity is similarly thought to demonstrate "the emergence and decline of complex chiefdoms against a regional backdrop of simple chiefdoms" (Anderson 1994b:155). The argument for political cycling in the Black Warrior Valley is based on rivalries between simple chiefdoms between AD 1000-1250, leading to the establishment of the Moundville complex chiefdom (Anderson 1994b:145-150). As will be discussed in Chapter Four, this scenario of contemporaneous, competing simple chiefdoms is no longer thought to account for the development of the Moundville polity (Knight and Steponaitis 1998). Political conflicts are suggested by Anderson (1994b:147) to have occurred between Moundville and polities in the upper Black Warrior, Cahaba, and Tennessee river valleys, contributing to its fragmentation into simple chiefdoms. In addition to a lack of evidence for such macroregional conflicts, there is no explanation of why such competition exacerbated, rather than mollified, factionalism within the Moundville polity.

The strongest argument in support of political cycling comes from the Savannah River valley of present-day Georgia and South Carolina. Anderson (1994b:157-322) identifies a series of mound sites and settlements associated with regional polities that developed and disappeared over a few generations, until the virtual abandonment of

the Savannah River Basin after AD 1450. Settlement data from mound centers such as the Irene and Hollywood sites are marshaled to illustrate the rise and decline of simple and complex chiefdoms (Anderson 1994b:290-296). Anderson (1994b:12) argues that the causes of political cycling were numerous and interrelated, discounting any facile "prime mover" argument. Among the wide range of factors that Anderson (1994b:49) identifies as promoting the organizational changes associated with cycling are: physiography, climate, resources, subsistence production, storage technology, tribute mobilization, prestige goods exchange, alliance networks, information flow, territorial boundary maintenance, population change and movement, ritual institutions, authority structures, and the nature of chiefly succession. According to Anderson, each of these factors might have contributed in some way to the instability of regional political economy, and thus political cycling. In fact, the potential causes of cycling are so ubiquitous, as to preclude almost any possibility of political cycling having *not* occurred.

Nonetheless, Anderson argues that political instabilities, rather than structural contradictions, are the key to understanding political cycling. Weighing multiple lines of evidence, Anderson concludes that political cycling can ultimately be accounted for by factional competition:

> However, the underlying causes of cycling, that is, why the process occurs, is more basic. Competition for prestige and power between rival elites, it is argued, is what initiates and drives cycling in chiefdom societies. The process is cyclical because this very pattern of competition precludes the development of stable organizational structures capable of maintaining a two-level decision-making hierarchy indefinitely (Anderson 1994b:50).

Shifting centers of regional centralization in the Mississippian Southeast are viewed as inherent aspects of political cycling, produced by persistent political instabilities, competition, and factional conflicts (Anderson 1994b:326-332).

In focusing on factionalism as an "inherent aspect of chiefdoms" and characterizations of "cycling behavior," the argument for political cycling leans heavily on sociopolitical typology (Anderson 1994b:1). Regional political development and decline are consequently described in somewhat contradictory terms: as cyclical developmental structures and sociopolitical types in cultural evolution. In conflating these concepts, there is a risk of portraying regional polities as an evolutionary dead-end, or recurrent sociopolitical structures that failed to attain a higher level of complexity due to innate factional conflict. Smith (1986:58) raised this issue in terms of "shifting networks of conflict and alliance" among Mississippian polities:

> While it is reasonable enough to expect that some of these networks followed a roughly similar centralization-decentralization cycle of development from segmentary tribes through local chiefdoms, to regional chiefdom, and then back to unranked or minimally ranked societies (DePratter 1983:204-211), such cycles were far from universal across the Southeast and were neither temporally synchronized nor causally linked (Smith 1986:58).

In contrast, Anderson's model of political cycling privileges the conflicts between elite factions, as well as implicating sociopolitical structures and types as historically interconnected:

> To elaborate, simple chiefdoms are essentially autonomous economic and sociopolitical units. Complex chiefdoms, formed from a number of simple

> chiefdoms, are thus made up of entities perfectly capable, if given the chance, of usurping the role of the paramount center or, alternatively, operating autonomously. Accordingly, complex chiefdoms existed only as long as their elites could maintain political control over similar yet subsidiary elites in other centers. Struggles for political control in these societies were typically between paramount and lesser elites and their retinues and only rarely encompassed entire populations (Anderson 1994b:50-51).

This concept of factionalism as circumscribed among an elite is based on an understanding of factions as comprised of individuals "who occupy similarly senior positions in the genealogical structure" (Bujra 1973:136). Such factions are "structurally and functionally similar groups which, by virtue of their similarity, compete for resources and positions of power or prestige" (Brumfiel 1994:4). Factional competition between groups is thought to have involved transitions between simple and complex chiefdoms (rather than local-level communities), based on the assumption that such conflicts were unlikely to undermine the "structural basis of power" (Bujra 1973:137). Political cycling is reduced in part to a problem of typological construct, highlighted by disagreement over whether political-administrative organization alternated between one, two, or three levels of hierarchy (Anderson 1994b:9; Wright 1977:381, 1984:43), or fluctuated between chiefdoms and less centralized, kin-ordered societies (Galloway 1995:67-74; Smith 1986:58).

The argument for political cycling is less convincing when the historical contexts of regional political development and decline are considered. The historical trajectories of Mississippian polities in regions outside of the Savannah River valley do not provide particularly convincing evidence in support of cycling (e.g., Blitz 1993a, 1999; Knight 1997; Milner 1996a; Rogers 1996; Scarry 1990; Steponaitis 1991; Williams and Shapiro

1996). Hally (1996a:125, 1996b) points out that Mississippian polities in northern Georgia can be characterized as simple chiefdoms that developed and declined without attaining two levels of administrative-political hierarchy. Nor does political cycling take into account the potential for alliances between polities, social relations among non-elite or commoners, and the formation of coalitions that cross-cut social statuses and political hierarchies (e.g., Maxham 2000; Smith and Hally 1992; Williams and Shapiro 1990). Even more problematic, political cycling does not address social heterogeneity or variability in the historical trajectories of regional polities. Blitz (1999) thus calls into question the simple-complex chiefdom cycle and instead proposes that political development and decline followed a process of fission and fusion.

If one of the most apparent weaknesses in political cycling is an over reliance on sociopolitical typology, a second, more serious problem has to do with an overemphasis of chronic, elite factionalism. Notwithstanding, it is salutary that social conflict has emerged as a major focus of research alongside managerial perspectives of political development (Cohen 1973:872-873). Consideration of the potential for competing factions is certainly an important step in addressing political development and decline as an historical process. Yet in the final analysis, the political actions associated with social heterogeneity are confined to competition among elite members of society vying for power. Such factionalism is presumed to be a behavioral constant, inexorably tied to the recurrent structures of political cycling. While potentially significant, social relations in Mississippian communities were not entirely elite-oriented, or wholly dependent upon antagonisms between the elite (Maxham 2000). It is accordingly an oversimplification to suggest that the historical trajectories of all Mississippian polities were either defined or constrained by incessant, factional conflict. Furthermore, the connections between such "subject-centered" and "system-centered" perspectives should not be regarded as historically determinate in political development and decline (Brumfiel 1992:558-559, 1994:12-13).

Political cycling ultimately calls into question the appropriate units of analysis, or what is actually being described as cyclical. Whether or not a political-administrative cycle can be demonstrated for a specific regional polity must be distinguished from broad characterizations of the entire Mississippian Southeast as having undergone political cycling. Failure to do so conflates regional political conflict with macroregional interactions. Distinctions can also be drawn between the annual or seasonal periodicity of political-symbolic ritual, a household or domestic cycle, and the long-term, historical development of regional political economy as exhibiting a "cyclical pattern through time" (Hassig 1996:1085). Fluctuations in regional political-administrative hierarchy more accurately comprise historical trajectories of political development and decline, influenced by contingent circumstances (Skinner 1985). Spatial variations in political-administrative centralization may exhibit cumulative changes through time, what Skinner (1985:283) referred to as a regional developmental cycle (cf., DeMontmollin 1989:209-212). In contrast to the recurrent structures of political cycling, the trajectories of regional political development and decline correspond with distinct and irreversible historical sequences (Figure 12).

While Skinner (1985:281) was primarily concerned with the regional analysis of market economies, his concept of dynastic cycles is relevant in understanding the historical trajectories of polities in the Mississippian Southeast. Political consolidation and regional centralization were recurrent, yet not inherently cyclical in terms of structural power or social relations of authority. A macroregional analysis tends to support the occurrence of political cycling, but requires overlooking regional, diachronic variation and exaggerating the scale of interregional interactions in the Mississippian Southeast. Anderson (1994b:12-52) attempts to redress this problem by incorporating a wide range of variables that might have contributed to factionalism and political cycling. Nevertheless, regional developmental cycles must take into account the historical contexts of political-symbolic actions and structural power. Political cycling

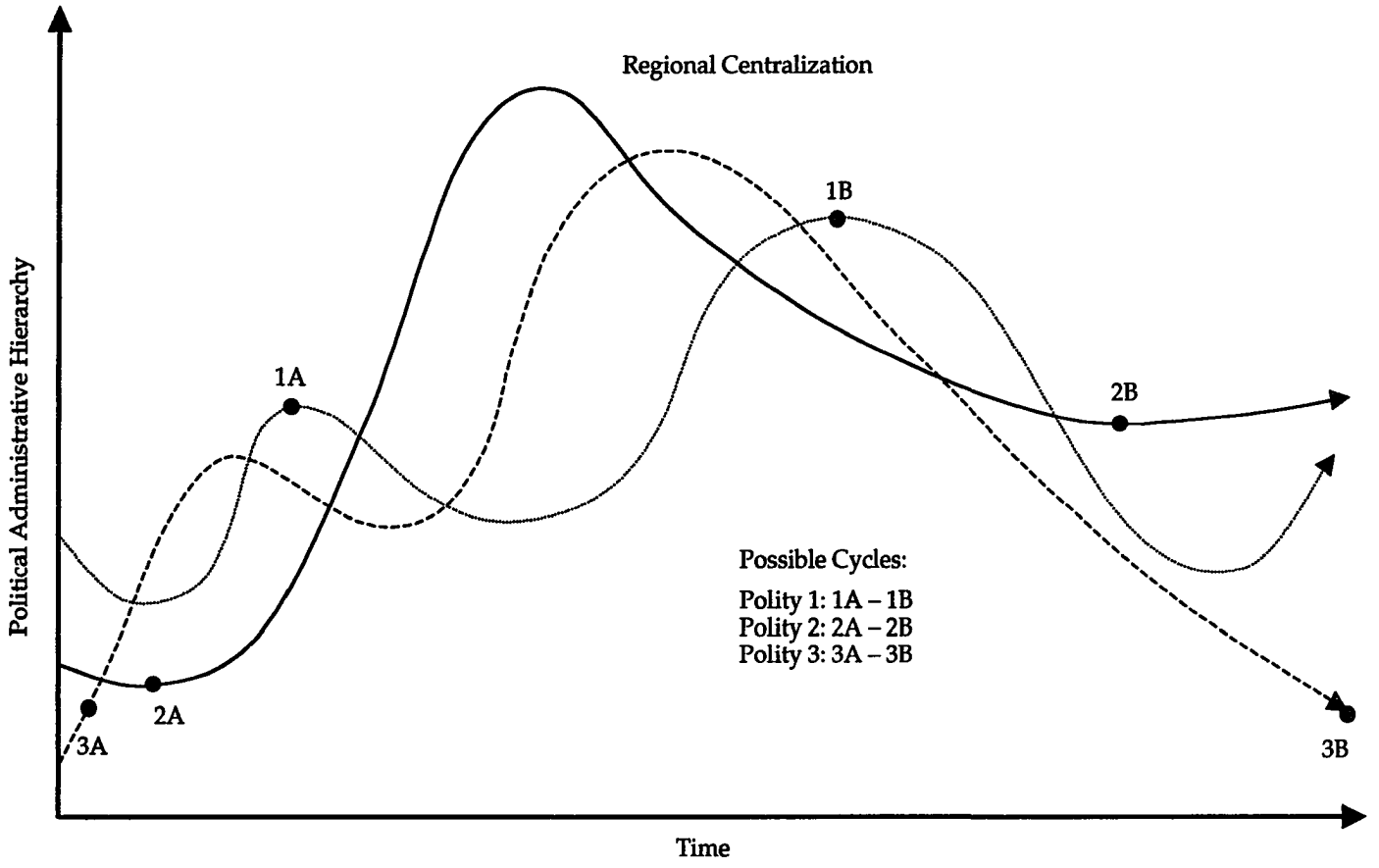


Figure 12. Historical Trajectories of Regional Developmental Cycles.

has pointed archaeologists in the direction of historical process and structural power, yet it has overemphasized the significance of sociopolitical typology and the prevalence of political instability.

The portrayal of factional competition as an inherent characteristic of chiefdoms produces caricatures of human agency in terms of a particular sociopolitical type, as in "chiefly cycling" and "cycling chiefdoms." As Brumfiel (1994:12) notes, regional political development should be regarded as an "epiphenomenal consequence" in subject-centered analysis: "Although factional competition provides a common impetus to political development, any particular sequence of development is uniquely complex and contingent" (Brumfiel 1994:12). As such, factionalism does not account for all of the ways in which structural power and praxis were related to regional development and decline, or why the historical trajectories of some regional polities were not cyclical, but instead appear to have been punctuated by dramatic episodes of rapid centralization, protracted decentralization, and decline (e.g., Knight and Steponaitis 1998; Pauketat 1993a, 1995). Since factional conflicts presented potential constraints to regional centralization, as well as opportunities for political consolidation, social relations of authority and questions of legitimacy lie at the center of the problem (Spencer 1994).

As one facet of political action, any consideration of factionalism must also take into account the changing contexts of accommodation, compliance, and coercion (Bujra 1973:149-150). To do otherwise is to merely reify factions as a normative social structure. Examining the dynamics of political action, Bujra (1973:132) suggests that factionalism has more to do with "informal" political process than the "formal structural aspects of political systems." The juxtaposition of network-oriented and corporate-based political strategies makes a similar distinction, in that political actions can be *both* exclusionary and group oriented (Blanton et al. 1996; cf., Renfrew 1974; Trubitt 2000). Individual-centered social relations may be more susceptible to episodic fluctuations, while corporate strategies emphasize "collective representations" and the institutionalization

of hierarchical social structures (Blanton et al. 1996:4-6). Although the former strategy in one sense parallels the factionalism implied in political cycling, these political actions represent opposite ends of a continuum in potential historical variation. The prospect of unpacking this historical variation in terms of social relations of authority provides a critique of subject-centered/system-centered and network-oriented/corporate-based distinctions in regional political development and decline. More importantly, it provides an avenue for investigating historical process in terms of regional political culture.

Political Culture

Consideration of political culture presents a point of departure for investigating structural power and praxis, as an historical process that did not uniformly result in the emergence of complex chiefdoms or expansionist states. The concept of political culture is meant to focus attention on the ways in which social relations of authority were intentionally (and unintentionally) negotiated and transformed. Political organization is in this sense not merely structural or institutional, but connects with symbolic expressions of identity and legitimate authority (Bourdieu 1991:37; Cohen 1974:18-34; Kertzer 1988:35-56; Pauketat 1993a). One of the underlying assumptions here is that "identity is formed in action" and that such identities are "dynamic, processual, and contextual phenomenon" (Mach 1993:5). Unlike normative cultural categories or taxonomic constructs, political culture must be operationalized within changing, historical contexts (cf., Wilson 1992:11-24).

The concept of political culture that is proposed here differs from earlier studies that have implied a particular form of ideology, level of complexity, or institutionalized bureaucracy (i.e., Thompson and Ellis 1997). From the latter point of view, political culture denotes a particular range of social relations created as an *outcome* of cultural evolution or political economy (e.g., Earle 1997:206). Yet political culture is a pervasive dimension of social practices that does not hinge on sociopolitical taxonomy or require

the production of an economic surplus. Alternatively, when used as a synonym for political ideology, political culture implies an unchanging, historically determinate ethos deployed by a few, against unsuspecting masses of people or opponents, for political ends (Thompson and Ellis 1997; Wilson 1992:11-13). Political culture as an historical process requires reassessment of such categorical distinctions between ideology, culture, and power (Ball and Dagger 1990:7).

Nor should political culture be mistaken for political socialization or structural differences between regional polities (Cohen 1974:129; Wilson 1992:12). As such, political culture does not offer a ready-made explanation for the development and decline of regional polities. Previous studies of political culture were inadequate for the same reasons that the culture concept was viewed as falling short: it did not address the actual processes of change, and while theoretically unifying, was ultimately tautological (Watson 1995; Wolf 1984). Research has more recently focused on situating political culture within shifting historical contexts (as in power *versus* culture), viewing political culture itself as problematic, and following Giddens (1979, 1987), recognizing that these changes entail a dialectic of agency and structure (Dirks et al. 1994; Keesing 1994:309; Lockhart 1997; Thompson and Ellis 1997; Thompson et al. 1990; Wolf 1999).

In this sense, political culture can be applied to a comparative study of the divergent and incommensurate historical trajectories of regional polities (Giddens 1984:199-201, 1987:214). Studies of political culture should be both anthropological and historical in the sense proposed by Wolf (1999:14): "to attend to how material production, organization, and ideation intersect, and to how this intersection is not frozen at some moment of history but unfolds in tension-producing changes over time and space." Political culture refers to the ongoing negotiation of meaningful social relations of authority, involving actions that intersect political economy and ideology through compliance, accommodation, and coercion (cf., Wilson 1992:11-24). Following Wolf (1990:587), studies of political culture should seek to uncover the "power that

structures the political economy," as well as the practices that defy, resist, or reinvent the social circumstances of power relations (Foucault 1980). In this "political economy of culture," the social distribution of meanings is an intrinsic part of informal, non-capitalist economies (Hannerz 1992:7, 18; cf., Halperin 1994:191-195). Instead of viewing sociopolitical systems and political economy as overarching, integrative structures, emphasis is placed on examining political culture in terms of contrasting historical trajectories of political-symbolic actions, or praxis (Gramsci 1971:403-409; Kertzer 1996:153-160; Pauketat 1993a, 1997b:11; Swartz 1968a:6-12).

Encompassing the late prehistoric and protohistoric Southeast, Mississippian archaeology presents an ideal opportunity to examine regional political development and decline. A synthesis of historical anthropology and archaeology offers the appropriate framework for studying Mississippian political culture as an historical process (e.g., Burke 1997:191-198; Comaroff 1982; Comaroff 1985; Ohnuki-Tierney 1990:6-18). The historical trajectories of Mississippian polities reflect regional variations of indigenous social relations of authority, rather than recurrent political cycles or a macroregional, structurally-defined, cultural florescence and collapse. Locational models that situate ideology and meaning outside of political economy are ill-prepared to address this *processual* culture history. As Hodder (1991a:33) points out, "power and resources are given prestige and value through systems of meaning that are themselves historically situated."

As argued above, the timing and scale of regional political development and decline were neither concurrent or commensurate across the Southeast. Yet there do appear to have been underlying commonalties in a macroregional culture area, what has recently been referred to as a process of "Mississippianization" or the emergence of a "Mississippian World" (Anderson 1997:259-267; Payne and Scarry 1998:22-24; Pauketat and Emerson 1997a:275-276). Mississippianization can be distinguished from previous explanations involving cultural diffusion, migration, and expansion, in that non-local

traditions were intentionally emulated, resisted, or reinterpreted at the local and regional levels. The adoption of recognizably Mississippian cultural practices, material culture, and architecture throughout the Southeast was facilitated by multiscalar interactions, among regionally autonomous polities (cf., Sassaman and Nassaney 1995:349).

Pauketat and Emerson (1997b) have argued that the disproportionate influence of Cahokia as an early, and extraordinarily large-scale, Mississippian polity offers insight into this process (see also Pauketat 1994:182-184):

> Such long-distance communications and interactions, though not causing the rise of Cahokia, were at the heart of the Mississippianization of the Southeast. Cahokian influences, or a Cahokian strain of 'political culture,' altered in some ways the long-term development of significant portions of the Eastern Woodlands (Pauketat and Emerson 1997b:275-276).

The dissemination of cultural practices was negotiated on regional and local levels, in which the "long-distance exchange of Cahokia-made symbols would have been part of the pan-regional diffusion of Mississippian political culture" (Pauketat 1997b:11). Cultural emulation and accommodation are not the only factors to consider, as divergent historical trajectories call into question the ways in which such practices may have been contested, coerced, or resisted.

Knight (1997:234) addresses a similar problem in terms of "historical linkages" and the "adoption of the conceptual core of Mississippian 'superculture'." Historical linkages refer to a macroregional undercurrent of shared referents, in which legitimating symbols or "shared classes of *sacra*" provided the "*context* of Mississippian political power" (Knight 1986:685, 1997:234). Contrasting the polities of Moundville and Cahokia, Knight (1997) outlines comparable historical sequences of regional political

consolidation, decentralization, and decline. While the trajectories of these Mississippian polities were not concurrent or produced on similar spatial scales, the comparison highlights a range of similar, yet distinct political dynamics.

Developmental parallels between Moundville and Cahokia imply not only the regional expression of a Mississippian "conceptual core," but a "chain of historically linked events," or underlying commonalties in the historical process of regional political consolidation and decline (Knight 1997:234). Mississippian political culture involved revaluations and renegotiations of power relations in different historical circumstances, as regional expressions of Mississippianization. These practices did not revolve solely around factional competition (cf., Anderson 1994a, 1994b), but ranged from compliance and accommodation, to coercion and resistance (Figure 13). Weber (1978:50; cf., 1993:111-118) suggested a similar derivation of authority in corporate groups, in which associations were made by "voluntary agreement" (consensual) or "imposed and acquiesced." Political domination and the exercise of power in regional polities stem from such voluntary and compulsory associations, linked to the establishment of legitimacy or legitimate authority (Weber 1978:53-54, 212-216, 1993:118). While both Cahokia and Moundville appear to have been broadly influential as centers of Mississippianization, political culture must ultimately be examined as an historical process on a regional scale (Rees 1997).

Social relations of authority can be characterized in terms of a political-symbolic field of compliance and coercion, ranging from the orthodoxy of accommodative practices, to factionalism, coercive violence, and various forms of resistance (Scott 1985:28-41, 1990). A grid-group analysis of political culture presents one means of illustrating the organization of diversity in terms of social involvement (Figure 13), as a process of heterogeneity and praxis, rather than rigid structuralism or behavioralism (Douglas 1992:167-207, 1997; Pauketat 1994:25-26; Thompson and Ellis 1997:2-7; Wolf 1999:289). Increasingly hierarchical and heterarchical social relations of authority are

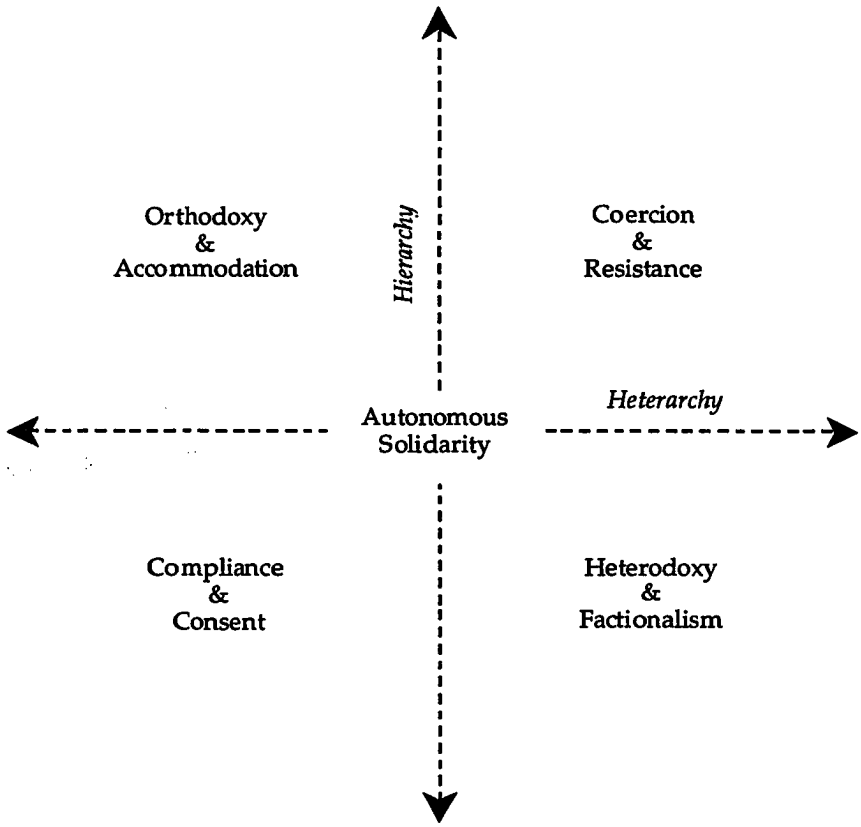


Figure 13. Action Grid of Ideological Compliance and Coercion.

associated with overlapping extremes of accommodation and factionalism, in which political-symbolic actions are characterized by the formation of alliances and coalitions. Factional competition is only one dimension of potential social relations, and not historically determinate (cf., Anderson 1994a).

Regional political development and decline in the Mississippian Southeast should accordingly be approached as a process of political-symbolic revaluation and interaction among corporate groups and coalitions, culminating in the consolidation of legitimate authority through compliance and coercion, in the context of social heterogeneity (Emerson and Hargrave 2000; Pauketat and Emerson 1999). Just as Mississippianization involved the revaluation of craft goods produced as symbols of authority, preexisting social relations were transformed through praxis. It is in this political-symbolic context that the material manifestations, styles, and "cult institutions" of the Southeastern Ceremonial Complex can be viewed as the regional elaboration of recurrent cosmological and iconographic themes, involving craft production, elite acquisition, and long-distance exchange (Brose 1989; Brown 1976, 1989; Emerson 1989; Knight 1986; Muller 1989). Although Mississippian polities were linked by similar *kinds* of symbols, social relations of authority hinged on the appropriation of meaning and production of identity on regional and local levels (Kertzer 1996:156-160; Pauketat 1997b).

As it is used here, political development refers to the emergence of social relations of authority that extended beyond kin-ordered or local levels, characterized by consolidation and centralization. In this sense, development refers to an historical process in which political ideologies were increasingly consolidated, resulting in some form of ideological compliance, legitimate authority (orthodoxy), and regionally centralized political economy. Political consolidation was similarly associated with representations of authority and the distribution of social meanings among groups, involving "power asymmetries" and the construction of a hegemonic social order through accommodation, collaboration, or coercion (Pauketat 1994:25-31). Political

consolidation and social identity were closely associated through craft production and an "architectural grammar," or "legitimate language" of sacred space (Bourdieu 1991; Costin 1998; Lass 1998; Lewis et al., ed. 1998; Sassaman 1998; Spielmann 1998).

Regional centralization is distinguished from political consolidation as involving the centripetal appropriation and control of goods, whether comestibles, crafts, or raw materials. It also implicates social relations of production, social obligations, and labor (Pauketat 1997b:4, 1998:57-68). However, regional centralization is typically described by archaeologists in terms of demographic nucleation, urbanization, or the political economy of central places. It can more broadly be characterized by the disproportionate distribution of legitimate authority. Helms (1993:173-191) thus refers to the "superordinate center," in a cosmological scheme of "creative centers." Helms (1993:187-191) suggests that "uncentralized superordinate societies" may have enlarged the "moral universe of the center" through the extension of kinship associations. The centralizing tendencies of political consolidation hinged on the creative abilities of certain individuals and coalitions in acquiring and controlling the cosmological significance of things, frequently over long distances, as well as the revaluation of monumental architecture and locally-crafted items (Helms 1993:163-167).

The abilities of a certain individuals and groups to manipulate and redefine compliance ideologies through political symbolism is at the core of an historical process of consolidation, centralization, and cultural production (Comaroff 1985:75; Wilson 1992:12-24; Wolf 1999:290-291). Comaroff (1985:74-77) associates the charismatic and creative powers of the chiefly office in South African polities with the formation of coalitions and alliances, as challenges to the "existing distributions of power:"

> The fulcrum of the process of centralization was, of course, the chiefship itself. We have seen that the office rested on institutionalized mechanisms capable of accumulating a fund of material and symbolic resources; on

> the control of land, labor, booty, and trade, and rights to various forms of tribute; and on the regulation of the agricultural cycle. The spatiotemporal dimension of productive and ritual processes spiralled inwards, establishing the chiefship as the "still point" of a turning wheel (Comaroff 1985:75).

Such social relations of authority can be broadly characterized in terms of coalitions, in that different groups pursue collective actions through emulating, instigating, or resisting a social order (Bourdieu 1990:120; Brumfiel 1994:10; Fox 1994:199; Perusek 1994:195-197). Although charismatic leadership is central to the formation of coalitions, preexisting conflicts, political identities, and experiences often define what is regarded as socially appropriate (Caplow 1968; Cook and Gilmore 1984:28-29; Sider 1997:63-65). Emphasis on coalitions also circumvents the methodological difficulties in focusing on individuals and events in prehistory, while allowing for the investigation of regional political development and decline as an agentive, historical process.

Although political consolidation and centralization are historically related to the decline of regional polities, the latter is less often examined, and consequently not as well understood (Eisenstadt 1988; Yoffee 1988). "Decline" as used here refers more generally to the disintegration or dissolution of social relations of authority. The decline of a regional polity may have involved decentralization or out-migration from a central place, as well as more radical changes in political culture, more commonly referred to as a "collapse of civilization" (Cowgill 1988:255-57; cf., Yoffee 1988:14-15). Decentralization and decline are used here as less ambiguous alternatives to collapse, which tends to assume cultural homogeneity in lieu of historical process (cf., Yoffee 1988:14). Concepts such as "cultural collapse" and the "collapse of civilization" frequently gloss over the processual nature of regional political dynamics by assuming a sudden and precipitous

loss of cultural complexity, rather than investigating the rate or scale of an historical process.

Decentralization refers to the regional diffusion of a centralized political culture, as characterized by centrifugal dispersals of goods and people across a landscape. Decentralized political culture can be viewed as heterarchically rather than hierarchically consolidated, with social relations of authority "unranked" yet "counterpoised" (Crumley 1995:3). Authority is negotiated through heterarchical social relations, while centralized appropriations of authority may be otherwise resisted or constrained (Comaroff and Comaroff 1991:30; Crumley 1995). Regional political culture in such instances entailed no centralized political economy as such, yet social relations of authority transcended the local-level. This is somewhat comparable to situational contexts described as chieftaincies, or sequential hierarchies (Johnson 1982:402; Redmond 1998a:3-4), although without implying reduced levels of complexity (cf., Milanich 1998).

Based on evidence from Bronze and Iron Age Europe, Kristiansen (1991:19) describes decentralized, stratified polities in which residences were "scattered across the landscape" and regional political economies did not conform to a central place model. While it would be unproductive to expound decentralization as yet another "general type" of polity, political culture should nonetheless be considered in terms of decentralized social relations of authority (cf., Kristiansen 1991:19-20). Regional decentralization is characterized by social heterogeneity in specific historical contexts, whether through confederation, factional competition, or constraints to the further centralization of authority (Blau 1977:79).

As Pauketat (1992:40-43) notes, the "decentralizing tendency of political centralization" as a centrifugal factor in political consolidation appears to have involved increased factionalism. There is consequently a corresponding counter-hegemonic tendency in political consolidation, in which the proliferation of compliance ideologies

may have contributed to regional decentralization, and ultimately decline (Pauketat 1992:40-43). While political consolidation entailed the compliance ideologies of coalitions, the study of decentralization shifts the focus of study to the social heterogeneity of factional conflicts, accommodation, coercive violence, and resistance.

Symbolic Capital

The development and decline of Mississippian political culture can be archaeologically investigated as a process of political-symbolic revaluation, or symbolic capital (Bourdieu 1977:171-183, 1990:112-121, 1991:194-197). Giddens (1979:100) makes a similar distinction in his discussion of the "authorisation" and "allocation" of resources. The former is referred to by Comaroff and Comaroff (1991:30) as the "authoritative frame of reference" (see also Giddens 1995:92, 113-121). According to Giddens (1995:4), "co-ordination of authoritative resources forms the determining axis of societal integration and change." Smith (1992a:23-25) takes up this distinction in describing the Woodhenges of Cahokia, in that the actions of an elite in scheduling and controlling seasonal subsistence rounds represented authoritative resources or "levers of social inequality." In non-capitalist modes of production, authoritative resources represent "the more fundamental lever of change" (Giddens 1995:92).

As with authoritative resources, symbolic capital must be approached in the context of variable historical circumstances and a specific course of political-symbolic action (cf., Giddens 1984:256-262). Bourdieu (1977) describes symbolic capital as bridging the self-interested economism ("material interests") of capitalist accumulation and the culturally appropriate, yet "non-productive" labor and accumulation ("symbolic interests") of honor, prestige, and renown. Symbolic capital is "*the most valuable form of accumulation*" in societies where collective labor is important, and is the "only possible form of accumulation when economic capital is not recognized" (Bourdieu 1977:179, 1990:118). Unlike the concept of authoritative resources, symbolic capital subsumes the

integration of "economic and ideological powers" through the appropriation of legitimate authority, property rights, and labor (cf., Earle 1991b:98). Where symbolic capital is the "only recognized, legitimate form of accumulation," the appropriation of a surplus may appear irrational, or absurd (Bourdieu 1977:180, 1990:120-121). As Kertzer (1996:156) argues, symbolic capital is based as much on emotions as rationalities (cf., Bourdieu 1990:137-139).

The negotiation of symbolic capital in widening political fields involves unequivocal representations of social interests, obligations, and associations through everyday practices in material culture and foodways. These practices have been characterized as prestige goods economies, the mobilization of surplus foodstuffs, redistribution, and tribute (see Chapter Two). The manipulation of symbolic capital through formal and informal ritual can in fact be associated with discrete material correlates (Bourdieu 1991:197; cf., Kertzer 1996:153-154). As "symbolic behavior that is socially standardized and repetitive," rituals provide the context in which "symbolic processes enter into politics" (Kertzer 1988:5-8). Gifts of food and ritual feasting, formerly referred to as reciprocity and redistribution, represent distinct forms of symbolic capital in regional political culture. The symbolic capital of craft production and acquisition is similarly accessible to archaeologists. Furthermore, symbolic capital engages the built environment, including the monumental reordering of social landscapes. Each of these practices can in turn be related to warfare, coercion, and symbolic violence.

Gifts of Food and Feasting

Redistribution continues to be associated with Mississippian polities, despite its apparent absence as an organizing principle in managerial-based leadership (Earle 1977, 1987a; Peebles and Kus 1977). Alternatively, Blitz (1993a:21) approaches redistribution in terms of resource mobilization and distribution, or "the pooling and exchange of food

between households that takes place during large-group aggregations, ceremonials, and feasts." Wesson (1999) links informal redistribution and communal food storage practices with the efforts of certain groups to control access to food surpluses. Redistribution in this sense overlaps with staple finance (D'Altroy and Earle 1985; Earle and D'Altroy 1989; Kolb 1999), since the surpluses it entailed were politically-defined beyond the household (Pearson 1957). Redistributive practices more broadly represent the socially-appropriate consumption of foods for political ends. Tribute lies at the other end of this status-related variation in feasting, food storage, and foodways, what Welch and Scarry (1995) refer to as "elite provisioning." Symbolic capital in Mississippian political culture involved the acquisition and consumption of certain *kinds* of foods, whether staples or more exotic, perishable fare (Jackson and Scott 1995b; cf., Helms 1993:160-170, 200-209).

Gifts of food represent an expedient political currency documented among polities throughout the world, in which reciprocity is embedded in social relations of authority (Malinowski 1961 [1922]:166-194; Mauss 1967; Sahlins 1972:149-275). According to Mauss (1967:43, 73-80), the "productive capacity" of the gift compels obligations, creates prestige, and reinforces solidarity. Gifts may be made as "counter-prestations," in order to "maintain a profitable alliance which it would be unwise to reject" (Mauss 1967:71). As Sahlins (1972:182) surmised, the gift carries with it the "political burden of reconciliation." In so far as there are no "pure" or "free" gifts, they comprise a political medium of exchange, in which authority and identity are actively negotiated (Douglas 1989; Malinowski 1996). Social relations of authority are expanded through such generosity, creating indebtedness and prestige through association. Since "to give is to show one's superiority," food is valued not simply as a commodity or disposable wealth, but in the accrual of social obligations and as symbolic capital (Bourdieu 1977:171-183, 1990:112-121; Lévi-Strauss 1996:19; Mauss 1967:72).

Ethnographic and archaeological examples of ritual feasts in which certain dishes were prepared and consumed present evidence of the central role of foods as a form of symbolic capital (Ames 1995; Blitz 1993a, 1993b; Jackson and Scott 1995b; Sahlins 1972:187-191, 263-275; VanDerwarker 1999). Among the Tikopia in Polynesia, certain kinds of cooked foods held special significance. According to Firth (1957:103), "cooked food has a direct bearing on kinship in that so many obligations are fulfilled in terms of food, and to some extent the nature and quality of the dish are indices of the timbre, as it may be called, of the relationship." Periodic gifts of food as "conventionally sanctioned eatables" on the Trobriand Islands regularly established and reproduced social relations of authority through ritual feasting (Malinowski 1961:187). In contrast, quite different occasions for gift-giving and ceremonial feasting were recorded among polities along the Northwest coast of North America (Bourdieu 1977:194; Codere 1950:77-78; Drucker and Heizer 1967; Kan 1986, 1989).

The distribution and consumption of foods in the Mississippian Southeast symbolized and solidified political relations and alliances, particularly in the context of ritual feasts and warfare (Dye 1995). Foods such as maize held strategic political importance in ceremonial exchanges and as prestations to a centralized or legitimate authority (Welch and Scarry 1995). Among historic tribal confederacies in the Southeast, the Green Corn (or Natchez Great Corn) ceremony was not only associated with planting or fertility, but may have served as an occasion to reproduce social relations of authority and establish new political relationships or alliances (Hudson 1976:365-375; Knight 1986:683; Swanton 1911:110-130, 1931:221; Witthoft 1949). The significance of maize in such contexts was not merely as a fortuitous dietary staple or comestible surplus, but as symbolic capital in the renewal (and control) of the seasonal agricultural cycle (Emerson 1997a:134, 243-245; cf., Rose et al. 1991:21; Scarry 1993c:90; Smith 1992a). The continuity of Mississippian corn/fertility iconography and cosmology supports such broad historical connections (Emerson 1997a:262; cf., Knight 1986:683).

While previous studies have stressed the underlying importance of maize in Mississippian political economy, investigations of faunal remains suggest that deer and preferential cuts of venison were also important in ritual feasting and the provisioning of an elite (Bogan and Polhemus 1987; Jackson and Scott 1995a; Kelly 1997; Michals 1990, 1998; Scott 1983; Welch 1991). There is additional evidence that other animals, including certain rare species, were incorporated in social relations of authority (Jackson and Scott 1995b). A wide range of political relationships are documented as having been negotiated over the display and consumption of dishes containing cooked meat (e.g., Firth 1957:103). During the early eighteenth century in the lower Mississippi valley, the Natchez are reported to have held a "war feast" in which particular foods were meticulously arranged (Swanton 1911:129-130). Cooked maize, deer, and dog were reported to have had specific meanings to be ritually consumed by warriors. Other foods (including fish) apparently had negative connotations and were to be avoided in certain social contexts (Hudson 1976:128, 158, 281). Just as certain kinds of food might have been ritually avoided, the presentation and consumption of others comprised symbolic capital in the consolidation of a legitimate authority.

Craft Goods

Symbolic capital was also associated with craft production, prestige goods distribution and display, and the acquisition of exotic resources, or control of long-distance exchange (Helms 1992a, 1993, 1994; Pauketat 1997b). Such practices were also likely to have been associated with ritual feasts, in the context of alliance formation and coalition building. The symbolic capital of craft goods (as potentially "prestigious" emblems) overlaps with foodways and feasting, in that the display and consumption of certain dishes was often associated with finely-crafted ceramic vessels (i.e., serving ware) and other items vested with political meanings (Welch and Scarry 1995). Ceramic vessels might have literally served as "containers of authority," in which emblematic

display and consumption were more politically expedient than control of production or distribution (Giddens 1984:256-262; Smith 1992a). Native copper plates and spatulate axes were reported to have been displayed during the Green Corn Ceremony among the historic Tukabatchee (Hudson 1976:369-370; Swanton 1928a:569-570, 1928c:66). Although the manufacture of these items predates their historical usage, there are clear correlates in mortuary contexts for the prestige attributed to such items, as well as their association with ceremonial practices in the Mississippian Southeast (Knight 1985:25-26; Larson 1971; Peebles 1971; Smith 1987:101; Waring 1977).

Prestige was defined in the context of social relations, rather than attributed directly to a commodity, or its accumulation as a form of wealth. The concept of "prestige goods" stems from social relations in which the production, acquisition, display, and distribution (or ritual destruction) of such items had an overriding, if not conspicuous political-symbolic intent (cf., Kipp and Schortman 1989; Peregrine 1992). The uses of an item, such as a ceramic bowl, represent only one dimension of its potential symbolic capital, in which meanings were also crafted and attached (Bourdieu 1991:43-65). Categories such as "utilitarian" and "ceremonial" must consequently be reexamined within the contexts in which such items were produced, acquired, and displayed.

Mississippian prestige goods economies entailed iconographic representations of symbolic capital, in that the production, use, and transfer of objects was associated with a particular cosmology or dominant ideology (Emerson 1997b:193-223). The concept of wealth finance does not accurately describe this historical process, in which prestige may have been accrued from either centralized access to, or the distribution of, items with political import. The same social relations that defined the prestige of an object may have also appropriated the requisite labor and productive specialization. Pauketat (1994:184) thus suggests that "efficiency must be defined from an elite perspective." In the Cahokian polity, this appears to have included elite-controlled production and

distribution of Ramey Incised pots, as representations of a cosmological order that reinforced the sacredness of Cahokian ritual and hierarchy (Pauketat and Emerson 1991:935, 1999). Knight (1997) suggests a contrasting scenario for the decline of the Moundville polity, in which the "communalization" of elite iconography through cult symbolism is reflected in the widening distribution of Moundville Engraved, *variety Hemphill* ceramic vessels (Knight 1997:240).

Monumental Landscapes

Just as craft production and acquisition may be understood in the context of symbolic capital, the built environment also represents the materialization of social relations of authority (Lawrence and Low 1990). Palisades, military outposts, and walled towns were constructed not merely for defense, but as a tangible demonstration and reminder of "the power of the authorities who were able to build and maintain them" (Trigger 1990a:122). Domestic and public spaces as well, reflect and reinforce social inequalities and compliance ideologies not only from persistent use and reuse, but from intentional design. Politically-designed spatial patterning is discernible in landscapes as different as late prehistoric mound centers and towns, elite residences, roads and causeways, and the urban edifices of industrial capitalism (Earle 1991a; Lewis and Stout 1998; Lewis et al. 1998; Mainfort and Walling, ed. 1996; Mrozowski 1991; Renfrew 1984; Trumbold 1991). The construction of monuments, and monumental buildings in particular, is associated with demographic nucleation, urbanization, and the emergence of an elite class of rulers (Adams 1966:29-30). Sacred spaces are noteworthy as the product of collective representations that were not merely functional or utilitarian, but simultaneously political-symbolic and cosmological. (Brown 1997:475-477; Wesson 1998:95-101). Sacred spaces and buildings, oversized public architecture, earthworks, and plazas can more generally be referred to as monumental landscapes.

The independent origins of monumental landscapes among regional polities throughout the world attests to the momentousness of these central places and "great towns" as representations of social inequalities, ascribed status, and power relations (Lindauer and Blitz 1997; Neitzel, ed. 1999; Trigger 1990a:120). Trigger (1990a) describes monumental architecture as a form of conspicuous consumption comparable to mortuary practices and ritual feasts, in which the principle of least effort was opportunistically modified in the service of political symbolism. Yet viewing monumental landscapes as material transformations in which "energy is converted into prestige symbols" (Trigger 1990a:125) does not entirely account for variations in construction histories and social relations of authority (Kidder 1998:123-124). It is the social appropriation of labor and social relations associated with construction, use, and reuse of the mounds, temples, and plazas that are important here, rather than the architecture itself as an ostensibly fixed and meaningful form.

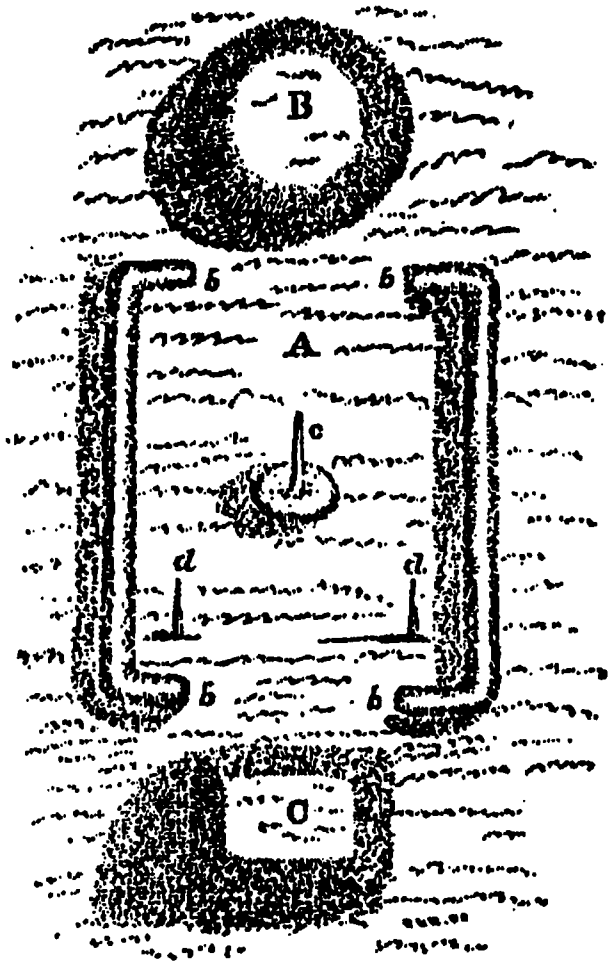
The act of monumental construction in regional polities more broadly signifies social relations of authority arranged through associations, corporate groups, or coalitions. The "common currency" of monumental landscapes is in this respect not simply the "control of energy" or mobilization of labor to make monuments, but the appropriation and wielding of symbolic capital in reordering *social* landscapes (Renfrew 1984:234-241; Trigger 1990a:129). The construction and partitioning of monumental landscapes in the Mississippian Southeast not only symbolized prestige, making certain ideologies *seem* more legitimate; it was the embodiment of a cosmological and elite-orchestrated reordering of social realities (Knight 1986:683, 1998:44-46; Nassaney 1996:35; cf., Steponaitis 1986:385-386). Pauketat (1993b:147-148) thus describes Mississippian platform mounds and the sacred temples they supported as "nodal points of articulation between the community and the cosmos." The cosmological center or *axis mundi* of a monumental landscape corresponded with political consolidation and the

social transformation of space, as represented in superordinate centers (Helms 1993:173-191; Wesson 1998:99).

The study of monumental landscapes should also account for the changeable, and ultimately contested, social relations of authority in construction, use, alteration, and abandonment (Dalan 1997; Pauketat 1993b:4-5). As Dalan (1997:89) points out for Cahokia, "earth-moving activities were not an epiphenomenon of an already Mississippianized society; the creation of the cultural landscape played an integral role in the development of Mississippian culture in the American Bottom." Sub-structural, platform mounds are the quintessential feature of Mississippian monumental landscapes, ceremonial centers, and political capitals (Knight 1989b; Payne 1994). The construction and alteration of mounds in particular, should be considered in the context of regional political culture, along with the successive temples, elite residences, or structures they may have supported (Pauketat 1993b; Pauketat and Rees 1996).

Early historic descriptions of platform mounds clearly indicate their uses as foundations for sacred temples and elite residences, often situated along the margins of a plaza or large public space (Le Page Du Pratz 1947 [1758]; Elvas 1993 [1557]:95; Swanton 1911:162, 191; Rangel 1993 [1851]:300). During the late eighteenth century, Bartram (1996 [1789]) described the spatial layout of earthen platform mounds and plaza among the Creek (Figure 14). Bartram and other documentary sources provide general analogies in understanding the symbolic capital of Mississippian monumental landscapes (Brain 1978, 1988; Brown 1985b; J. Brown 1990; Neitzel 1965, 1983; Williams and Brain 1983). For example, Knight (1986:683; 1989b) marshals ethnographic, mythical, and lexical evidence for mound construction and use among historic southeastern tribes, as enduring earth icons and symbols of world renewal, purification, and fertility.

Archaeological evidence for episodes of incremental mound construction and summit resurfacing suggest that such practices were intimately associated with world renewal, purification, and political succession, just as the interment of the deceased in



From Bartram (1996 [1789]:562).

Figure 14. Bartram's Plan of a Muskogee Ceremonial Center.

mortuaries and burial mounds reflected social position and authority. The laying down of relatively thin mantles of soil was described by Waring (1977:58) as the ceremonial "sealing off" of a previous structure and preparation of a new mound surface. Such occasions for mound construction and summit use may have been associated with annual fertility rituals among Mississippians, as represented in the Creek Busk ceremonial. Once constructed, the meanings attached to platform mounds were renegotiated and reconstructed, along with the associated temples, residences, and activities carried out in mound precincts (Knight 1989b:285; Pauketat 1993b:146; Waring 1977:58).

In contrast, more sustained efforts at massive mound and plaza construction may have been associated with even more monumental alterations of regional political culture. Pauketat (1993b:5, 142-148) has advanced just such an approach to understanding the earthen mounds and spaces at Cahokia, in which the temporal patterns of construction and alteration reflect "region-wide political-religious changes." He associates later additions of thick, clay mantles, with profound alterations to the meanings of the mound itself (Pauketat 1993b:147). While dramatic episodes of monumental construction were associated with regional centralization, such practices also indicate efforts to consolidate a legitimate authority, through the revaluation of the social landscape (cf., Trigger 1990a:127). While mound construction itself was a political-symbolic act, the meanings of both mounds and summit architecture were transformed through time. Interpretations of mound construction, use, and alterations should consequently take into account the fact that, like different regional polities, "mounds had different histories" (Pauketat 1993b:146).

Once produced, the monumental landscape of mounds and ceremonial center was a palpable and durable referent. Although the meanings attached were more malleable and might have been expediently revalued, the underlying spatial idiom was likely to have endured long after corresponding social relations of authority had been

transformed (Trigger 1990a). Pauketat (1997a:49) thus refers to the "inertia of Cahokia as a sacred location" and Knight (1998) suggests that the gravity of Moundville's landscape persisted for centuries after the ceremonial center was largely abandoned. The construction histories of monumental landscapes thus represent a recurrent theme in the political culture of regional polities in the Mississippian Southeast.

Symbolic Violence and Coercion

Lastly, symbolic capital can also be understood in terms of coercive social relations, as authority "accumulated in the course of previous struggles" (Bourdieu 1991:194). While social relations of authority imply some degree of accommodation and ideological compliance, it may also entail symbolic violence, coercion, threats of retribution, domination, and resistance (Brumfiel 1989; Jahangir 1989; Paynter and McGuire 1991; Reyna 1994). This becomes apparent in the context of competitive feasting, in which gifts of food and resources were also a means of symbolic violence, as a way of "fighting with property" (Codere 1950). Ritual feasts were occasions for subordination and coercion, as well as forging and maintaining alliances, making restitution, and negotiating peace.

Gifts associated with political alliances or tribute might have been the only alternative to warfare and as such, are exemplary of coercive social relations among regional polities (Dalton 1977). Dye (1995:292) suggests that ceremonial exchanges of food, prestige goods, and other resources represented a "political currency" among Mississippian polities, intensified by warfare and threats of violence (cf., Kipp and Schortman 1989). He further suggests that the circulation of certain prestige goods may have been facilitated by rituals associated with warfare and peace (Dye 1990, 1994, 1995:307). Symbolic capital was negotiated in such contexts not simply through the exchange of goods, but through coercive tactics, political subordination, and resistance.

Coercion may also be associated with ideological compliance through various forms of symbolic violence (cf., Wilson 1992:24). Warrior sodalities, militarism, and other representations or displays of coercive force have clear implications as symbolic violence not accounted for by territorialism or "innate" aggression (Bourdieu 1991:51-52; Malinowski 1941; Otterbein 1973; Wolf 1987, 1999:172-178). In fact, the ubiquitous occurrence of warfare throughout prehistory has prompted many scholars to correlate political development (and less frequently, decline) with organized violence (Carneiro 1981, 1990; Dickson 1981; Ferguson 1984, 1990; Ferguson and Whitehead, ed. 1992; Gibson 1974; Haas, ed. 1990; Keeley 1996; Webster 1975). External warfare and internal, factional conflicts both present certain opportunities for seeking power, status, and legitimate authority, often expressed as symbolic violence (Redmond 1994a, 1994b; Reyna 1994; Riches 1986). The propensities for symbolic violence can be distinguished from warfare and factionalism however, as a form of coercion not limited to organized conflict. In contrast, Earle (1997:105-110) describes coercion primarily in terms of military deployment ("the strategic use of naked force"), as a distinct source of political power.

Warfare and coercion are difficult to discern from the archaeological record (Blakely, ed. 1988; Milner et al. 1991). While fortifications such as palisades and moats are commonly interpreted as evidence of warfare and defensive posturing, it may also indicate attempts to politically dominate a surrounding hinterland and its residents (Hassig 1992:43; Reyna 1994; cf., Larson 1972; Steinen 1992). As part of the built environment, palisades and fences also demarcated ceremonial enclosures and the separation of social space (Anderson 1994b:310). Such physical barriers would have clearly signified hierarchical and heterarchical social relations of authority. The historical contexts of fortifications and palisade walls should consequently be examined as strategies aimed not solely at defending society from an outside threat, but as instruments of coercion and symbolic violence.

Evidence for systematic, organized violence in human physical remains is even more difficult to detect. Furthermore, the traumatic injuries of individuals, if discernible, may not reflect the political exigencies of coercion. The evidence for human sacrifice and dismembered body parts such as trophy heads are notable exceptions. The interment of sacrificial victims in the Mound 72 elite burial at Cahokia is a potent example of the potential extent of symbolic violence in one particular, albeit extraordinarily large-scale, Mississippian polity (Fowler 1977, 1991; Pauketat 1997a:35-37). There is also evidence from historic sources for symbolic violence in the form of human sacrifice among the Natchez (Swanton 1911:140-141). Bodily dismemberment in mortuary contexts alludes to the potential significance of symbolic violence as a form of coercion, with clear parallels in Mississippian iconography and a "warfare complex" (Conrad 1989; Knight 1986:680; e.g., Muller 1989:24, Fig. 15). DePratter (1991:64) suggests that such coercive tactics continued to be pursued during the early historic period.

Each of the above practices – gifts of food and ritual feasting, craft production and acquisition, the construction and alteration of monumental landscapes, and coercive, symbolic violence – represent variable, yet recurrent themes in Mississippian political culture, in which social relations of authority were accommodated or contested. Rather than alluding to the generative qualities of things (via material production), or delineating the structure of power relations (as a mode of production), emphasis is shifted instead to the productive (and socially reproductive) capacities of individuals, groups, and coalitions in the negotiation of symbolic capital. A comparative analysis of the archaeological correlates of these practices in the Mississippian Southeast holds considerable potential for additional insight into political culture as an historical process. Based on the preceding discussion, a comparative analysis of the development and decline of Mississippian polities should take into account the centripetal forces of coalition building, political consolidation, and regional centralization, as well as the centrifugal and decentralizing forces of social heterogeneity, factionalism, and

resistance. The next chapter introduces Moundville, one of the most archaeologically well-known Mississippian polities, as the focus of this study.

At all events, whatever opinion we may form in regard to the cults of prehistoric Moundville – an opinion which must be based largely on conjecture – we know the region to have been a most interesting one and the inhabitants of Moundville to have figured among the foremost in the art of the ancient peoples of what is now the United States.

– C. B. Moore (1907:405), *Moundville Revisited.*

CHAPTER FOUR:

The Black Warrior Valley

The site of Moundville in the Black Warrior Valley is today one of the most intensively studied and well-known Mississippian mound centers in southeastern North America (Bense 1994:220-223; Peebles 1981, 1987a, 1998; Steponaitis 1983a:6-9). Along with Cahokia and a few other multiple-mound sites, research on Moundville has contributed a substantial portion of present-day knowledge concerning the Mississippi Period (e.g., Knight and Steponaitis, ed. 1998; Pauketat and Emerson, ed. 1997). Like other large, Mississippian mound centers, relationships between local environment, physiography, and surrounding mound and non-mound sites have played an important role in understanding culture history and ecology, setting the stage for studies of political development and decline (e.g., Emerson and Lewis, ed. 1991; Fowler 1978; Peebles 1978; Steponaitis 1978; Stoltman, ed. 1991).

The Moundville site is located approximately 17 m (55 ft) above the east bank of the Black Warrior River, on a Pleistocene-age terrace on the south side of Hemphill Bend (Figure 15). As Knight and Steponaitis (1998:2) note, this is one of the few locations in this portion of the valley where the river meets the edge of the terrace. The Black Warrior River flows southwesterly through the Cumberland Plateau and Coastal Plain physiographic provinces of northern and west-central Alabama. Near the present-day town of Tuscaloosa, the river crosses the Fall Line and enters the Gulf Coastal Plain. The Fall Line Hills are an area of deeply dissected uplands and flood plains that vary in elevation from approximately 15 to 213 m (50 to 700 ft) above mean sea level (AMSL). The lower Black Warrior drainage extends south of the Fall Line Hills into the Coastal Plain.

The Black Warrior River enters the Black Belt (or Black Prairie) region around Eutaw, Alabama, one of the most distinctive geomorphological features of the Coastal

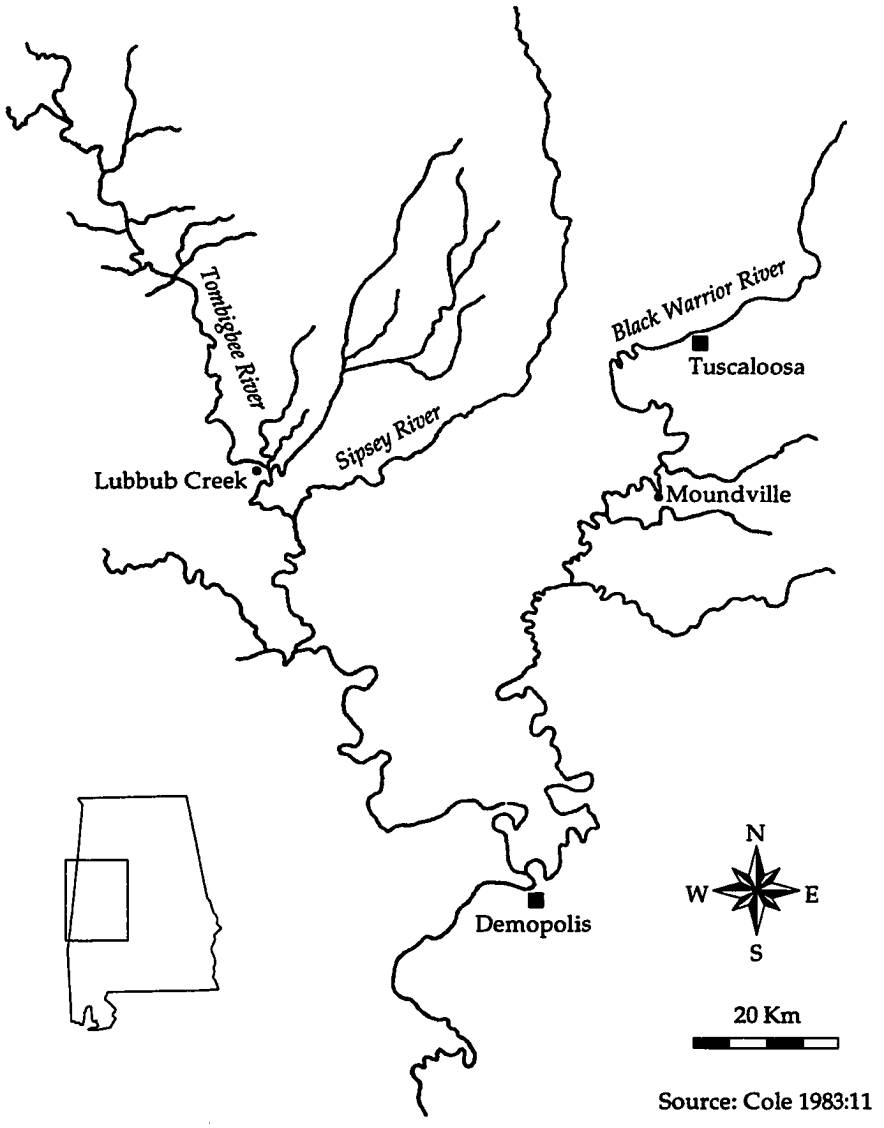


Figure 15. Location of Moundville and River Drainages in West Central Alabama.

Plain province. The Black Belt is an area of exceptionally fertile soils that extend through central Alabama and Mississippi and were known historically for the production of cotton. The confluence of the Black Warrior and Tombigbee rivers lies near the center of the Black Belt, north of the present-day town of Demopolis. The Tombigbee River continues in a southerly direction through the Coastal Plain to its confluence with the Mobile River and the Gulf of Mexico (Lineback and Traylor 1973:5-7; Macrander and Telle 1989:15-20). Mississippian communities utilized this fertile riverine environment where residents had access to a wide range of plants and animals.

The contrasts in relief and resource availability between floodplain and surrounding uplands appear to have been significant to Native Americans throughout late prehistory. Most Mississippian communities and nearly all large mound sites (except for Moundville), were located in the floodplain. Furthermore, most of the known sites are within close proximity to the river (Bozeman 1981; Futato 1989:314-315; Nielsen et al. 1973). Other sites are located on remnant oxbow lakes and tributaries of the Black Warrior River. The site of Moundville itself appears to have been strategically situated in a favorable location. The section of the Black Warrior River valley that bisects the Fall Line Hills was characterized by Peebles (1978:389) as a "transitional region" between the Cumberland Plateau and Coastal Plain, with associated physiographic and biotic diversity. Furthermore, the terrace edge south of Hemphill Bend offers an excellent vantage point for viewing the river in both directions, as well as the surrounding floodplain.

While numerous archaeological investigations have focused on the Moundville site during the past century, relatively less is known about the outlying mound sites, villages, and farmsteads in the surrounding floodplain, uplands, and Fall Line Hills (Hammerstedt 2000; Michals 1998; Welch 1998). From the Cumberland Plateau to the Black Belt, the floodplain of the Black Warrior River ranges in width from approximately 5 to 10 km. The river meanders west and east through the Fall Line Hills,

a straight line distance of approximately 45 km. The designation "Black Warrior Valley" as used here, refers more specifically to that portion of the lower Black Warrior drainage south of the Fall Line and north of its confluence with the Tombigbee River, a relatively small and well-defined study area.

Recent interpretations of the geographic extent of the Moundville polity suggest that it loosely corresponded with this 40 to 55 km extent of floodplain corridor (Knight and Steponaitis 1998:14; Welch 1991:23-25, 1998:134). The central location of the Moundville site is conspicuous, with approximately 20 km of floodplain to the Fall Line on the north, and 35 km to the Black Belt on the south. In his study of settlement patterns in the Black Warrior Valley, Peebles (1978) correlated late prehistoric settlement size and location with floodplain physiography, biotic diversity, and soil fertility. Steponaitis (1978) extended his settlement pattern analysis to include a locational model for regional polities, based on central place theory (see Chapter Two). Although he misconstrued contemporaneous site occupations in calculating spatial correlates, Steponaitis' model has nonetheless remained widely influential in the analysis of regional polities, or what are commonly referred to as simple and complex chiefdoms.

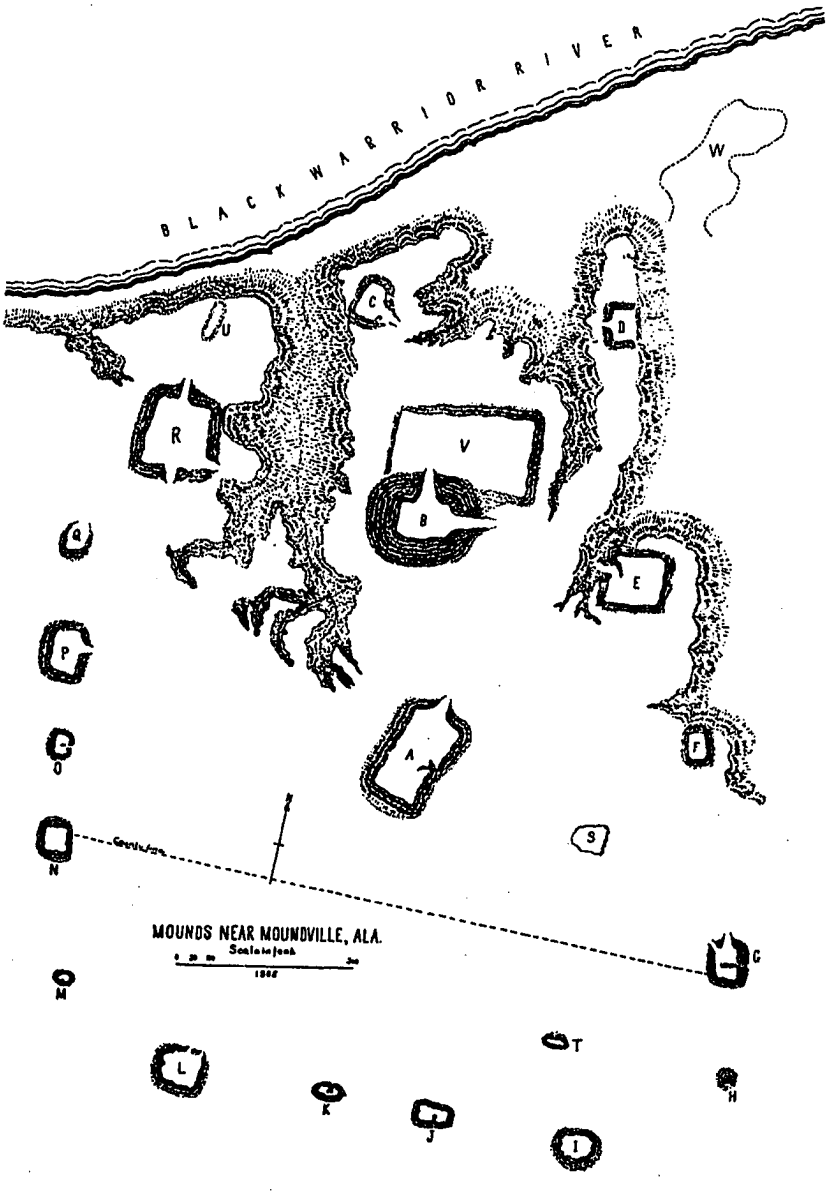
Descriptions of Moundville as the center of a regional polity in the Black Warrior Valley have influenced interpretations of Mississippian societies as politically and economically centralized. The principal settlements of the Moundville polity are thought to have been circumscribed within a fairly uniform environment or homogeneous region. As a functional region, Moundville's political-economic boundaries are still under consideration (see Chapter Two, Prehistoric Political Economy; Hassig 1996). Nevertheless, successive temporal refinements have generally been accompanied by increased spatial resolution and represented by numerically-assigned Moundville phases. The northern and southern extent of the Moundville polity are less apparent in this regard, perhaps due to possible variation over time (DeJarnette and Peebles 1970; Little and Curren 1995; Welch 1998:134). Archaeological accounts of the Moundville

polity continue to be revised through additional research and the gradual accumulation of knowledge, as well as changing theoretical perspectives. The following discussion of previous investigations is thus framed in light of broader theoretical trends in political anthropology and archaeology (see Chapters Two and Three).

Moundville Revisited

The culture history of Moundville represents the combined results of more than a century of archaeological research. The relationship between ongoing research and a more well-defined, culture historical approach is apparent in light of the history of previous investigations. Among the earliest scientific investigations of the Moundville site were conducted by the Smithsonian Institution during the second half of the nineteenth century, resulting in brief descriptions of the earthen mounds and collection of artifacts for museum display (Steponaitis 1983b). The next formal investigations were conducted by C. B. Moore (1905, 1907), who mapped the site during the first decade of the twentieth century and hired crews to dig into most of the earthen mounds (Figure 16). Moore also excavated at many of the single mound sites in the Black Warrior Valley. However, he devoted his second season of fieldwork to investigations of Moundville.

Moore's investigations were haphazard by today's professional standards, yet his work resulted in the first detailed documentation of late prehistoric material culture and sites in the region (Knight 1996:15-18; Peebles 1981:78-79). Partially as a result of Moore's work, two ideas were eventually accepted regarding late prehistory in the Black Warrior Valley. First, the platform mounds and associated artifacts were the product of Native American labor and ingenuity. While hyper-diffusionist arguments and indigenous migrations were still entertained, direct Mesoamerican influence and migrations from outside of eastern North America were subsequently ruled out as explanations for the origins of Moundville (DeJarnette 1952:280-281). Second, the imposing earthen mounds,



Source: Moore (1905:129)

Figure 16. The Moundville Site in AD 1905, by C. B. Moore.

elaborate pottery, and exotic, non-local artifacts were recognized as representing a level of complexity and ceremonialism that contrasted with subsequent historic tribal confederacies encountered by French and British colonists (Ford and Willey 1941:350-359; Willey and Phillips 1958:). A pre-Columbian association for Moundville was indicated early on by the absence of European trade goods and historic artifacts in well-controlled excavations (Moore 1905:141, 1907:340, 404-405).

Three decades after Moore had placed his "trial holes" at Moundville, more extensive investigations were performed by the Alabama Museum of Natural History (AMNH) and Civilian Conservation Corps (CCC), under the direction of Jones and DeJarnette (Baklanoff and Howington 1989; Peebles 1981:79). While an enormous amount of work was accomplished, the fieldwork was interrupted by the Second World War and the depression-era investigations went largely unanalyzed and unreported for another three decades. The legacy of this fieldwork was to preserve the site and artifact assemblages as Mound State Monument. It was the pioneering works of McKenzie (1964, 1966) and Peebles (1974, 1979) that synthesized and interpreted the vast amounts of data collected during the first half of the twentieth century and that initiated the period of intensive research that continues today.

In the interim, the earthen mounds, artifacts, and skeletal remains from thousands of burials at Moundville came to be associated first with the Moundville culture and then the Moundville phase. Moundville was defined as a particular manifestation of Middle Mississippi culture and the Southern Cult (DeJarnette 1952; Jones and DeJarnette 1936; Snow 1941, 1943; Wimberly 1956). Other Mississippian mound sites in the Black Warrior Valley and neighboring regions were also recorded and studied during this time, including the Snows Bend site 20 km north of Moundville and the Bessemer site in the Cumberland Plateau (DeJarnette and Peebles 1970; DeJarnette and Wimberly 1941; Peebles 1981). Due to its sheer scale, the size of its mounds, and impressive artifact

assemblages, the Moundville site became emblematic of late prehistory in Alabama and the mid-South.

In an influential summary of Alabama archaeology, DeJarnette (1952:283) associated various culture traits from Moundville with other "specialized ceremonial sites" such as Spiro and Etowah as well as "less ornate Middle Mississippian components" (cf., DeJarnette and Wimberly 1941:102-107). Explanations for the origin and demise of Moundville were framed in terms of the "problem of intrusion or indigenous development," the calamitous arrival of the first Europeans, the loss of culture traits, and "degeneration" of Mississippian cultural tradition. The end of the Mississippi Period was associated with changes in material culture and the subsequent use of burial urns, often associated with European trade goods (DeJarnette 1952:280, 284):

> Marking the decline of the Middle Mississippian period in Alabama is the disappearance of the custom of building temple mounds and the discontinuance of the use of many "Cult" symbols. There seems to have been adopted just prior to or during this stage the custom of burying in pottery urns (DeJarnette 1952:283).

The practice of urn burial, noted earlier by Moore (1905:140, 1907:338, 342-343) and Holmes (1903:108), was identified at sites along the Alabama River. Protohistoric sites throughout central Alabama were subsequently associated with the Burial Urn culture (Sheldon 1974:14-17; Walthall 1980:257-259). Although the ceramics of the Burial Urn culture were stylistically and technologically similar to types manufactured elsewhere in the Southeast, in the Black Warrior Valley it was thought to represent a "dilute Moundville ceremonial ware" (DeJarnette 1952:284). DeJarnette thus subdivided the late Mississippian period into "Climax Mississippian" represented by Moundville, and

"Decline Mississippian," represented by protohistoric Burial Urn sites (Walthall 1980:259).

The Moundville phase was first defined by McKenzie (1964, 1965a, 1965b), based on the analysis of previously excavated ceramics. Contrasting the range of material culture from Black Warrior Valley sites with other areas of the Southeast, McKenzie (1966:48) arrived at an approximate range of AD 1250 to 1500 for the Moundville phase. Among the culture traits of Mississippian affiliation were pottery types and shell gorget engravings attributed to the Southeastern Ceremonial Complex. McKenzie also interpreted the absence of any mention of Moundville sites in the de Soto narratives as evidence that the Moundville phase had ended around AD 1500, prior to the arrival of the De Soto expedition. Although McKenzie's estimate for the beginning of the Moundville phase was later found to be two centuries too late, he was correct in describing the decline of Moundville as prior to the arrival of Europeans (cf., Steponaitis 1983a). In delineating the Moundville phase, McKenzie produced the first detailed pottery typology, vessel form descriptions, and discussion of "ceremonial objects" and related motifs shared with the Southeastern Ceremonial Complex (McKenzie 1965b, 1966:6-33).

Following DeJarnette, McKenzie (1966:38-41) viewed late prehistoric influences in the Black Warrior Valley as culturally progressive and geographically wide-ranging. He suggested that the residents of the Moundville site were affiliated with people in the Tennessee valley over 175 km to the north, including inhabitants of the Pickwick Basin, and Gulf Coast communities to the south (cf., DeJarnette and Wimberly 1941). Similarities in pottery found in the Black Warrior and Tennessee river valleys prompted McKenzie to suggest that the latter were part of the Moundville phase. According to McKenzie (1966:38), "the sites in these [Tennessee valley] regions may represent 'colonies' sent out from Moundville or stopping places of a migrating people on the route to Moundville." In keeping with the concept of a Mississippian cultural expansion,

McKenzie (1966:43) suggested that similarities evident in material culture and pottery types found at sites in west-central Alabama and those in the Eastern Lowlands of the central Mississippi valley indicated "contacts and perhaps a place of origin" for the Moundville phase.

Going beyond DeJarnette's (1952:281-282) more cautious assessment, McKenzie (1966:49) stated that "derivation of Moundville from the indigenous, non-Mississippian cultures of Alabama is clearly implausible." McKenzie (1966:49-51) suggested instead that the Moundville phase was the result of a "site unit intrusion," the direct migration of peoples from the Nodena and Walls phases in the Eastern Lowlands of the lower Mississippi valley. Radiocarbon assays from sites in the Black Warrior and Mississippi valleys has subsequently ruled out this possibility, since the establishment of Mississippian communities in the Black Warrior Valley predated the Nodena and Walls phases by at least three centuries (D. Morse 1990; Morse and Morse 1983:171-303; G. Smith 1990; Steponaitis 1983a:151-161).

As in previous studies, McKenzie's explanation relied heavily on a presumed migration in order to account for Moundville's initial establishment and subsequent development. While McKenzie (1966:49) admitted a lack of evidence to "prove or disprove" the migration hypothesis, he concluded that evidence of high population density at the Moundville site argued against any *in situ* or "gradual development." Notably, the evidence for demographic nucleation and rapid development would be interpreted decades later as supporting an indigenous, political consolidation (Knight and Steponaitis 1998).

During the 1970s, archaeologists delineated the temporal and spatial units bracketing the Moundville phase, referred to as the Late Woodland, West Jefferson phase and protohistoric, Alabama River phase. Moundville thus came to be understood in greater detail through contrasts with earlier and later cultural units. The West Jefferson phase (ca. AD 900-1050) was identified by Jenkins and Nielsen (1974) as a

terminal Woodland component, characterized primarily by undecorated, grog-tempered pottery (see also O'Hear 1975). Jenkins (1978:24) suggested that similarities between the West Jefferson phase and subsequent Mississippian period were the result of diffusion, based on the introduction of small amounts of shell-tempered pottery during the earlier period. Jenkins presented a modified version of McKenzie's (1966) site-unit intrusion hypothesis, suggesting that Mississippian peoples had migrated from the Eastern Lowlands of the central Mississippi valley into the Tennessee valley by AD 1000. The subsequent "rapid acculturation" of West Jefferson populations was thought to have been facilitated by their "knowledge of the regional environment" in establishing a redistributive economy in the Black Warrior Valley (Jenkins 1978:26, 1981:29-30). Jenkin's explanation of Mississippian origins thus combined a systemic-processual understanding of adaptive, sociopolitical systems, with the concept of cultural expansion.

The terminal expression of Mississippian culture in west-central Alabama was also identified during the 1970s. The Alabama River phase was first identified by Cottier (1970) as a regional manifestation of the Burial Urn culture. It was later recognized as the protohistoric, post-Moundville phase in the Black Warrior Valley (Steponaitis 1981a:102-103; 1983a:81-82). In his dissertation, Sheldon (1974) examined artifact collections and other evidence for Burial Urn sites in the Alabama, Tombigbee, and Black Warrior river drainages. He was specifically concerned with the Mississippian-historic transition in central Alabama. Sheldon (1974:22) described the Alabama River phase as one of several distinct phases that might be identified for the Burial Urn culture in Alabama. However, no additional phases were described.

Following DeJarnette, Sheldon (1974:21) characterized the protohistoric Burial Urn culture (ca. AD 1550-1700) in terms of pottery types and culture traits loosely associated with the Mississippian decline (cf., Sheldon and Jenkins 1986). Continuities in culture traits between the "Mature Mississippian" at Moundville and the Burial Urn culture

were interpreted as evidence that the latter had originated in the preceding Moundville phase. However, discontinuities were interpreted as evidence of a "loss or reduction of cultural elements during the Mississippian Decline" (Sheldon 1974:111). Among the cultural discontinuities associated with the Protohistoric era were the disappearance of "black-filmed wares," cessation of elaborate offerings in burials, and the end of mound construction. In contrast to a dynamic, Mississippian culture, the protohistoric Burial Urn culture was regarded as relatively "stable," with few "significant innovations" (Sheldon 1974:112-113).

In order to account for this wide-ranging "reduction in cultural complexity," Sheldon (1974:112, 116) suggested that only the elite or "ceremonial" aspects of Mississippian culture had disappeared, leaving a "reduced" or "truncated version of Moundville culture surviving as the Burial Urn culture." An ecological core of Mississippian subsistence and settlement patterns ("techno-environmental adaptation") was thought to have remained essentially intact into protohistory, as the "domestic features of Mature Mississippian culture" (Sheldon 1974:116, 120). Sheldon (1974:112) acknowledged that to characterize this as a "reducing tradition" was an over-simplification, since changes in culture traits were likely to have occurred at different rates. Nevertheless, he summarized the cultural changes that took place during the Mississippian Decline and protohistory in terms of a "reducing areal tradition" (Sheldon 1974:120).

As with earlier explanations of cultural collapse, changes in material culture, mound building, and burial practices were viewed as a form of "degeneration" (i.e., DeJarnette 1952:284). Sheldon (1974:116) went beyond such facile generalization in associating these cultural changes with a loss of ceremonial and sociopolitical organization. However, he did not examine the potential relationships between sociopolitical organization, domestic economy, and ceremonialism. Instead, he focused on describing the changes in culture traits associated with a Mississippian decline. The

concepts of a macroregional, Mississippian cultural expansion and decline thus continued to influence the ways in which archaeological data were interpreted, despite the introduction of neoevolutionary theory.

Sociopolitical organization in the late prehistory of the Black Warrior Valley was examined in further detail and made more explicit through research directed by Peebles (1971, 1974), especially his studies of social ranking and mortuary practices (see also Peebles and Kus 1977). Peebles demonstrated that ascribed social statuses during the Moundville phase were reflected in mortuary customs, including burials at the Moundville site, nearby mound centers, and outlying sites. Although he initially included sites as far away as the Tennessee valley as "local communities" of the Moundville culture, Peebles (1971:85) demonstrated that a "hierarchical (ranked) distribution of statuses is evident in the distribution of supra-local symbols." Individuals interred in platform mounds at Moundville were associated with prestige-goods and non-local artifacts, while those at community cemeteries were interred with substantially fewer and much less ornate burial goods. Based on his analysis of burials at Moundville, Peebles (1974) argued that mortuary practices reflected "superordinate" (elite) and "subordinate" (non-elite) social positions (Peebles and Kus 1977:439).

Peebles (1971:86) also suggested that differences in mortuary practices between sites associated with Moundville and those associated with the Bessemer site reflected two "sub-sets" and perhaps two distinct cultures, the latter "politically dominated" by the Moundville culture. The spatial dimensions of the Moundville culture were consequently narrowed and redefined, focusing on the Moundville site and associated sites in the Black Warrior Valley, south of the Fall Line. By demonstrating the existence of ascribed social ranking in mortuary practices, Peebles established that Mississippian communities in the Black Warrior Valley were characterized by a hierarchically-ranked political and economic organization, subsequently referred to as the "Moundville chiefdom" (e.g., Steponaitis 1978). The sociopolitical hierarchy was also thought to be

represented in a three-tiered settlement pattern of regional center, "minor" or single-mound secondary centers, and villages, or farmsteads (Peebles and Kus 1977:440). As mentioned earlier, this regional settlement pattern was thought to reflect the requirements of maize-based, agricultural subsistence and political centralization (Peebles 1978; Steponaitis 1978).

An even more ambitious program of fieldwork was initiated in the Black Warrior Valley during the late 1970s. Peebles and his students at the University of Michigan accelerated the pace of archaeological investigation, culminating in further temporal and spatial refinements to the Moundville phase and polity (Peebles 1981; Scarry 1981b; Steponaitis 1981a, 1983a). Bozeman (1981, 1982) re-examined the regional settlement pattern of single-mound sites in his dissertation research. Based on new information from these outlying sites, he established tighter chronological and spatial controls on the distribution of sites associated with Moundville. Preliminary survey data also indicated that small hamlets or farmsteads were a major, albeit under examined component of the Moundville settlement pattern (Bozeman 1981:86). Building on Steponaitis' (1978) earlier settlement pattern study, the locations of sites were tied to environmental productivity and a "politically unified system organized at a chiefdom or ranked level of complexity" that had changed over time (Bozeman 1982:263, 302-308; cf., Peebles 1983:189).

Research by Peebles and his students also established a more detailed regional chronology (Figure 17). Steponaitis (1981a, 1983a) defined a three-phase chronological sequence for the Black Warrior Valley based on the seriation of pottery vessels from burials and the analysis of sherds from controlled stratigraphic contexts. Steponaitis (1980:48) proposed that this ceramic chronology indicated that Moundville was the result of a "long, *local*, developmental sequence." He argued against previous diffusionist explanations and speculation regarding migrations from the Mississippi valley. Steponaitis (1981a:99) also noted that the tripartite subdivision of the Moundville

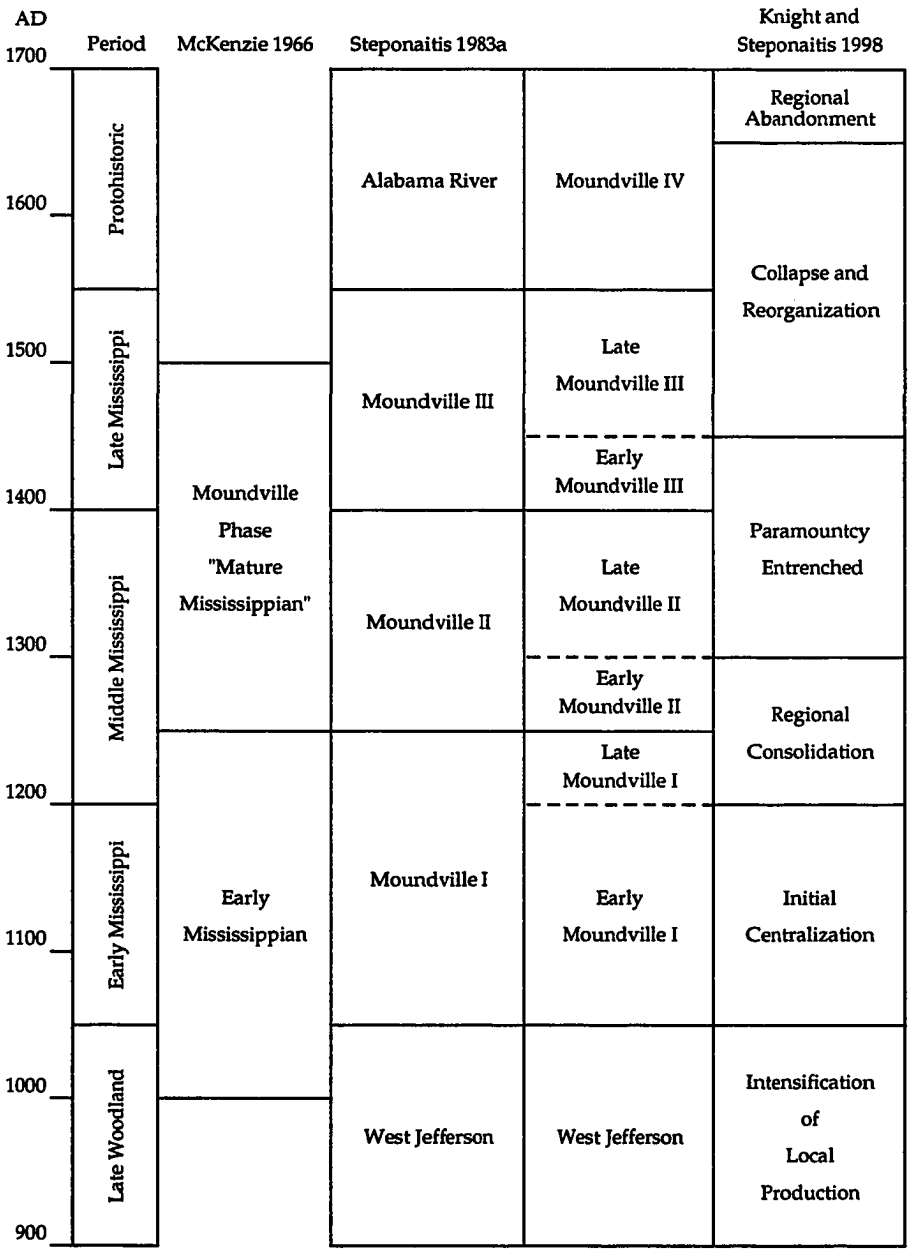


Figure 17. Regional Chronologies for the Black Warrior Valley.

phase provided a clearer explanation of "how the size and configuration of the Moundville site changed through time."

Additional research built on this regional chronology by elaborating on the processes involved in the emergence and collapse of the Moundville chiefdom and by focusing specifically on its political and economic organization (e.g., Scarry 1981a, 1986; Welch 1986, 1990). Subsequent studies of Moundville's political economy represent a substantial refinement over earlier culture historical explanations concerning diffusion, migration, and degeneration. Yet the further delineation of temporal and spatial units (i.e., phases) has remained a central, contributing factor in understanding Moundville as a regional polity. A brief review is presented here to summarize what was known about the polity by the early 1990s, and the ways in which that culture history was presented (i.e., Peebles 1983, 1986, 1987a, 1987b; Steponaitis 1983a; Scarry 1986; Welch 1981, 1990, 1991). This is followed by a discussion of recent revisions to Moundville's culture history.

Emergence and Collapse

The terminal Woodland period in the Black Warrior Valley is represented by villages associated with the West Jefferson phase (AD 900-1050). West Jefferson phase material culture is generally characterized by undecorated, grog-tempered pottery classified as Baytown Plain (*variety Roper*), although smaller quantities of shell-tempered pottery were also produced at this time (Jenkins 1978:24; Steponaitis 1983a:80-81; Welch 1990:210). Spatial variations in ceramic tempering and surface treatment were interpreted by Welch (1981:82) as a pattern of social interactions confined primarily within major river drainages. West Jefferson phase sites included large villages in the floodplain, although smaller site clusters may have also been common (Welch 1981).

Like other Late Woodland communities, West Jefferson populations in the vicinity of Moundville appear to have been seasonally mobile, semi-sedentary foragers

(Bozeman 1981; Scarry 1981a; Welch 1981:82). Based on the recovery of grog-tempered pottery sherds, it was thought that a small Late Woodland community may have established residence at the Moundville site sometime during the West Jefferson phase. There is no evidence however, for the construction of mounds or large-scale monumental architecture at Moundville, or any other sites during this time. Nor is there convincing evidence for the exchange of prestige goods or distinctions in social ranking. West Jefferson phase communities have thus been characterized as egalitarian or tribal-level societies with local subsistence economies lacking a regionally-centralized political authority (Steponaitis 1983a:164-165; Welch 1990).

While hunting and the gathering of wild plant foods were the principal means of subsistence, small-scale maize cultivation was begun during the West Jefferson phase. Evidence for the consumption of maize suggests that changes in subsistence were underway *prior* to the beginning of mound construction and the adoption of material culture characteristic of the Mississippi period (Scarry 1981a, 1986). Scarry (1986:409-422) argued that since the intensification of maize cultivation occurred at this time, the risks of crop failure and management of a food surplus were unlikely causes for the emergence of the Moundville polity (see also Scarry 1993a). In contrast to earlier speculation on migrations, changes in subsistence, settlement patterns, and material culture were interpreted as part of a regional, Mississippian adaptation with precursors in West Jefferson times (Peebles 1983:188; Scarry 1986; Steponaitis 1983a:81; Welch 1990:218-219).

The beginning of the Moundville I phase (AD 1050-1250) marked formidable and wide-ranging changes in subsistence and settlement patterns, referred to as the Mississippian emergence (Welch 1990:212-213). More intensive maize agriculture was practiced and the use of other wild plant foods decreased (Scarry 1981a, 1986). Deer and turkey remained important sources of meat, with less evidence for the consumption of fish and waterfowl (Michals 1981:93). Shell-tempered pottery became ubiquitous at this

time, almost entirely displacing earlier sand and grog-tempered vessels. While the majority of the population lived in dispersed farmsteads, the construction of platform mounds also dates to the Moundville I phase. The site of Moundville was thought to be one of four single-mound centers established during the Moundville I phase (Bozeman 1982:304; Peebles 1987b:7; Welch 1991:31). However, Welch (1990:213) argued that "the shift to agriculture, village dispersal, and the change to shell-tempered ceramics all preceded the beginning of mound construction." The shift to shell-tempered pottery and mound construction also dates to this time at the Bessemer site (Peebles 1971:86; cf., Welch 1990:217-219, 1994).

The earliest indications of superordinate and subordinate dimensions in mortuary practices were also thought to date to the Moundville I phase, indicating the beginnings of a hierarchically-ranked society in the Black Warrior Valley (Peebles 1983:189; 1987a:27-29). Single mound sites were thought to have served as the political-religious centers of "autonomous polities," referred to as simple chiefdoms. A regional, three-tiered settlement hierarchy had thus not yet developed (Peebles 1987b:6-7; Steponaitis 1981a:100, 1983a:156, 167). Since Moundville and many of the single mound sites were thought to have been occupied during the preceding West Jefferson phase, the emergence of Mississippian communities was viewed in terms of a cultural transition "in the context of a stable, indigenous population" (Steponaitis 1983a:167), rather than the results of migration, site-unit intrusion, or acculturation (cf., Mistovich 1988). Continuities in pottery vessel form and tempering generally supported this argument (Steponaitis 1983a:130-132). Based on radiocarbon dates from stratigraphic contexts at Moundville, Bessemer, and sites in adjacent regions, Steponaitis (1983a:104-106) placed the end of the Moundville I phase at AD 1250.

The Moundville II phase (AD 1250-1400) was originally proposed by Steponaitis (1981a:100) as the time frame in which the site of Moundville "grew to become a major political center" as indicated by the construction of platform mounds and wall-trench

houses. Steponaitis (1983a:106-114) distinguished Moundville II from the preceding phase by changes in the percentages of decorated shell-tempered pottery types and vessel shapes. The beginning and ending dates were thus based on the radiocarbon dates for earlier and later phases.

Soon after AD 1250, the Moundville site was thought to have emerged as the primary political-administrative center in the region and was distinguished by at least four platform mounds (Peebles 1987a:27, 1987b:9). During the next century and a half, 14 more mounds were constructed, and the central plaza was thought to have gradually taken shape. The largest of these mounds, Mound B, was built to a height of more than 17 m (Figure 18). Peebles (1987a:27) suggested that the mounds at Moundville were arranged by size and content, exhibiting a planned spatial organization or "bilateral symmetry" by the end of this phase. Pottery, shell beads, and other craft goods were thought to have been manufactured only in certain areas of the site, indicating some level of productive specialization (Peebles 1987a:27; Welch 1991).

According to this scenario, families living at other sites throughout the Black Warrior Valley were drawn into a "three-level settlement hierarchy" characteristic of complex chiefdoms in the Mississippian Southeast (Steponaitis 1978, 1983a:168). The regional population was estimated by Peebles (1983:190) to number more than 10,000. However, the majority of the population continued to reside in farmsteads, dispersed throughout the valley (Steponaitis 1983a:168). While additional single-mound centers were built, others appear to have been abandoned (Bozeman 1982:305). A subsistence pattern of maize agriculture, wild plant foods, and hunting was thought to have persisted throughout this time. Social ranking and mortuary ceremonialism at Moundville became prominent during the late Moundville II and early Moundville III phases (Peebles 1987a:29; Steponaitis 1983a:168). The Moundville II phase was accordingly described alongside the Moundville III phase, suggesting that there had been few major changes in settlement or sociopolitical organization during the transition

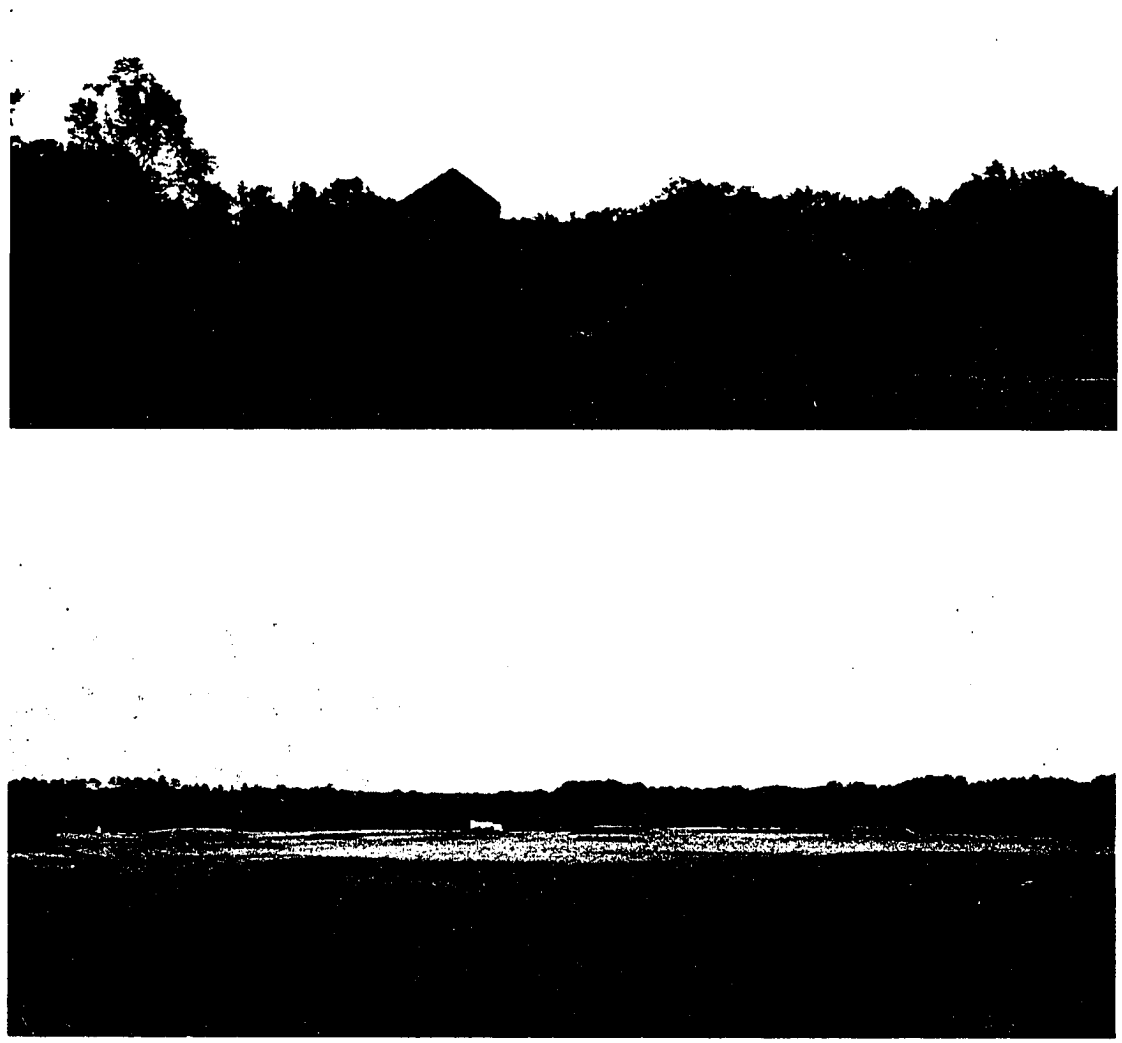


Figure 18. Two Views of Moundville: Mound B, Facing North (top); Mound A and Plaza, Facing South (bottom).

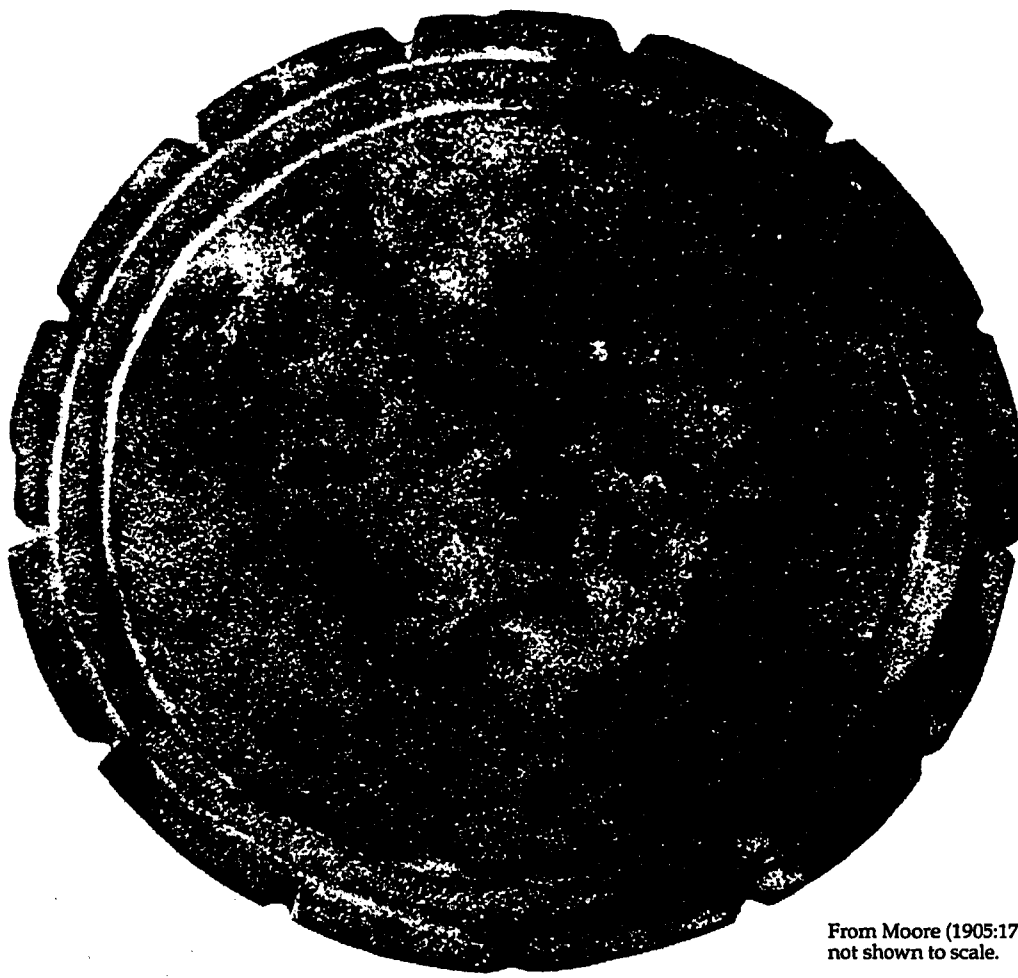
between these phases (Bozeman 1982:305-307; Peebles 1983:190-192; Steponaitis 1983a:106-108, 114).

According to Peebles (1987a:25), it was during the Moundville III phase (AD 1400-1550) that the Moundville site "grew to its greatest size and reached the zenith of its complexity," with more than 20 mounds, an enormous plaza measuring 40 ha, and a population of approximately 3,000 (cf., Peebles 1983:190, 1987b:9). In short, the early Moundville III phase represented "a culmination of the trends that had begun 200 years earlier" (Peebles 1986:29). Mound construction was thought to have continued uninterrupted from the preceding phase, with the ceremonial center taking its definitive form as a large plaza, bordered by mounds (Steponaitis 1981a:102, 1983a:160). An impressive palisade wall was thought to have been in place at Moundville by this time, enclosing the entire site (Peebles 1986:29).

Social ranking and mortuary ritual at Moundville were thought to have reached a climax by this time, as indicated by ornate craft items and burial goods associated with the Southeastern Ceremonial Complex. These included the copper ear spools, copper and stone axes, notched stone palettes, shell beads, and gorgets documented by C. B. Moore (Figure 19; Peebles 1983:192, 1987a:29; Peebles and Kus 1977:439). While the elite residents of Moundville received tribute or prestations in the form of maize and more choice cuts of deer, there appeared to be no substantial disparities in health or diet between elite and non-elite (Peebles 1987a:30; Peebles and Schoeninger 1981; Powell 1988:196, 1991:50; 1992:88; Steponaitis 1978; Welch 1986).

In summary, Moundville's political economy was thought to have become regionally centralized by the end of the Moundville I phase and remained relatively stable for nearly three centuries until the latter part of the Moundville III phase. Welch's (1986, 1991:182) model of Moundville's economy was based on data from a single mound center (the White site), dating from the Moundville III phase. He contrasted this





From Moore (1905:179, 1907:398); not shown to scale.

Figure 19. Shell Gorget (top) and Notched Stone Palette (bottom) from the Moundville Site.

with information on non-local goods from Moundville which dated from the Moundville I phase. His conclusions thus reflected the assumption that there had been "no change in the economic structure of the chiefdom between late Moundville I and late Moundville III" (Welch 1991:183). A collapse of the Moundville polity was thus thought to have occurred abruptly, near the end of the Moundville III phase (ca. AD 1500-1550).

Peebles (1986:30, 1987a:32-34) noted that the occurrence of non-local, "imported" goods decreased dramatically at Moundville after AD 1450 (cf., Welch 1991:195-196). Welch (1991:194) suggested that a disruption of long-distance exchange networks may have precipitated a collapse, as the Moundville elite would have been unable to acquire the prestige goods necessary to legitimize their social positions, status, and authority. The Moundville site was abandoned by AD 1550, as a consequence of the precipitous collapse of the sociopolitical system and settlement hierarchy (Peebles 1986:31, 1987b). While prior to this time most of the population had lived at farmsteads, toward the end of the Moundville III phase people had begun moving to villages at single-mound sites, a trend thought to have continued as late as the sixteenth century (Bozeman 1982:307; Welch 1991:31). According to Bozeman (1982:307), at the close of the Moundville III phase "the structured social organization of the Moundville chiefdom collapses into the relatively impoverished egalitarian society of the Alabama River phase."

The Moundville IV phase (AD 1550-1700) was described as a local variant of the Alabama River phase, based on investigations of protohistoric sites in the Black Warrior Valley (Curren 1984; Curren and Little 1981). Moundville IV thus completed a regional chronology of four sequential phases stretching from the Late Woodland to early historic periods. As mentioned above, Sheldon (1974:120) had documented both continuities and discontinuities in culture traits between the Moundville III phase and protohistoric, Burial Urn culture, a transition he characterized as the "Mississippian Decline" and a "reducing areal tradition." The use of large, shell-tempered vessels as

burial urns was perhaps the most characteristic of innovations dating from this time. Yet similarities between pottery types also suggested some measure of cultural continuity. Steponaitis (1983a:127) thus referred to protohistoric pottery in the Black Warrior Valley as "stylistically a direct outgrowth" of the Moundville III phase.

Following Sheldon, Bozeman (1982:307) argued that mound construction was discontinued at protohistoric sites in the Black Warrior Valley. Although the site of Moundville was apparently almost completely abandoned by this time, a demographic nucleation occurred at a few single mound sites, particularly the Fosters Landing site (1TU42), located 4 km (2.5 miles) north of Moundville (Steponaitis 1983a:160). Peebles (1987b:9, 14) suggested that perhaps three of these single mound sites may have continued to function as "points of reference" or "regional foci" during the Moundville IV phase. However, the settlement pattern and mortuary practices exhibited no clear evidence for sociopolitical hierarchy, centralization, prestige goods exchange, or status differentiation (Curren 1984; Little and Curren 1995; Peebles 1987b; Sheldon 1974). The regionally-centralized political economy of Moundville had been transformed into local communities organized around domestic modes of production, represented by the poorly documented, post-contact societies of the seventeenth century (Galloway 1994, 1995; Hudson and Tesser 1994; Knight 1994b). The deterioration of nutrition and health were thought to indicate that disease and subsistence-related stress followed on the heels of protohistoric, European contacts (Hill 1996; Hill-Clark 1981; Powell 1988:191-192).

Accompanying this chronology, there has been disagreement over whether Moundville's collapse was either caused or hastened by the arrival of Europeans and the introduction of Old World diseases (e.g., Curren 1984; Hudson et al. 1990; Little and Curren 1990; Peebles 1986, 1987a, 1987b). One misunderstanding in particular, has been a major impediment in resolving the issue. Examining the late Mississippian-protohistoric transition in the Tombigbee valley, Blitz (1993a) suggested that a more

well-defined, regional chronology may yet disentangle what are essentially two separate issues:

> Discussions of this time period in the southeastern United States are dominated by two themes: (1) changes in the Mississippian cultural pattern that are characterized as a decline; and (2) the nature and effect of initial European contact. The dominant view that has emerged in recent years is that these processes are directly related: the decline of chiefdom organization is the result of massive depopulation from epidemics unleashed through European contact (Curren 1984; M. T. Smith 1987). Others observe that chiefdoms are unstable political constructs that fluctuate in size and duration, producing a cycle of rise and decline that has considerable prehistoric depth (e.g., Peebles 1986; Anderson 1989 [1994a]). A prerequisite to evaluating such propositions is an *adequate chronological framework*, which in the study area still requires a great deal of refinement (Blitz 1993a:50-51; emphasis added).

In terms of culture history in the Black Warrior Valley, the crux of the problem has centered on whether the Moundville polity collapsed prior, or subsequent to, the passage of the de Soto expedition through the region in the mid-sixteenth century. Relatively brief mention of the province of Apafalaya in the de Soto narratives has been interpreted in support of the latter position (Curren 1984; Hayward et al. 1995; Hudson et al. 1990; Little and Curren 1995). Yet such interpretation tends to downplay the evidence for endogenous sources of change, in favor of European colonial history. In fact, a Moundville III phase to Moundville IV phase cultural collapse and transformation (i.e., degeneration) are based largely on the presumed effects of European contacts, subsequent to five centuries of indigenous political history.

Arguing on the side of an indigenous collapse, Peebles (1986:31, 1987a:31, 1987b:1) remarked that declining health and the disappearance of social ranking that began during the late Moundville III phase represented "a drastic reversal of 500 years of development," a "spectacular crash" that was "catastrophic." Since it was thought that Moundville IV phase communities had continued to pursue agriculture, Peebles (1987a:31-32) concluded that Moundville's collapse was not caused by changes in subsistence patterns or adaptive strategies. Peebles (1987b:4) further discounted the likelihood of any wide-ranging environmental prime mover, since Moundville's collapse was not paralleled by a collapse of Mississippian polities in neighboring regions. He instead concluded that the causes of collapse were attributable to internal sociopolitical factors, "rooted in the relations of production and in broadly cultural factors: in a change in social and economic organization itself not triggered by environmental change" (Peebles 1987a:37).

As Knight and Steponaitis (1998) have subsequently shown, regional political decline preceded the arrival of the de Soto expedition and the earliest European explorers by at least one century. A European-induced, cultural collapse is thus no longer sufficient explanation for the decline of the Moundville polity. Instead, the problem itself must be redefined:

> The question, rather, is whether the former Moundville chiefdom was totally decentralized in AD 1540 as Peebles sees it, or whether it was still a minimally functioning chiefdom unifying a district of several towns, as Hudson would have it (Knight and Steponaitis 1998:23).

Recent research has begun to shed light on an historical process of political development and decline that predates any presumed Columbian consequence (i.e., Little and Curren 1990).

Revised Culture History

The culture history of the Black Warrior Valley has been the subject of significant reexamination during the past decade, particularly as a result of intensive research efforts focused in and around the site of Moundville (Knight 1992, 1994a; Knight and Steponaitis, ed. 1998; Scarry 1995; Scarry and Steponaitis 1997; Steponaitis 1991, 1992; Welch 1989, 1996; Welch and Scarry 1995). Knight and Steponaitis (1998) provide further refinements to a regional chronology, tracing the development of the Moundville polity from the intensification of production (AD 900-1050) to its eventual collapse and reorganization (AD 1450-1650). Additional information is gradually becoming available for outlying mound sites and farmsteads (Ensor 1993; Maxham 2000; Michals 1998; Mistovich 1986, 1987; Welch 1998). The application of new analytical techniques has also raised questions concerning Moundville's development and decline (e.g., Powell 1998:118; Schoeninger and Schurr 1998:129-132). However, much of this revised culture history has resulted from Steponaitis' (1991, 1998) reevaluation of population trends at Moundville and novel interpretations of previously available information (e.g., Knight 1997, 1998). Combined with this reanalysis is a growing recognition of the central role of the political-symbolic actions of people in the making of Moundville's history (Knight and Steponaitis 1998:25).

As a result, current understanding of the Moundville polity is being revised, both in terms of the previously discussed culture history, and the ways in which regional chronologies can be used to describe developmental sequences (Figure 17). The contrast between recent research and an earlier culture historical approach highlights the advantages in examining political development and decline as an historical process. Such research not only contributes to the refinement of a regional chronology, but to the advancement of archaeology as historical anthropology (i.e., Lightfoot 1995). Archaeological research in the Black Warrior Valley in particular, can apply a "new

history of Moundville" (i.e., Knight and Steponaitis 1998) to a "resurgent culture history" of the Mississippian Southeast (Barker and Pauketat 1992:3). As summarized by Knight and Steponaitis (1998) Moundville's revised culture history is contrasted here with previous interpretations of the regional chronology (Figure 17), as a point of departure for the present study.

"Intensification of Local Production" (AD 900-1050)

While the beginning and ending dates for the West Jefferson phase are essentially unchanged in the revised chronology, Knight and Steponaitis (1998:10) emphasize that agriculture and the local intensification of food production in Late Woodland communities had begun well prior to political centralization (Scarry 1993a, 1998; Scarry and Steponaitis 1997). The transition to agriculture was accompanied by increased populations in river valleys, perhaps associated with warfare or social circumscription (Knight and Steponaitis 1998:10-11). Scarry (1993a:180) pointed out that infrequent risks posed by droughts or floods in the valley could have been dealt with by kin groups or households. There is therefore still little reason to suspect that Moundville or other Mississippian polities emerged in response to the risks of crop failure or as a consequence of maize agriculture (Kelly 1992; Lopinot 1992, 1997; Scarry 1993c). Nonetheless, potential food surpluses associated with intensification of local production might have been manipulated and even augmented by individuals or groups in gift-giving and exchanges, in order to reinforce asymmetrical social relations, or inflict social debts. The intensification of production may have been politically expedient in contexts where subsistence shortfalls were unlikely, or easily surmounted.

Evidence for the intensification of shell bead production indicates that aspiring leaders and/or corporate groups might have also taken advantage of opportunities to control the manufacturing and distribution of these and other craft items (Knight and Steponaitis 1998:11; Pope 1989). The political strategies associated with local

intensification of production may have been oriented toward broadening social relations of authority, perhaps also involving the control of agriculturally-productive floodplain. The West Jefferson phase is thus thought to have marked a departure from semi-sedentary foraging and may have involved heightened conflicts across a politically-circumscribed landscape (cf., Welch 1990:211-212). Although it was earlier assumed that a Late Woodland community had been established at Moundville during this time, based on a reanalysis of domestic refuse, Knight and Steponaitis (1998:12) state that the Moundville site was "probably not occupied prior to about AD 1050." Despite excavations throughout much of the site, no West Jefferson phase features have been clearly identified at Moundville (Peebles 1979; Ryba 1997a; Scarry 1995).

"Initial Centralization" (AD 1050-1200)

Based on evidence for wall-trench architecture and the construction of the earliest sub-structural mounds at Moundville, Knight and Steponaitis (1998:12-13) refer to the early Moundville I phase as a time of initial centralization. The use of mound structures as the "residences of an emerging elite" at Moundville, and apparent absence of mounds at other sites, is interpreted as evidence that the status of Moundville's residents was from the beginning unique (cf., Scarry and Steponaitis 1997:109; Welch 1990:212-214). Mound construction was likely to have taken place in the context of community rituals in which the authority of corporate groups was legitimized and invested with increased social status (Knight 1998; Knight and Steponaitis 1998:13). The community that had taken up residence at Moundville sometime around AD 1050 was characteristically Mississippian in terms of social ranking, subsistence, and shell-tempered pottery. Yet Moundville itself was a relatively small town, with only two sub-structural mounds known to have been constructed during this time (Knight and Steponaitis 1998:13).

The distribution of non-local resources indicates emergent status-related social distinctions, supporting the argument that initial political consolidation may have been

based in part on the abilities of certain groups of people to direct or control long distance exchange (Michals 1998:181). However, the acquisition of non-local lithic resources was not limited to the residents of Moundville (Maxham 2000:349; cf. Welch 1991:167). While social ranking in the Moundville community was becoming more apparent, the majority of the population lived in farmsteads, with a self-sufficient subsistence economy in place since West Jefferson times (Hammerstedt 2000; Scarry 1995:243-245, 1998:90, 95-99).

Between AD 1050 and 1200, maize agriculture was intensified to the point that it could provide approximately 40 percent of the calories. In comparison, the consumption of wild plant foods such as nuts appears to have declined (Schoeninger and Schurr 1998:128; Scarry and Steponaitis 1997:115). During the early Moundville I phase, agricultural production may have been geared toward provisioning higher ranking individuals and corporate groups at the Moundville site (Ensor 1993:179-184; Michals 1998; Scarry 1993b:230; Scarry and Steponaitis 1997:117-118). If distinctions between elite and non-elite were drawn along previously existing kin group affiliations, then the storage of maize in above ground granaries may have presented additional opportunities for controlled distribution among corporate groups (Knight 1990; Scarry 1995:240, 1998:93). Such distributions may have taken place in the context of ritual feasts, including those associated with platform mound construction, seasonal agricultural cycles, and world renewal.

The ascendancy of ranked corporate groups at Moundville was likely to have involved intentional efforts at social aggrandizement, rather than resulting from fortuitous agricultural productivity or environmental factors alone (Scarry and Steponaitis 1997:110). However, the long-term consequences of such actions may well have been unintentional and unforeseen. The establishment of a community on the terrace overlooking the Black Warrior River soon proved to have far-reaching implications for the entire region.

"Regional Consolidation" (AD 1200-1300)

At approximately AD 1200, the site of Moundville became the political-religious center of a regional Mississippian polity in the Black Warrior Valley (Knight and Steponaitis 1998:14; cf., Scarry and Steponaitis 1997:110; Steponaitis 1991). Knight and Steponaitis (1998:14-17) refer to this as a time of regional consolidation, marked by the rapid and large-scale construction of a monumental landscape and associated architecture. In contrast to previous interpretations that portrayed the rise of Moundville as a result of gradual population growth and incremental mound building, the community expanded precipitously, to an estimated population of 1,000. Within a relatively short time, the site itself was transformed into a prodigious ceremonial center (Knight and Steponaitis 1998:15; Steponaitis 1998:43).

Construction of the plaza and most of the mounds began at this time. The entire community was enclosed by an enormous palisade (Figure 20). Residential dwellings were moved inside the palisade walls, portions of which were rebuilt at least six times, between AD 1200 and 1300 (Knight and Steponaitis 1998:15; Ryba 1997a; Scarry 1995:235-236, 1998; Vogel and Allan 1985). When completed, more than 26 mounds covered an occupied area of approximately 185 acres (Knight and Steponaitis 1998:3; cf., Steponaitis 1983a:4-6, 167). The construction of the ceremonial center is described by Knight and Steponaitis as purposefully planned, swift, and deliberate:

> The settlement was imposed on the landscape, in a flurry of coordinated activity in which plaza margins were artificially leveled to accommodate mounds, and existing constructions were cleared away to accommodate the new architecture (Knight and Steponaitis 1998:15).

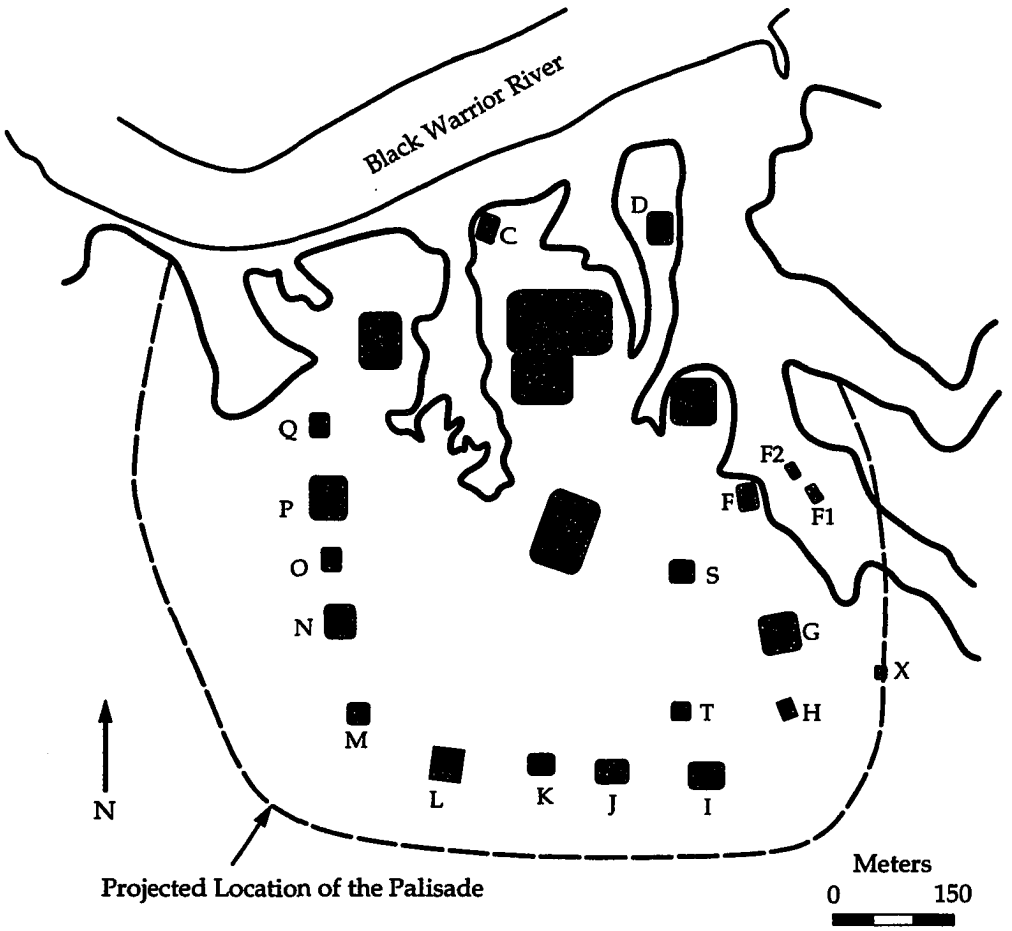


Figure 20. Map of the Moundville Site, Showing the Location of the Palisade.

The mound summit architecture included huge, wall-trench structures with large, central support posts. One of the buildings on Mound E measured approximately 214 square meters (Ryba 1997b). The floor area of this structure alone, was more than 11 times larger than the average size of domestic structures built around the periphery of the plaza and along the riverbank (Peebles 1978:378-280; Scarry 1998:92).

Knight (1998) suggests that the social landscape of the ceremonial center was from the beginning represented in the built environment. According to Knight (1998:46), Moundville can be viewed as a "diagrammatic ceremonial center" in which the spatial pattern of earthworks and architecture was "a political effort to insure the intergenerational stability of a particular, arbitrary vision of social reality." The central plaza and mounds at Moundville were built to reflect a "cognized order" or "sociogram" that represented and reinforced social distinctions through the sacred landscape of the ceremonial center (Knight and Steponaitis 1998:17; Knight 1998:44-45). The "bilateral symmetry" in mound arrangement noted earlier by Peebles (1971, 1983) was accompanied by clear status distinctions in the pairing of residential and mortuary mounds. Knight (1998:52) further suggests that residential and mortuary-mound pairs were associated with distinct corporate groups, the higher ranking represented by the larger mounds on the northern side of the plaza. Subsequent alterations of the architecture and spatial configuration may accordingly be regarded as reflecting changes in social relations of authority.

Several single mound sites were also established at this time as "secondary administrative nodes," in order to "facilitate the flow of tribute to the primary center" (Knight and Steponaitis 1998:16). The acquisition of non-local resources and production of craft goods at Moundville increased, indicating that it had emerged as the center of a regional political economy (Knight and Steponaitis 1998:16-17; Scarry 1995:241, 1998:94-95; Welch 1996). The mobilization of foodstuffs and distribution of craft goods is thought to have resembled the mobilization + prestige goods economy discussed by

Welch (1991). However, political-economic relationships between Moundville and residents of outlying communities varied more than has been portrayed by the hierarchical, three-tiered locational model. The residents of farmsteads were not confined to subsistence production, but actively engaged in community activities such as ritual feasts (Maxham 2000). Nor does the manufacture of items such as greenstone celts appear to have been isolated to specialized production at Moundville (Wilson 2000). The description of outlying mound sites as "secondary centers" may similarly conceal considerable variation during this time.

Nonetheless, social relations of production were associated with regional political and economic centralization (Knight and Steponaitis 1998:13; Steponaitis 1992). Distributions of local and non-local cherts suggests status-related differences in access to certain resources, as does the centralized distribution of certain craft items, such as sandstone palettes (Scarry 1995:242-243, 1998:94-100). Botanical and faunal evidence indicate that an elite at Moundville were provisioned with choice cuts of deer, maize, and other plant foods, a range of social distinctions also reflected in frequencies of pottery used in cooking and serving (Scarry and Steponaitis 1997; Welch and Scarry 1995). By AD 1300, maize agriculture was intensified to the point that it could supply the population with approximately 65 percent of the calories in their diet (Schoeninger and Schurr 1998:128). In summary, within a relatively short time span following AD 1200, Moundville was established as the political and ceremonial center for agricultural communities in the Black Warrior Valley.

"Paramountcy Entrenched" (AD 1300-1450)

One of the most significant revisions to the regional culture history has to do with the recognition of population movements, particularly in relation to the ceremonial center. Knight and Steponaitis (1998:17-19) point out that the most impressive mortuary evidence for Moundville's elite dates after AD 1300, following the departure of a greater

part of the population from the site. This is based on observations by Steponaitis (1998:39-43) that most of the domestic architecture and midden at Moundville date prior to AD 1300, while most of the burials associated with exotic grave goods date after this time. The ascribed social ranking and "superordinate dimension" of statuses discussed by Peebles (1971, 1974) thus apparently became most accentuated *after* the residential population of Moundville had already drastically decreased. Although other alternatives have been considered, the punctuated nature of this decrease in the residential population can be interpreted as evidence of a large-sale out migration from the center (Steponaitis 1998:40-43).

By the late Moundville II phase, the remaining residents of Moundville are thought to have represented a relatively small, elite segment of the population, while the majority of the community had moved to outlying sites (Knight and Steponaitis 1998:18; Steponaitis 1998:39). Notably, the palisade was no longer maintained during this time and most of the individuals buried at Moundville are thought to have resided at outlying sites. The Moundville site of the late Moundville II and early Moundville III phases had thus been drastically transformed, referred to by Knight and Steponaitis (1998:19-20) as a "vacant ceremonial center" and "necropolis." Due to the continued elaboration of "chiefly cult symbolism" in mortuary practices, this period is characterized as the "paramountcy entrenched" (Knight and Steponaitis 1998).

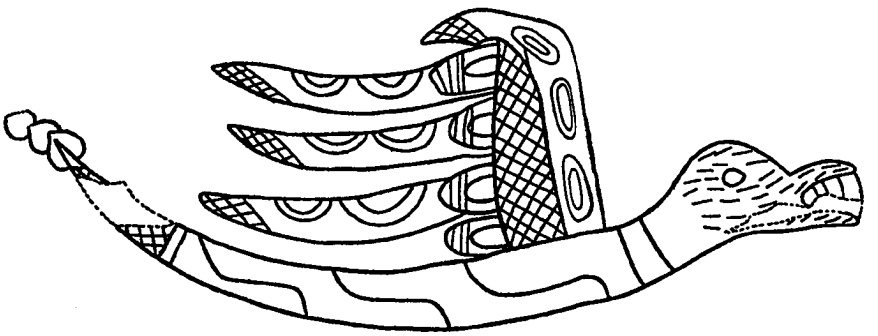
Knight and Steponaitis (1998:18-19) suggest that among the possible causes of this mass departure were (1) the efforts of an elite to "distance themselves" from the rest of the population, (2) the depletion of resources surrounding Moundville, and (3) decreased need for defensive fortifications. In fact, cult symbolism and exotic burial goods were accentuated to such an extent that an elite do appear to have effectively distanced themselves from commoners, at least in death (Knight and Steponaitis 1998:18, 20). Knight (1998) notes that the dispersal of the residential population and expansion of cemeteries at Moundville were accompanied by the eventual abandonment

of platform mounds, beginning with those located on the southern end of the plaza. While the acquisition of non-local resources may have also begun to decrease during this time, the abundance of engraved iconography on pottery vessels led Knight (1986:682) to surmise that the abstract symbols of former elite authority had been appropriated by others, what he refers to as a "communalization of the chiefly cult symbolism" (see also Knight 1997, 1998; Knight and Steponaitis 1998:20). Among the engraved iconography dating from this time are pottery vessels with variations of a Winged Serpent motif (Figure 21).

Most of the sub-structural mounds at the ceremonial center had been abandoned by AD 1400, although some of the mound summits continued to be occupied (Knight 1992, 1994a; Knight and Steponaitis 1998:19-20). At the same time, additional mounds are thought to have been constructed at outlying sites (Welch 1998). The transformation of Moundville from a densely populated, fortified town, to nearly vacant, elite residence and necropolis is interpreted by Knight and Steponaitis (1998:21) as indication that the "cognized order" of the Moundville elite may have ultimately been contested by "lower-ranked groups." Nonetheless, they note that the available evidence from Moundville and outlying mound sites suggests the long-term maintenance of prestige goods exchange and tributary social relations.

"Collapse and Reorganization" (AD 1450-1650)

In contrast to earlier descriptions of an abrupt collapse at around AD 1500 or 1550, the late Moundville III and Moundville IV phases are described by Knight and Steponaitis (1998:21-24) as a period of more attenuated collapse and reorganization. Mound construction continued at several outlying sites, while only a few mounds at Moundville show evidence of continued occupation. Snows Bend and White were among the larger secondary sites where mounds continued to be built. Cemeteries are



Source: Moore (1907:372)

Figure 21. Winged Serpent Engraving on a Pottery Vessel from Moundville.

also known to have been established at these sites (DeJarnette and Peebles 1970; Knight and Steponaitis 1998:21; Welch 1991, 1998).

While a pattern of dispersed farmsteads may have persisted, there appears to have been a trend toward demographic nucleation at a few outlying mound sites and villages (Welch 1998:164). Knight and Steponaitis (1998:21-22) suggest that after AD 1450 this reflects "an increasing independence and self-sufficiency among the outlying communities" (cf., Peebles 1987b:9, 14). Despite this, comparatively little additional information has been gathered regarding outlying mound sites dating from this time. Subsequent organizational changes left little evidence for a regionally centralized political economy in the Black Warrior Valley. When the de Soto entrada passed through the area in AD 1540, the Moundville polity is thought to have been at most "nominally centralized" (Knight and Steponaitis 1998:24).

Additional changes associated with the Moundville IV phase are likely to have occurred after AD 1550, including the cessation of platform mound construction, abandonment of outlying mound sites, and continued decrease in long-distance exchange and craft goods manufacture. By the end of the sixteenth century, the Moundville site was completely abandoned (Knight and Steponaitis 1998:22). Contrary to previous interpretations, there does appear to have been a concomitant decrease in the importance of maize and maize agriculture during this time (Schoeninger and Schurr 1998:128). Schoeninger and Schurr (1998:132) associate an overall decline in health with malnutrition, exacerbated by the loss of a "dependable nutrient source" and the shift to greater reliance on wild plant foods (cf., Hill-Clark 1981). These changes were followed by a region-wide demographic transition. The Black Warrior Valley was severely depopulated by around AD 1650, just prior to the formation of the historic Choctaw and Creek confederacies (Knight and Steponaitis 1998:22; cf., Galloway 1994, 1995; Knight 1994b).

According to one recently proposed scenario, the collapse of Moundville's political economy may have been brought about through indigenous sources of disease, malnutrition, and changes in subsistence that resulted from soil exhaustion *prior* to the arrival of the Spaniards (Schoeninger and Schurr 1998:132). Yet as Powell (1998:118) notes, out-migration from the ceremonial center and consequent dispersal of the population throughout the valley would have minimized the long-term effects of disease and malnutrition, not to mention reducing the likelihood of both soil exhaustion and resource depletion. Schoeninger et al. (2000:73) have more recently proposed that the collapse of Moundville may have been precipitated by endemic disease and natural population decrease ("subfecundity"), immediately prior to direct Spanish contacts. Combined with potential crop failures, the Moundville polity is thought to have been destabilized due to "internal biological reasons" (Schoeninger et al. 2000:75). However, the evidence for regional population movements during the preceding centuries does not support an overall decline in population levels. Furthermore, it is not at all clear why a decrease in population after AD 1400 might have caused, rather than been a consequence of, political destabilization.

The possibility of a sixteenth-century collapse as being caused by disease epidemics and depopulation remains even less tenable today, considering the revised regional chronology presented by Knight and Steponaitis (1998). Explanations of a sudden, irrevocable collapse as resulting from changes in subsistence, soil exhaustion, resource depletion, and disease are not supported by the evidence for out-migration from Moundville after AD 1300, nor do such arguments account for the subsequent demographic nucleation at outlying mound sites. The problems in distinguishing a regional, political decline from broader changes involving Mississippian cultural practices are further complicated by assumptions regarding the demographic consequences of European contacts. By the time of the de Soto entrada, the Moundville polity had already been substantially transformed.

In summary, the development of the Moundville polity occurred much more abruptly than previously thought, followed by a more attenuated decline. This decline represents as yet poorly understood changes in regional political dynamics that began centuries prior to European intrusion (Knight and Steponaitis 1998:25; Welch 1998:165). Moundville's historical trajectory is not accounted for by the successive management (or mismanagement) of ecological risks, crop failures, or environmental problems. Just as the meteoric rise of Moundville is not reducible to cultural adaptions, such relationships alone do not account for the series of organizational changes in regional political economy in the four centuries following AD 1200.

Political development and decline in the Black Warrior Valley is not adequately explained as an isomorphic reflex of resource availability, demography, or disease. Once again, available evidence points toward the importance of understanding interrelated political, economic, and social factors (Peebles 1987a:37). The historical trajectory of Moundville and other regional polities need not confound archaeologists with a series of stochastic or "unknowable" events (Steponaitis 1991:227). Instead, previous studies can be brought together with additional research in order to shed light on the *historical process* of political development and decline. One of the least developed sources of information on the Moundville polity comes from outlying mound sites, in the Moundville countryside.

In the Moundville Countryside

In comparison to the ceremonial center, less information is available on outlying mound sites in the Black Warrior Valley. As many as fourteen sites with earthen mounds may have been associated with the Moundville polity during the five centuries after AD 1050 (Figure 22). As recognized since at least the early 1980s, mound construction and village occupation at various sites can no longer be assumed to have

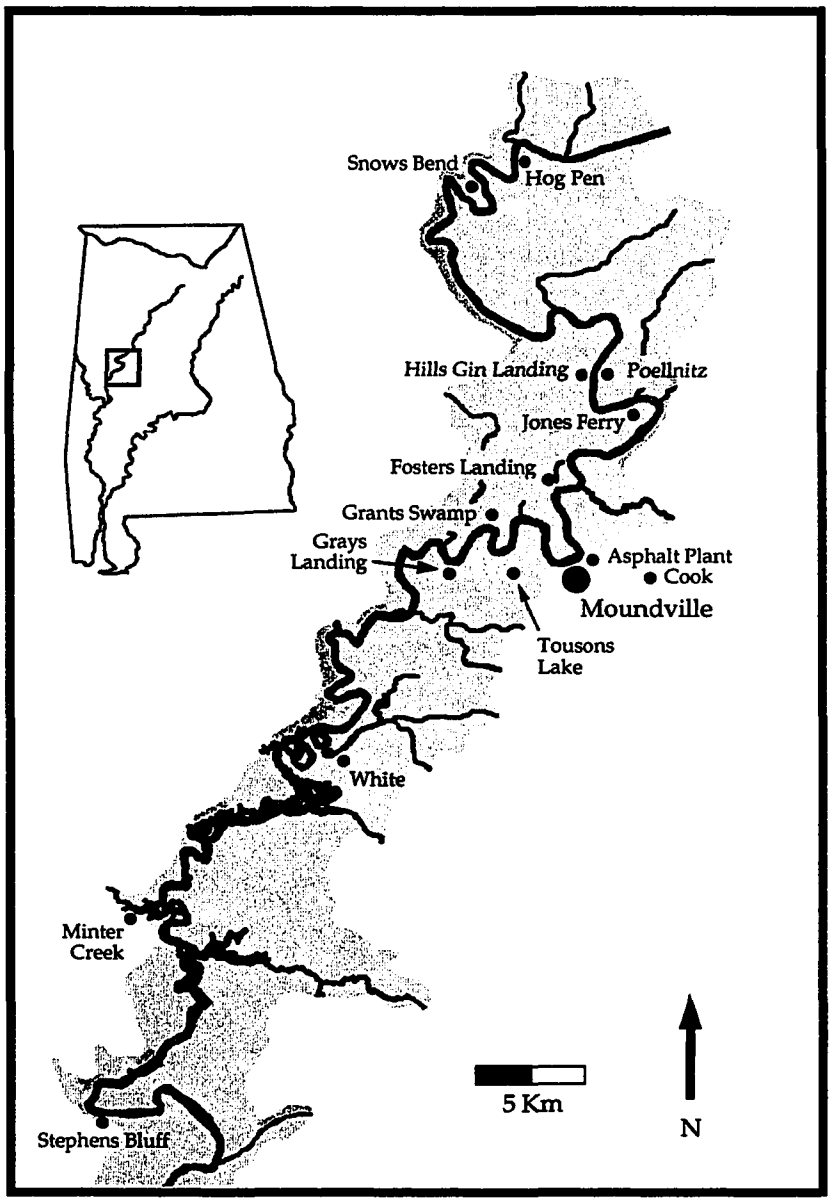


Figure 22. Outlying Mound Sites in the Black Warrior Valley.

been contemporaneous throughout the existence of the Moundville polity (Bozeman 1982; cf. Steponaitis 1978). Lack of more definitive knowledge on the precise number of Mississippian mound sites and their construction and occupational histories reflects a critical deficiency in regional survey coverage. An unknown number of farmsteads, villages, and non-mound sites are also located in this area, of which even less is known (but see Maxham 2000; Michals 1998; Mistovich 1986, 1987, 1995). Despite several initiatives at surveying and documenting sites in portions of the floodplain and uplands (e.g., Alexander 1982; Bozeman 1982; DeJarnette, field notes at the Office of Archaeological Research, University of Alabama; Nielsen et al. 1973), more systematic survey of the Black Warrior Valley has only recently begun (Hammerstedt 1999, 2000).

Notwithstanding, investigations at outlying sites since the late 1970s have contributed to an overall understanding of Moundville's culture history and political economy, especially research conducted at the more well-documented outlying mound sites (Bozeman 1982; Hayward et al. 1995; Welch 1991, 1996; Welch and Scarry 1995). Welch (1998) provides an overview of the information currently available on outlying sites, including detailed descriptions of farmsteads, hamlets, and mound sites. As discussed above, present-day understanding of Moundville's political economy is based largely on his analysis of comparative data from two sites: the White (1HA7/8) and Hog Pen (1TU56/57) mound sites (Welch 1991, 1996; Welch and Scarry 1995). As Welch (1998:134-136) points out, the identification of outlying mound sites associated with Moundville has been used to define the spatial limits of the regional polity. Since the 1970s, a reduction in the estimated size of the polity reflects the new information available from these sites, as well as an increased understanding of political theory and its application through locational models.

This trend has been paralleled by recent studies in other regions of the Mississippian Southeast (e.g., Scarry, ed. 1996). Hally's (1993, 1996a, 1996b) investigations of settlement patterns and the territorial sizes of polities in the southern

Appalachians provides a particularly relevant contrast to political consolidation in the Black Warrior Valley. According to Hally (1993:159), contemporaneous mound sites separated by less than 18 km most likely represent political-administrative centers within a single regional polity. Mound sites more than 32 km distant may in turn indicate discontinuous or separate polities (Hally 1993:160). The Moundville polity at its height is currently estimated to have extended 40 to 55 km within the Black Warrior Valley, a considerably smaller area than envisioned earlier for the Moundville culture, yet well within the distribution of sites suggested by Hally (e.g., Peebles 1971:85; Welch 1998:134). However, it is important to bear in mind that such appraisals tend to presume site contemporanaity based on limited (or negative) information.

As discussed above, the temporal delineation of the Moundville polity is based predominantly on information from the site of Moundville (e.g., Knight and Steponaitis 1998; Steponaitis 1983a), although outlying sites are also clearly relevant in this regard (Welch 1998:134). Since the various occupancies of mound and non-mound sites were not concurrent, the investigation of construction histories and settlement chronologies of outlying sites is integral to an improved understanding of the development and decline of the Moundville polity. Examining the single mound site closest to Moundville (1TU50), Steponaitis (1992:11) noted that its residents likely played a pivotal role in political consolidation. The changing relationships between the residents of Moundville and outlying sites thus take on a central importance:

> Hence, if we are to delineate the trajectory by which the Moundville polity developed, it is crucial to know the chronology of construction at each of the minor centers, and to be able to relate that chronology to events at Moundville itself (Steponaitis (1991:2).

Contrasted with recent studies of the ceremonial center, research on mound sites and associated communities in Moundville's countryside offers a crucial source of contextual information on political development and decline. Previous investigations by Bozeman (1981, 1982) and Welch (1991, 1998) provide the starting point for a reanalysis (see also Peebles 1978; Steponaitis 1978; Welch and Scarry 1995). The evidence for mound construction and village occupation, as well as the interpretation of these sites as secondary political-administrative centers, must be reevaluated in light of recent research. The trajectory of consolidation, regional centralization, and decentralization in the Black Warrior Valley can then be reconsidered as part of an historical process of development and decline.

A majority of the information available on outlying mound sites comes from the University of Michigan Museum of Anthropology (UMMA) fieldwork in 1978 and 1979, under the direction of Christopher Peebles. The UMMA crew conducted surveys of most of the outlying mound sites and nearby village areas (Table 3). The data from this project were the topic of Bozeman's (1982) dissertation, outlining more precise site chronologies and a clearer understanding of changing settlement patterns in the Black Warrior Valley (see also Bozeman 1981; cf., Peebles 1978; Steponaitis 1978).

Since the UMMA survey, the cultural affiliation and construction histories of two outlying mound sites, Grants Swamp (1TU387/388) and Cook (1HA1/2), have remained uncertain. Their potential relationship with the Moundville polity is consequently called into question. Two low mounds were recorded at Grants Swamp by the UMMA crew in 1978 (Bozeman 1982:203-205). Test excavations produced no definitive stratigraphic evidence for mound construction. Although shell-tempered pottery sherds were recovered from one mound at Grants Swamp, historic artifacts were also present. Both Bozeman (1982:205) and Welch (1998:157) have consequently suggested that the mounds at Grants Swamp may be of more recent historic origin.

Table 3. Previous Investigations at Outlying Mound Sites in the Black Warrior Valley.

Site	Site Number	Investigations	References
Hog Pen	1TU56/57	AMNH 1933; UMMA 1978; Welch 1990	Bozeman 1982; Welch 1998; Welch and Scarry 1995
Snows Bend	1TU2/3	AMNH 1930, 1932; UMMA 1978	Bozeman 1982; DeJarnette and Peebles 1970
Hills Gin Landing	1TU46/47	AMNH 1933; UMMA 1978	Bozeman 1982; Moore 1905
Poellnitz	1TU398	UMMA 1978	Bozeman 1982
Jones Ferry	1TU44/45	AMNH 1933; UMMA 1978	Bozeman 1982
Fosters Landing	1TU42/43	AMNH 1933; UMMA 1978	Bozeman 1982; Curren 1984; Curren and Little 1981; Moore 1905
Asphalt Plant	1TU50	AMNH 1933; UA 1975	Bozeman 1982; Steponaitis 1992
Cook	1HA1/2	AMNH 1933; UMMA 1978	Bozeman 1982
Tousons Lake	1HA14/15	AMNH 1933; UMMA 1978	Bozeman 1982; Nielsen et al. 1973
Grants Swamp	1TU387/388	UMMA 1978	Bozeman 1982
Grays Landing	1TU41/HA107	UMMA 1978	Bozeman 1982; Moore 1905
White	1HA7/8	AMNH 1930-31, 1972-73; UMMA 1979, 1983	Bozeman 1982; Moore 1905; Nielsen et al. 1973; Welch 1986, 1991
Minter Creek	1GR76		Welch 1998
Stephens Bluff	1GR14	AMNH	Hayward et al. 1995; Moore 1905; Nielsen et al. 1973; Shogren 1989

Bozeman (1982:181) suggested that the Cook site may date to the Woodland period based on the conical shape of the mound and unusual upland location of the site, outside of the Black Warrior River floodplain. Nevertheless, Welch (1998:156) has suggested that shell-tempered pottery surface collected from the site in 1933 may indicate a Moundville II phase or later association. Another mound, and adjacent village site (1HA9/10) were reported by the AMNH in the 1930s but were not relocated during the 1970s fieldwork (Bozeman 1982:185-186; Nielsen et al. 1973:82-83). Due to a lack of reliable information on these sites, and their potential Woodland and historic associations, none can be considered further without additional investigation.

Based on the evidence available at the commencement of this study, mound construction dating from the period of Moundville's regional consolidation (ca. AD 1200-1300) had been identified at three outlying sites: Hog Pen, Poellnitz, and Jones Ferry (Welch 1998). A fourth site, known as Asphalt Plant (1TU50), dates earlier, to the first half of the Moundville I phase (ca. AD 1050-1150). Due to its close proximity (approximately 800 m northeast) from the site of Moundville, it can be regarded as contiguous with an early Moundville site occupation (Welch 1998:156, 162). It also appears to have been one of the earliest areas of mound construction in the valley and was abandoned immediately prior to the establishment of Moundville as a regional center (Steponaitis 1992:1, 11).

The Hog Pen site (1TU56/57) is farther up river than any other mound site presently associated with the Moundville polity. It is located on the east bank of the river, approximately 21 km (13 miles) north of Moundville (Table 4). Recorded by Jones in 1933, the Hog Pen mound does not appear to have been visited by C. B. Moore (1905). The UMMA survey tested the mound in 1978 and documented at least 2 distinct episodes of mound construction, with evidence for structures on each mound surface (Bozeman 1982:59-65). Bozeman (1982:61) suggests that most of the mound was "constructed as a single event," probably sometime during the Moundville I phase.

Table 4. Distances and Estimated Travel Time by River from Outlying Mound Sites to Moundville.

Site		Distance (km)	River Distance (km)	River Travel Time (hr)*
Hog Pen	1TU56/57	21.0	47.5	9.9
Snows Bend	1TU2/3	19.8	40.1	8.4
Hills Gin Landing	1TU46/47	10.5	18.9	3.9
Poellnitz	1TU398	10.4	18.9	3.9
Jones Ferry	1TU44/45	9.3	14.5	3.0
Fosters Landing	1TU42/43	4.0	4.8	1.0
Asphalt Plant	1TU50	0.8	0.8	n/a
Tousons Lake	1HA14/15	2.7	6.6	2.1
Grays Landing	1TU41/HA107	5.2	9.8	3.1
White	1HA7/8	12.7	30.6	9.6
Minter Creek	1GR76	26.0	58.4	18.3
Stephens Bluff	1GR14	35.0	74.0	23.1

* Estimated travel time by river is calculated at 4.8 km (3 miles) per hour downstream and 3.2 km (2 miles) per hour upstream.

There subsequently appears to have been periodic renewal of the mound surface, as indicated by several thin layers of clay and sand. Based on the recovery of diagnostic pottery (including Moundville Incised, *varieties Moundville, Snows Bend,* and *Carrollton*), Bozeman suggests a general association with the Moundville I and II phases. Yet controlled surface collection of the adjacent village area was interpreted as evidence for a large, Late Woodland West Jefferson component, followed by a considerably smaller, early Mississippian occupation.

Additional information is available on the Hog Pen site from investigations conducted by Welch (1998:150-152) in 1990 and again in 1992. Test excavations in the mound again revealed evidence for two principal construction stages, with diagnostic pottery sherds associated with the Moundville I and early Moundville II phases. A series of radiocarbon dates reported by Bozeman (1982:62) and Welch (1998:140) are thought to erroneously suggest mound summit use during the fourteenth and fifteenth centuries. A fourth radiocarbon sample from a secondary midden deposit on the mound slope yielded a calibrated date of AD 1230, corroborating the pottery evidence for a late Moundville I phase occupation and mound summit residential activity (Welch and Scarry 1995:401). Welch and Scarry (1995) use ceramic and subsistence data from the Hog Pen site in support of their argument for the provisioning of an elite from contrasting, contemporaneous contexts dating from the late Moundville I phase.

Moving down river, the Poellnitz site (1TU398) also appears to have been overlooked by C. B. Moore. The site is located across the river from Hills Gin Landing, approximately 10.4 km (6.5 miles) north of Moundville. The UMMA crew excavated a single test unit into the mound at the Poellnitz site and surface collected the adjacent village area (Bozeman 1982:129-141). Similar in some respects to Hog Pen, there is evidence for at least two major episodes of mound construction, with Moundville Incised (*variety Carrollton*) pottery sherds from the lower and upper layers. Two sherds of Moundville Engraved, *varieties Taylorville and Tuscaloosa,* were also recovered,

subsequently interpreted as evidence for a Moundville II or early Moundville III phase association (Bozeman 1982:130-131; Welch 1998:153-154). Yet a large number of grog tempered, Baytown Plain sherds were recovered from the surface collections, again indicating that a large West Jefferson phase village preceded the Mississippian mound site.

The presence of the later diagnostic pottery types and a suspiciously late radiocarbon date for the mound (AD 1330-1650, calibrated at AD 1450) has led Welch (1998:154) to surmise that the Poellnitz site might have initially been occupied during the late Moundville I or early Moundville II phase, when mound construction began. According to this argument, the site was either occupied continuously or subsequently reoccupied during the late Moundville II or early Moundville III phase. Yet both Moundville Engraved sherds from the mound fill may date to the *early* Moundville II phase, along with a single sherd of Moundville Engraved (*variety Havana*) surface-collected from the village area (Steponaitis 1983a:106). Considering the absence of later diagnostic pottery types from the mound, it is reasonable to conclude that mound construction and associated village occupation span the thirteenth century (i.e., late Moundville I through early Moundville II).

The Jones Ferry site (1TU44/45) was recorded by Jones in 1933 as having a single bluff-top pyramidal mound, located approximately 9.3 km (5.8 miles) north of Moundville. The mound and portions of the site have subsequently eroded into the river. However, prior to its complete loss the UMMA crew was able to document mound fill, two burials, and associated features (Bozeman 1982:142-149; Welch 1998:154-155). Both of the burials and a pit feature containing grog-tempered pottery sherds are thought to predate the mound. Welch (1998:141, 155) suggests that the pit dates to the West Jefferson phase, although a charcoal sample from the pit produced a calibrated date of AD 1250.

Jones Ferry is generally associated with the Moundville I phase, ostensibly following a sizeable West Jefferson phase occupation. Bozeman (1982:144) suggests that Jones Ferry was similar to the Hog Pen site, in that the mound appears to have been constructed sometime during the Moundville I phase and was associated with a small (0.5 to 0.8 hectare) early Mississippian village. Pottery sherds of Moundville Incised (*varieties Moundville* and *Snows Bend*) and Moundville Engraved (*variety Havana*) were recovered from the mound fill. Since the fill beneath the mound also contained Moundville Incised (*varieties Moundville* and *Carrollton*), it seems likely that the mound was constructed during the latter part of the Moundville I phase. If so, the radiocarbon date of AD 1250 from the sub-mound pit may have been intrusive from the first of the two documented mound construction episodes, marking the time at which mound construction began (cf., Welch 1998:154-155). Unfortunately, more precise stratigraphic and chronometric data can no longer be obtained.

In contrast to the four sites just discussed, as many as eight outlying mound sites have been associated with Moundville's later culture history and reorganization (Knight and Steponaitis 1998:21-24; Welch 1998:163-164). In other words, there is some evidence for either mound construction or village occupation that postdates AD 1400 from these sites, perhaps as early as the late Moundville II phase (AD 1300-1400; Bozeman 1982:59-261; Welch 1998:148-163). Comparatively little is known regarding three of the outlying mound sites thought to date from this time: Grays Landing, Minter Creek, and Tousons Lake. The available information on these sites can be briefly summarized.

The Grays Landing (1TU41/HA107) mound had been leveled as a result of cultivation by the time of Moore's (1905:127) visit and may have subsequently eroded into the river. It was not relocated during the UMMA survey (Bozeman 1982:216). Bozeman (1982:218) and Welch (1998:158) both indicate that surface-collected pottery sherds from a nearby village may reflect an early Moundville II to Moundville III phase mound construction and use, assuming that the village and mound were

contemporaneous. Not much more is known regarding Minter Creek (1GR76), located 26 km (16 miles) south of Moundville. Welch (1998:160) notes that pottery collected from the surface of the mound indirectly suggests a protohistoric, Moundville IV phase occupation. The mound at Minter Creek is notable in that the summit appears to have had two levels. Minter Creek was not included in the UMMA survey, and considering what little else is known about the site, has generally been excluded from discussions of Moundville's political economy (e.g., Peebles 1978; Steponaitis 1978; Welch 1991, 1996). Considering its distance from Moundville and possible protohistoric occupation, its association with Moundville remains uncertain. Nonetheless, the distance of the Minter Creek site from Moundville has been taken into consideration in calculations of the southern extent of the polity (Welch 1998:160).

By the time of the UMMA survey, the Tousons Lake (1HA14/15) mound had been partially destroyed by a road. The village area had been damaged by flooding and partially buried under historic fill (Bozeman 1982:187-188; Welch 1998:156-157). Test excavations in the mound produced uncertain stratigraphy, although Welch (1998:156) suggests that there was evidence for two episodes of construction. The recovery of Moundville Engraved (*varieties Havana* and *Tuscaloosa*) sherds and a lack of earlier diagnostic pottery types from the mound fill suggest it was built after ca. AD 1350. Carthage Incised pottery collected from the village area and salvaged from burials exposed by flooding indicate a possible late Moundville II to Moundville III phase occupation. Bozeman (1982:196) reports a single sherd of Barton Incised (*variety* unspecified) from the mound fill, suggesting a post-AD 1400 association.

The remaining five outlying mound sites have been investigated in more detail. These include the Snows Bend, Hills Gin Landing, Fosters Landing, White, and Stephens Bluff sites. The Snows Bend site (1TU2/3) is located 19.8 km (12 miles) north of the Moundville site. The Snows Bend mound and village were recorded in the 1930s by the AMNH and investigations from that time were subsequently reported by DeJarnette

and Peebles (1970). Excavations in the village area documented at least 47 burials, including decorated pottery and artifacts associated by DeJarnette and Peebles (1970:93) with Southern Cult iconography. Moundville Engraved vessels with winged serpent, hand and eye, and paired tail themes are generally diagnostic of the late Moundville II and Moundville III phases (Bozeman 1982:97; Welch 1998:152).

UMMA excavations on the mound summit and north mound slope at Snows Bend yielded pottery sherds diagnostic of the Moundville III phase. A layer of daub and charcoal flecks recorded on the mound slope may have been associated with a structure on a an earlier mound summit. Despite a radiocarbon date three centuries earlier than expected, mound construction appears to date after approximately AD 1350 (Bozeman 1982:95; Welch 1998:152). Surface collections from a village area 600 m to the northeast yielded pottery sherds of Baytown Plain, Mississippi Plain, and Carthage Incised (*varieties Carthage* and *Moon Lake*), perhaps suggesting two separate components dating to the West Jefferson and Moundville III phases (Bozeman 1982:96-97).

Like most of the other outlying mound sites, Hills Gin Landing is comprised of a single mound and associated village that were originally designated by two different site numbers (1TU46 and 1TU47) but now generally regarded as a single site (AMNH site files; Welch 1998:150). Hills Gin Landing is located on the west bank of the Black Warrior River, approximately 10.5 km (6.5 miles) north of Moundville. The mound at Hills Gin Landing was described by Moore (1905:243) as 6 feet 8 inches (2.03 m) in height, with dimensions of 133 feet (40.5 m) east-west by 100 feet (30.5 m) north-south at its base. According to Moore, the excavation of "thirteen trial-holes yielded neither human bone nor artifact." Consequently, he did not revisit this or any of the other nearby outlying mound sites on his second visit to Moundville.

The AMNH under the direction of Jones documented the Hills Gin Landing site in 1933. A village area at Hills Gin Landing (or Burnette site) was recorded approximately 100 meters north of the mound, although no additional work was performed in this area

(AMNH site file). The AMNH conducted excavations two years earlier at the nearby Lon Robertson site (1TU93/5), after several burials had been exposed by road construction. The location of the Lon Robertson site was described as approximately 400 meters south of the Hills Gin Landing mound (Curren 1984:126-132; Welch 1998:153). According to Curren (1984:126), the AMNH crew excavated 19 burials, 11 of which included burial urns. The Lon Robertson site was subsequently relocated by Curren in 1975. Based on a surface collection and the burials excavated during the 1930s, the site was described by Curren (1984:132) as a "large Protohistoric village." However, potential relationships between this site and the Hills Gin Landing mound and village were not investigated (Welch 1998:153).

The UMMA crew conducted test excavations and controlled surface collections at the Hills Gin Landing site, producing a contour map and documenting surface artifact distributions (Bozeman 1982:112-128). The mound was recorded at that time as "50 by 45 meters at the base, 25 by 25 meters at the summit, 2 meters high, with the long axis oriented NE-SW" (Bozeman 1982:112). Excavation of two 1 by 1 meter test units on the mound surface indicated approximately eight construction episodes. Analyses of radiocarbon samples produced dates of AD 1570 $\pm$ 65, 1690 $\pm$ 50, and 1705 $\pm$ 65, potentially associated with burned structural debris from the upper mound strata (AMNH site file; Bozeman 1982:113-116).

Pottery sherds from the Hills Gin Landing mound excavation units and surface collection in the village area to the north provided evidence of an earlier occupation dating to the late Moundville II or Moundville III phase. Based on the UMMA surface collection, the village occupation north of the mound was estimated by Bozeman (1982:117) to cover little more than two-thirds of an acre (0.28 ha.). As Welch (1998:153) notes, the radiocarbon dates from the mound and urn burials at the Lon Robertson site to the south indirectly suggest a Moundville IV phase association for Hills Gin Landing. Given the lack of controlled excavations in areas adjacent to the mound or in the village,

association with the Moundville IV phase remains inconclusive. However, the ceramic evidence from the Hills Gin Landing mound and nearby protohistoric site generally corroborate radiocarbon dates for final mound construction episodes and summit use from the late fifteenth to mid-seventeenth centuries (Bozeman 1982:112-123; Curren 1984:126-132; Welch 1998:153).

The Fosters Landing site also includes a single mound and associated village (1TU42 and 1TU43) that are now generally regarded as one site. Fosters Landing is located less than 4.0 km (2.5 miles) north of Moundville on Moon Lake, an oxbow remnant of the Black Warrior River. Beginning with a visit by C. B. Moore in the early twentieth century, the Fosters landing site has received intermittent attention by archaeologists. Moore (1905:243) first described the "mound near R. H. Foster Landing" as "almost obliterated by cultivation." Excavations into the mound produced no notable artifacts or burials and were regarded by Moore as unproductive. Excavations in the surrounding field exposed a burial pit in which two extended skeletons had been interred, with no evidence of associated burial goods. Moore's (1905:22) sketch map shows Moon Lake as the active channel of the Black Warrior River, indicating that the oxbow was cut off subsequent to his visit (Figure 23).

The mound and village at Fosters Landing (or Wiggins site) were recorded by the AMNH in 1933. Thirty years later, the AMNH was contacted by the land owner, after artifacts and burial pits had been exposed as a result of deep plowing (Curren 1984:122-124; Curren and Little 1981). Curren subsequently inspected some of the artifacts collected by the land owner. This unprovenienced collection includes large numbers of Alabama River Incised, Alabama River Appliqué, and red and white-painted sherds, indicative of a post AD 1400-1550 occupation (Office of Archaeological Services, University of Alabama). However, it also includes grog and sand-tempered, shell-tempered Mississippi Plain, and Moundville Incised (*variety Moundville*) sherds, as well as a large quantity of mussel shell. Conversations with the land owner and examination

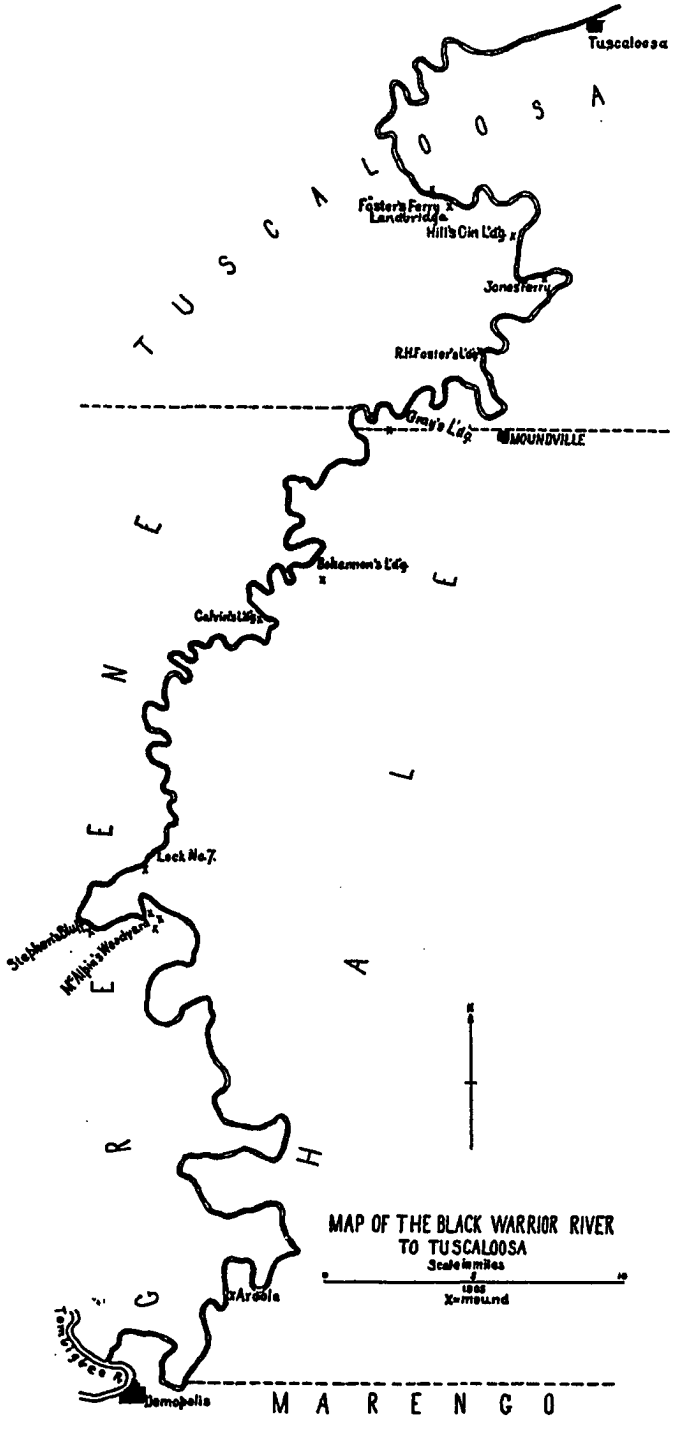


Figure 23. Map of the Black Warrior Valley by C. B. Moore.

of additional unprovenienced collections in his possession indicate that several urn burials and at least one daub and thatch structure had been unearthed at the site during the 1970s (AMNH site file; Billy Wiggins, personal communication 1997).

As of 1974, the mound at Fosters Landing was described by Curren (1984:124) as approximately one meter in height, with basal dimensions of approximately 30 by 35 meters. According to Curren (1984:124), the "main area of a Protohistoric village" was located "across an intermittent stream to the southwest of the mound some 200 meters." According to information provided by the land owner, the village may have extended further to the southeast, within the immediate vicinity of the land owner's house (Billy Wiggins, personal communication 1997).

The UMMA crew surveyed and conducted controlled surface collections at the Fosters Landing site, producing a contour map and detailed record of artifact distributions (Bozeman 1982:160-172). The mound was described at this time as "nearly indistinguishable from the surrounding field" and no excavations were attempted (Bozeman 1982:160-161). Based on the wide temporal range of surface collected ceramics, Bozeman suggested that the site had Middle Woodland, Late Woodland (West Jefferson), and Mississippian components. The recovery of Carthage Incised, Moundville Engraved, Alabama River Appliqué, and Alabama River Incised sherds generally corroborated a possible Moundville III to Moundville IV phase occupation for the mound and village (Bozeman 1982:161-162; cf., Welch 1998:155).

The size of the village at Fosters Landing has been of particular interest, since it is thought to have been considerably larger than other comparable villages with nearby mounds. The late Mississippian occupation at Fosters Landing is estimated to have covered 2.2 hectares, or 5.4 acres. However, this is based on the size of the area from which shell-tempered sherds were recovered during the UMMA surface collection (Bozeman 1982:287). As Welch (1998:155) notes, it is uncertain whether this artifact distribution is a product of mound-leveling, or a reflection of the actual size of an

adjacent village. Since no excavations were performed by the UMMA crew, it is also unclear whether the mound itself was associated with the Moundville III or Moundville IV phases. Information obtained by the UMMA survey has nonetheless been interpreted as evidence of a major demographic nucleation that occurred at Fosters Landing during the late Moundville III and early Moundville IV phases, a trend that is thought to have occurred at other outlying mound sites as well (see above discussion; Knight and Steponaitis 1998:21-22; Peebles 1987b:9; Welch 1998:164).

The White site (1HA7/8) was investigated by Welch (1986, 1991) as part of his dissertation research, contributing substantially to subsequent understanding of Moundville's regional political economy and outlying mound sites in general. The White site is located 12.7 km (7.9 miles) southwest of Moundville on the south end of Martin Creek, a relict channel of the Black Warrior River. Like the mound at Minter Creek, the White mound is somewhat unusual, in that it is comprised of two separate levels. Moore (1905:127) visited the White site and excavated into the mound, which he referred to as the "mound near Bohannon's Landing." Numerous burials were excavated at the site by the AMNH during the 1930s, providing evidence of one of the few cemeteries known to have been associated with an outlying mound site (Bozeman 1982:246-247; Welch 1991:36, 59, 66-67). In 1979, the excavation of test units by the UMMA crew into the lower and upper mound summits and east mound slope indicated two construction episodes, separated by numerous sand layers and a mantle of white clay (Welch 1991:33-40).

Both the AMNH and UMMA excavations produced ceramic evidence of a Moundville III phase association for the mound and adjacent village (Bozeman 1982:249-250). Welch (1998:158) suggests that the earlier episode of mound construction dates to the Moundville III phase, while the second may have been associated with the Moundville IV phase. The latter is suggested by the recovery of two Alabama River Appliqué sherds from upper mound fill (Bozeman 1982:258). A radiocarbon date of AD

1400 for burned materials from the sand layers between the principal strata suggests that the first mound stage was laid down quickly at that time, followed by successive summit use, renewal, and a second episode of mound construction (Welch 1998:158).

Welch (1991:40-55, 1998:159) excavated in the village area at the White site in 1983 and recorded an area of secondary refuse, apparently from an elite household. Diagnostic pottery types and a series of chronometric dates confirm that the village was occupied from approximately AD 1400 to AD 1550, at which point the mound and village appear to have been abandoned. As discussed earlier, Welch contrasted subsistence and artifactual data from the White site with information on residential contexts at the Moundville site dating from at least a century and a half earlier. He also assumed broad functional similarities between outlying mound sites in order to support the "mobilization + prestige goods" model of Moundville's economy (Welch 1991:182-183). Welch (1998:161-166) has more recently pointed out that changing settlement patterns in the region more likely reflect variable political and economic relations between residents of outlying mound sites and Moundville.

Stephens Bluff (1GR14) is the farthest south of any outlying mound site associated with the Moundville polity (Peebles 1978:387). It is located 35 km (21.7 miles) southwest of Moundville, on a bluff overlooking Choctaw Bend of the Black Warrior River. Along with the Minter Creek site, the location of Stephens Bluff has occasionally been used to demarcate the southern limits of the Moundville polity. Moore (1905:127) briefly visited the site and noted that the mound was over 9 feet (2.97 m) in height, with steep sides. He also remarked that the summit of the mound was "level as a floor," probably reflecting its use as a substructural platform.

Although Stephens Bluff was not included in the UMMA survey, earlier investigations by the AMNH suggested a likely Mississippian association for both the mound and village, with a possible earlier Late Woodland component (Nielsen et al. 1973:34-35; Shogren 1989). Subsequent test excavations in the mound and village area

produced diagnostic pottery associated with the Moundville III phase (Hayward et al. 1995:6-25). Excavations on the mound summit were of insufficient depth to document sequential construction episodes. However, a pit feature within the uppermost fill layer contained shell-tempered sherds with small loop handles, likely dating from the Moundville III phase or later (Hayward et al. 1995:21).

Given the distance separating Stephens Bluff from the Moundville site (as well as other outlying mound sites), Welch (1998:160) suggests that its association with the Moundville polity is "questionable." However, the presumed isolation of Stephens Bluff may reflect a lack of reliable information on nearby mound sites that have been destroyed. In addition to the Minter Creek site, two mound sites are reported to have been located along the river between the Stephens Bluff and White sites (cf., Welch 1998:134). Moore (1905:127) referred to these as Calvin's Landing and the "Mound Below Lock Number 7" (Figure 23). The latter appears to have been less than 4 km northeast of the Stephens Bluff site, on the east bank of the river just north of Choctaw Bend. It was apparently destroyed by dam construction and could not be relocated during the 1972-73 AMNH survey (Nielsen et al. 1973:121). Calvin's Landing was reported on the west bank of the river approximately 3.7 km southwest of the White site, and may have been destroyed by Warrior Lake.

At least two other mound sites (1GR 16 and 1GR 17), have been reported approximately 3.5 km east of Stephens Bluff, within 400 m (0.25 mile) of each other. Moore (1905:126) recorded three mounds in this vicinity, which he referred to as the "mounds near McAlpin's Woodyard." These appear to have been platform mounds, potentially part of a single site. However, only two of the mounds could be relocated by the AMNH survey in the 1970s (Nielsen et al. 1973:38-40). Unfortunately, not much more is known regarding these sites, other than their probable Mississippian association. The information currently available on outlying mound sites in the Black Warrior Valley thus varies considerably from site to site. In short, it is apparent from this

preliminary review that present-day knowledge of Moundville's countryside, and the relationships of its inhabitants to the ceremonial center, is still far from complete.

Fosters Landing

Contrasted with the information presented above and recent investigations of Moundville (i.e., Knight and Steponaitis, ed. 1998), research on outlying mound sites has the potential to contribute to the further refinement of a regional chronology and better understanding of Moundville's historical trajectory. As part of this research, an investigation of outlying mound sites was specifically designed to address the rate and scale of political development and decline. Fieldwork was conducted in order to obtain additional information on mound construction and use, domestic refuse, and village occupations potentially associated with the collapse and reorganization of the Moundville polity. More detailed chronological information was sought from these contexts in order to better understand the apparent dispersal of Moundville's residential population after AD 1300 (i.e., Steponaitis 1998), the demographic nucleation at several outlying mound sites at around AD 1400 to 1450 (i.e., Peebles 1987b:9, 14; Welch 1998:164), and the relevance of these processes to the decline of the Moundville polity. Of particular interest are the political dynamics represented by mound construction and use, craft production and the acquisition of nonlocal items, feasting, and food provisioning. These political-symbolic activities might have been associated with the formation of coalitions at the ceremonial center or outlying mound sites (see Chapter Three).

Two outlying mound sites were initially selected for this study: Fosters Landing (Figure 23) and Hills Gin Landing (Figure 24), located 4.0 km (2.5 miles) and 10.5 km (6.5 miles) north of Moundville, respectively. Based on the information summarized above, mound construction and village habitation at both sites have been attributed to Moundville III and Moundville IV phase communities (Bozeman 1982:112-128, 160-172;

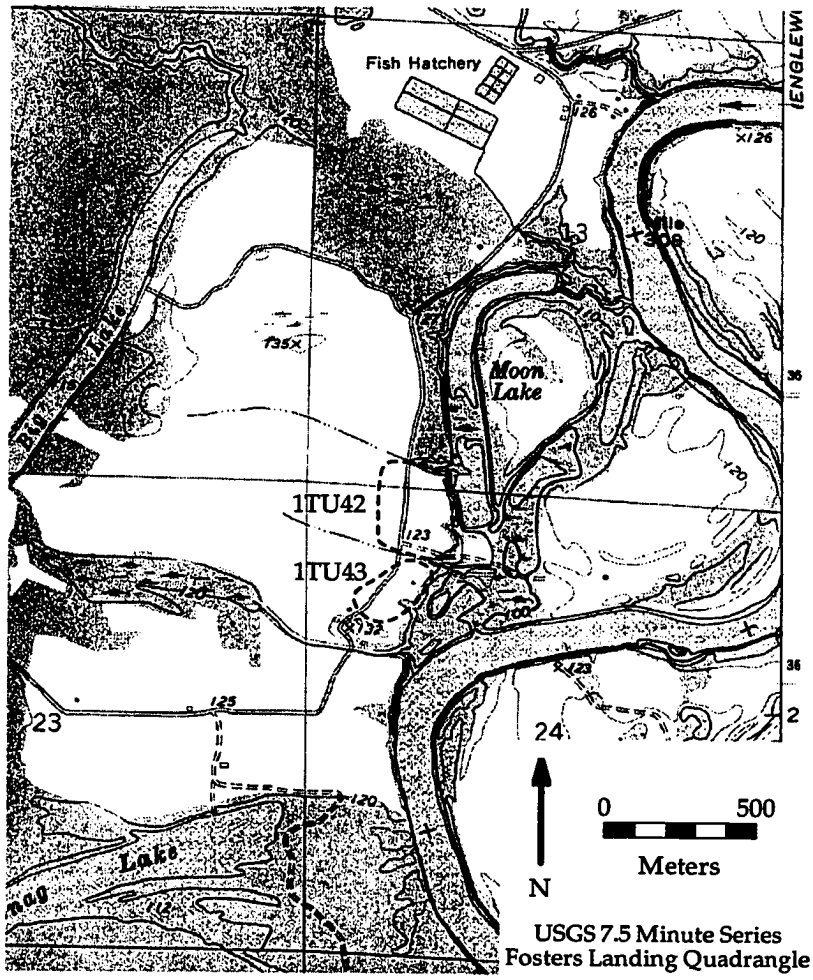


Figure 24. Location of the Fosters Landing Site.

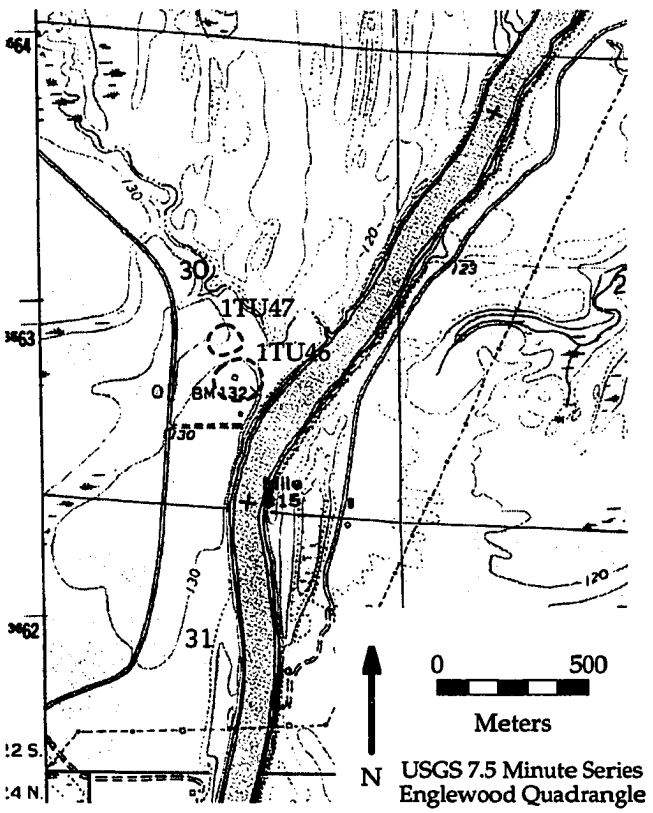


Figure 25. Location of the Hills Gin Landing Site.

Curren 1984:122-124; Welch 1998:153, 155). More importantly, these communities were identified as possible focal points for a region-wide political and economic reorganization that occurred approximately one and a half centuries subsequent to an out-migration from the ceremonial center. A more detailed knowledge of the timing and scale of these developments is necessary in order to understand the changing relationships between the residents of the Moundville site and outlying communities, as well as the decline of the polity (Steponaitis 1991:2).

Between December 27, 1997 and January 10, 1998, a crew of field school students and volunteers from the University of Oklahoma conducted two weeks of preliminary investigations at the Fosters Landing and Hills Gin Landing sites. The objectives of this survey were to more precisely delineate the boundaries of village areas, obtain distributional data on artifacts within and beneath historic plow zones, and locate potentially intact cultural features associated with late Mississippian and protohistoric habitation. Datum and grid points were established at both sites, based on previously available information from controlled surface collections and limited subsurface testing (Bozeman 1982:160-172, 112-128). Shovel test pits (STP) measuring 30 cm in diameter were excavated at 20 m intervals, following a systematic sampling strategy and standard archaeological recovery techniques. All soils were sifted through one quarter-inch screen. Artifacts and cultural materials were collected and labelled according to provenience.

The mound at Fosters Landing was barely discernible on the terrace west of Moon Lake during the Winter of 1997-98 (Figure 26). Modern agricultural practices have continued to adversely impact the site since C. B. Moore first visited in the early twentieth century. In addition to the deep plowing of fields, mechanized grading has resulted in the further attrition of the mound surface. Nonetheless, it was thought that conflation of upper mound deposits across the terrace may have left cultural features or lower mound stratigraphy intact beneath the plow zone and redeposited mound fill.



Figure 26. Fosters Landing Site Facing East to the Mound, Winter 1997-98.

Given the relatively large size previously estimated for the Fosters Landing village (2.2 ha) and lack of corroboration through subsurface testing, the survey initially focused on the investigation of possible village areas on the terrace surrounding and adjacent to the deflated mound surface (Figure 27). A total of 113 shovel test pits were excavated at Fosters Landing during the Winter 1997-98 field season, of which 103 (91 percent) produced prehistoric artifacts (Appendices 1 and 2). The depth of artifact recovery ranged from an average of 42 cm to a maximum depth of 103 cm below surface, with a plow zone recorded to depths of approximately 30 to 40 cm.

The identification of cultural features and vertical extent of subsurface artifacts in some areas indicated that cultivation and leveling of the mound had in fact left substantial cultural features intact beneath the plow zone. Evidence for buried cultural deposits was recorded in two STPs (at N140 E280 and N160 E280) northwest of the estimated location of the mound. The first (Feature 1) was a layer of yellowish-brown sandy clay 74 cm beneath the surface, while the latter appeared to be a small (12 cm diameter) postmold.

The spatial occurrence of pottery from the Winter 1997-98 shovel testing at Fosters Landing roughly corresponded with the surface distributions reported earlier by Bozeman (1982:169-170), indicating a considerably higher concentration of shell-tempered pottery immediately north of the mound (Figures 28 and 29). The area in which prehistoric artifacts were recovered from shovel tests exceeded 3.8 hectares (9.5 acres), considerably larger than previous estimates based on surface collection. However, shell-tempered pottery sherds were concentrated in a much smaller area (0.8 hectares or 2.0 acres), on what appeared to be the remnant north slope (and conflated surface) of the mound. Based on the recovery of artifacts from shovel test transects extending 300 meters east-west and 260 meters north-south, the principal Mississippian occupation appeared to be located in the immediate vicinity of the mound.

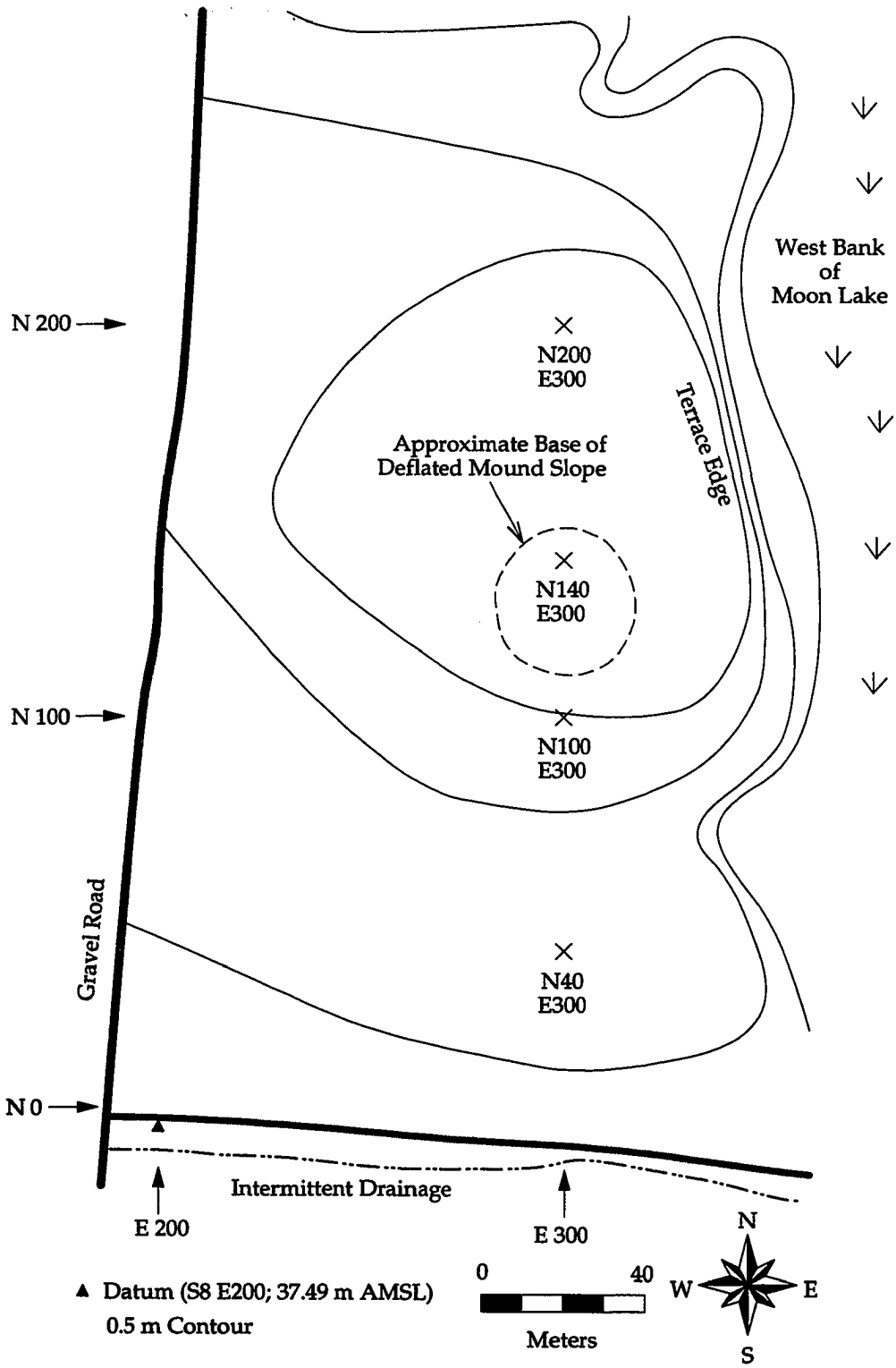


Figure 27. Map of the Fosters Landing Site, Winter 1997-98.

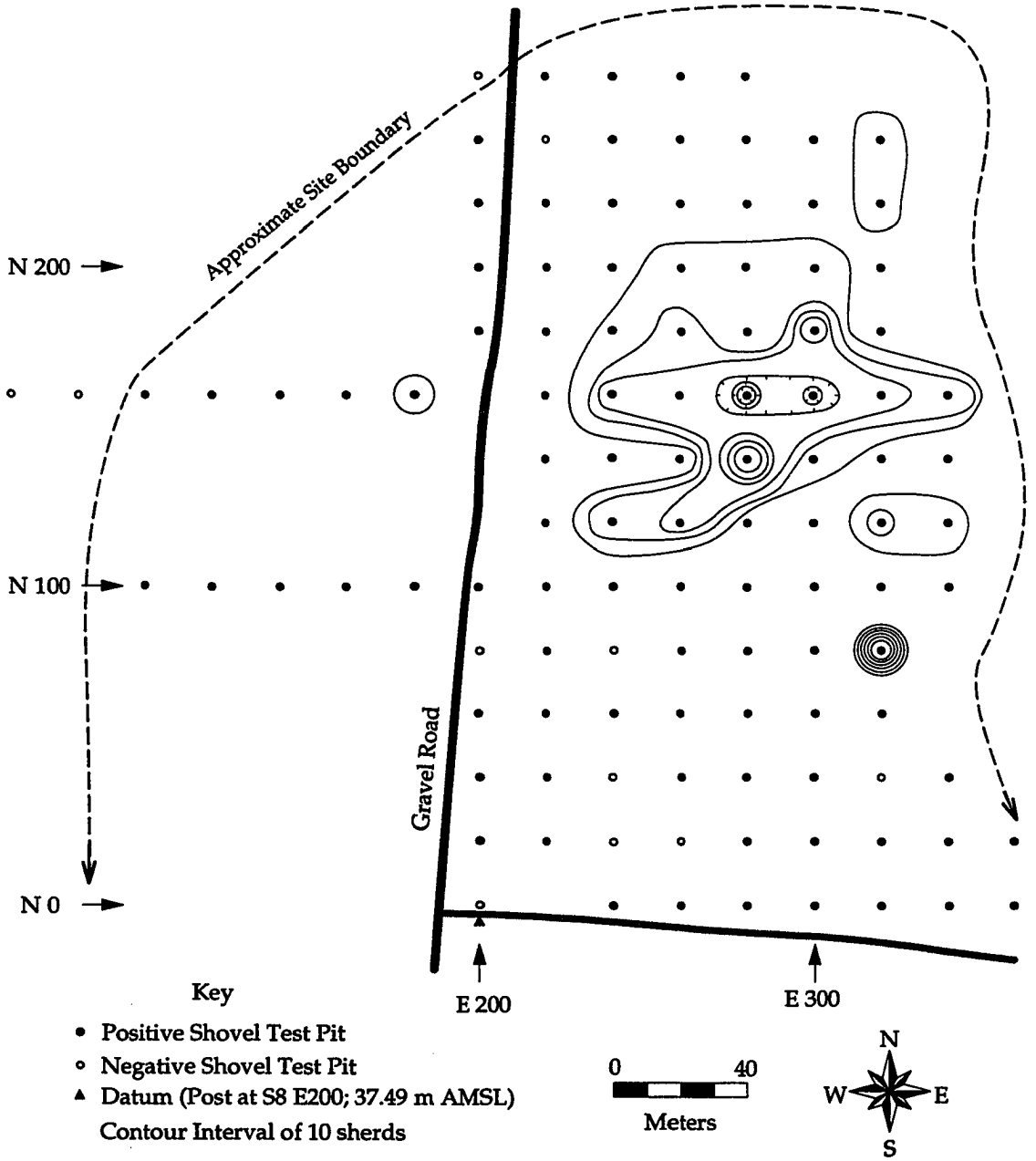


Figure 28. Shell-Tempered Pottery Sherd Distribution in Shovel Tests at Fosters Landing, Winter of 1997-98.

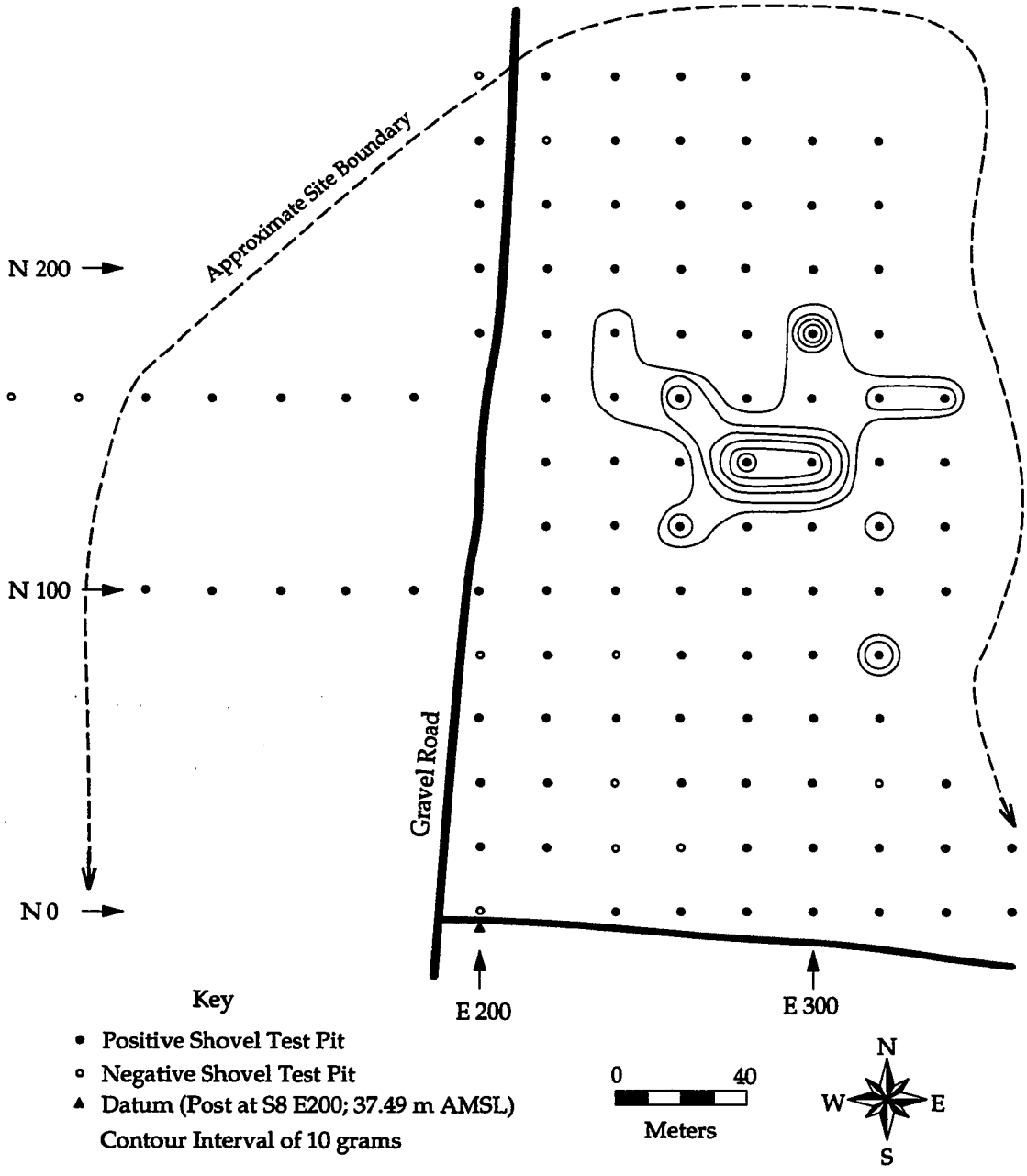


Figure 29. Shell-Tempered Pottery Weight Distribution in Shovel Tests at Fosters Landing, Winter of 1997-98.

Shovel test transects were not extended across an intermittent drainage to the south, in the vicinity of the land owner's house. Based on previous investigations, a protohistoric site component is located in this area (Curren 1984:122-124; Curren and Little 1981). Inspection of unprovenienced artifact collections in the possession of the land owner confirmed that a substantial Moundville IV phase occupation was located in the vicinity of his house, approximately 120-200 m south of the southernmost shovel test transect. If village deposits in this area and those north of the mound represent contiguous and coeval occupations, then 2.2 hectares is a conservative estimate for the size of the protohistoric village at Fosters Landing.

Artifacts recovered from the plow zone in STPs at Fosters Landing during the Winter 1997-98 field season were generally in a poor state of preservation, consisting predominantly of small, eroded pottery sherds (Table 5). The majority of the pottery was shell-tempered (68 percent; n=754; 537.1 g), although grog-tempered (n=281; 443.4 g) and a smaller amount of sand-tempered (n=69; 126.6 g) sherds were also recovered. Small fragments of daub were recovered from many of the shovel test pits, further indicating the presence of a sizeable Mississippian village on the terrace overlooking Moon Lake (Appendix 2).

Based on the recovery of grog-tempered, Baytown Plain (*variety Roper*) sherds, there was a substantial Late Woodland, West Jefferson phase (AD 900-1050) community at Fosters Landing. Sand-tempered, Alexander Incised (*variety Pleasant Valley*) and Alexander Pinched (*variety Prairie Farms*) sherds indicate a yet earlier occupation at the site, dating to the Late Gulf Formational period (ca. 500-100 BC). Cursory examination of eroding surfaces along the terrace edge west of Moon Lake produced a few fiber-tempered, Wheeler Plain sherds, approximately 70 meters southeast of the mound, indicating the presence of a Middle Gulf Formational period (ca. 1000-500 BC) component (Appendix 3; Jenkins 1981:17-18, 89-90, 114-120, 164-168; Jenkins and Krause 1986:30-47; Jenkins and Meyer 1998:132-142; Steponaitis 1983a:305).

Table 5. Pottery from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	Shell-Tempered		Grog-Tempered		Sand-Tempered	
	n	g	n	g	n	g
2	3	2.0				
3	1	0.3				
4	3	3.0			1	0.2
5			1	1.0		
6	1	0.6				
7	1	1.7			1	2.2
8			1	0.3		
9	1	1.0				
13			1	1.2		
14	2	0.6	1	2.9	1	0.5
15	2	0.5				
16	1	1.0				
19	4	2.2	1	0.6		
21	2	0.9				
22	1	0.7				
23					1	0.5
25	1	0.1			1	0.4
26	1	0.5			1	0.2
27	5	2.0				
28					1	0.4
29	3	0.7				
30	1	0.2	1	2.2		
31	4	2.1				
32	1	0.2				
34	3	2.2				
36	1	0.2				
37	3	1.3	2	3.0	2	5.2
38	5	5.6	2	3.6		
39	68	26.1	14	12.6	10	6.2
40	7	2.9				
41	3	1.6				
42	4	1.6	3	2.9		
43			2	0.7		
44	1	0.3	1	1.0		
45			1	0.4		
46	1	1.5				
47	1	0.3	3	2.9		
48	7	2.6	3	1.6		
49	6	3.6	4	4.3	4	1.5
50	9	8.6	1	2.4	1	0.9

Table 5. Pottery from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	Shell-Tempered		Grog-Tempered		Sand-Tempered	
	n	g	n	g	n	g
51	8	6.8	1	0.5		
52	5	1.8			1	1.9
53	1	0.3			1	1.2
54	20	9.3	2	1.1	1	0.7
55	32	19.7	5	4.0	1	0.2
56	6	2.9	1	2.3	2	1.6
57			3	3.8	1	3.2
58	24	14.4	12	7.3	3	3.3
59	11	3.5	4	4.0	4	10.8
60			12	27.5	4	5.9
61	4	6.3	2	3.1		
62	5	6.0	1	3.3		
63	63	61.8	13	14.1	1	0.4
64	11	53.2	5	11.8	3	11.8
65	5	1.7	2	3.0	3	3.7
66	3	2.3	2	6.2	1	3.7
69	6	2.3				
70	5	2.2	1	1.0		
71	4	0.9	2	2.7	1	6.1
72	3	1.8	1	0.2		
73	11	3.3	7	8.9		
74	3	6.5	6	27.6		
75	37	19.0	8	6.1	2	2.0
76	35	30.2	4	5.6		
77	2	0.6	2	3.7	1	0.3
78	14	13.0	5	13.8		
79	32	20.2	7	5.5	6	9.8
80	24	26.9	3	38.3	5	37.1
82	4	3.3	5	9.5		
83	18	12.6	12	16.6		
84	20	7.5	16	14.4		
85	9	6.8	7	13.1		
86	42	43.6	11	10		
87	6	3.4	1	1.1		
88	3	3.8	7	33.9		
89			4	13.8		
90	6	1.7	6	8.2		
91	17	8.4	12	13.1		
92	17	6.6	18	16.6	1	2.1
93	11	6.8				

Table 5. Pottery from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	Shell-Tempered		Grog-Tempered		Sand-Tempered	
	n	g	n	g	n	g
94	5	0.9	1	2.0		
95	1	0.3	2	2.6		
96			1	0.3		
97	1	0.2				
98	5	2.1	4	4.3	1	1.3
99	2	0.8	3	4.4		
100	6	3.7	3	6.0	1	0.7
101	11	4.3	1	0.7		
102	1	0.1	3	2.3		
104	3	1.3			1	0.6
105	8	6.2	1	1.7		
106	2	1.2				
107	5	4.4	4	8.4		
108	14	8.2	5	10.4		
111	1	0.5				
112	4	2.3	1	1.0		
113	1	0.5				
TOTAL	754	537.1	281	443.4	69	126.6

In brief, the recovery of diagnostic pottery during the Winter 1997-98 field season at Fosters Landing generally corresponded with Curren's (1984:124) description of a multicomponent, Early Woodland to protohistoric site. Even more important for this study, shovel testing indicated that cultural features had in some areas remained intact beneath the plow zone in the vicinity of the mound. The southern boundary of the site and potential connection with a protohistoric occupation in the vicinity of the land owner's house remains poorly defined. Nevertheless, shell-tempered pottery sherds from a Mississippian occupation were concentrated in an area that extended approximately 240 m north-south by 160 meters east-west (38,400 square meters, or 3.8 ha).

In contrast, the Winter 1997-98 investigations at Hills Gin Landing provided little indication of undisturbed, Mississippian village deposits. The survey was conducted under inclement conditions, after Winter rains had inundated the Black Warrior River and raised the water table along its banks. As a result, many of the STPs at Hills Gin Landing could be excavated to depths of only 40 cm before filling with water. The flooding of STPs was especially problematic at lower elevations north of the mound, in the location previously recorded as the village area (Bozeman 1982:112-128). Twenty-nine STPs were excavated on transects extending N-S and E-W from the mound. Only 18 STPs (62 percent) yielded prehistoric artifacts, while nine (31 percent) contained historic artifacts. Nine STPs contained neither prehistoric or historic artifacts (Appendices 4 and 5).

The majority of the pottery from Hills Gin Landing was shell-tempered (61 percent; n=54; 94.0 g), although smaller amounts of grog-tempered (n=32; 54.0 g) and sand-tempered (n=2; 2.2 g) sherds were recovered (Table 6). More than half of the sherds (58 percent; n=51; 113.2 g) were concentrated in only two STPs, located approximately 5 m east (STP 19) and 40 m northeast (STP 27) of the mound. Although STP 27 contained

Table 6. Pottery from Shovel Tests at Hills Gin Landing, Winter 1997-98.

STP	Shell-Tempered		Grog-Tempered		Sand-Tempered	
	n	g	n	g	n	g
1	5	4.1	1	1.0	1	0.6
3	1	0.6	1	1.2		
8	1	4.9				
10	2	0.5	2	1.4		
11	5	6.2	3	1.5	1	1.6
12	4	0.7				
15	1	1.4				
18	2	1.7				
19	21	54.9				
21	2	1.5	3	4.0		
25			1	2.8		
27	9	16.2	21	42.1		
28	1	1.3				
Total	54	94.0	32	54.0	2	2.2

the highest concentration of pottery (n=30), these were associated with deeply-deposited historic artifacts, ostensibly representing an intrusive, historic fill. In comparison, the excavation of 15 STPs (numbers 1-10 and 13-17), on three transects extending 100 meters south and 100 m west of the mound, yielded few pottery sherds or lithic artifacts (Appendix 5). There was no evidence for an undisturbed, prehistoric or protohistoric soil horizon beneath the plow zone in these areas.

During the summer of 1996, a hay barn on the mound summit at Hills Gin Landing had been renovated in order to shelter farm equipment (Figure 30; cf., Bozeman 1982:120). The top of the mound was resurfaced with gravel at that time and an unknown portion of the northern mound slope appears to have been disturbed. According to the land owner, the entire field surrounding the mound had been deeply graded by a former land owner (Bob Guin, personal communication 1998). The scarcity of prehistoric artifacts from the shovel testing lends credence to this idea, although deeper testing is necessary in order to more fully evaluate site stratigraphy. In particular, a relatively small area between the eastern mound slope and river bank may retain undisturbed, Mississippian deposits that were detected in STP 19. Considering its proximity to the base of the mound slope, this might alternatively represent redeposited fill from the historic leveling and use of the mound summit.

While it is still possible that Mississippian village deposits or domestic features remain intact at Hills Gin Landing, their identification was effectively impeded by the high water table and historic disturbance encountered during the Winter of 1997-98. The recovery of deeply-deposited historic artifacts north of the mound (in STPs 25, 26, and 27) further indicated that any associated Mississippian habitation in this area may have been disturbed as a result of historic landscape modifications. Very few prehistoric artifacts were visible during a brief surface inspection of the surrounding field, although Mississippi Plain, Bell Plain, and Moundville Engraved (*variety Hemphill*) sherds were collected from an erosional surface and animal burrow on the northern mound slope



Figure 30. Hills Gin Landing Site Facing East to the Mound, Winter 1997-98.

(Appendix 6). In short, investigation of village occupancy at Hills Gin Landing was inconclusive. A substantial portion of the site appears have been disturbed through historic land use, farming, or landscape alterations, with little evidence for intact, Mississippian village deposits.

The Fosters Landing site was selected for further fieldwork based on the apparently extensive nature of the Mississippian village, as well as the evidence for intact cultural features beneath the plow zone encountered during the Winter 1997-98. Furthermore, while intact mound stratigraphy had previously been documented at Hills Gin Landing (i.e., Bozeman 1982:112-123), since Moore's brief sojourn there had been no recorded, systematic investigation of the mound at Fosters Landing. A crew of volunteers and field school students from the University of Oklahoma returned to the Fosters Landing site and conducted test excavations for six weeks during May and June of 1998. This second stage of fieldwork was undertaken in order to excavate and examine cultural features that had been identified during the Winter 1997-98 field season, and to further investigate the late Mississippian and protohistoric occupations.

The objectives of the Summer 1998 field season were to: (1) obtain information on domestic architecture and refuse; (2) document mound construction episodes, alteration, and use; (3) collect diagnostic artifacts and subsistence remains from mound and non-mound contexts; and (4) obtain radiocarbon samples from sealed or undisturbed cultural features associated with Mississippian components. As outlined above, this research was more specifically geared toward the assessment of a late prehistoric and protohistoric site chronology, in order to contribute to a more detailed knowledge of regional culture history. Moreover, it was expected that such temporally diagnostic information from mound and non-mound contexts could be used to examine the processes of regional political development, decentralization and decline, from the perspective of an outlying mound site.

A total of 19 square meters was excavated at Fosters Landing during the Summer 1998 field season (Table 7). Excavation units (EU) measuring 1 by 1 m were laid out on the site grid in areas of highest sub-surface artifact concentration and in locations where cultural features had been identified during the Winter 1997-98 field season (N140 E280 and N160 E280). While each EU was excavated separately, the contiguous placement of adjacent units in three principle excavation blocks allowed for the horizontal exposure of larger areas (Figure 31).

The first block consisted of five adjacent units excavated near the STP at N140 E280, where a buried cultural feature had been identified during the Winter 1997-98 field season. In contrast to the shallower subsoil elsewhere on the terrace, cultural features extended fairly deep in Block 1, to approximately 1.2 meters below surface. As discussed below, there appears to have been post-depositional disturbance in this area, possibly a result of a tree fall. The second excavation block was specifically planned to document mound stratigraphy. Two adjacent, 1 by 1 meter units (EU 5 and 9) were excavated at N129 E300 and N130 E300, in an area estimated based on site elevations to be the approximate location of the mound summit. After mound fill had been positively identified in these units, a 2 m by 0.5 m unit (T1) was excavated on the western mound slope (at N129.5 E292), in order to investigate the potential relationship between the mound fill and site stratigraphy. Together, these units comprised Block 2.

A third excavation block of 8 units was placed at N166 E340, on the terrace edge overlooking Moon Lake. A brief surface inspection below the terrace edge along the west bank of Moon Lake had indicated a higher concentration of shell-tempered ceramic sherds eroding from the terrace in this location. Systematic investigation with a 2 cm diameter core in this area revealed a dense layer of daub approximately 10-15 cm beneath the ground surface. Successive episodes of late prehistoric and protohistoric occupation were revealed by the cultural features recorded in this excavation block. Three additional 1 by 1 meter units were excavated in locations where shovel testing

Table 7. Excavation Unit Coordinates and Associated Features at Fosters Landing, Summer 1998.

Block No.	EU No.	SE Corner Coordinates	Features Identified	Feature Description
1	1	N140 E280	F1; F5	floor; pit
1	4	N140 E281	F1; F5	floor; pit
1	7	N141 E280	F5	pit
1	8	N141 E281	F5	pit
1	14	N139 E280	F1; F5	floor; pit
2	5	N130 E300	M1, M2; F3	mound stratigraphy; hearth
2	9	N129 E300	M1, M2; F3	mound stratigraphy; hearth
2	T-1	N129.5 E292	M2	mound stratigraphy
3	10	N166 E338	F10	daub and thatch house
3	11	N167 E338	F10; F11; F12	daub and thatch house; wall-trench house; burial
3	12	N167 E337	F8; F10; F11; F12	small pit; daub and thatch house; wall-trench house; burial
3	13	N166 E339	F10	daub and thatch house
3	15	N167 E339	F6; F10; F11; F12	pit; daub and thatch house; wall-trench house; burial
3	16	N166 E340	F10	daub and thatch house
3	17	N168 E339	F9; F10; F11; F12	small pit; daub and thatch house; wall-trench house, burial
3	18	N168 E338	F10; F11; F12	daub and thatch house; wall-trench house, burial
n/a	2	N159 E280	n/a	
n/a	3	N79 E320	n/a	
n/a	6	N179 E301	n/a	

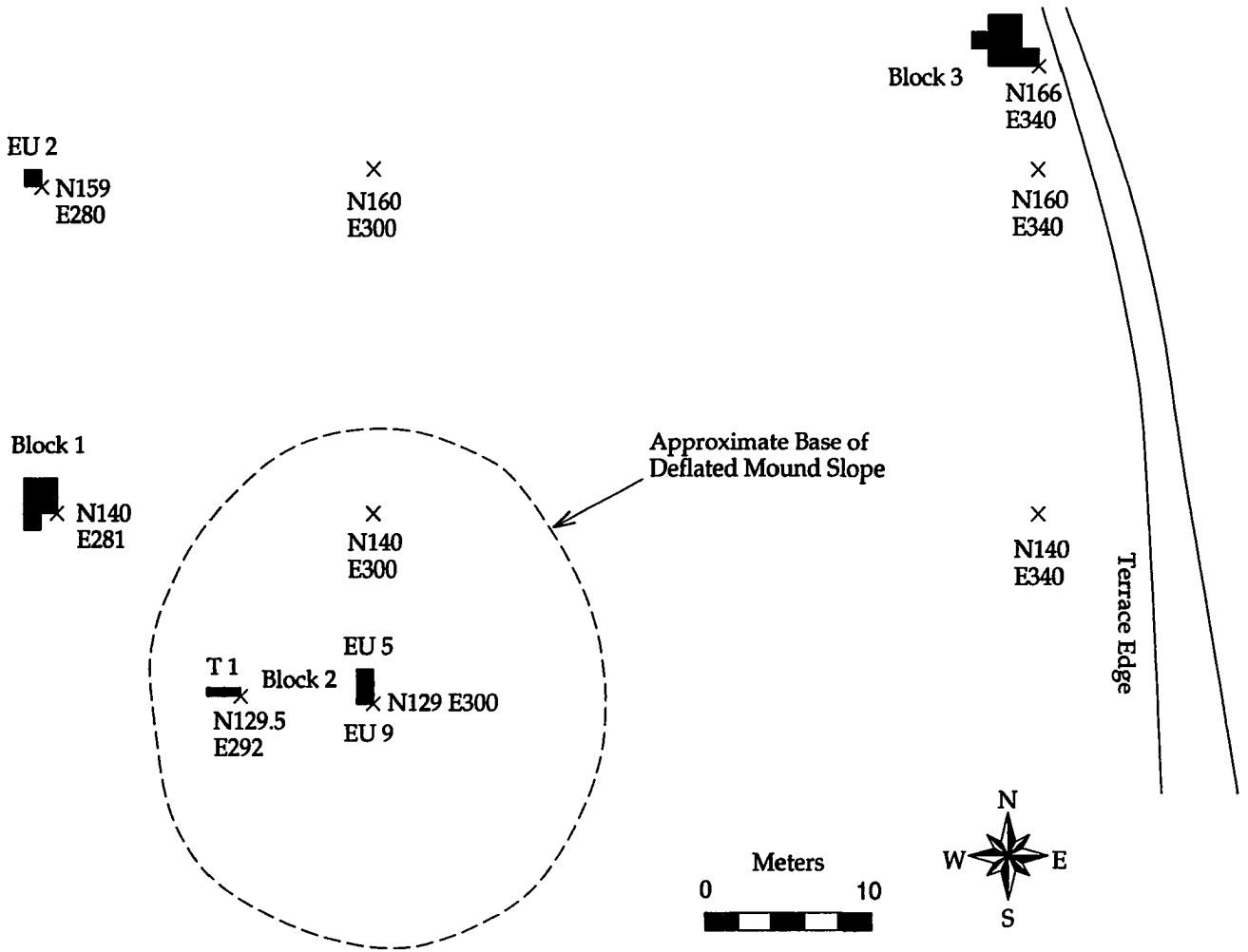


Figure 31. Excavation Blocks at Fosters Landing, Summer 1998.

had indicated potential cultural features or higher lithic and pottery sherd concentrations, at N159 E280 (EU 2), N79 E320 (EU 3), and N179 E301 (EU 6). With the exception of a postmold recorded in Unit 2, no intact cultural features were encountered beneath the plow zone in these units.

During the Summer of 1998 it was quickly ascertained that the multicomponent layering and consequent disturbance of successive occupations at Fosters Landing had resulted in mixed contexts, transposed features, and secondary cultural deposition. Redeposited sand-tempered sherds (including Alexander Incised, *variety Pleasant Valley,* and Alexander Pinched, *variety Prairie Farms*) dating to the Late Gulf Formational period (ca. 500-100 BC) were encountered throughout the excavation blocks, including late prehistoric and protohistoric features (Appendix 7). As noted during the Winter 1997-98 field season, artifacts recovered from the plow zone at Fosters Landing were generally in poor condition, particularly shell-tempered sherds that were frequently less than one-half inch in diameter, referred to as "sherdlets" (Ensor 1993:71; Scarry and Scarry 1995:17; see discussion in the Appendices). Nonetheless, intact cultural features were documented in each of the three principal excavation blocks. The cultural features, artifacts, radiocarbon analyses, site stratigraphy, and mound construction episodes are discussed below, followed by a summary of the investigations at Fosters Landing.

Block 1: Conflated Mound Fill and Features

Block 1 consisted of five adjacent 1 by 1 m units excavated between grid coordinates N139-N142 and E279-E281, approximately 20 m northwest of the estimated location of the mound summit (Figure 31). A layer of yellowish-brown sandy clay (Feature 1) identified in a shovel test during the Winter field season was investigated by excavating this block in 10 cm levels, within stratigraphic layers. In contrast to a typical stratigraphic profile at the site, Block 1 revealed substantial sub-plow zone cultural features, to a maximum depth of 1.2 meters below surface or 37.57 m AMSL. Two

distinct plow zones (PZ1 and PZ2), approximately 35 to 40 cm thick, were visible in the excavation unit wall profiles (Figures 32 and 33). Prominent plow scars were noted at the bottom of PZ2. Once the stratigraphy had become more apparent in the wall profiles of four adjacent units, Unit 14 (N139 E280) was excavated stratigraphically, in order to obtain representative collections of diagnostic artifacts and soil samples for flotation.

Immediately beneath PZ2, a very dark grayish-brown loam was encountered (CM2), with light concentrations of charcoal flecks, small pieces of daub, and bone fragments (Figure 34). Pottery sherds collected from stratum CM2 included Alabama River Appliqué (n=10; 22.5 g), Carthage Incised, varieties *Carthage* (n=3; 8.0 g) and *Moon Lake* (n=1; 9.2 g), and a large amount of Mississippi Plain *variety Warrior* (n=326; 917.9 g), generally indicative of a Moundville III phase to Moundville IV phase occupation (Table 8; Figures 35 and 36). While a large amount of Baytown Plain (n=190; 782.6 g) and other earlier types were also recovered, it is reasonable to assume that these sherds were commingled in a post-depositional or secondary context. Furthermore, the heterogeneous mixture of small fragments of pottery, bone, charcoal, and daub throughout this stratum suggested that it was unlikely to represent a primary depositional event or trash midden. The absence of any intact cultural features and condition of the artifacts suggested that it was instead redeposited fill associated with the leveling of the nearby mound surface.

Immediately beneath stratum CM2 was a very dark grayish-brown loam with strong brown and yellowish-brown mottling (CM1). While generally similar in texture and color and difficult to distinguish from CM2, stratum CM1 exhibited minute soil inclusions and mottling from the lower strata. In fact, stratum CM1 was distinguished from CM2 only by its slightly more mottled appearance. Together, these strata ranged from approximately 40 cm to 50 cm in thickness and were distinguished from the plow zone and underlying strata by matrix color, texture, and artifact content. The absence of

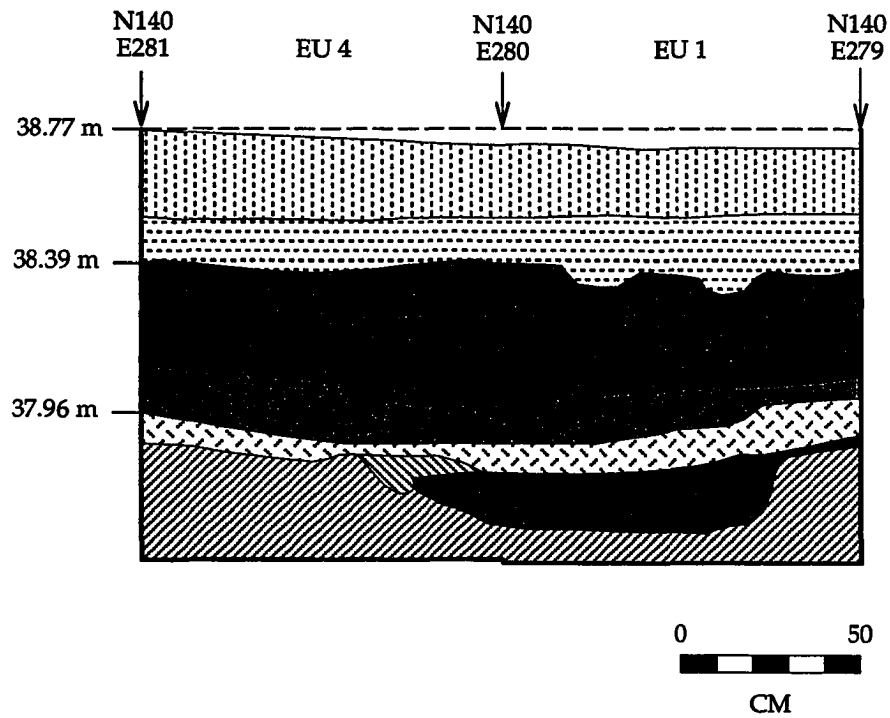


Figure 32. Profile of Block 1 at Fosters Landing, View to the South.

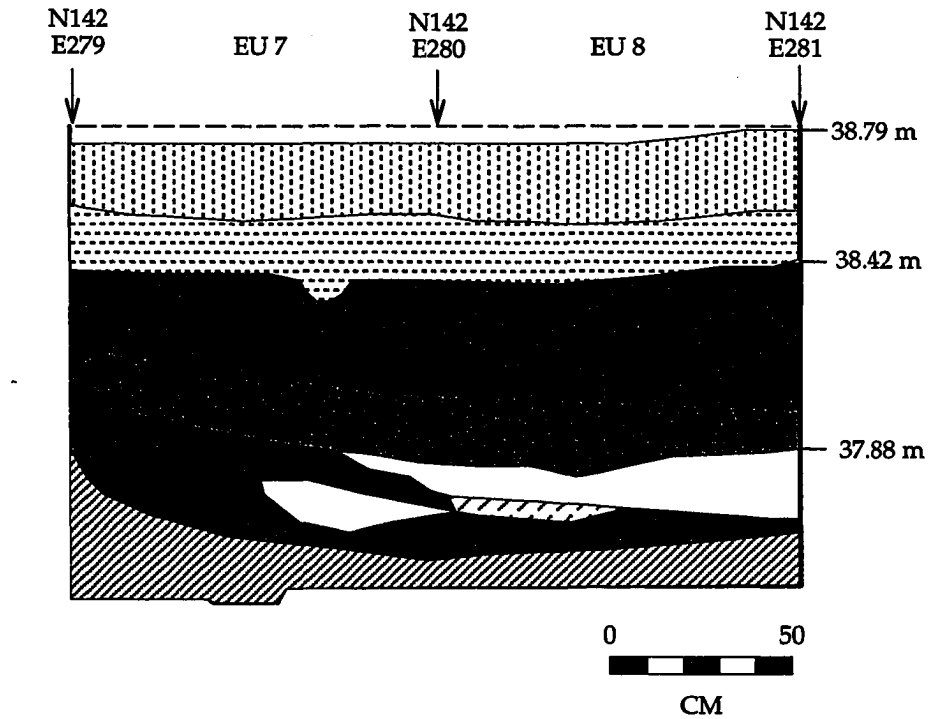


Figure 33. Profile of Block 1 at Fosters Landing, View to the North.

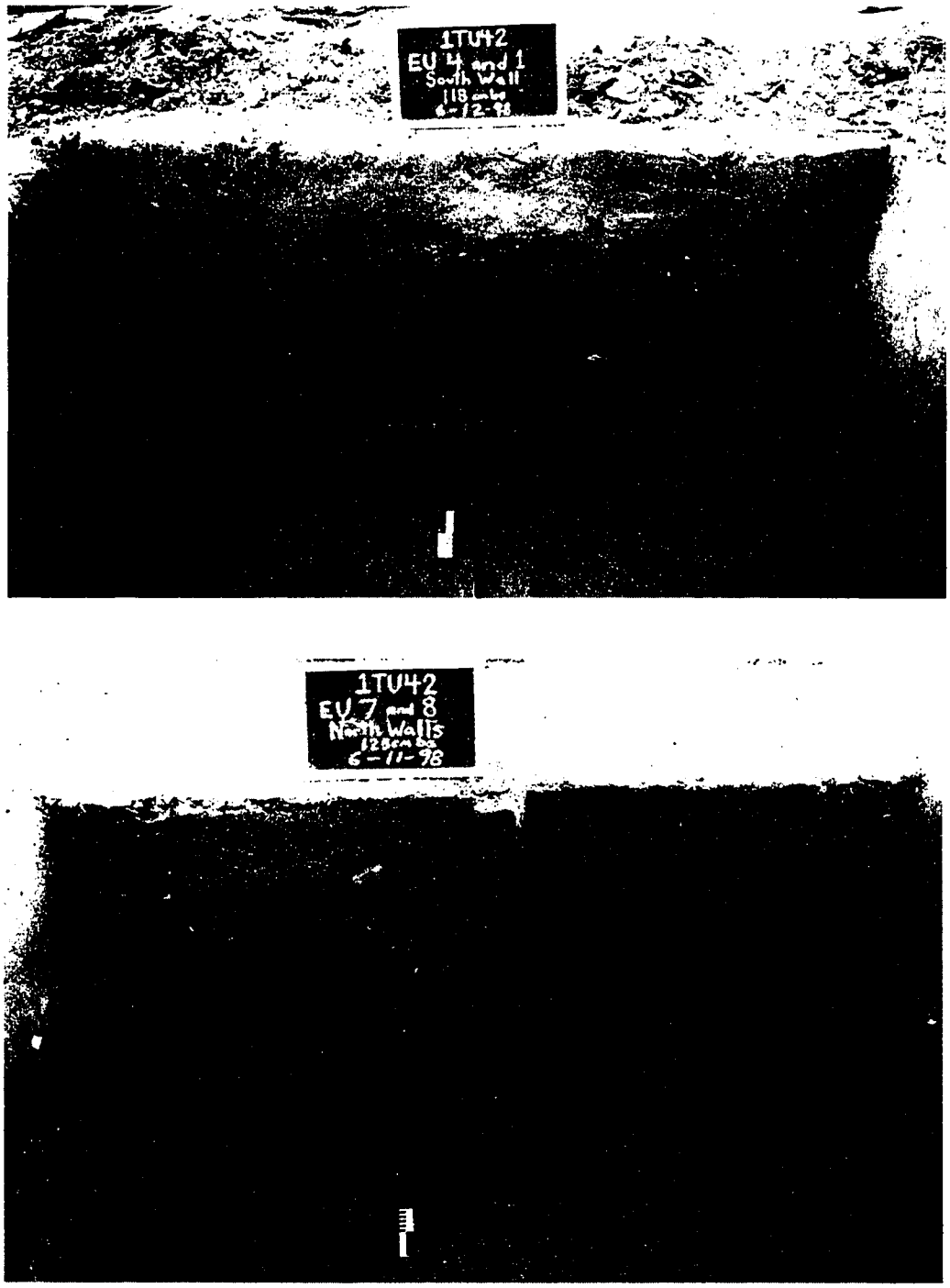


Figure 34. Photographs of the South Wall (top) and North Wall (bottom) Profiles of Block 1.

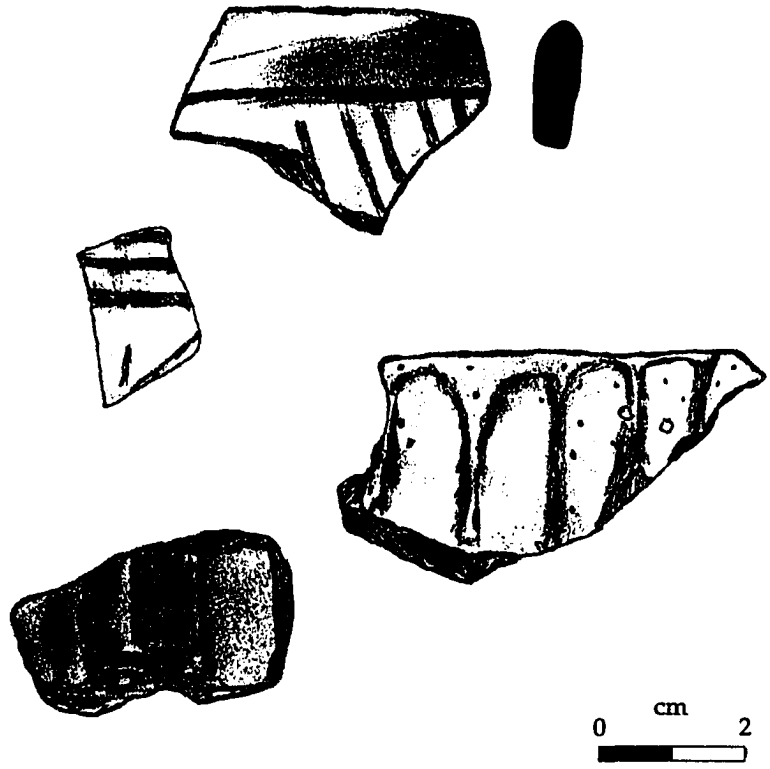


Figure 35. Carthage Incised (top) and Alabama River Applique (bottom) Sherds from Block 1, Stratum CM2 at Fosters Landing.

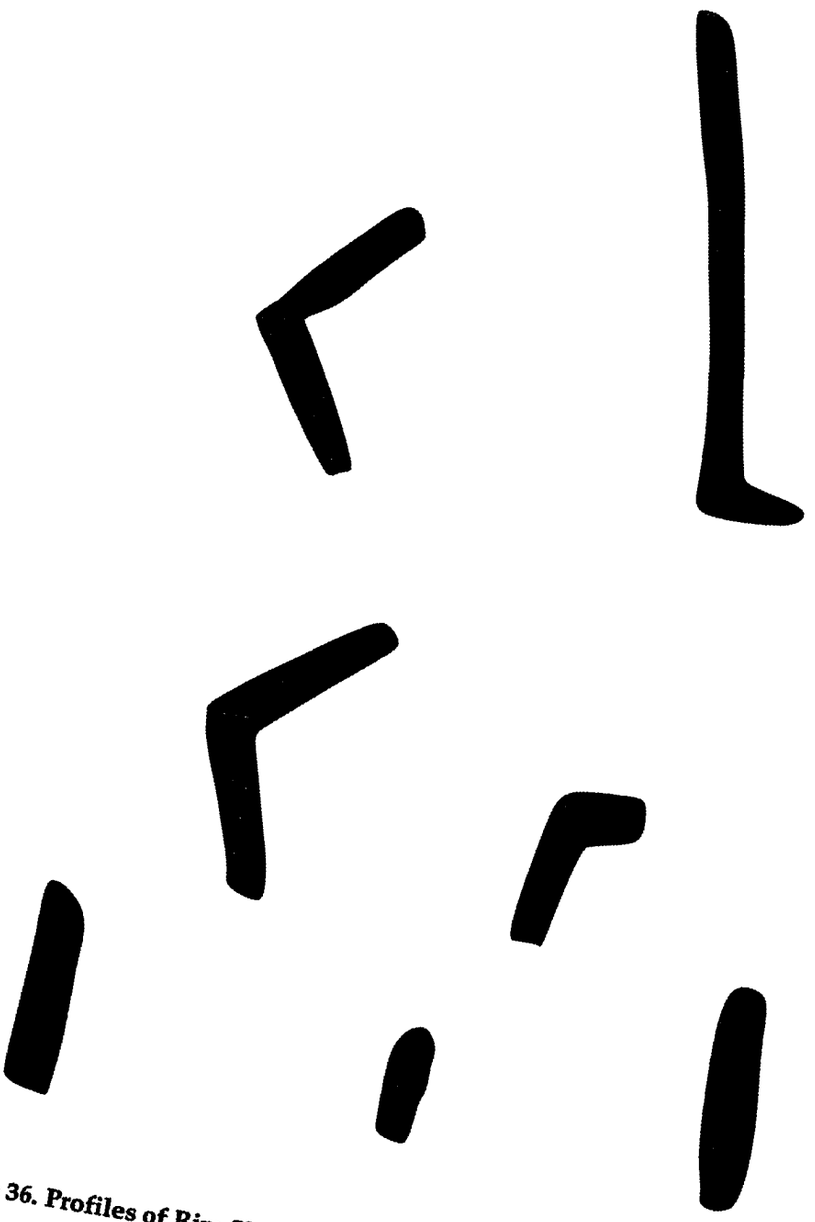


Figure 36. Profiles of Rim Sherds from Block 1 at Fosters Landing.

Table 8. Pottery from Block 1 at Fosters Landing, Summer 1998.

	PZ		CM2		CM1		Feature 1		Feature 5		Total	
Type/Temper	n	g	n	g	n	g	n	g	n	g	n	g
Alabama River Applique			10	22.5							10	22.5
Alexander Incised, unspec.					1	3.3	1	4.1			2	7.4
Barton Incised, Demopolis	1	4.2									1	4.2
Baytown Plain, Roper	58	228.8	190	782.6	100	531.7	17	60.0	79	422.4	444	2025.5
Bell Plain	7	24.0	52	158.8	10	68.3			1	3.7	70	254.8
Carthage Incised, Carthage			3	8.0							3	8.0
Carthage Incised, Moon Lake			1	9.2							1	9.2
Carthage Incised, unspec.			4	7.2							4	7.2
Grog-tempered, unclassified	12	25.8	5	12.6	10	23.8			4	8.8	31	71
Mississippi Plain, Warrior	111	259.4	326	917.9	112	594.3	20	69.1	26	100.8	595	1941.5
Moundville Engraved, unspec.			2	2.2							2	2.2
Moundville Incised, Carrollton									1	51.9	1	51.9
Moundville Incised, Mdvl			3	17.3							3	17.3
Moundville Incised, unspec.			6	10.7					1	0.6	7	11.3
Mulberry Creek Cord Marked	1	8.4	2	11.5							3	19.9
Sand-tempered, unclassified	5	24.6	5	34.9	8	45.3	1	3.0	18	177.8	37	285.6
Shell-tempered, painted	4	5.7	11	68.1	1	2.7					16	76.5
Shell-tempered, unclassified	46	86.8	107	198.8	31	64.8			23	78.8	207	429.2
Wheeler Punctated, unspec.	1	1.8									1	1.8

intact cultural features within CM1 further suggested potential disturbances related to the reported mound leveling and the conflation of mound deposits in this area. Strata CM2 and CM1 are consequently interpreted as representing redeposited fill, containing pottery sherds associated with the Moundville IV phase (Table 8). The large number of earlier pottery types (e.g., Alexander Incised, Baytown Plain, and Moundville Incised, *variety Moundville*) from CM2 and CM1 are thought to represent secondary deposition. The possible relationship between these strata and mound construction is discussed below.

Feature 1 was clearly distinguished beneath CM1 as a layer of yellowish-brown sandy-clay that ranged in thickness from 3 to 15 cm (Figures 32 and 34). Based on the portion of the feature that was exposed in Block 1, it extended approximately 1.0 m north-south by a minimum of 2.0 m east-west (Figure 37). In contrast to the overlying strata, Feature 1 contained relatively fewer artifacts and no evidence of charcoal or pieces of daub. The pottery recovered from Feature 1 included Mississippi Plain *variety Warrior*, Baytown Plain *variety Roper*, and sand-tempered sherds (Table 8). There was no evidence for the vertical mixing of the relatively homogenous yellowish-brown sandy-clay of Feature 1 with the above strata. Several pieces of unmodified sandstone were recovered from Feature 1. In fact, the larger pieces of sandstone were isolated to the yellowish-brown sandy-clay (Appendix 8). Feature 1 appeared slightly basin-shaped beneath M1, as seen in the cross section of the south wall profile of Block 1 (Figure 32). In plan view it appeared slightly oblong or oval.

Two post molds were identified on the north and south sides of Feature 1, in EU 1 and EU 14 (Figure 37). Based on its possible association with these post molds, it was initially thought that Feature 1 may represent the floor of a small structure. However, it was more likely the result of a tree fall that occurred *prior* to the deposition of CM1 and CM2. This is based on the relatively narrow, oblong shape of the feature, the absence of

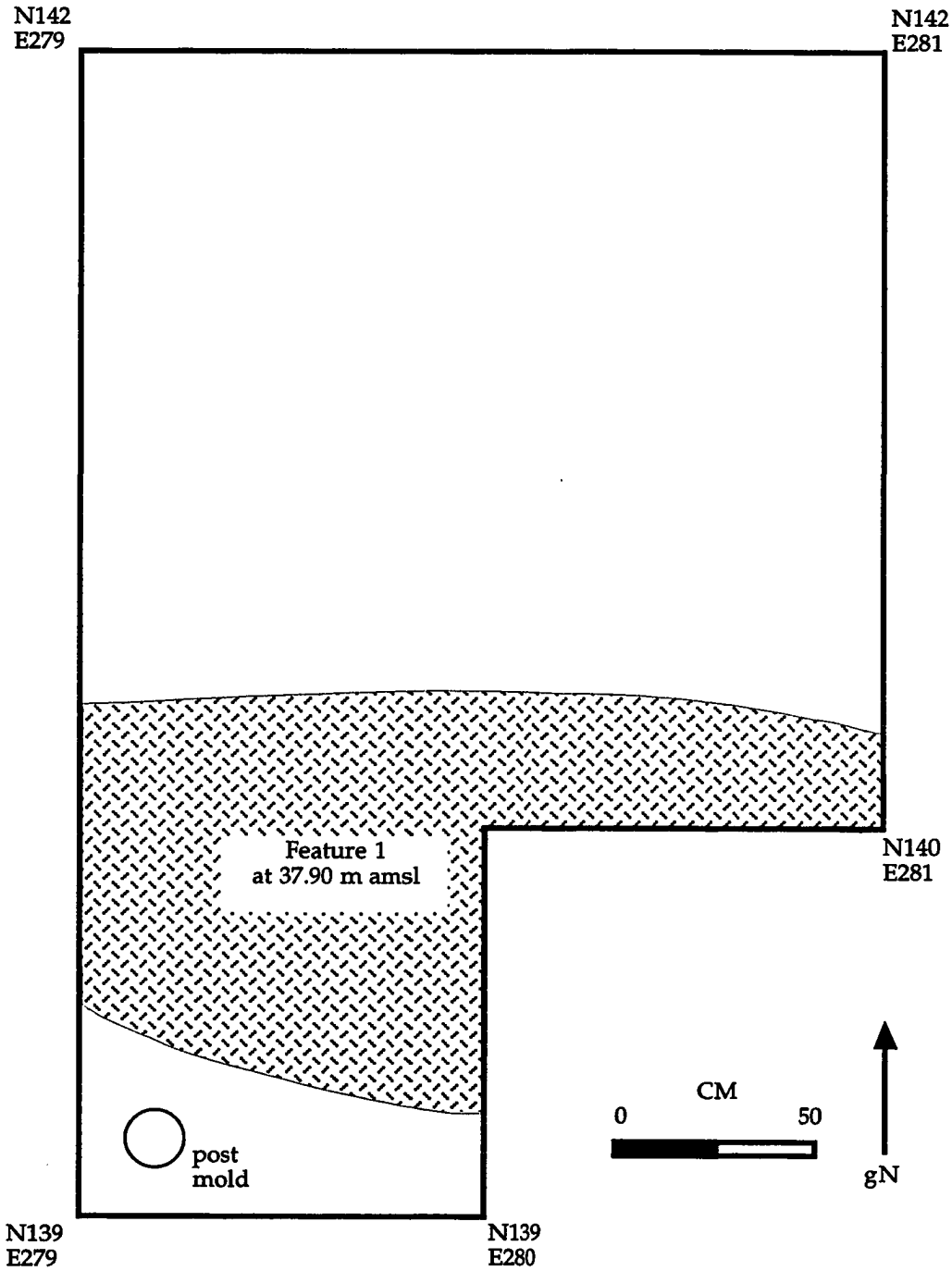


Figure 37. Plan View of Feature 1 in Block 1 at Fosters Landing.

later diagnostic pottery types in Feature 1, and its association with underlying, water-deposited soils (discussed below). Feature 1 was distinctly basin-shaped in the cross-section excavated in EU 14, further suggesting the deposition of subsoil from the uprooting a large tree (Figure 38).

Located partially beneath Feature 1 was a broad, basin-shaped deposit of very dark grayish-brown loam (Feature 5) that extended approximately 15 cm into the strong brown sandy-clay subsoil (Figure 37). Feature 5 was easily distinguished from the yellowish-brown sandy-clay of Feature 1 by color, texture, the inclusion of small charcoal flecks, and strong brown mottling. While the boundaries of Feature 5 were sharply-defined in the south wall profile of Block 1 (Figure 32), its edges were less distinct one meter to the north. In the north wall profile (Figure 33), Feature 5 extended across the EU and did not appear basin or pit-shaped. It contained lenses of coarse sand and clay that appear to have been deposited while exposed to the surface. The pottery recovered from Feature 5 included a large, folded rim sherd from a Moundville Incised, variety Carrollton jar (Figure 39), Mississippi Plain (n=26; 100.8 g), a large quantity of Baytown Plain (n=79; 422.4 g), and sand-tempered sherds (Table 8).

While it initially appeared that Feature 5 was a pit that had been intentionally dug into the subsoil, both features 1 and 5 might have been produced by the uprooting of a large tree. This would account for the irregular shapes of both features, as well as the deposition of sandy clay subsoil and alluvial sands. Nonetheless, these features do have an important distinguishing characteristic. Neither contained pottery sherds diagnostic of a Moundville III or Moundville IV phase context, as did stratum CM2. Nor was there vertical mixing with the overlying strata. This was confirmed through the careful stratigraphic excavation of Unit 14. Additionally, the postmolds ostensibly associated with Feature 1 indicate that posts were intentionally placed in this vicinity, possibly associated with a small structure. Considering the shell and grog-tempered pottery



Figure 38. Photograph of Feature 1 in EU 14, Facing South.

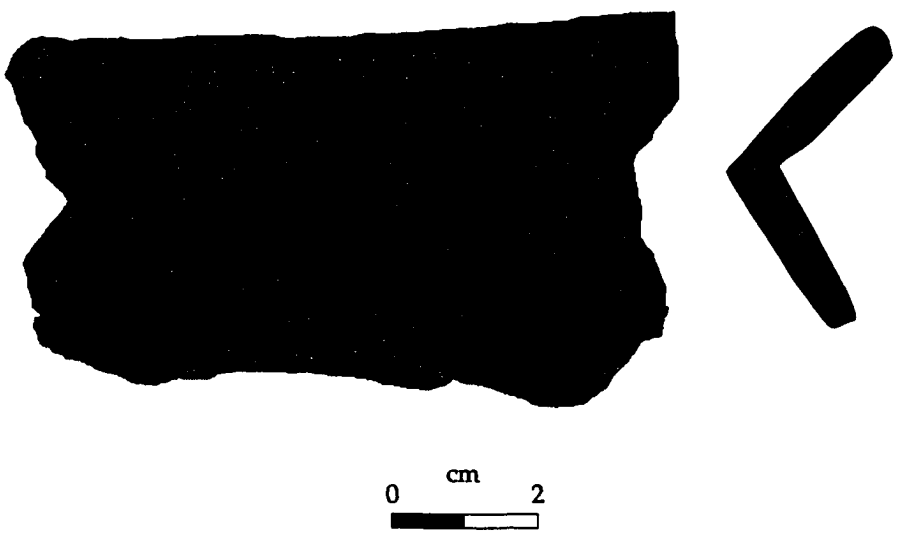


Figure 39. Moundville Incised, Variety Carrollton Sherd from Block 1, Feature 5 at Fosters Landing.

types recovered from Feature 5, it is possible to infer a general association with the Moundville I phase (ca. AD 1050-1250), albeit representing a largely natural depositional process, such as a tree-fall. Cultural features in this area may have consequently been disturbed.

Radiocarbon analysis provides an additional source of information on the fill deposition in Block 1 (Table 9). A single sample of charcoal from the interface of stratum CM1 and Feature 1 in Unit 14 yielded a radiocarbon age of 740 ± 50 years BP (Beta-121583), with a calibrated intercept of AD 1280. Since stratum CM1 appears to represent a secondary deposit produced by the leveling of the nearby mound, the context of this sample is uncertain. However, the pottery sherds in features 1 and 5 appear to be associated with an earlier occupation and depositional event. The radiocarbon date of AD 1280 thus only indirectly suggests an early Moundville II phase or earlier context, which is generally supported by the diagnostic pottery recovered from Feature 5. Given its lack of clear association, this single radiocarbon date provides no definitive context for fill deposition or the leveling of the mound surface.

Block 2: Mound Construction and Associated Features

The elevation of the mound at the Fosters Landing site was recorded as 39.16 m AMSL (N129 E300), only 0.40 to 0.50 meters higher than the immediately surrounding field. However, the mound is situated on a river terrace remnant that slopes gradually to the west from Moon Lake, accentuating the present-day elevation of the mound contour (Figure 27). Curren's (1984:124) estimate of 1 m for the mound elevation in 1974 may reflect this slight topographic relief. When the UMMA crew visited the Fosters Landing site a few years later, the mound was described as "nearly indistinguishable from the surrounding field" (Bozeman 1982:160-161; cf., Moore 1905:243; Welch 1998:155). A reduction in the height of the mound is likely accounted for by continual cultivation over the past century, deep-plowing, and the intentional leveling of the mound by the

Table 9. Radiocarbon Dates from Fosters landing, Summer 1998.

Sample	Provenience	Radiocarbon Age	Calibrated Results	Intercept Calibration
Beta-121583 (AMS)	EU 14, Stratum CM1	740 +/- 50 BP	AD 1220-1310 AD 1365-1375	AD 1280
Beta-121584 (AMS)	EU 16, Daub Layer	550 +/- 50 BP	AD 1305-1445	AD 1410
Beta-128619 (AMS)	EU 13, Level 4	300 +/- 30 BP	AD 1500-1655	AD 1635
Beta-121581 (AMS)	EU 9, Feature 3	730 +/- 40 BP	AD 1245-1305	AD 1285
Beta-121582 (Standard Radiometric)	EU 9, Feature 3	180 +/- 80 BP	AD 1520-1570 AD 1630-1950	AD 1675, AD 1770 AD 1800, & AD 1940
Beta-121585 (AMS)	T-1, Stratum M1	710 +/- 50 BP	AD 1245-1325 AD 1340-1390	AD 1290

land owner. The upper mound layers would have consequently been redeposited across the field, destroying any cultural features potentially associated with the summit. As a result, basal and summit surface dimensions could not be reliably measured during the Summer of 1998. Nor could Curren's (1984:124) estimated mound dimensions of 30 by 35 meters be accurately confirmed based on surface elevations. The mounded area could only be roughly estimated to cover a minimum of 600 square meters (20 m East-West by 30 m North-South), corresponding to an area in which the actual surficial dimensions of the mound have been obscured.

Block 2 at the Fosters Landing site consisted of two adjacent 1 by 1 m excavation units (Units 5 and 9) placed at the estimated point of highest elevation in order to investigate mound construction and any potentially related features (Figure 31). Once a shallow plow zone had been removed (15 to 20 cm), a highly mottled, clay and loam fill was encountered, at approximately 38.96 m AMSL. There was evidence for extensive rodent burrowing beginning at this depth, and throughout the excavation block, indicating considerable disturbance to the mound construction episodes (Figure 40). The upper mound fill (M2) was an approximately 40 to 45 cm thick layer of heavily mottled brown loam, with dark grayish-brown, brownish-yellow, gray, and yellowish-brown sandy clay inclusions. This highly variegated, kaleidoscopic clay-loam fill is often characteristic of mound construction episodes (Knight, personal communication 1998; Steponaitis 1992:2-3; Welch 1994:4).

At the bottom of M2, at approximately 60 cm below surface (38.53 m AMSL), an area of burned soil and charcoal fragments (Feature 3) was recorded near the center of the excavation block, in EU 5 and EU 9. Soil and charcoal from this feature were mixed with stratum M2 and the underlying strata M1 as a result of rodent burrowing. Feature 3 thus appear irregularly shaped at times, with pockets of burned soil and charcoal scattered throughout M2 and M1. However, in plan view it was clearly distinguishable as a small, circular hearth (Figures 41 and 42).

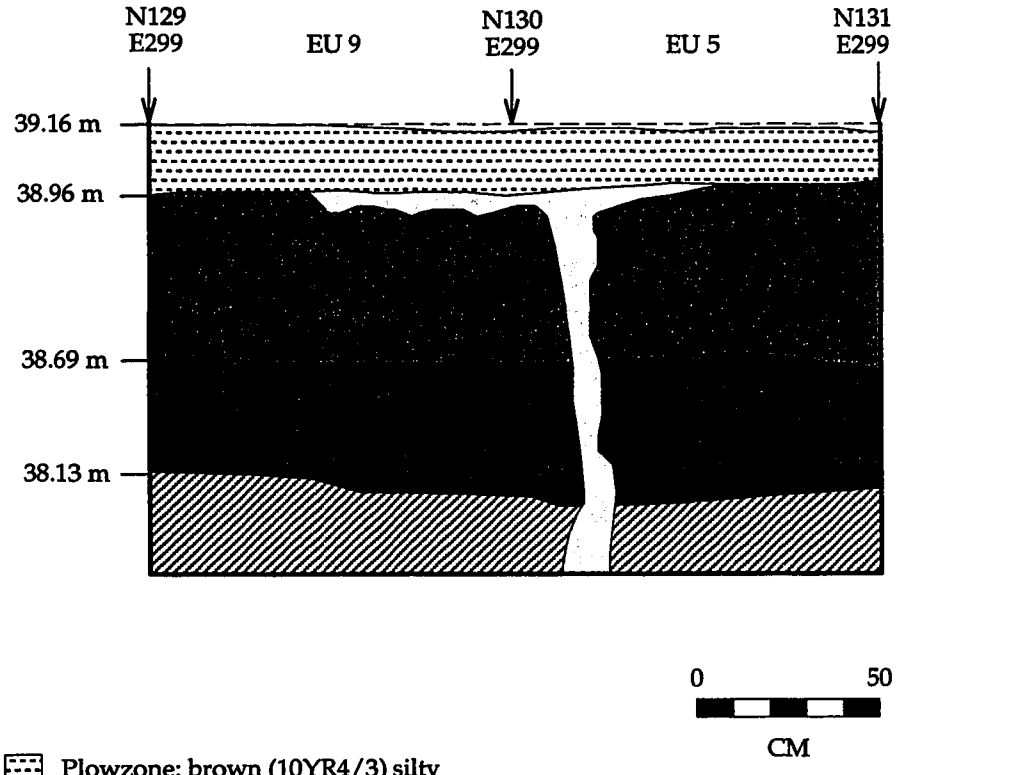


Figure 40. Profile of EU 5 and 9 at Fosters Landing, View to the West.

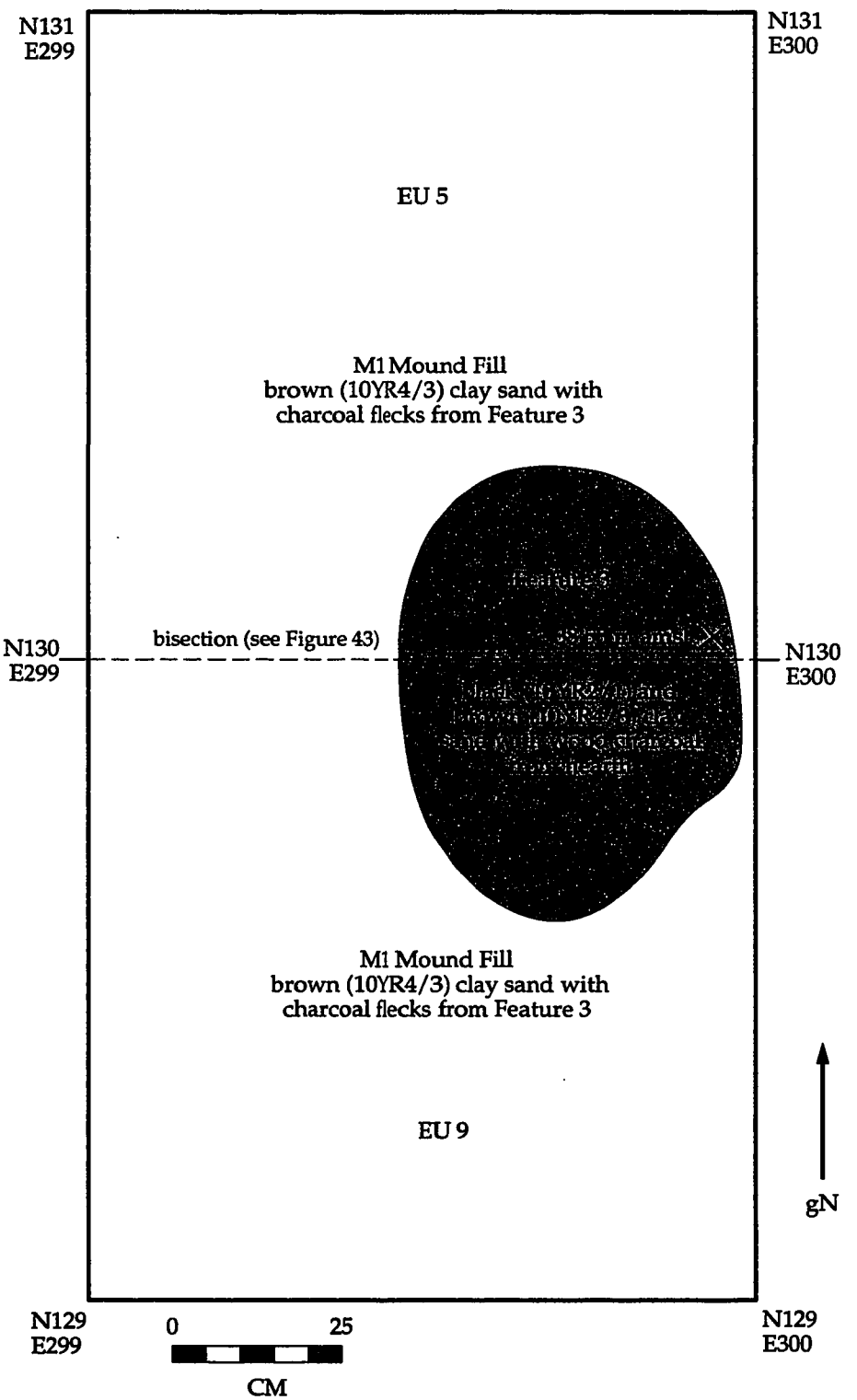


Figure 41. Plan View of Feature 3 at Fosters Landing.

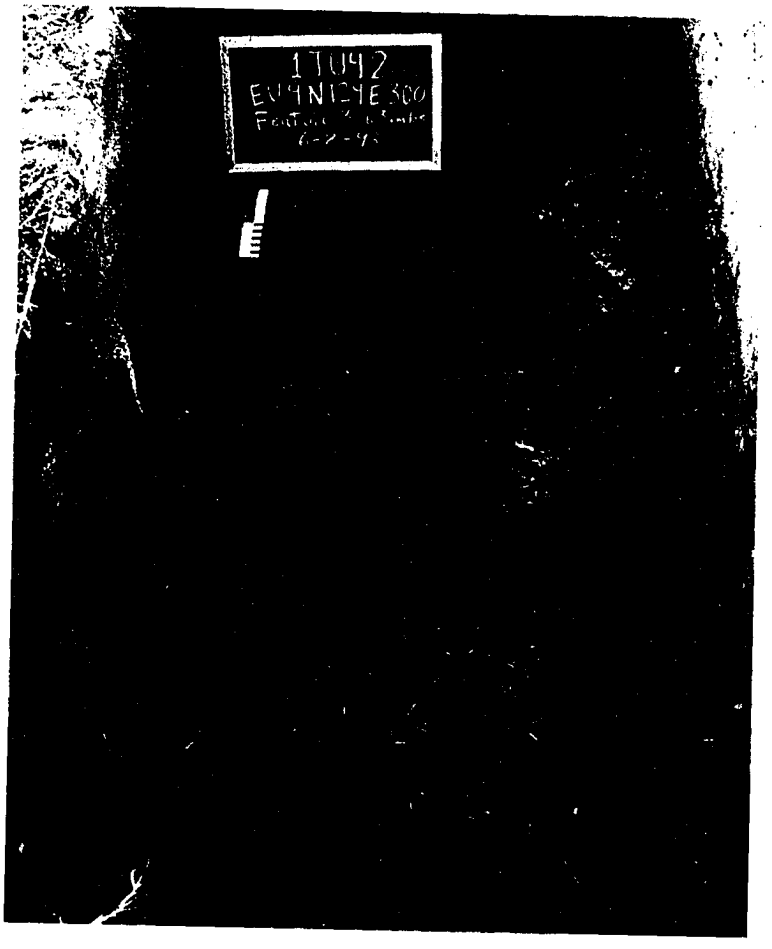


Figure 42. Photograph of Feature 3, View to the South.

Feature 3 was approximately 60 cm in diameter and slightly basin-shaped in profile, as bisected by units 5 and 9 (Figure 43). It was a small hearth that had been built on the surface of the underlying mound stratum (M1). Given the horizontal limits of the excavation block, no structural remains could be associated with Feature 3. A narrow pit visible in the east wall of Unit 9 may have been dug by a pot hunter, cutting through the mound stratigraphy and leaving behind no artifactual evidence (Figure 44). Dark yellowish-brown sand lenses were visible between strata M1 and M2, interspersed with charcoal flecks associated with Feature 3. These ephemeral sand lenses appear to have been deposited on the mound surface at the time the hearth (Feature 3), and may represent thin mantles, or the product of mound summit resurfacing.

Stratum M1 was approximately 30 to 35 cm thick and consisted of brown sandy clay with considerably less mottling than stratum M2 (Figure 45). These two strata appear to represent sequential episodes of mound construction and enlargement, as distinguished from the relatively thin mantles of earth that may indicate more incremental construction associated with the ceremonial purification of a mound surface (Knight 1989b:287; Pauketat 1993b:146; Pauketat and Rees 1996). Beneath M1 was a layer of brown sandy clay that contained few artifacts.

The pottery sherds associated with both mound construction episodes (M2 and M1) and Feature 3 were conspicuous, in that types characteristic of the Moundville I phase were recovered, yet no later types were encountered (Table 10). Diagnostic pottery from these mound strata confirm a temporal association much earlier than was expected. Moundville Incised *variety Moundville* and Bell Plain *variety Hale* sherds with a beaded shoulder are generally associated with Moundville I and early Moundville II phase (AD 1050-1400) contexts (Figures 46 and 47; Steponaitis 1983a:99-111, 1992). The relative size of the sherds from Feature 3, in contrast to the smaller sherds from the plow zone and redeposited mound fill in Block 1, are indicative of a primary depositional

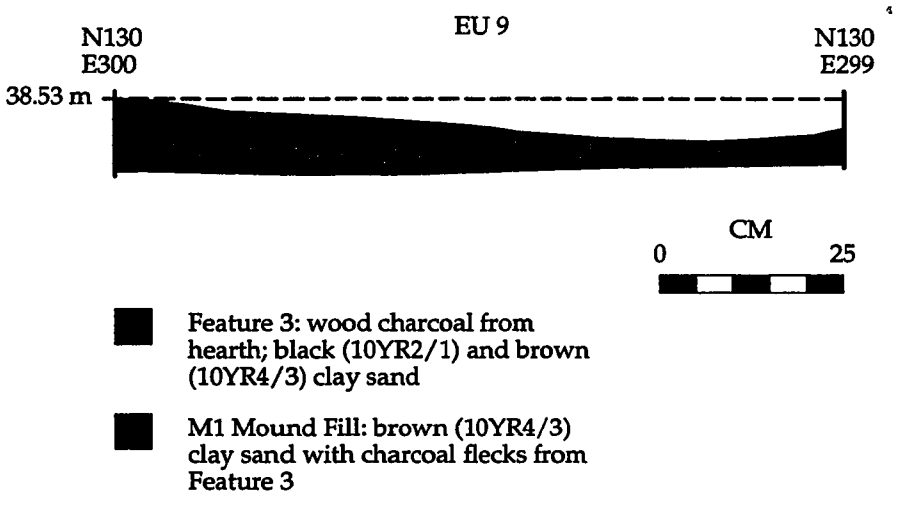


Figure 43. Bisection of Feature 3, View to the South.

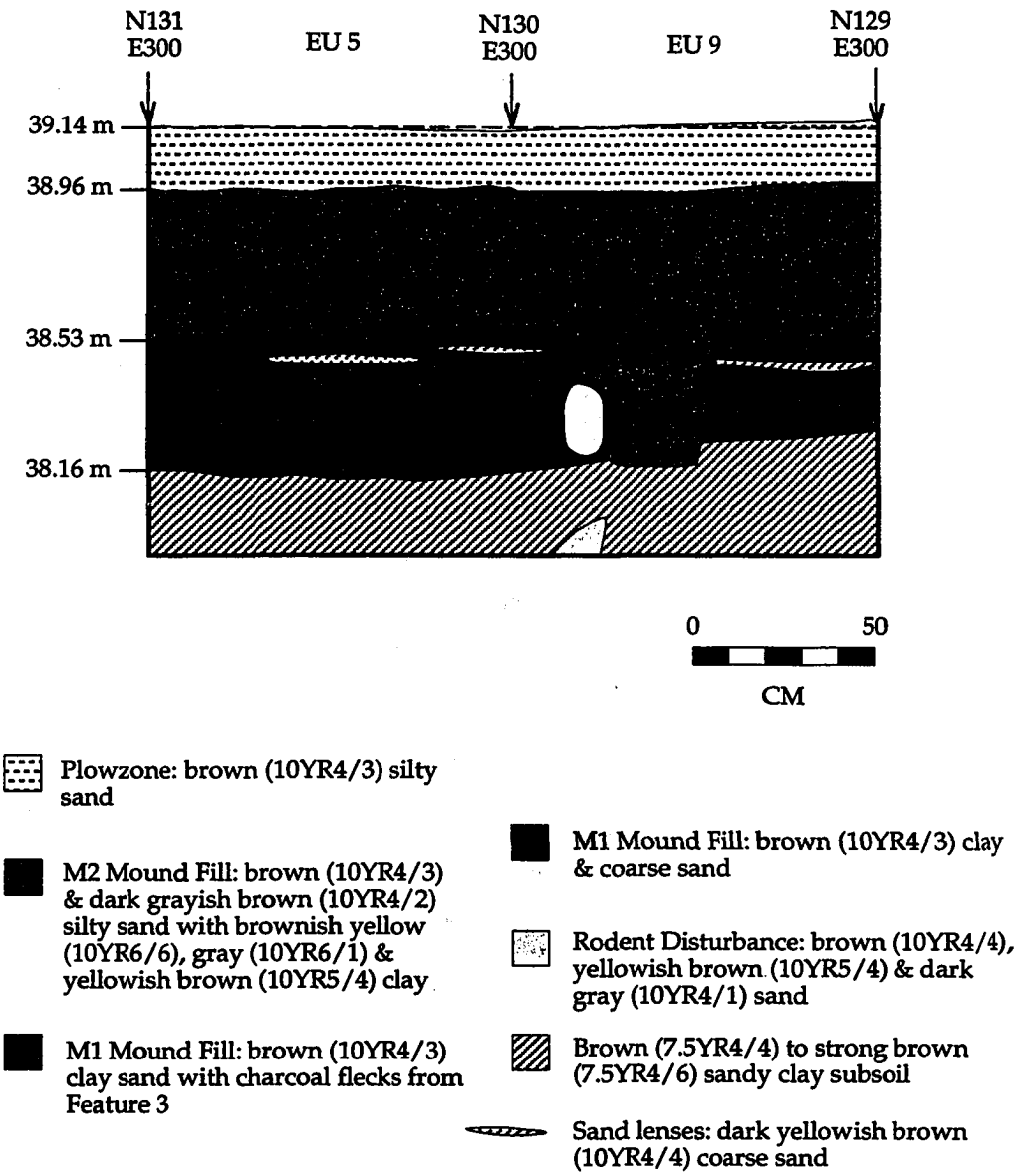


Figure 44. Profile of EU 5 and EU 9 at Fosters Landing, View to the East.

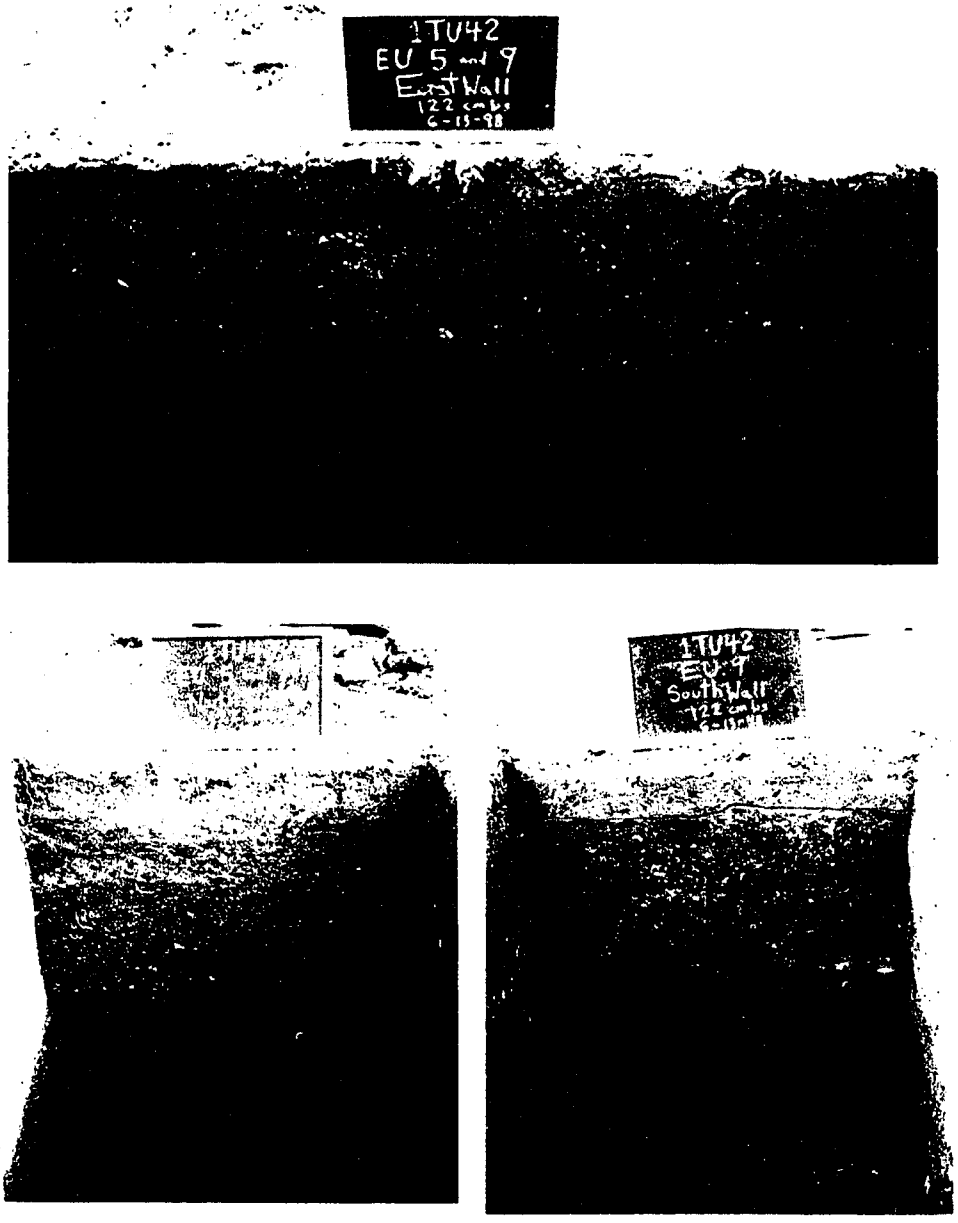


Figure 45. Photographs of EU 5 and EU 9 at Fosters Landing, Views to the East (top), North (bottom left), and South (bottom right).

Table 10. Pottery from Block 2 at Fosters Landing, Summer 1998.

	PZ		M2		Feature 3		M1		B		Total	
Type/Temper	n	g	n	g	n	g	n	g	n	g	n	g
Alexander Incised, Pleasant Valley			1	7.0							1	7.0
Alexander Incised, unspecified			1	4.6			1	4.6			2	9.2
Alexander Pinched, Prairie Farms			3	68.4							3	68.4
Alexander Pinched, unspecified			2	5.3							2	5.3
Alligator Incised									1	2.9	1	2.9
Baytown Plain, Roper	41	104.9	19	63.5	1	3.9	51	279.8	16	73.8	128	525.9
Bell Plain	1	1.6	9	20.8	14	38.6	38	66.8			62	127.8
Benson Punctate							1	4.5			1	4.5
Evansville Punctated, unspecified	1	3.4									1	3.4
grog-tempered, unclassified			2	4.8			5	9.6			7	14.4
Mississippi Plain, Warrior	6	13.8	20	97.2	8	43.1	53	310.2	6	24.2	93	488.5
Moundville Engraved, unspecified	1	0.7	1	0.5			1	2.9			3	4.1
Moundville Incised, Moundville							10	50.4			10	50.4
Moundville Incised, unspecified			2	2.2	2	8.1	1	0.8	1	0.8	6	11.9
Mulberry Creek Cordmarked							1	16.6			1	16.6
Salomon Brushed, Fairfield							1	37.3			1	37.3
sand-tempered	6	20.4	4	16.1	4	19.3	15	75.6	5	21.6	34	153.0
sand-tempered, incised							1	7.5			1	7.5
shell-tempered	17	22.1	20	44.2	13	29.0	84	122.5	12	18.3	146	236.1

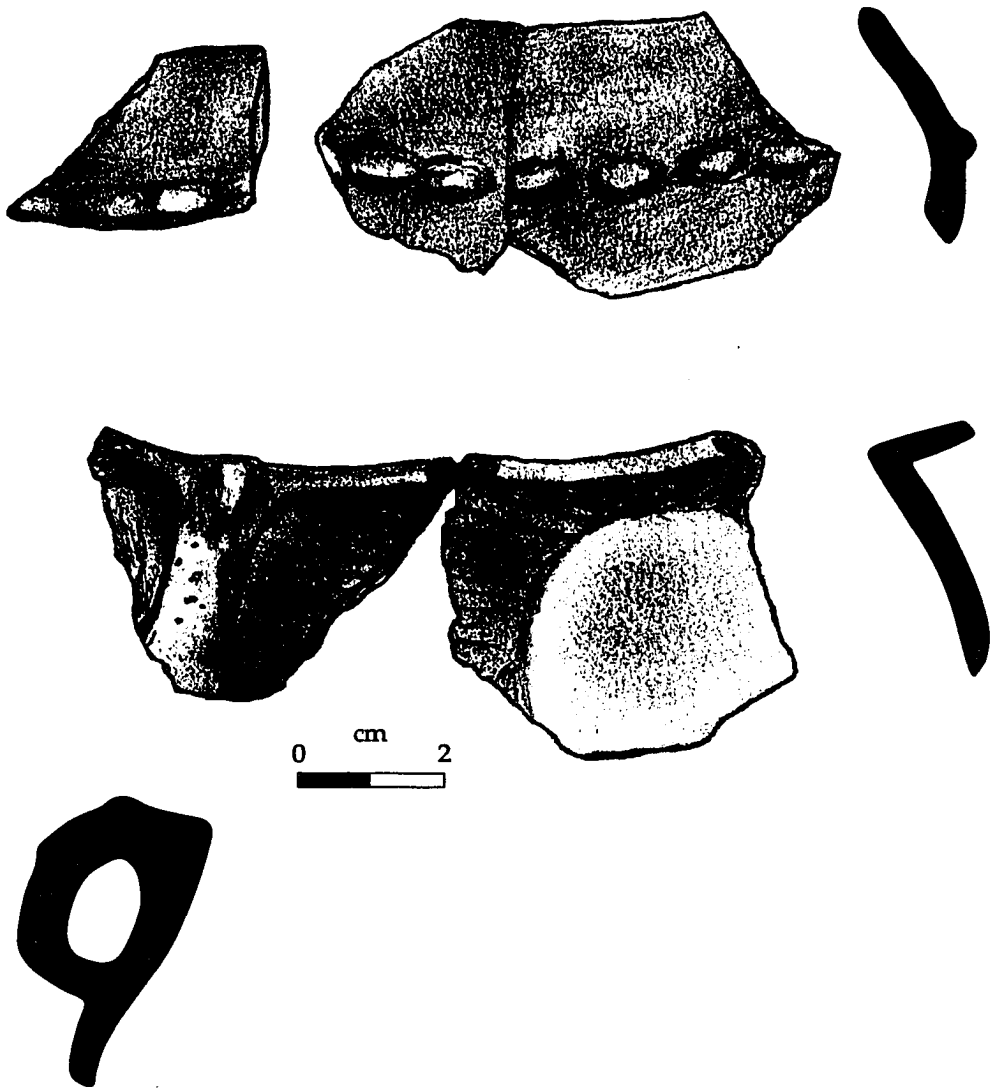


Figure 46. Bell Plain, Variety Hale (top), and Moundville Incised, Variety Moundville (bottom), Sherds from Feature 3 at Fosters Landing.

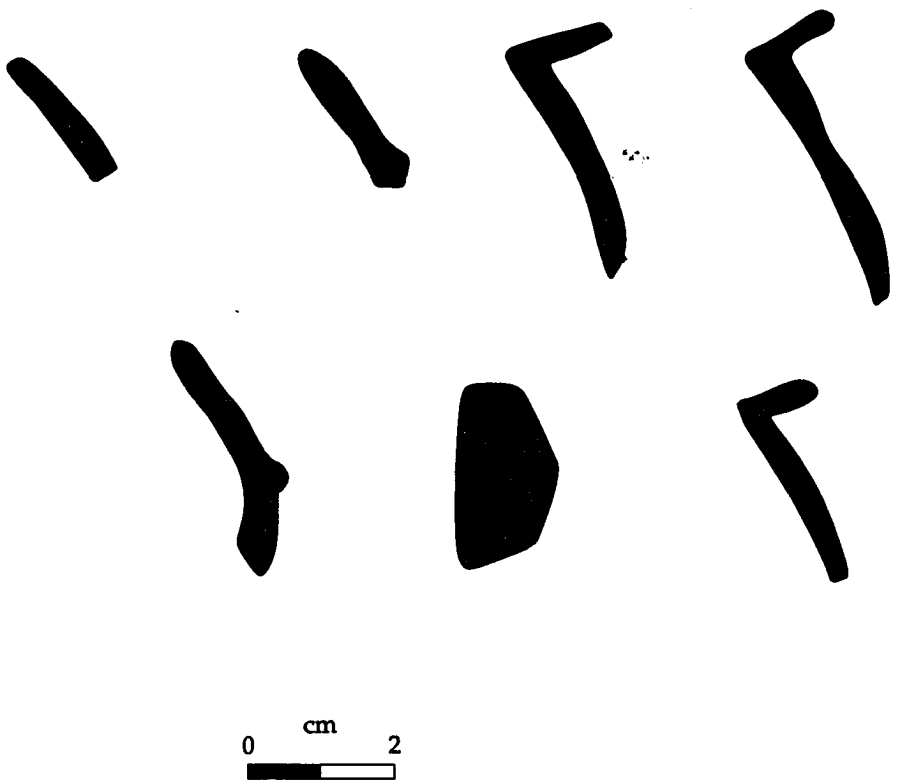


Figure 47. Profiles of Rim Sherds from Feature 3 at Fosters Landing.

context for Feature 3 and the mound construction episodes. Although sand and grog-tempered Woodland pottery sherds were also recovered, these were noted throughout the excavation blocks and had been redeposited in the mound fill. More significantly, there were no diagnostic pottery types from the mound fill or Feature 3 to indicate an association with the Moundville III or Moundville IV phases (ca. AD 1400-1650).

Radiometric analysis of a carbon sample obtained from the hearth (Feature 3) on the surface of stratum M1 corroborates the chronological assignment of mound construction episodes (Table 9). Accelerator mass spectrometer analysis of one sample (Beta-121581) from Feature 3 in EU 9 yielded a radiocarbon age of 730 $\pm$ 40 BP (AD 1245 to 1305), with a calibrated intercept of AD 1285. A second sample (Beta-121582) from Feature 3 in EU 9 was analyzed by standard radiometric technique and returned calibrated date ranges of AD 1520-1570 and AD 1630-1950 (based on a radiocarbon age of 180 $\pm$ 80 BP). The results of the second sample appear to be too recent based on the diagnostic pottery and may be unreliable as a result of the rodent burrowing noted throughout the excavation block.

Given what is known from previous investigations of the Fosters Landing site, it is reasonable to conclude that prior leveling of the mound effectively removed any evidence for later mound construction episodes, while leaving earlier mound layers intact. Beneath stratum M1, a heavily oxidized, sandy clay was encountered at approximately 1 meter below surface (38.16 m AMSL). Only a few artifacts were recovered from this stratum. The same stratum of subsoil was recorded in Block 1.

The possible relationship between the two mound construction episodes (M1 and M2) and redeposited mound fill in Block 1 (CM1 and CM2) was investigated by the excavation of a narrow (0.5 m by 2 m) trench (T1) in Block 2. The mound stratigraphy was examined by placing this trench at the estimated location of the western mound slope, 7 meters west of Units 5 and 9 (Figure 31). While distinguished by considerably less mottling, stratum M2 was visible beneath the plow zone in the north wall profile of

T1. Stratum M2 gradually narrowed in thickness from N130 E292 to N130 E290 (at 28 cm and 14 cm, respectively), suggesting that its western edge was located within a few meters to the west (Figure 48). Stratum M1 was also recorded in T1, although it was exceedingly difficult to distinguish from stratum M2 and the underlying subsoil. However, a single postmold was documented in the lower mound fill in the east wall profile of Unit T1, measuring 14 cm in diameter and intruding 12 cm into the sandy-clay subsoil (Figure 49).

Accelerator mass spectrometer analysis of a charcoal sample (Beta-121585) associated with the upper mound stratum (M2) in the east wall of T1 closely corroborates the radiocarbon age obtained for Feature 3 (Table 9). The sample from stratum M2, T1 yielded a calibrated date range of AD 1245 to 1325 (based on a radiocarbon age of 710 $\pm$ 50 BP), with an intercept of AD 1290. Radiocarbon analyses of samples from the mound thus indicate that the second mound construction episode (M2) at Fosters Landing predates the last decade of the thirteen century, and is most likely associated with the early Moundville II phase (ca. AD 1250-1300). The first mound construction episode (M1) thus probably dates prior to this time, or the late Moundville I to early Moundville II phase. This is generally corroborated by the diagnostic pottery types from Feature 3.

Block 3: Terrace Edge Features

Located on the terrace edge overlooking Moon Lake, Block 3 was one of the most productive areas of investigation during the Summer 1998 field season (Figure 31). Surface inspection along the terrace edge above the west bank of Moon Lake indicated that there was a higher concentration of shell-tempered sherds from N165 to N170, approximately 50 meters northeast of the mound. Systematic sampling with a 2.0 cm diameter soil core revealed a 10 to 15 cm layer of daub beneath a shallow (8 to 16 cm)

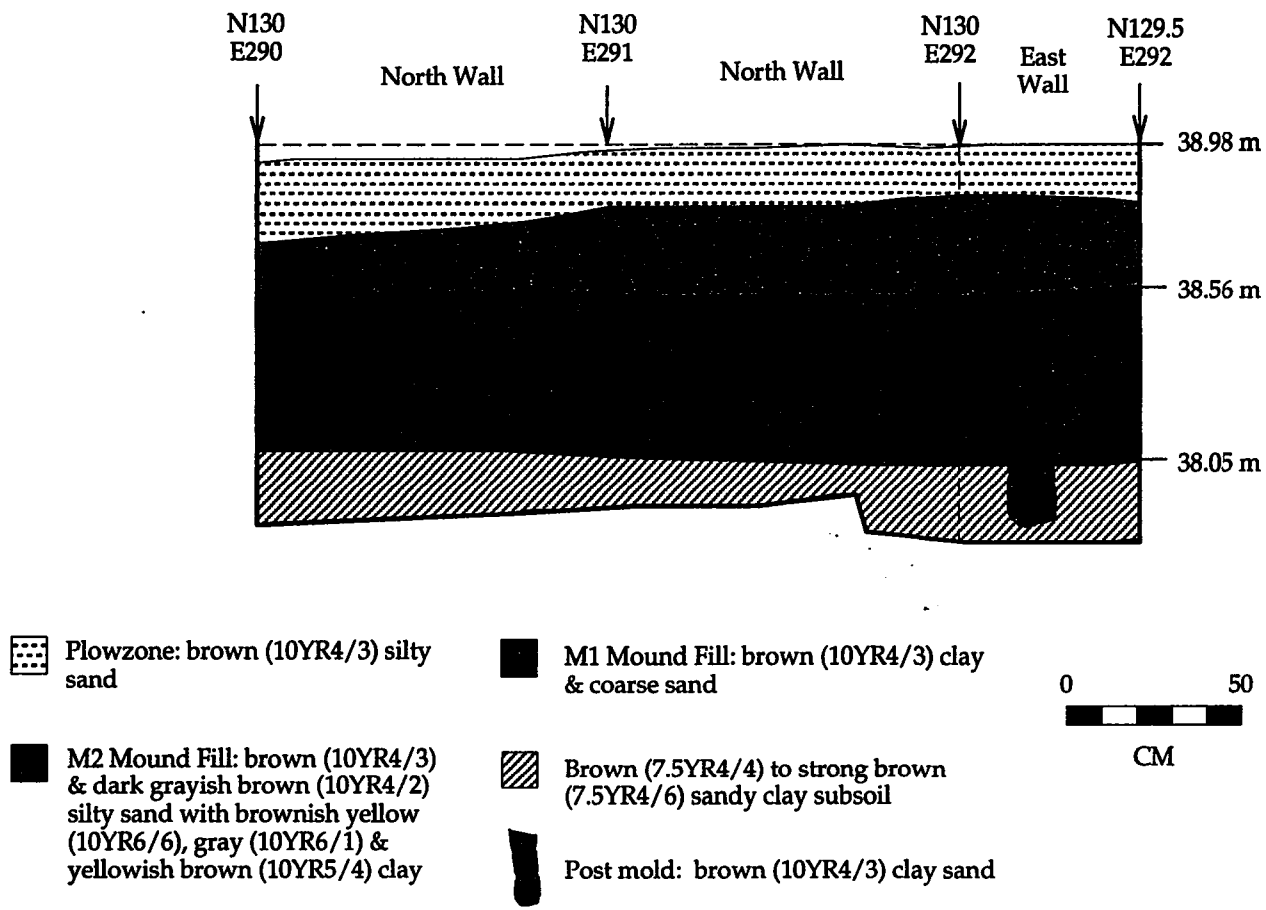


Figure 48. Profile of T1 at Fosters Landing, Views to the North and East.



Figure 49. Photograph of T1 at Fosters Landing, View to the East.

plow zone (Figures 50 and 51). In contrast to much of the site, this area along the terrace edge appeared relatively undisturbed by cultivation. Cultural features were consequently preserved beneath the plow zone. A total of 8 square meters were excavated between N166-N169 and E336-E340 (Figure 52), to a maximum depth of approximately 1.16 m below surface (37.16 m AMSL).

The cultural features documented in Block 3 along the terrace edge were fairly complex, with the remains of a protohistoric house (Feature 10; Figure 53) superimposed over an earlier Mississippian wall-trench structure (Feature 11; see below). The walls of Feature 10 were constructed of dried clay daub, cane, and split-cane thatch, which in many instances had left visible impressions in the daub. Samples of split-cane thatch were also preserved within the daub and several pieces of burned cane were recovered (Figure 54). The layer of daub and burned daub was extremely dense in some areas and more lightly scattered in others (Appendix 8). A linear arrangement of daub was uncovered in one excavation unit (EU 10) and may have been produced from the collapse of a wall (Figure 55).

Thin lenses of dark gray and yellowish-brown sand were visible immediately beneath the layer of daub in the east wall profile of Block 3 (Figure 51). These lenses may represent the remains of a house floor, although they were not discernible in plan view during excavation, or in the other wall profiles. While it was difficult to distinguish color and texture variations in the light brown sandy loam, several postmolds could be identified immediately beneath the layer of daub. These postmolds were associated with the protohistoric daub and thatch house (Feature 10), yet did not appear to coincide with any recognizable architectural pattern. This might have been due in part to the limited area that was exposed by the excavation block. Although the entire area encompassed by Feature 10 was not excavated, core sampling at 50 cm intervals indicated that the daub scatter covered at least 3.5 m by 3.5 m (Figure 53). The shape of Feature 10 could

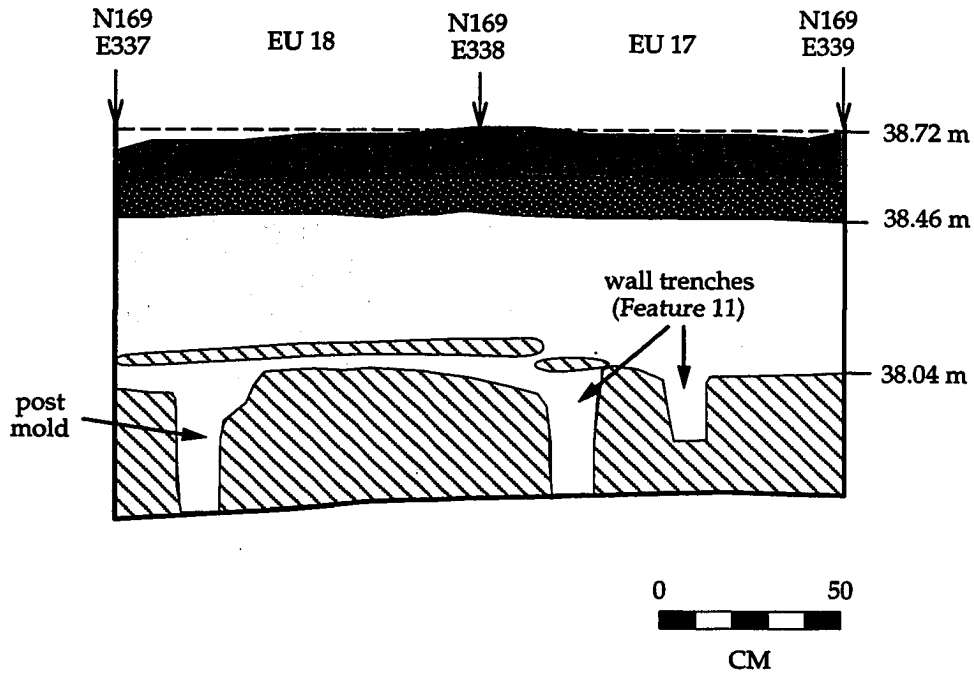


Figure 50. Profile of Block 3 at Fosters Landing, View to the North.

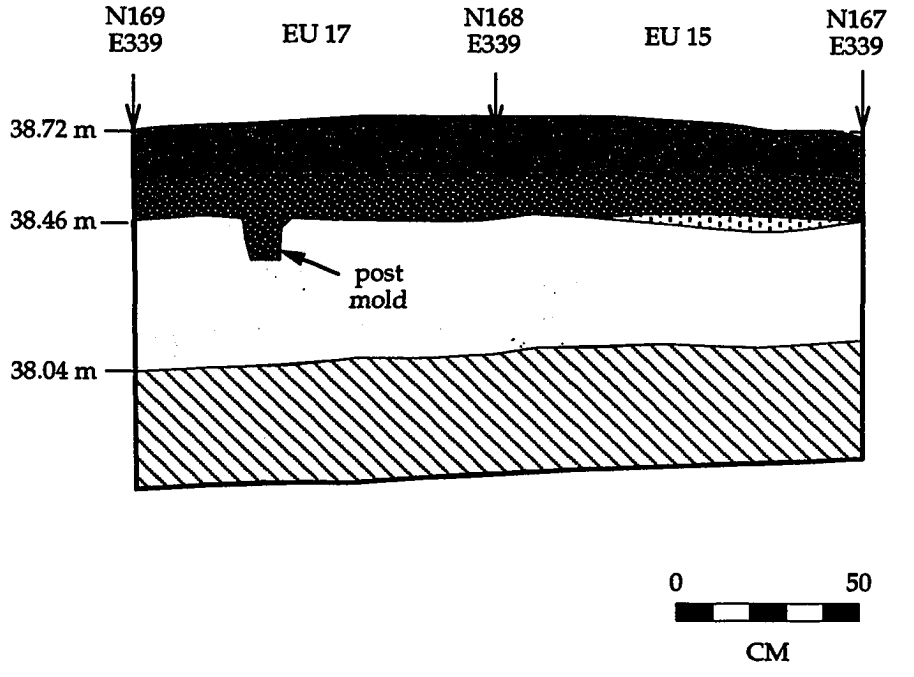


Figure 51. Profile of Block 3 at Fosters Landing, View to the East.

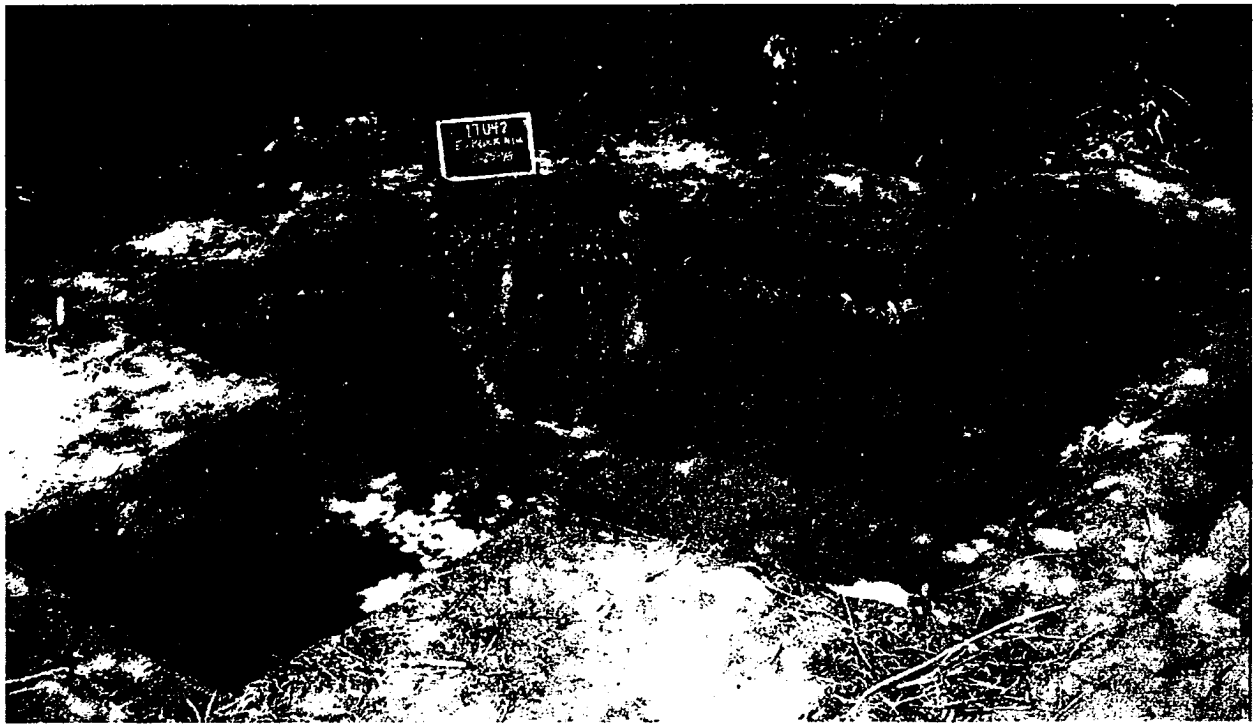


Figure 52. Photograph of Block 3 at Fosters Landing, View to the Northeast.

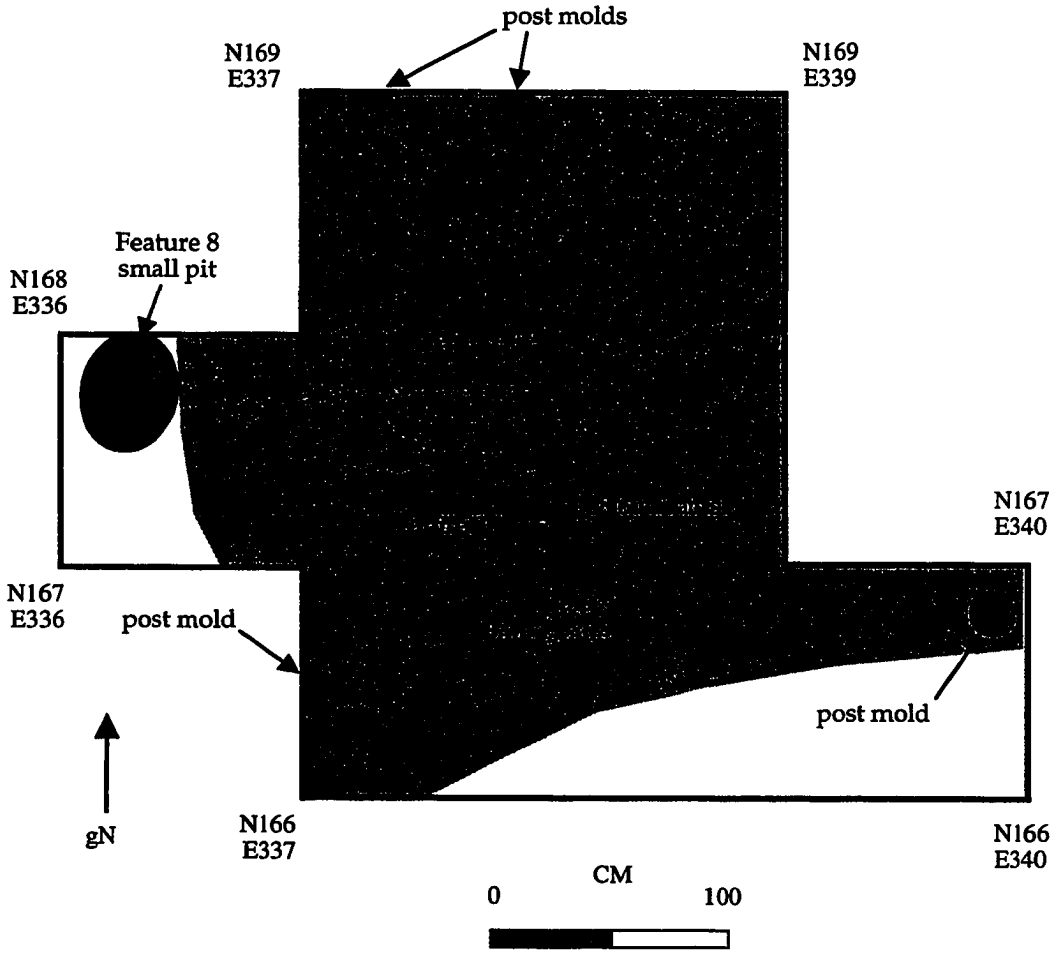


Figure 53. Plan View of Feature 10 in Block 3 at Fosters Landing.



Figure 54. Photograph of Daub and Cane from Feature 10 in Block 3.



Figure 55. Photograph of Feature 10, Daub Concentration in EU 10, Block 3, View to the West.

not be ascertained within the excavation block. However, the core sampling indicated that the daub scatter was confined within this 12.25 square meter area.

Feature 10 clearly represents the remains of a protohistoric, Moundville IV phase (ca. AD 1550-1700) daub and thatch house based on the occurrence of daub, postmolds and the recovery of Alabama River Appliqué and Alabama River Incised pottery sherds from within and immediately beneath the layer of daub (Figures 56 and 57; Table 11). A more precise temporal association can be made based on radiometric samples (Table 9). Accelerator mass spectrometer analysis of fragments of partially burned cane collected from immediately beneath the layer of daub yielded a date range of AD 1500 to 1655 (300 $\pm$ 30 years BP), with a calibrated intercept of AD 1635 (Beta-128619). Analysis of a second sample of burned daub (Beta-121584) from Feature 10 resulted in a date range of AD 1305 to AD 1445 (based on a conventional radiocarbon age of 550 $\pm$ 50 years BP), with a calibrated intercept of AD 1410. The results of the first sample (Beta-128619) coincide more closely with the temporal association of the diagnostic pottery that was recovered, indicating that the second sample (Beta-121584) may be erroneous. Taking the diagnostic pottery and AMS date into account, this suggests an early seventeenth century association for the daub and thatch house (Feature 10).

A burial (Feature 12) was exposed beneath Feature 10 in Block 3 (Figure 58), from approximately 50 to 80 cm below surface (37.82-37.52 m AMSL). The burial pit intruded through the layer of daub but was not detected during the excavation of Feature 10, most likely due to the concentrations of daub mixed throughout both features. Pieces of burned daub and cane were recovered near the bottom of the burial pit, further indicating that it post-dated the destruction of Feature 10. Alexander Incised and undecorated sand-tempered sherds had been redeposited within the features and surrounding matrix, further indication of an earlier Late Gulf Formational period (ca. 500-100 BC) component in this location (Table 11). Within Feature 12, the extended



Figure 56. Alabama River Applique (right) and Alabama River Incised (left and top) Sherds from Feature 10 in Block 3 at Fosters Landing.

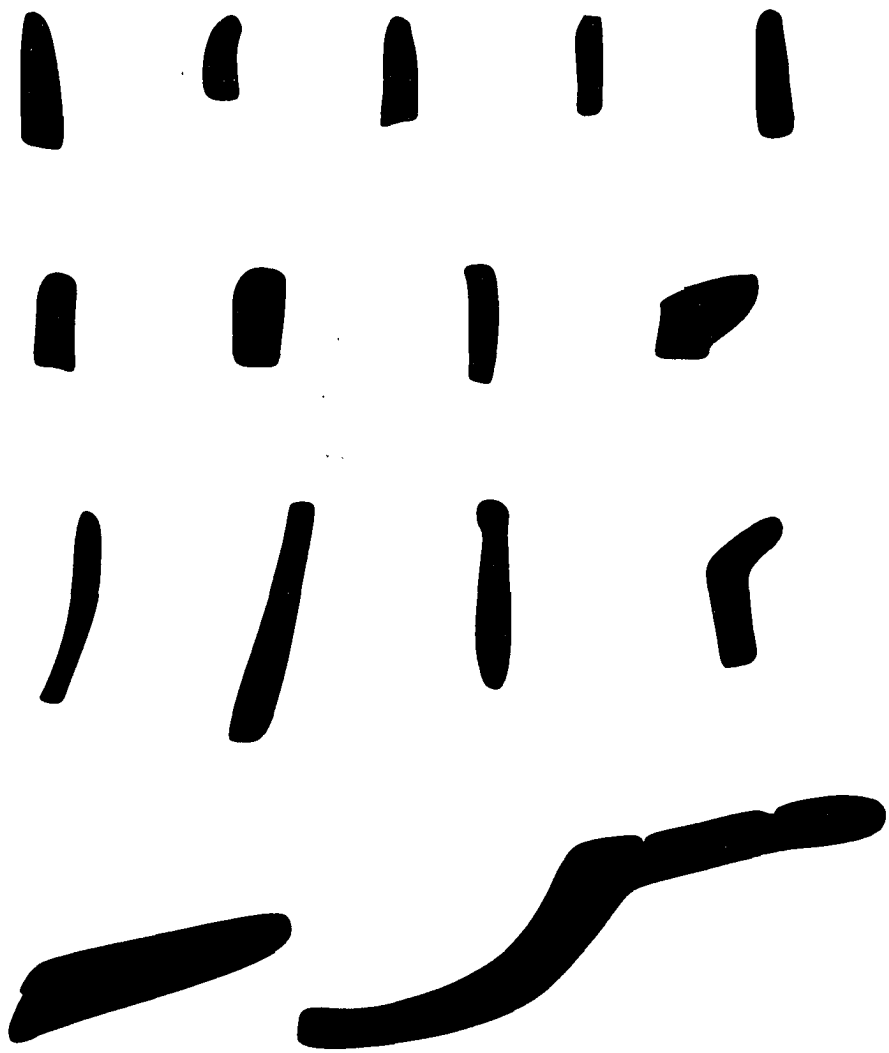


Figure 57. Profiles of Rim Sherds from Feature 10 in Block 3 at Fosters Landing.

Table 11. Pottery from Block 3 at Fosters Landing, Summer 1998.

	PZ		Feature 10		Level 3		Level 4		Level 5		Feature 11		Feature 12		Level 6		Levels 7-10	
Type/Temper	n	g	n	g	n	g	n	g	n	g	n	g	n	g	n	g	n	g
Alabama River Applique			37	117.7														
Alabama River Incised, Alford	3	105.8	1	9.5														
Alabama River Incised, unspec.			1	9.1														
Alexander Incised, Pleasant Valley			6	37.3	1	15.1	10	111.7	13	92.6			2	36.9	13	50.9		
Alexander Incised, Prairie Farms			5	21.5			1	10.6	2	23.9								
Alexander Incised, unspec.	2	12.5	4	16.9	1	3.5	8	35.7	15	35.0			1	3.1	2	3.9	1	3.6
Alexander Pinched, Prairie Farms	1	3.1	12	61.5	2	14.2	20	114.1	20	118.9			5	31.3	9	55.2	2	16.8
Alexander Pinched, unspec.			2	8.9			5	25.4	2	17.0	2	7.6	4	12.1	3	12.9	2	9.8
Baytown Plain, Roper	9	21.3	17	49.6	9	50.6	28	125.9	5	25.6	9	50.0	5	12.4	17	71.0	2	7.2
Bell Plain	13	34.4	64	225.0	2	4.0	12	18.8	2	3.0	6	40.4	12	24.5	4	6.6		
Carthage Incised, Akron															1	6.7		
grog-tempered, unclassified	4	7.0	14	41.7	2	2.7	16	64.6	8	33.4					1	0.8	1	1.9
Mississippi Plain, Warrior	10	21.0	64	195.5			44	170.1	24	115.5	13	62.1	26	73.5	7	86.8	1	4.7
Moundville Engraved, unspec.	1	2.5									1	0.8						
Moundville Incised, Carrollton							1	3.4										
Moundville Incised, unspec.							3	6.5										
sand-tempered, unclassified	5	10.0	34	102.6	3	4.6	49	184.1	45	178.8	10	34.3	9	28.5	20	61.6	9	18.9
sand-tempered, incised									1	2.1					1	3.4		
sand-tempered, punctate							1	1.9			1	4.1					2	28.4
shell-tempered, unclassified	24	43.2	108	280.5	15	24.9	36	137.0	15	13.9	3	4.4	2	4.3	8	13.8	8	10.5
shell-tempered, incised	2	3.1	2	11.6	1	0.8							1	0.6				
shell-tempered, painted	4	9.0	1	0.7			2	8.9									1	1.9
Wheeler Check Stamped, Sipsey							2	17.3									1	5.5
Wheeler Plain									1	4.8								

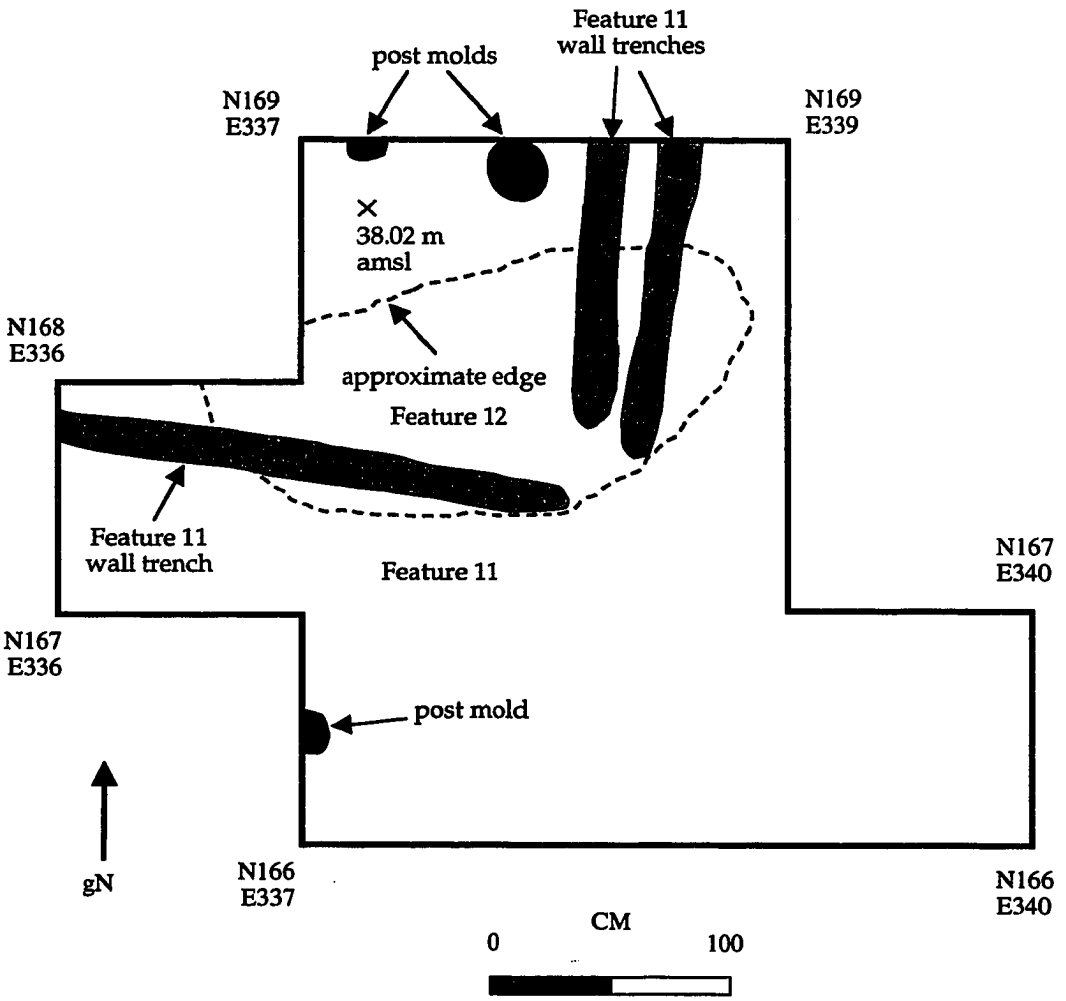


Figure 58. Plan View of Features 11 and 12 in Block 3 at Fosters Landing.

skeleton of an adult had been interred with only indirect evidence for burial goods. A few small fragments of mussel shell were recovered from the pit, although it is unclear whether these represent mortuary offerings or secondary deposition (Appendix 8). Both shell and bone preservation were exceedingly poor throughout Block 3. As a result, only rudimentary physical analyses of the in situ remains were conducted by anthropologists from the University of Alabama (Keith Jacobi, personal communication 1998).

At approximately 73 cm below surface (37.59 m AMSL), a series of wall trenches were exposed (Feature 11). The wall trenches were located approximately 47 cm beneath the layer of daub associated with Feature 10 and were visible in the north wall profile of Block 3 (Figure 50). The burial pit was superimposed over and partially intruded through the wall trenches, making it extremely difficult to discern their outline in the light yellowish-brown loam. However, the shaft of a partially-intact left humerus bisected the top of one wall trench, indicating that the wall-trench structure predated both the burial and Feature 10.

Once the burial pit had been excavated, portions of three wall trenches comprising the south and east walls of Feature 11 were visible in Block 3 (Figures 58 and 59). The wall trenches were recorded at depths of 73 to 113 cm below surface (37.59-37.19 m AMSL), what probably represents the lower portion that had not been bisected by Feature 12. These wall trenches were approximately 12 cm to 15 cm wide, with two associated postmolds evident in one trench. The two parallel east wall trenches suggests that at least one wall had been repaired or rebuilt.

The wall trenches of Feature 11 were positioned in a light yellowish-brown sand, in which it was difficult to ascertain the upper limit during excavation. However, the position of the east wall trenches in the north wall profile of Block 3 indicates that Feature 11 predates both Feature 10 and the intrusive burial pit (Figure 50). A thin lens of light yellowish brown sand was visible in the north wall profile, approximately 5 to 7 cm above the wall trenches. While this might represent the remains of a floor associated

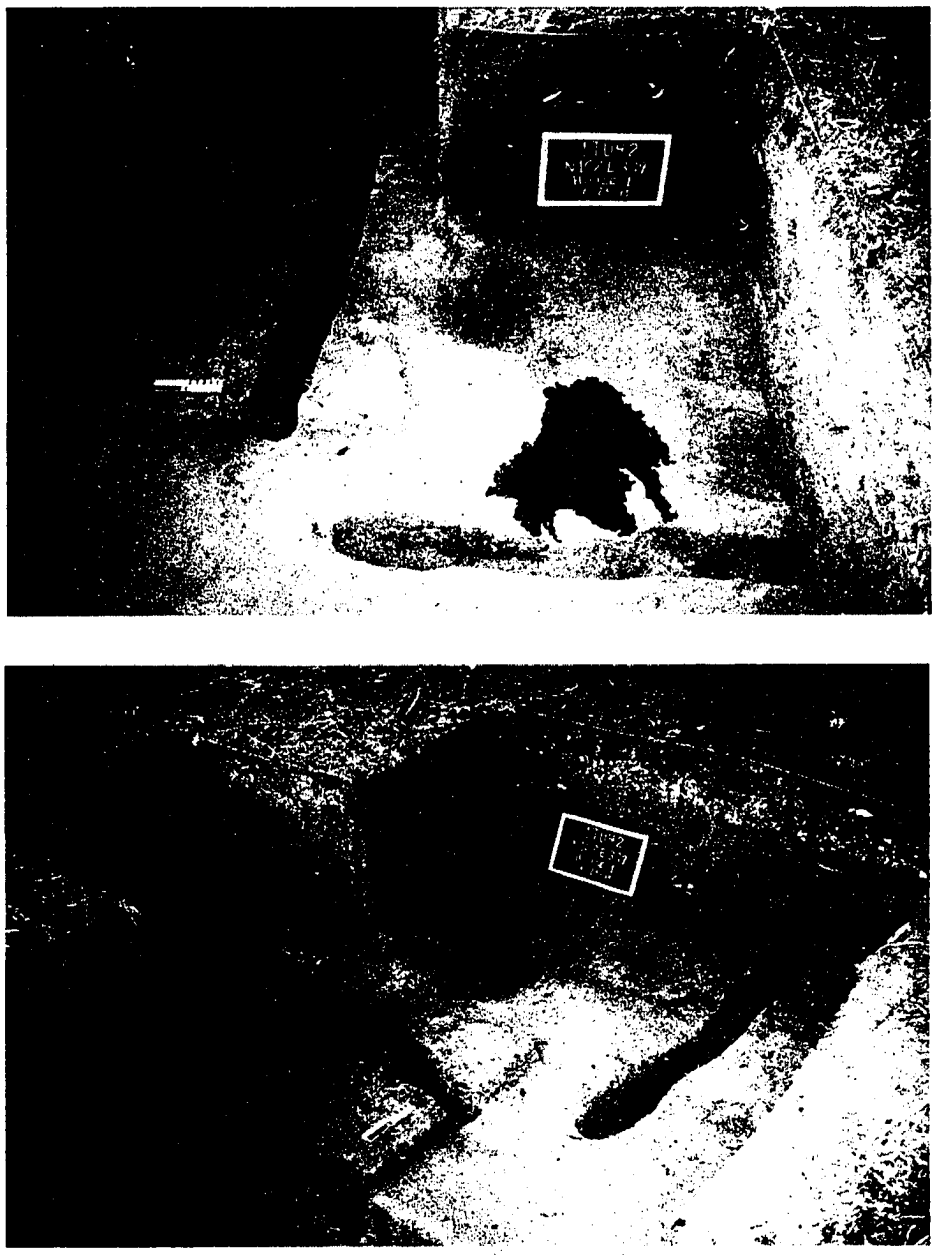


Figure 59. Photographs of Feature 11 Wall Trenches in Block 3 at Fosters Landing, Views to the West (top) and Northwest (bottom).

with Feature 11, it was too faint to discern in plan view. Relatively few artifacts and no diagnostic pottery were recovered from the wall trenches or surrounding matrix (Table 11). While only portions of the east and south wall trenches of Feature 11 could be exposed in the excavation block, the floor area appears to have been relatively small. It can be estimated to have covered 7.5 square meters at minimum. While it clearly predates Feature 10, the precise temporal association of Feature 11 remains problematic. However, similar wall-trench architecture is generally characteristic of late Moundville I and early Moundville II phase construction at Moundville, 4 km (2.5 miles) to the south (Knight and Steponaitis 1998:15; Scarry 1995:95-158; 1998).

Summary

The fieldwork performed during the Summer of 1998 at the Fosters Landing site documented mound stratigraphy, features, and residential structures dating from the early Moundville II and Moundville IV phases, generally associated with the beginning and end of the Moundville polity. Given the multicomponent, commingled nature of the site, there were anticipated difficulties in focusing exclusively on the Mississippian and protohistoric occupations. Diagnostic pottery types and radiocarbon analyses indicate successive yet probably intermittent inhabitation of the site during the Middle and Late Gulf Formational periods (ca. 1000-100 BC), Late Woodland West Jefferson phase (ca. AD 900-1050), early Moundville II phase (ca. AD 1250-1300), and Moundville IV phase (ca. AD 1550-1650).

Previous investigations and unprovenienced collections indicated that a large protohistoric village was located at the site. This was confirmed by the excavation of Block 3 on the terrace edge, which produced evidence of a daub and thatch structure (Feature 10), as well as residential debris scattered throughout the plow zone. A similar architectural pattern was noted by Curren (1984:152-155) at the Moody Slough site, a Moundville IV phase village south of Snows Bend on the Black Warrior River. Curren

(1984:152-155) described one of four likely daub and thatch structures excavated by the AMNH at the Moody Slough site. The structure at Moody Slough was represented by an irregularly-spaced pattern of post holes, beneath an approximately 20 cm thick layer of daub (see also Curren and Little 1981). The architectural debris of Feature 10 at Fosters Landing closely resembles the structure excavated at Moody Slough in terms of the apparently indiscriminate placement of supporting posts, distribution of daub scatter, intrusive burial, and daub and thatch wall construction.

A basin-shaped hearth and several pit features were also recorded at the Moody Slough site, from which numerous carbonized maize cobs were recovered (Lentz 1984:166-170). Similar features and macrobotanical remains were not encountered in Feature 10 or Block 3 at Fosters Landing. Nor was there evidence for maize in the flotation samples from Feature 3 in Block 2 at Fosters Landing, perhaps due to the generally poor preservation of botanical and faunal remains in the soil (M. Scarry, personal communication 1999). Laboratory analysis of absorbed residues in two shell-tempered sherds from Feature 10 were indeterminate for plant remains. However, a third sample from Feature 10 produced evidence of a residue attributable to maize (Reber 1999:24).

The size of the Mississippian occupation at Fosters Landing does appear to have exceeded the previously estimated 2.2 hectares. However, unforeseen problems in differentiating what were in fact at least two distinct Mississippian components make it difficult to assess the size of the Moundville IV phase village. The shovel testing revealed that the distribution of shell-tempered pottery is concentrated in a much smaller area in the vicinity of the mound (approximately 0.8 hectares or 2.0 acres), indicating that this scatter may have been produced by the leveling of the mound, rather than representing primary domestic refuse. There was additional evidence in Block 1 for mound-leveling and the conflation of upper mound layers in the surrounding field. Based on ceramic evidence alone, this conflated mound fill can be associated with the

Moundville IV phase component. Diagnostic pottery sherds from what appeared to be redeposited mound fill only indirectly suggests mound construction postdating AD 1550. Direct evidence for mound construction episodes dating to this time has either been obliterated or was not encountered during the Summer 1998 fieldwork.

The protohistoric, Moundville IV phase occupation at Fosters Landing appears to have extended an additional 200 m south of the mound, within the vicinity of the land owner's house. Based on the placement of the daub and thatch structure documented in Block 3 (Feature 10), a Moundville IV phase village was located along the terrace edge overlooking Moon Lake. A radiocarbon date of AD 1635 for this feature is probably a close estimate of the time at which it was burned and destroyed (Beta-128619). While it is now known that village habitation in the vicinity of the mound dates as late as the early seventeenth century, its association with contemporaneous habitation across an intermittent drainage to the south can only be inferred from unprovenienced collections housed at the AMNH and in the possession of the landowner (Curren 1984:122-124; Curren and Little 1981).

If habitation in these two areas was contiguous and simultaneous, then 2.2 hectares is a conservative estimate for the size of the protohistoric village at Fosters Landing. An estimate of 3.8 hectares is based on the extent of shell-tempered pottery recovered during the Winter 1997-98 shovel testing, excluding the protohistoric habitation in the vicinity of the land owner's house. There is only indirect evidence to associate village activities at this time with mound construction and/or use. Nonetheless, this remains a distinct possibility given the extent of contemporaneous, secondary mound deposits in Block 1, as well as the radiometric evidence for late sixteenth to early seventeenth century mound resurfacing and reuse at the nearby Hills Gin Landing site (Bozeman 1982:112-123).

Perhaps most unexpected is the evidence for mound construction episodes dating from the second half of the thirteenth century. Given what was known from previous

investigations, and the temporal associations of surface-collected and unprovenienced artifacts, Fosters Landing had been fairly well established in the literature as a single mound site dating to the Moundville IV phase. Based on the present study, diagnostic pottery sherds and radiocarbon analyses indicate that mound construction at Fosters Landing dates from the early Moundville II phase (AD 1250-1300). Two layers of mound fill were laid down in succession during this time, with evidence for a small hearth and resurfacing of the summit on the first mound surface.

Although evidence for a direct association is absent, the wall-trench architecture (Feature 11) encountered in Block 3 may have been contemporaneous with the documented mound construction episodes at Fosters Landing. The size of this early Moundville II phase habitation appears to have been approximately 0.8 ha, based on the placement of Feature 5 (Block 1) and Feature 11 (Block 3) in relation to Feature 3 (Block 2), in addition to the concentration of shell-tempered pottery sherds recorded by the shovel testing. Although this may be partly accounted for by secondary deposits that resulted from the conflation of the upper layers of the mound, it is a more conservative estimate than proposed earlier for the size of the mound-related residential area (2.2 ha). Diagnostic pottery from Feature 5 in Block 1, while apparently disturbed by a tree fall, may have been associated with a late Moundville I or early Moundville II phase habitation potentially contemporaneous with the earliest documented mound construction episode, prior to AD 1285.

The thirteenth century was a time of unequaled political consolidation in the Black Warrior Valley, as represented in the monumental transformation of the Moundville site only 4 km (2.5 miles) to the south (Knight and Steponaitis 1998:14-17; Welch 1998:148-161). Based on the evidence for concurrent habitation, mound construction, and use at Fosters Landing, its relationship to these events must now be rethought. The Fosters Landing site may have been abandoned sometime during the late Moundville II and Moundville III phases (ca. AD 1300-1550), although a few sherds of Carthage Incised

(*variety Carthage*) pottery suggest that intermittent habitation might have continued during this time. Furthermore, destruction of the upper layers of the mound may have effectively concealed evidence for subsequent resurfacing and/or habitation of the mound summit.

The Fosters Landing site was reoccupied during the late sixteenth and early seventeenth centuries, by a much larger community that established a sizeable village on the terrace overlooking the Black Warrior River. In the interim, and certainly by AD 1400-1450, the Moundville polity had once again been transformed. The mixed nature of the deposits and relatively small size of the pottery sample from Fosters Landing do not permit a more precise assessment of the duration of various site occupations and domestic structures (cf. Hally 1983; Pauketat 1989). Nonetheless, evidence for early Moundville II phase (ca. AD 1250-1300) and Moundville IV phase (ca. AD 1550-1650) habitation should not be interpreted as indication of an uninterrupted site occupation spanning four centuries of Moundville's culture history, not to mention earlier components dating from the Middle and Late Gulf Formational periods (ca. 1000-100 BC) and Late Woodland West Jefferson phase (ca. AD 900-1050). The Mississippian community at Fosters Landing would have certainly been influenced by, and was probably immersed in, widespread changes that emanated from the ceremonial center, only 4 km down river (Knight 1998; Knight and Steponaitis 1998).

In light of the present study, it is now possible to reconsider the regional development and decline of Mississippian political culture in the Black Warrior Valley, taking into consideration what is known about outlying mound sites in Moundville's countryside. First, it will be useful to consider comparable evidence from other regions in the Mississippian Southeast, in order to place the development and decline of the Moundville polity in comparative context. The subject of these investigations succeeds regional decentralization in the Black Warrior Valley by at least one century, involving

correspondent political dynamics in two very different regions: the Southern Appalachians and Central Mississippi Valley.

To think of power as an all-embracing, unitary entelechy would merely reproduce the reified view of society and culture as a priori totalities. It will be more productive to think of power relationally, but it then follows that different relationships will shape power differently.

– E. Wolf (1999:66), *Envisioning Power: Ideologies of Dominance and Crisis.*

CHAPTER FIVE:

Comparative Analysis of Mississippian Political Culture

As argued in previous chapters, a comparative, regional analysis of the historical trajectories of Mississippian polities has emerged as a major direction of research (e.g., Anderson 1997, 1999; Knight 1997; Peebles 1987b; Steponaitis 1991). Describing historical-processual development in terms of regional variations offers a productive critique of generalizations regarding the "surface similarity" of Mississippian culture, adaptation (or maladaptation), and highly-integrated political and economic systems (Smith 1990:1). Mississippian political culture was negotiated and transformed through the actions of individuals and coalitions, reproducing and reinterpreting traditions on local and regional scales. A comparative study of Mississippian political culture will thus shed light on social relations of authority as an historical process (Chapter Three). Such research is facilitated through consideration of multiple lines of evidence, drawing upon archaeological, ethnographic, and historical sources of information.

While a comparative approach has long been pursued by anthropologists in order to arrive at broad, cross-cultural generalizations, it does not follow that such studies should culminate in the further definition of sociopolitical types, archaeological phases, or static culture areas (e.g., Phillips 1970; Phillips and Willey 1953; Turner 1986). Nor is it necessary for comparative studies to forward synchronic models of political economy, make further generalizations regarding the adaptive propensities of certain cultures, or demonstrate the veracity of cultural evolution. As Wolf (1999) has argued, a comparative, historical anthropology can address the ways in which power relations were framed in different societies, at different times. Such a comparative approach might be applied to distinct subgroups within "a culture" or regional polity, through the operational concept of political culture. A comparative study of Mississippian political culture can demonstrate the historical permutations of power relations among culturally

similar, yet geographically and temporally distinct polities (Rees 1997). The development and decline of Mississippian political culture was associated with variable social relations of authority, involving a range of ideological compliance, resistance, coercion, and factionalism.

The comparative approach pursued in this chapter recognizes that Mississippian political culture entailed both structural constraints and political-symbolic actions, especially in the negotiation of power relations. Political culture provides both a point of departure and counterpoint for a comparative analysis of different historical trajectories, "in the context of broader political and economic processes that transcend the boundaries of any single region" (Steponaitis 1991:227). At the same time, it is recognized that over-emphasis of political and economic structure implies an historical determinism that glosses over regional variations and may obfuscate further understanding of political culture as an historical process. Just as similar cultural practices were not simply a result of similar cultural adaptations, different historical trajectories were not exclusively the product of different structures or regional environments (cf. Earle 1997). It is this variation in social relations of authority that is ultimately implicated in understanding regional political development and decline in the late prehistoric and protohistoric Southeast.

In light of the recently proposed political history for the Black Warrior Valley (i.e., Knight and Steponaitis 1998; Chapter Four in this volume), the following comparative study of Mississippian political culture begins by considering archaeological and historical evidence for late prehistoric and protohistoric polities in the Southeast. The polities to be considered here were located in the Southern Appalachians and Central Mississippi Valley (Figure 1), represented by sites that have been the focus of both intermittent and large-scale investigations during the past century (e.g., Griffin 1952b; Kneberg 1952; Moore 1908, 1910; Lewis and Kneberg 1993 [1946]; Phillips 1970; Phillips et al. 1951; Webb 1938; Williams 1954). Clusters of contemporaneously occupied sites

and archaeological phases in these regions have been associated with discrete Mississippian polities, based on material culture, monumental architecture, settlement patterns, and ethnohistorical research (e.g., Hally 1994b, 1996b; Hally et al. 1990; Hudson et al. 1985; D. Morse 1989, 1990; P. Morse 1981, 1990; Morse and Morse 1983:271-301; Polhemus 1990a).

In contrast to Moundville and surrounding sites in the Black Warrior Valley, less is generally known regarding late prehistoric and protohistoric sites in the Southern Appalachians and Central Mississippi Valley. Previous studies of Moundville have been brought to bear in understanding polities in both of these regions, based in large degree on presumed structural similarities among hierarchical sociopolitical organizations (simple and complex chiefdoms) in the Mississippian Southeast (e.g., Steponaitis 1978). At the same time, ethnohistorical research has shed light on polities in the Southern Appalachians and Central Mississippi Valley, drawing upon a source of information not available for Moundville. Unlike the Black Warrior Valley, Mississippian societies in these regions achieved political consolidation during the fifteenth and early sixteenth centuries, only a few decades prior to the earliest direct contact with Europeans. It is consequently thought that Mississippian polities in the Southern Appalachians and Central Mississippi Valley had reached a pinnacle of organizational complexity during the mid-sixteenth century, when the de Soto expedition was launched into the interior Southeast (DePratter 1991; Hudson 1997; Morse 1993). A comparative analysis of Moundville and protohistoric Mississippian polities thus has the added advantage of drawing upon complimentary sources of information.

Notwithstanding, two formidable obstacles must first be addressed in extending a comparative analysis of Mississippian political culture to protohistory. The first involves the archaeological recognition of politically-integrated societies, a goal achieved by the 1970s for the Black Warrior Valley (e.g., Peebles 1978; Steponaitis 1978). In the Southern Appalachians, Hally (1993, 1999) and others have argued persuasively that

geographically and temporally distinct clusters of mound sites represent different Mississippian polities (Hally, and Langford 1988; Polhemus 1990; Sullivan 1989). However, the issue of politically-integrated societies in the Southern Appalachians also involves the more problematic issue of identifying the archaeological correlates of a more geographically expansive polity, referred to in documentary sources as the province of Coosa (Boyd and Schroedl 1987; Hally 1994b; Hally et al. 1990; Smith 2000).

In the Central Mississippi Valley, lack of systematic correlation between archaeological phases as derived from ceramic type frequencies and spatially-circumscribed clusters of sites has recently called into question the appropriateness and veracity of phases as normative, constructed units of analysis (Fox 1992, 1998:58; O'Brien 1994a; O'Brien and Fox 1994; O'Brien and Wood 1998:362-363; cf. Phillips 1970:523-524; Phillips and Willey 1953:621). This has in turn been used to cast doubt on previous accounts of politically-integrated societies in the region (O'Brien 1994b, 1995). Such criticism is necessarily dismissive of ethnohistorical research, ethnographic analogy, and comparative information from other regions of the Southeast, not to mention settlement pattern studies (Dye 1993; Hudson 1997; P. Morse 1981, 1993; Morse and Morse 1996b; White et al. 1971). Lack of statistical confirmation for phases as discrete spatial-temporal units derived from pottery type-variety frequencies does not rule out more compelling reasons for revising such conceptual units as a heuristic, in terms of regional political dynamics. Accordingly, it is necessary to consider multiple lines of evidence in order to explain *why* discrete clusters of sites in the Central Mississippi Valley may not produce ceramic type frequencies that neatly conform to archaeological phases (cf. Mainfort 1999).

The second obstacle to a comparative analysis of protohistoric Mississippian political culture is an even more contentious issue, as represented in the rejection of the direct historical approach and reluctance of some prehistorians to draw analogies between Mississippian societies and Native American communities documented in early

historical sources. As mentioned in Chapter Three, the introduction of Old World diseases by early European explorers produced virulent epidemics and a subsequent large-scale loss of population throughout the Southeast (Milner 1980; Ramenofsky 1987, 1990; Smith 1987, 1994). As Dunnell (1991) points out, the lethal consequences of disease epidemics among Native American communities has long been recognized (e.g. Crosby 1972, 1976; Phillips et al. 1951:457), and was a recurrent phenomenon of European exploration and colonization (Thornton 1987; Verano and Ubelaker, ed. 1992). At issue here are the "methodological impacts" of epidemics on Mississippian archaeology and historical anthropology (Dunnell 1991). Related to this are the magnitude and timing of the loss of life.

According to one view, the population decline and demographic upheavals wrought by European-introduced diseases were of such rapidity and scale that a wide-ranging cultural collapse ensued. Consequently, Native American communities and historic tribal confederacies of the seventeenth and eighteenth centuries are thought to represent the amalgamated remnants of earlier populations, with little or no cultural continuity with late prehistoric Mississippian polities (Dobyns 1983, 1991; Dunnell 1991; Ramenofsky 1987, 1990). In effect, European disease epidemics produced a cultural rift and loss of complexity that calls into question comparative studies of Mississippian prehistory and historically-documented groups. It should be noted that much of the argument for cultural discontinuity and collapse represents a reaction to earlier excesses regarding presumed long-term, cultural continuity (e.g., Dunnell 1991). Without taking either extreme position, there is ample evidence and a growing body of literature to demonstrate historical connections between Mississippian and historic Native American political culture (e.g., Galloway 1994, 1998; Hann 1994; Knight 1989b, 1994b, 1998). In order to begin to understand protohistoric variation and historical transition in the Mississippian Southeast, it is necessary to go beyond any monocausal link between epidemic disease and a pan-regional, cultural collapse (Kealhofer and Baker 1996).

In the second part of this chapter, archaeological and historical evidence are brought together in order to address the development and decline of Mississippian political culture. While the Black Warrior Valley once again provides the backdrop for this study, protohistoric polities in the Southern Appalachians and Central Mississippi Valley provide the necessary comparative framework. It is argued that Mississippian protohistory was linked to antecedent traditions and practices that changed according to preexisting, indigenous political culture and human agency, despite the methodological biases regarding cultural continuity, discontinuity, or collapse. Explaining regional political development and decline as an historical process requires that the concept of Mississippian culture itself be revised as a "culturally specific mode of change" (Sahlins 1994:380). Slicing through the juxtaposition of prehistory and history, Mississippian protohistory emerges as a multiethnic setting of indigenous political identities, social relations of authority, and decisive political-symbolic actions.

Protohistoric Variation and Transition

Regional variations in a Mississippian culture area were alluded to long ago by Holmes (1903:20-23) in his discussion of ceramic assemblages as "aboriginal pottery groups" (see Chapter Three). The Middle Mississippi Valley group proposed by Holmes was centered around the Mississippi River and its tributaries in the present-day mid-continental U.S., including part of the Appalachian Ridge and Valley province of eastern Tennessee (see Figure 7). The South Appalachian group stretched from eastern Alabama to North Carolina, lying in the southeastern portions of the Appalachian Piedmont and Coastal Plain provinces. In terms of variation in pottery traditions in the Mississippian Southeast, Holmes (1903:21) speculated on the possible differences between various subgroups:

> We soon observe that the pottery of one section differs from that of another in material, form, color, and decoration, and that the groups may be defined each probably representing a limited group of peoples, but more conveniently treated as the product of a more or less well-marked specialization area ... Many of these groups are so clearly differentiated as to make their separate study easy. Within the limits, however, of their areas are numerous subgroups which do not possess such strong individuality and such clear geographic definition as the larger ones, but which may well be studied separately and may in time be found to have an *ethnic importance* quite equal to that of the better-defined groups of ware (Holmes 1903:21, emphasis added).

Since Holmes' study, considerable advances have been made in discerning social distinctions between and *within* subgroups based on ceramic types, type varieties, and stylistic variation (e.g., Dickens 1976; Ford 1936, 1952, 1954; Phillips 1970; Phillips et al. 1951; Steponaitis 1983a). Holmes was concerned primarily with delineating large-scale differences between pottery groups, rather than stylistic distinctions that might reflect the demarcation of sociopolitical boundaries or ethnic distinctions. Nevertheless, Holmes (1903:21) warned against the inherent difficulties in assuming a one to one correlation between pottery styles or "groups" and a culture or society: "Separate groups of people may have practiced nearly identical arts, and portions of a single people may have practiced very different arts." Yet the potential relationships between pottery traditions and political or ethnic identities has remained largely implicit. The received view among both culture historians and systemic-processualists has been that pottery types as symbols represent or transmit information pertaining to a specific cultural reality (such as social identity or status), whether consciously or unintended (Robb 1998:332-334). Consequently, it is possible in some instances to refute the ceramic

evidence for discrete social and political boundaries based on inconsistent or overlapping pottery type frequencies among different assemblages (e.g., Fox 1992, 1998).

Methodological difficulties in the correlation of archaeological phases with politically-integrated societies have become no where more apparent than in the Central Mississippi Valley, where numerous late prehistoric and protohistoric Mississippian polities are thought to have resided within a relatively circumscribed expanse of floodplain (Morse and Morse 1983:237-301). In fact, archaeologists working in the Central Mississippi Valley have long recognized that phases derived from ceramic type varieties overlap both temporally and spatially (e.g., Phillips 1970:930-936). Although Phillips (1970:524) stated that the intuitive reasoning involved in constructing such phases was "sufficiently obvious," the concept of phases as discrete temporal-spatial units has recently drawn sharp criticism, specifically the Parkin, Nodena, Walls, and Campbell phases in northeast Arkansas and southeast Missouri (e.g., O'Brien 1994b:360-365, 1995; O'Brien and Fox 1994; O'Brien and Wood 1998:358–363). Based on a statistical reanalysis of pottery type frequencies from sites in the Central Mississippi Valley, Fox (1992, 1998:57-58) contends that phases in the region are "inconsistent sets of assemblages" and therefore entirely "anecdotal." O'Brien (1994b:360, 1995:35) has further implied that such statistically unsound units should not be misconstrued as representing Mississippian polities or historically-documented provinces. In short, archaeologists are once again reminded of Phillip's admonition that phases, like the pottery types on which they were based, may exhibit considerable internal variation and external similarity (O'Brien 1994b:360-365, 1995:28-29; O'Brien and Fox 1994:48-60; cf. Phillips et al., 1951:66).

However, the criticism of phases as "real things" begins to unravel when subjected to closer scrutiny (i.e., O'Brien and Wood 1998:362). Using statistical methods similar to those employed by Fox, Mainfort (1999) demonstrates that it is in fact possible to generate discrete phases based on frequencies of decorated and undecorated ceramic

types. Furthermore, the clusters of pottery type frequencies produced by Mainfort (1999:155-165) roughly correspond with previous spatial subdivisions of sites in the Central Mississippi Valley. Reliance upon predominantly surface-collected assemblages highlights the shortcomings of the database, while underscoring the need for more systematic excavations of sites in the region in order to further reevaluate pottery type frequencies and regional, stylistic variations (Mainfort 1999:165-167; O'Brien and Dunnell 1998). While it has long been recognized that the validity of particular phases as constructed units can easily be impugned, their potential application and usefulness as a conceptual tool or heuristic remains intact (Phillips and Willey 1953; Rouse 1955; Willey and Phillips 1958).

The materialist critique of phases as "real things" re-emphasizes the need to reevaluate phases as a heuristic, in concert with multiple lines of evidence. Following Holmes (1903:21), it also raises largely unexamined issues concerning assumed relationships between ceramic production, stylistic variation, and social or ethnic identities. Mainfort (1999:166-167) thus points out the discrepancy of obvious stylistic variability among culturally-affiliated Caddoan groups and relative stylistic uniformity among seemingly distinct polities in the Central Mississippi Valley. While inconsistencies and shortcomings in the database are no doubt partly to blame (Mainfort 1999:167), it also reflects unrealistic assumptions regarding the correlation of stylistic and technological variation (via type frequencies) with sociopolitical boundaries and ethnic identity. Variability in decorative style may not neatly conform to sociopolitical boundaries in settings where ethnic or hierarchical distinctions are also involved (Earle 1990; Pauketat and Emerson 1991; Sinopoli 1991:124-141). Conversely, style should not be assumed to passively encode ethnic identity in contexts where gender or political culture play an active role (Conkey 1990; Dietler and Herbich 1998:236-244; Hegmon 1992, 1998; Sackett 1990). The challenge then, is to examine such variability (or apparent lack thereof) as an historical process.

In which case, the existence of late prehistoric and protohistoric Mississippian polities in the Central Mississippi Valley and Southern Appalachians is a generally well-supported and useful inference based on studies of monumental architecture, material culture, settlement patterns, and historical sources (Biedma 1993; Dye 1993; Dye and Cox, ed. 1990; Elvas 1993; Hally 1994b; Hally and Langford 1988; Hudson 1985, 1993, 1997; D. Morse 1990; P. Morse 1981, 1990; Morse and Morse 1990b; Rangel 1993). The same research suggests that social inequalities and political consolidation resembled other, more archaeologically well-known Mississippian polities. It will therefore be counterproductive to expect that the spatial and temporal boundaries of regional polities must *necessarily* be supported through the statistical manipulation of pottery type frequencies (Mainfort 1999:165; O'Brien 1994b:353-365, 1995:35), with the implication that stylistic variation was simply a residual reflection of ethnic identities, sociopolitical systems, or boundaries (Dietler and Herbich 1998). As Hally and Langford (1988:107) note regarding site clusters in the Southern Appalachians, the concept of polity may be preferable here, in that it refers explicitly to a "politically organized community" yet does not convey many of the methodological and taxonomic assumptions of phase or chiefdom.

The critique of phases has pointed out the need for more systematic studies, in order to more accurately document stylistic and technological variation within and between assemblages (Fox 1998:58; Mainfort 1999:165-167). However, much of the critique has been motivated by a selectionist, evolutionary perspective, with calls for studies of material culture in order to demonstrate the "coincidence of homologous anatomical features," "pleiotropic relation" and "genealogical closeness" (e.g., O'Brien and Holland 1994:217; O'Brien and Fox 1994:25). Such a perspective concedes the methodological obstacles in the archaeological recognition of phases, yet essentially disregards a preponderance of archaeological, ethnographic, and historical sources concerning protohistory (cf., Brain 1985b; Brain et al. 1974; Hudson 1976, 1997; Hudson

and Tesser, ed. 1994; Young and Hoffman, ed. 1993). Since the 1970s, this has taken the form of neoevolutionary and systemic-processual reaction against historical perspectives and the direct historical approach (Leonard 1993; Chapter Two, this volume). More recently, it has been engaged by a more resolute obstacle; the assertion of protohistoric, cultural discontinuity.

As stated earlier, disease epidemics introduced by contact with Europeans generally wrought high mortality rates among Native American communities throughout eastern North America, in some instances reaching or exceeding a 90 percent population loss within a few generations (e.g., Cook 1973; Verano and Ubelaker, ed. 1992). The severity of "virgin soil" epidemics in the Americas as a whole has drawn increased attention since at least the 1930s and the literature on the subject has grown considerably during the past few decades (Crosby 1972, 1976; see reviews in Dobyns 1983; Ubelaker 1992). That such disease-induced mortality and population loss occurred is now well established, although regional variations in the timing and scale are still not well understood (Kealhofer and Baker 1996; Johnson and Lehmann 1996; Milner 1996b; Thornton et al. 1992). More recently, it has been the aftereffects on indigenous societies, the so-called "Columbian consequences" that have become the subject of debate, along with the implications for studies of culture contact and protohistory (e.g., Dobyns 1991; Dunnell 1991; Henige 1998; Ramenofsky 1990, 1991).

Two contrasting views of Native American protohistory in the eastern Woodlands have consequently been forwarded: (1) a general assumption of long-term cultural continuity, and (2) the likelihood of catastrophic, demographically-determined cultural discontinuity. The first position was articulated long ago, implicit in the works of such influential culture historians as Kroeber (1939) and Swanton (1922, 1931, 1946). Swanton (1922, 1985 [1939]) suggested that the antiquity of historical tribal confederacies extended to earliest contact with Europeans. He consequently referred to the Southern Appalachian groups encountered by the de Soto expedition as Creek (Swanton 1922:257,

1985 [1939]:176). Such views of long-term cultural continuity are not supported by archaeological or historical evidence (Galloway 1993:91-92; Knight 1994b:376-377). Major political and economic changes involving Creek towns are known to have taken place during the eighteenth and early nineteenth centuries, associated with European-American settlement and removal. Yet earlier social changes and migrations following European intrusion culminated in the emergence of the Creek Confederacy (Knight 1994b; Smith 1987). Arguments for long-term, cultural continuity are thus easily discounted and in fact, have few living proponents (cf. Dunnell 1991; Ramenofsky 1990).

The second view has become popular recently and has focused on the connection between a disease-induced demographic and cultural collapse, suggesting that historic tribes were fundamentally different from their Mississippian progenitors. Native American depopulation clearly effected political and economic interactions with Europeans, influencing subsequent Native American histories as well (e.g., Hoffman 1995; Rollings 1995). In fact, the connection between disease epidemics, population loss, and political decline is now commonly made by both anthropologists and historians: "Epidemics that struck upon initial contact with Europeans caused the collapse of most chiefdoms and the consolidation of surviving people into new political formations" (Usner 1998:34). As discussed earlier, such generalizations do not account for the variable historical trajectories of all Mississippian polities, or take into account the ways in which preexisting societies dealt with increased mortality, migration, or demographic upheaval.

Some proponents of cultural discontinuity have gone one step further and suggested that Native American depopulation was of such magnitude that it all but terminated indigenous cultures in eastern North America (i.e., Dunnell 1991). The methodological consequences for the study of protohistoric Mississippian polities are clear: prehistoric archaeology and historic sources are incommensurate and incompatible. Consequently, ethnographic analogy, the direct historical approach, and

historic sources are of little or no use in understanding prehistoric and even protohistoric Mississippian polities. Applying a principle from biological evolution, Dunnell (1991:570) argues that the "founder effect" severely reduced and even prevented the transmission of cultural variation to historic tribes. Dunnell (1991:572) goes so far as to state that rather than assuming continuity, cultural collapse and discontinuity *must be assumed* as the direct result of disease-induced depopulation.

There are several interrelated problems with this view of Native American prehistory, history, and culture. First, there is surprisingly little evidence to support an early sixteenth century pandemic sweeping throughout the entire Southeast and causing an abrupt cultural lapse. A strikingly similar argument, referred to as the "Mississippian decline" was considered earlier (Chapter Three). Difficulties in correlating sparse bioarchaeological evidence for pathological conditions in cemetery populations with European-introduced epidemics has redirected much research to settlement patterns, architectural change, and variation in material culture (e.g., Hally 1994b; Hoffman 1993b:265-267; Morse 1991; Ramenofsky 1987:23-24; Smith 1987). Perspectives on the effects of European pathogens in the protohistoric Southeast range from an early, widespread, and rapid disease-induced cultural collapse to more gradual and uneven regional depopulation (e.g., Baker and Kealhofer 1996; Blakely and Detweiler-Blakely 1989; Burnett and Murray 1993; Dobyns 1983, 1991; Milner 1980, 1992; Ramenofsky 1990; Ramenofsky and Galloway 1997; Smith 1994).

Second, the latter view of localized, protohistoric epidemics is more convincingly supported by archaeological evidence for regional abandonment, migrations, ethnogenesis, confederacy formation, and the persistence of transformed Native American traditions and cultural practices (e.g., Brain 1988; Brown 1985a; Ewen 1996; Galloway 1994, 1995; Kidder 1992b; Knight 1989b, 1994b). The attrition of indigenous populations may in some instances have increased between the period of earliest, indirect contacts and eighteenth-century European colonization. Many of the earliest

epidemics appear to have been regionally isolated or localized, depending upon the myriad factors influencing transmission (Thornton et al. 1992:193). Among the most relevant, yet least considered factors, are population density and demographic nucleation, interregional interaction, and border zones between polities. Each of these factors were in turn, related to regional political culture.

Third, the prospect of such inflexible discontinuity raises troubling questions concerning cultural production, identity, and authenticity. Ironically, while forwarded by proponents of evolutionary or neo-Darwinian archaeology, the argument for discontinuity itself relies on a normative, superorganic concept of culture, as consisting of traits and encompassing cultural systems transmitted from one generation to the next (e.g., Dunnell 1991:571-573; Ramenofsky 1987:174, 193). Such an approach has a long and varied history in anthropology, as reflected in the vast literature on acculturation (Barnett et al. 1954; Herskovits 1938; Redfield et al. 1936; Willey 1953; for a recent review, see Cusick 1998). As applied to arguments for discontinuity, depopulation not only resulted in a form of cultural "poverty," it facilitated the subsequent acculturation of Native Americans to a European way of life and material culture (Dunnell 1991; Ramenofsky 1995, 1998). Studies regarding deculturation and acculturation effectively minimize the cultural production of identity and capacity of indigenous (literally, pre-historic) peoples to escape from, or regenerate moribund traditions (Rubertone 2000). Such cultural "despondency" perspectives imply that "termination was inevitable" and preclude further investigation of the historical trajectories of Mississippian polities at the threshold of protohistory (Ramenofsky 1987:175; Sahlins 1999:iii).

As Knight (1994b:382) points out, it is unnecessary to assume either extreme point of view regarding "internal collapse versus European disruption." Assumptions regarding cultural continuity and discontinuity have both produced inaccurate generalizations regarding the historical trajectories of Mississippian polities. Kealhofer and Baker (1996:210) point out that studies equating demographic and cultural collapse

assume an implicit causal relationship, rather than advocating a more detailed and balanced understanding of protohistory: "Clearly, not only are multiple perspectives needed in this analysis, but we need to accumulate many more data sets to sample the complexity of indigenous reactions to European contact." Other studies have demonstrated that indigenous culture change is more problematic than linking depopulation with subsequent amalgamation and acculturation, particularly in those instances involving warfare, migration, missionization, accommodation, or resistance (Baker and Kealhofer 1996; e.g., Deagan 1985, 1990; Kidder 1993; Larsen et al. 1990; McEwen, ed. 1993; Milanich 1994; Milner 1996b).

Monocausal links between epidemic disease, depopulation, and cultural collapse disregard a host of indigenous political and economic factors, while casting little additional light on Mississippian protohistory (Larsen et al. 1990). It is argued below that protohistoric Mississippians not only interacted with Europeans and each other based on their own experiences and expectations, but that once confronted with an unprecedented crisis of disease and depopulation, they dealt with those problems as well based on historical circumstances. Furthermore, differential responses may have been linked to variation in regional political culture and not merely differences in the transmission of infectious diseases. First, it is necessary to consider the context and background for a comparative study of protohistoric Mississippian political culture.

Southern Appalachians

The Southern Appalachians do not comprise a uniform, homogenous region, but encompass considerable geographic variation. Referred to by Smith (1987:3) as "a portion of the interior Southeast," this includes parts of the Blue Ridge, Ridge and Valley, and Piedmont physiographic provinces (cf. Ferguson 1975). Sometimes referred to as the "interior highlands," elevation, vegetation, and floodplains vary considerably from present-day eastern Tennessee to northern Georgia (Bense 1994:16-17; Hally and

Langford 1988:2-12). Of particular note are the southwesterly flow of the Tennessee, Coosa and Chattahoochee river drainages west and south of the Blue Ridge, in contrast to the headwaters of the Ocmulgee, Oconee, and Savannah rivers to the east. The portion of the Southern Appalachians to be considered here falls primarily within the Ridge and Valley province of eastern Tennessee and Piedmont province of northwest Georgia (Figure 60).

Beginning with large scale excavations conducted during the 1930s and 1940s, the archaeology of the Southern Appalachians has contributed to an understanding of late prehistory and protohistory in the Southeast (e.g., Lewis and Kneberg 1946; Sullivan, ed. 1995; Webb 1938, 1939; Webb and DeJarnette 1942). Subsequent research has added considerably to the corpus of knowledge on Mississippian polities in the region, particularly in relation to the Native American provinces described in the de Soto narratives (e.g., Ferguson and Green 1984; Hally 1980, 1988; Hatch 1976; Polhemus 1987, 1990a; for regional reviews see Hally and Langford 1988, and Hally and Rudolf 1986). Based on various reconstructions of the route of the de Soto expedition through the Southeast, late prehistoric and protohistoric sites in eastern Tennessee, northwest Georgia, and northeast Alabama have been associated with the province of Coosa (Hally 1994b; Hally et al. 1990; Hudson 1994; Hudson et al. 1985; cf. Brain 1985a, 1985b; Swanton 1985 [1939]). Coosa has consequently been recognized as an enormous, yet somewhat enigmatic, protohistoric chiefdom (Figure 61). Part of the problem appears to stem from its association with several overlapping spatial-temporal units, one of the largest of which is Lamar.

Many late prehistoric sites in the Southern Appalachians have yielded the pottery types Lamar Incised and Lamar Complicated Stamped, particularly those located in northern Georgia. These sites have consequently been associated with the Lamar culture, a heterogeneous combination of various archaeological phases and clusters of sites that share similar culture traits dating from approximately AD 1350 to 1650

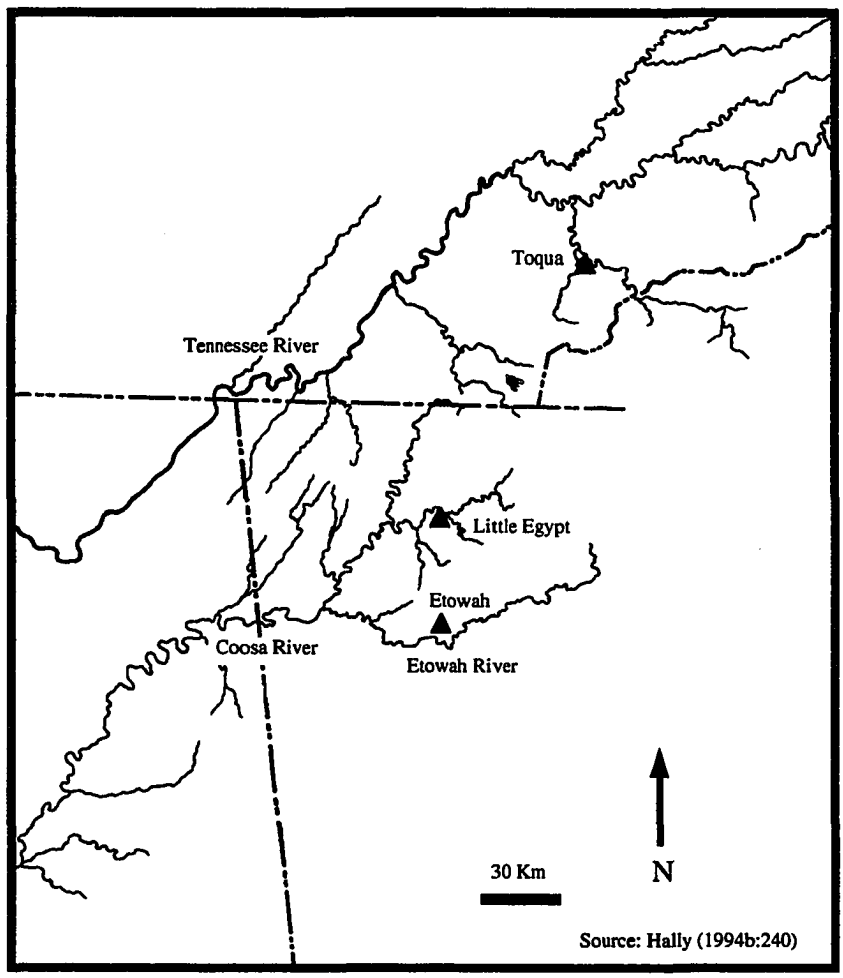


Figure 60. Selected Mississippian Mound Sites in the Southern Appalachians.

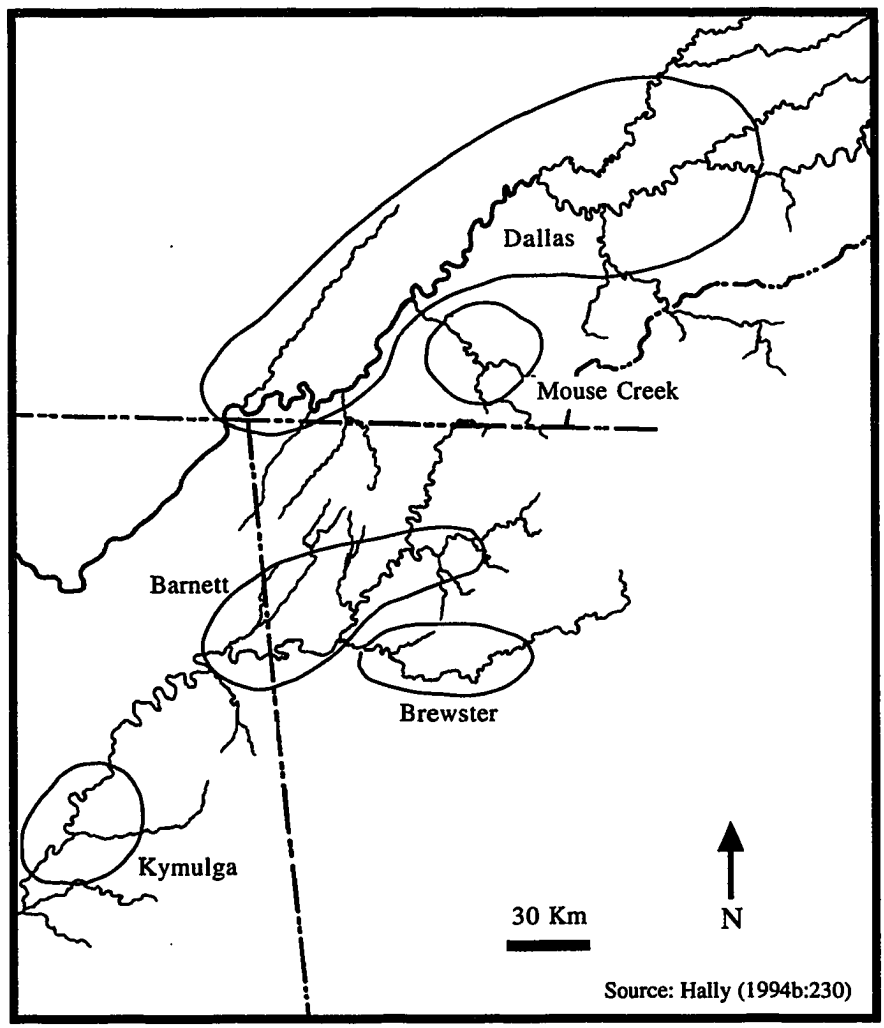


Figure 61. Late Prehistoric and Protohistoric Phases in the Southern Appalachians, Showing the Projected Location of the Coosa Province.

(Fairbanks 1952, 1958; Hally 1994a; Williams and Shapiro, ed. 1990:3-77). Reflecting earlier assumptions regarding a cultural expansion thought to have emanated from the Mississippi River Valley, Hally (1994a:144) points out that Lamar culture was previously described in terms of "the hybridization of intrusive Mississippian cultural elements and indigenous Southeastern cultural elements." Despite evidence for early Mississippian precursors to Lamar, the concept of a Mississippian expansion remained popular and found further support in the concept of site-unit intrusion (Caldwell 1958:64-65; Smith 1984:28-30; Willey 1966:293-294). The Etowah mound site in northwest Georgia was originally thought to have been contemporaneous with Lamar, or to exhibit a Lamar cultural affiliation. It is now known to predate Lamar by as much as a century (Fairbanks 1952:293, 297; Hally and Rudolf 1986:37-51; Williams and Shapiro, ed. 1990:32). King (1999:121) has recently suggested that the decline of the Etowah polity may have ultimately led to its being taken over by the paramount chiefdom of Coosa. Nonetheless, any potential historical connection between Etowah and Coosa is still uncertain.

As a ceramic complex, Lamar culture more broadly encompasses "over two dozen phases that span more than 400 years and an area covering most of Georgia and adjacent portions of Alabama, Florida, South Carolina, North Carolina, and Tennessee" (Hally 1994a:144). Representing neither a "politically integrated society" or cohesive ethnic group, Hally (1994a:173- 174) defines Lamar as "polythetic," an "arbitrary creation" of archaeologists that reflects a series of similar subsistence patterns and shared range of political processes. To some extent, Lamar is comparable to representations of a geographically expansive Moundville culture prior to the 1970s (e.g., DeJarnette 1952; Chapter Four of this volume). Among the many archaeological phases subsumed by the Lamar culture in northwest Georgia and northeast Alabama are the Kymulga, Barnett, and Brewster phases, associated with sites in the upper Coosa river drainage and its tributaries, the Coosawatee and Etowah (Figure 61). Hally (1994a:147) associates these

phases with the Middle Lamar period, dating from approximately AD 1450 to 1550 (Figure 62).

Lying on the northern periphery of the Lamar area in the Tennessee, Little Tennessee, and Hiwassee river valleys are late prehistoric and protohistoric sites associated with the Dallas and Mouse Creek phases. As in the case of Lamar culture, explanation of the origins of the Dallas and Mouse Creek phases was initially based on an assumed Mississippian cultural expansion. The Mississippian emergence in eastern Tennessee has been described in terms of diffusion, migration, invasion, and more recently, regional cultural development from Late Woodland precursors (Faulkner 1972, 1975; Kneberg 1952; Lewis and Kneberg 1993; Schroedl et al. 1990:189-192). Forerunners of the Dallas phase in east Tennessee have been identified at the Martin Farm site and sites associated with the Hiwassee Island phase, representing the indigenous development of emergent Mississippian subsistence patterns and political dynamics (Schroedl, ed. 1985; Schroedl et al. 1990). The Dallas phase dates from approximately AD 1300 to 1600, with Mouse Creek representing a late Mississippian, potentially Lamar-related component on the Hiwassee River (Polhemus 1990b:39-43, 1990c; Sullivan 1987, 1989; Williams and Shapiro, ed. 1990:31). The Dallas phase in the Tennessee River Valley is subdivided by Polhemus (1990b:40-41) into Early (AD 1300-1400), Middle (AD 1400-1525) and Late (AD 1525-1625) sub-phases, the latter considered by many to have been associated with the Coosa polity (Hally 1994b; Hally et al. 1990; Hudson et al. 1985; Smith 1987).

Comparison of Dallas phase sites and burials with the Moundville and Etowah polities suggests a minimally ranked society and relatively more dispersed settlement pattern, with less apparent evidence for the regional centralization of elite authority (Hatch 1975, 1976, 1987:14-15; cf. Larson 1971; Peebles and Kus 1977). While differences in ceramic assemblages between Lamar and the Dallas phase have been interpreted as demarcating cultural boundaries, Lamar and Dallas have increasingly been defined in

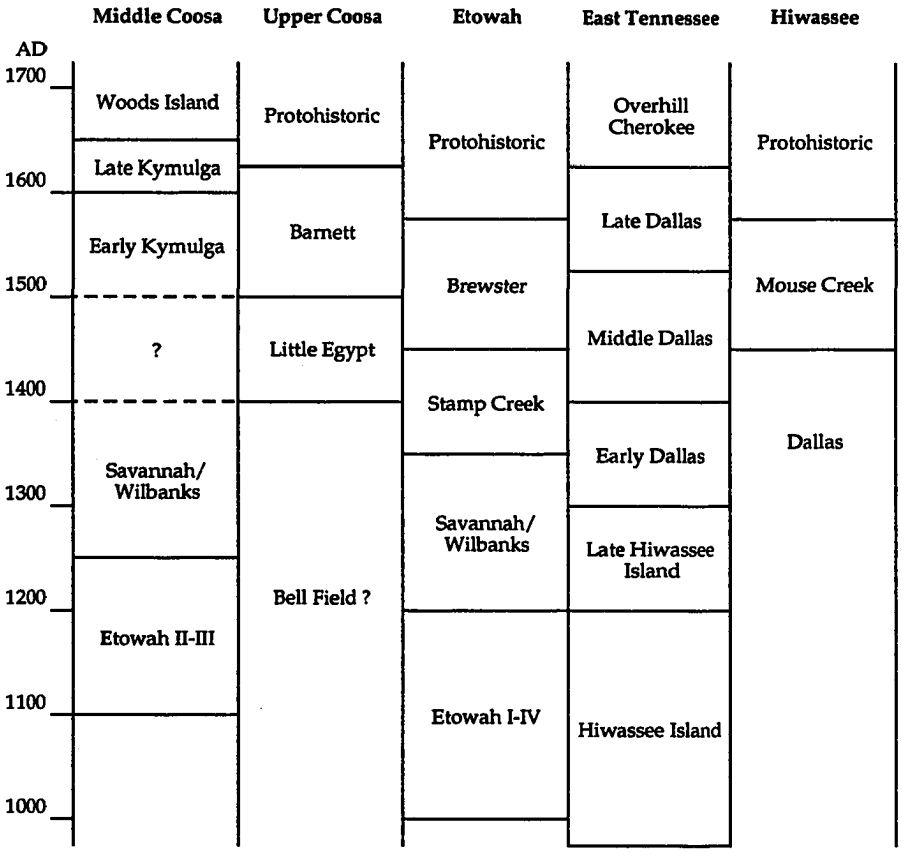


Figure 62. Late Prehistoric and Protohistoric Chronologies for the Southern Appalachians (from Williams and Shapiro 1990:30-32).

terms of interregional interaction and political dynamics (Hally 1994a:159-174; 1994b:228-230, 1996a; Polhemus 1990a; Williams and Shapiro 1996; Williams 1994). As Sullivan (1995:121-123) points out for the Dallas and Mouse Creek phases, social and political relationships are still unclear from an archaeological standpoint, yet should not be interpreted as a homogenous cultural development. Since there was likely to have been considerable variation between river drainages, a more concise understanding of the historical trajectories of polities in the Southern Appalachians will require the establishment of more precise regional chronologies, in concert with studies of settlement patterns and material culture.

Based on a nearest neighbor analysis of Middle Lamar sites, Hally (1994a:172) points out that "there is no necessary correspondence between ceramically defined phases and polities defined on the basis of mound and nonmound site distributions." This is a crucial distinction to be made in regards to recent criticism of the veracity and utility of archaeological phases as spatial and temporal units elsewhere in the Southeast (e.g., Fox 1998). Hally (1994b) and others have argued that late prehistoric and protohistoric site clusters in northwest Georgia and east Tennessee were regional polities nominally unified by the mid-sixteenth century as the paramount chiefdom of Coosa (Hally et al. 1990; Hudson et al. 1985; Smith 2000). Barnett phase sites are thought to have been the "core" of the Coosa polity, with Dallas, Kymulga, and Brewster phases representing subordinate polities or allies of the paramountcy (Hally 1994b; Hudson 1997:185-219; Langford and Smith 1990:106). Barnett phase sites and other site clusters associated with Coosa thus provide a potential source of comparative information for cross-examining historical sources and investigating Mississippian political culture.

Numerous mound and non-mound sites in the Southern Appalachians have been associated with protohistoric Mississippian polities, based in large part on the correlation of site clusters with politically-integrated societies (Hally 1994a:172, 1999). However, identification of a ceremonial center comparable to the site of Moundville has

proven more difficult. Based on comparative archaeological and ethnographic information, the Little Egypt site has been described as the political-administrative center of a regional Mississippian polity, as well as the possible residence of the paramount elite of Coosa (Hudson et al. 1985). This is supported in part by Hally's (1993, 1994a, 1994b, 1996) study of settlement patterns, mound construction, and nearest neighbor analysis of mound sites in northern Georgia.

Little Egypt is one of only two known late Mississippian mound sites on the Coosawattee River in present-day northwest Georgia (Hally 1996:97-110; Hally and Langford 1988:74). Little Egypt and the nearby Potts Tract were excavated by the University of Georgia between 1968 and 1972, as part of a salvage project for the U.S. Army Corps of Engineers (Hally 1970, 1978, 1980). Little Egypt had two or three mounds, the largest of which (Mound A) had been plowed down to a recorded height of approximately 9 feet (2.7 meters). The site itself probably covered little more than 12 acres (30 ha) and was located near the juncture of the Appalachian Piedmont and Ridge and Valley provinces, not far from the Blue Ridge (Hally 1980:1-8).

Association of Little Egypt with the sixteenth century province of Coosa is further based on the projected the route of the de Soto expedition, as well as the recovery of late prehistoric and protohistoric artifacts (Hally 1994b; Smith 1980, 1987). The site itself appears to have been occupied primarily between AD 1350 and 1550, associated by Hally (1994a:147-149) with the Little Egypt and Barnett phases (cf., Hally 1980:630-651; 1996:109). Little Egypt has thus been proposed as one likely location for the "main town" of Coosa (Hudson et al. 1985:726).

The Toqua site in present-day eastern Tennessee has also been associated with the Coosa polity. Large scale excavations at Toqua have contributed an even more extensive source of information for examining Mississippian political dynamics in the Southern Appalachians (Polhemus 1985, 1987, 1990). Toqua was located near the juncture of the Ridge and Valley and Blue Ridge physiographic provinces, covering approximately 27.5

acres (68 ha) on a terrace overlooking the Little Tennessee River (Chapman and Polhemus 1987:4-7). There were two platform mounds at the site, the larger of which (Mound A) had a recorded height of 24 feet (7.3 meters). Both mounds were excavated as part of the Tennessee Valley Authority (TVA) Tellico Project, along with approximately 4 acres (15,751 square meters) of the site (Chapman and Polhemus 1987; Polhemus 1987:58-159, 1210). The entire town was enclosed by a palisade line that was destroyed and rebuilt numerous times, paralleled by a steady decline in site size. While the habitation of Toqua began during from the Early Mississippian period and ended with the eighteenth-century Overhill Cherokee, the Dallas phase component represents the principal occupation (Polhemus 1987:1216-1217, 1231).

Polhemus (1990:136) argues that Toqua was the center of a Mississippian polity that "dominated the lower Little Tennessee valley from the middle of the thirteenth century to the early part of the sixteenth century." Studies of mortuary patterns and site structure indicate that the Dallas phase community had an ascribed form of social ranking and monumental architecture characteristic of ceremonial centers (Polhemus 1987:1209-1224; Scott and Polhemus 1987). By the mid-sixteenth century the residents of Toqua and other nearby Dallas phase sites had ostensibly become part of the province of Coosa, either as a subordinate polity or perhaps through a series of more tenuous political alliances. The Coosa polity does not appear to have lasted more than a century, an inference which is generally supported by the lack of archaeological evidence for the political and economic integration of such a large area (Hally 1994b). Evidence for platform mound construction in northern Georgia similarly suggests that late prehistoric and protohistoric polities did not last more than a century (Hally 1996:113).

Archaeological and ethnohistorical research have consequently emphasized three interrelated issues regarding Coosa: (1) identification of documented villages and mound sites visited by the de Soto expedition; (2) examination of the political and economic organization of a paramount chiefdom; and (3) investigation of the ways in

which a geographically immense, yet nominally-integrated polity in the Southern Appalachians was effected by, and dealt with, European intrusion (e.g., DePratter et al. 1985; Hally 1994b; Hally et al. 1990; Hudson 1988, 1997:185-219; Hudson et al. 1984; Hudson et al. 1985, 1987; Smith 1976, 1987; Smith and Hally 1992). Artifacts of sixteenth century Spanish origin provide convincing, albeit indirect evidence of the de Soto expedition (e.g., Hally 1988; Hudson et al. 1987; Smith 1987). Since such items might have continued to be traded, it is impractical to assume too close a relationship between the archaeological occurrence of trade goods and the provinces or towns mentioned in the de Soto narratives. As Smith (1987:25) points out, neither is the absence of such artifacts a concise indicator of pre-contact villages, since European trade goods may have become scarcer in the decades subsequent to the de Soto expedition.

When Coosa is contrasted with other, archaeologically well-known polities such as Moundville, certain distinctions are quickly observed. Of particular note is the virtual absence of a singular political-administrative center, clearly demarcated by a centrally-located site with prominent monumental architecture, residential segregation, and mortuary differentiation. Although Little Egypt is thought by many to be the central town of Coosa, in terms of earthen mounds, strategic location, and overall size it appears to have been no more impressive than other contemporaneous mound sites in northern Georgia or eastern Tennessee. In terms of the copper, ground stone, and engraved shell artifacts that are commonly thought to denote a high-ranking Mississippian elite, excavations at Little Egypt yielded assemblages no more impressive than that of the contemporaneous King site to the southwest (Hally 1988, 1994a:166; Hally et al. 1990:133). In contrast, investigations of Toqua have provided more convincing evidence for status-related social distinctions in terms of earthen mound construction, architecture, mortuary differentiation, and foodways (Polhemus 1987). Research on Coosa has in many respects been characteristic of the difficulties in examining protohistoric Mississippian polities, in that some of the most convincing

evidence has come from a combined ethnohistorical approach (Boyd and Schroedl 1987; Hally et al. 1990; Hudson et al. 1985; Hudson et al. 1987; cf. Little and Curren 1990:175-177).

The Coosa polity as discussed by Hally (1994b) and Hudson (1997:185-219) would have encompassed a much larger, geographically diverse area than the Black Warrior Valley, extending from present-day eastern Tennessee to east-central Alabama. The narratives of the de Soto expedition, while providing a biased and idiosyncratic account of Mississippian polities, imply that the authority of Coosa was comparable in many respects to other ethnographically-recorded polities (e.g., Biedma 1993:229-240; Elvas 1993:74-120; Rangel 1993:284-304). The paramount chief of Coosa displayed the elite regalia and symbolism of high political office. When he went to greet de Soto, the chief ("cacique") was transported on a litter and accompanied by an elite entourage:

> The cacique came out to welcome him [de Soto] two crossbow flights from the town in a carrying chair borne on the shoulders of his principal men, seated on a cushion, and covered with a robe of martin skins of the form and size of a woman's shawl. He wore a crown of feathers on his head; and around him were many Indians playing and singing (Elvas 1993:92).

The de Soto narratives further suggest that the authority of Coosa extended over towns as distant as Chiaha in the upper Tennessee River drainage of the Appalachian Ridge and Valley province to Talisi in the Coosa River Valley (Elvas 1993:85-94; Hudson 1997:203-216). At a distance of approximately 300 km, this is considerably larger than the average size proposed for other Mississippian polities in the Southern Appalachians or other regions in the Southeast (Hally 1993, 1994b). It is also nearly five times larger than the 40 to 55 km of river valley currently proposed for the territorial size of the

Moundville polity (Welch 1998:134; Chapter Four of this Volume). While the movement of people and goods might have been greatly facilitated by river transport, travel across river drainages in the Southern Appalachians would have certainly been more difficult. By the mid-sixteenth century, Coosa would have included sites associated with three distinct if not entirely unrelated phases and cultures: Dallas, Mouse Creek, and Lamar (Hally 1994b:228-231). The political integration of such an enormous region is difficult to assess from an archaeological standpoint, to the point that Coosa has been described as "essentially invisible" (Hally et al. 1990:133).

Based on their interpretation of historic sources and comparisons with ethnographic evidence for regional polities in Hawaii, Smith and Hally (1992:106-7) suggest that Mississippian chiefs in the Southern Appalachians may have been peripatetic. By means of periodic, seasonal rounds, a chiefly entourage might have traveled throughout the region to establish or maintain social relations of authority with outlying villages and allied or subordinate chiefdoms, bestowing gifts, collecting tribute, and accruing prestige and renown (cf. Earle 1978, 1987b; Sahlins 1981). The above description of the paramount chief of Coosa going out to meet the de Soto expedition may serve as a pertinent illustration in this respect. If the polity of Coosa was comprised of partially autonomous regional polities, then it might have been consolidated largely through impermanent political alliances and compliance ideologies, rather than coercion (cf. Hally 1994b). Site clusters other than Little Egypt and Barnett phase sites may have been associated with "largely independent chiefdoms that were unified, perhaps only briefly, by Coosa" (Hally et al. 1990:122). As occasions for arbitration, alliance formation, and coalition building, ritual feasting would have been an important political medium for the negotiation of alliances in the protohistoric Southern Appalachians (cf. Dye 1995:299-304).

The de Soto narratives also imply that provinces in the Southern Appalachians were separated by less densely inhabited tracts or border zones, areas in which the

expedition frequently lost sight of trails. Elvas (1993:85) thus recounts that Chiaha was a "twelve days' journey" from the province of Cofitachequi. Warfare in the Southern Appalachians and Coastal Plain is thought to have involved long-distance raids through these border zones, directed against the outlying settlements of neighboring polities (Dye 1995; Steinen 1992). This is generally supported by archaeological evidence for contemporaneous clusters of sites and the fortification of outlying sites in the province of Coosa (Blakely, ed. 1988, in Garrett 1988:46n; Biedma 1993:232; Elvas 1993:94; Hally 1980:648, 1988:6-10, 1994b:246-48; Hudson et al. 1985:733).

Explanations of the decline of Coosa emphasize the relatively short time span that the polity appears to have existed, from perhaps AD 1450 or 1500, until the second half of the sixteenth century (Hally 1994b; Hudson 1997:215; Hudson et al. 1987:850). Smith (1987:89, 2000:97) has argued that the Coosa polity followed a pattern of epidemic disease, rapid depopulation, political collapse, and subsequent "loss of culture" endemic to the Mississippian Southeast. Based on the discontinuation of craft goods manufacture and display of social status in mortuary practices, cessation of mound construction, and disappearance of settlement hierarchy, Smith (1987:86-112) argues that Coosa and its component chiefdoms in the Southern Appalachians had fragmented by AD 1600 into isolated villages and less centralized, local-level societies (see also Smith 1994, 2000). During the ensuing century and a half, the descendants of Southern Appalachian peoples are thought to have responded to external pressures in the form of European trade goods and population movements, subsequently forming the historically-documented Creek Confederacy (cf. Knight 1994b; Waslekov 1993). The disintegration and "deculturation" of Mississippian chiefdoms in the Southern Appalachians is thus thought to have occurred at least a century earlier than sustained European contact (Smith 1987:113-142).

Central Mississippi Valley

In contrast to the Southern Appalachians, the Central Mississippi Valley more closely resembles what has been referred to as a uniform or formal region, bounded on the west by the Ozark Plateau and on the east by the loess bluffs of the adjacent uplands (Crumley 1979:143). The Central Mississippi Valley as defined here refers to that portion of the floodplain and surrounding valley of the Mississippi River from its confluence with the Ohio River on the north to the Arkansas River on the south, what Phillips, Ford, and Griffin (1951:10-20) more precisely referred to as the northern and central divisions of the lower Mississippi alluvial valley (Fisk 1944).

The Central Mississippi Valley is somewhat arbitrarily separated from the Yazoo Basin to the south by the southwesterly turn of the Mississippi River south of present-day Memphis, Tennessee. The Central Mississippi Valley includes low lying areas drained by the White and St. Francis rivers and their tributaries, what are commonly referred to as the Western and Eastern lowlands (McNutt 1996:187; Morse and Morse 1983:1-15). The functional region of interest here is comprised primarily of the Eastern Lowlands of present-day northeast Arkansas and southeast Missouri, an area associated with the Parkin and Nodena phases (Figure 63; D. Morse 1989; 1990; P. Morse 1981, 1990; Morse and Morse 1983:284-295; Phillips 1970:930-936; Williams 1954). It includes the braided stream surfaces, alluvial deposits, tributary drainages, backwater sloughs, and active channels of the alluvial valley, as well as a narrow strip of floodplain and tributaries east of the river, between the Mississippi River and Eastern Hills (Mainfort 1996; Mainfort and Moore 1998; Saucier 1974:15-23; 1994:22-34; Smith 1996). Although technically part of the northern and central divisions of the Lower Mississippi Valley, following recent usage this region is referred to here as the Central Mississippi Valley (Phillips et al. 1951:10-20; Saucier 1974).

The Parkin and Nodena phases were outlined by Phillips (1970:930-936) as culture-historical units based on the frequencies of different pottery types, particularly sherds of

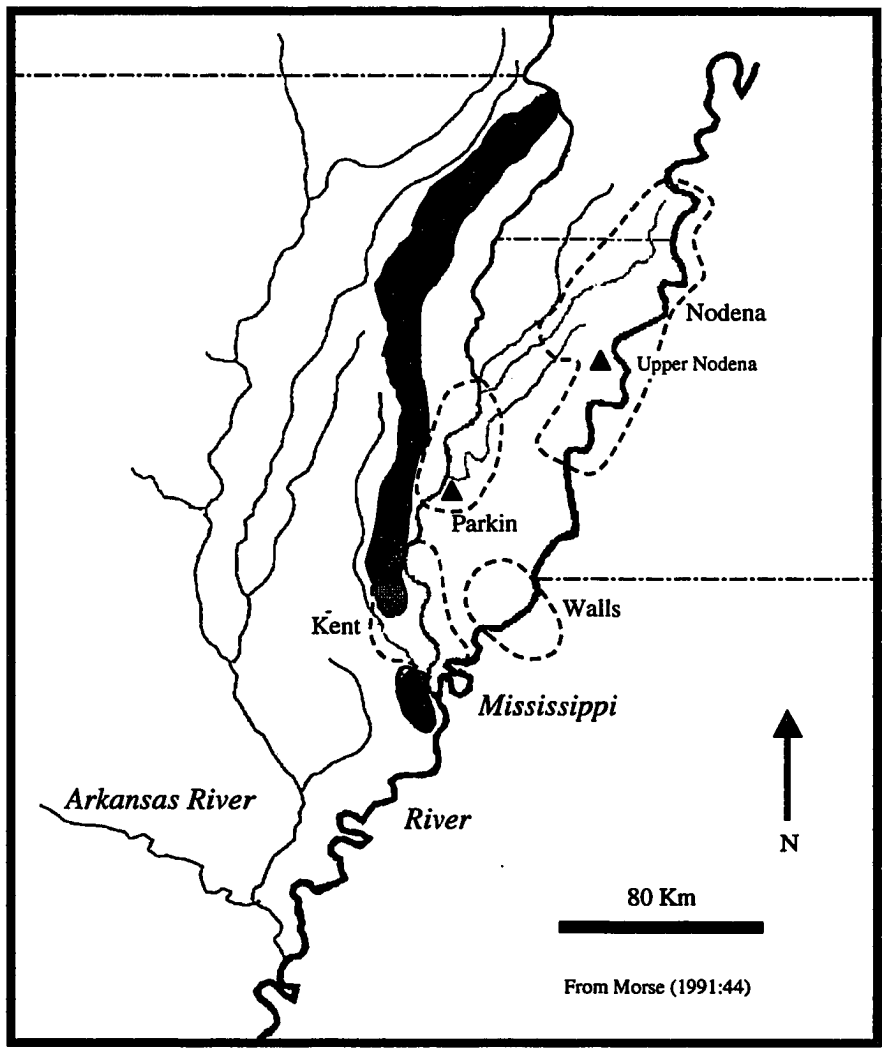


Figure 63. Late Prehistoric and Protohistoric Phases in the Central Mississippi Valley, Showing the Locations of the Parkin and Upper Nodena Sites.

Mississippi Plain (*variety Neeley's Ferry*, or Neeley's Ferry Plain) and Bell Plain. Referred to earlier as the St. Francis and Memphis sub-areas or Parkin and Walls-Pecan Point foci, the subdivision of site clusters according to phases derived from ceramic assemblages in this portion of the Central Mississippi Valley has recently reemerged as a topic of considerable debate (see above discussion; Griffin 1952b:231-236; Mainfort 1999; D. Morse 1990:77-83; O'Brien 1995, 1994b:360-365; Phillips 1970:930; Phillips et al. 1951:425-429; Williams 1954, 1980). Based on his investigations of sites in the region, Moore (1910:260) recognized early on the distinctiveness of whole ceramic vessels from sites along the St. Francis River (see also Moore 1908, 1911). Ford distinguished the St. Francis and Memphis sub-areas based on a comparative analysis of site plans, although not without overlap between sites in different sub-areas. He characterized the St. Francis-type site as a rectangular, fortified village with platform mounds. Ford also noted that the St. Francis and Memphis sub-areas appeared to be the "two most densely populated regions" during the Late Mississippi-protohistoric transition (in Phillips et al. 1951:343-344).

Based on research conducted by Williams (1954), Walls-Pecan Point was further subdivided into the Walls and Nodena phases (Phillips 1970:933-934). Williams (1980) subsequently proposed the Armorel phase (ca. AD 1500-1700), incorporating late Nodena and Walls phase sites as a protohistoric complex (see also Williams 1990). The Armorel phase has not been as widely applied, however, since it was essentially coeval and coterminous with the more commonly recognized Nodena and Walls phases (ca. AD 1400-1650; Figure 64). Such inconsistent terminology for spatially and temporally-overlapping archaeological constructs has been subjected to additional criticisms by those who regard phases in the Central Mississippi Valley as contrived and analytically useless (e.g., O'Brien and Fox 1994:57; O'Brien and Wood 1998:333, 362).

As discussed above, archaeologists working in the Central Mississippi Valley, as elsewhere in the Southeast, have not been confined to studies of ceramic type

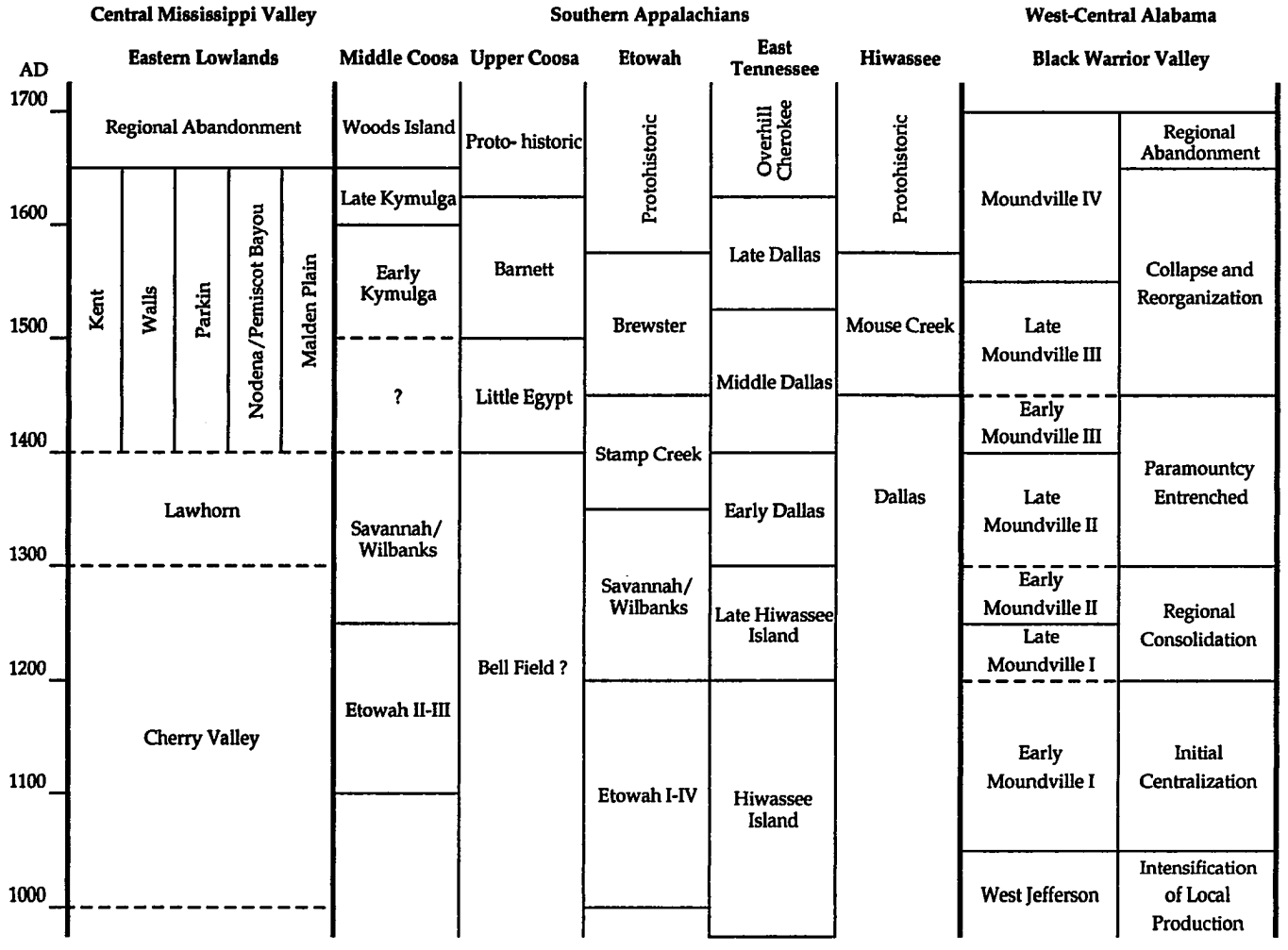


Figure 64. Late Prehistoric and Protohistoric Chronologies for Three Regions.

frequencies. The Nodena phase as described by Dan Morse (1990) includes three distinct clusters of sites located primarily along the Mississippi River north of present-day Memphis (see also Morse 1989). Based on the evidence for as many as 61 contemporaneously occupied sites, the Wapanocca Lake, Wilson-Joiner, and Pemiscot Bayou clusters encompass what was probably one of the most intensively occupied areas in the late prehistoric and protohistoric Eastern Lowlands, if not the entire Central Mississippi Valley (D. Morse 1990, 1993; Phillips et al. 1951:343-344). Morse and Morse (1983:280-284) associate the appearance of these nucleated communities after AD 1400 with the abandonment of sites in the Cairo Lowland of southeast Missouri (cf. Lafferty and Price 1996; Price and Price 1990; Williams 1990). Located in the St. Francis River drainage to the west, the Parkin phase is estimated to have been one-third the size of the Nodena phase, yet is characterized by an even more well-defined cluster of sites (D. Morse 1990:80-81; P. Morse 1981, 1990:121).

The subsequent large-scale abandonment of Parkin and Nodena phase sites has been associated with catastrophic mortality following the introduction of disease epidemics by the de Soto expedition. By the time French explorers reached the Central Mississippi Valley during the late seventeenth century, most of the densely populated sites in the region had been largely abandoned (Morse and Morse 1983:314-315; Phillips et al. 1951:392-421). Rapid depopulation, political disintegration, and cultural collapse ostensibly followed a similar pattern outlined for the Southern Appalachians (Ramenofsky 1987:71; Smith 1987:145). Nonetheless, the timing and severity of such epidemics, indigenous responses, and subsequent political and economic changes remain poorly understood. Unlike the Southern Appalachians and formation of the Creek Confederacy, there has been considerable disagreement concerning protohistoric population movements, political reorganization, and early historic ethnic identities in the Central Mississippi Valley (e.g., Ford 1961; Hoffman 1990, 1991, 1993a, 1993b, 1994; Morse 1991; Phillips et al. 1951:392-421).

Although Nodena and Parkin phase sites and material culture have drawn intense interest among antiquarians, collectors, and archaeologists for well over a century, there has generally been less systematic investigation of mound and non-mound sites than in the regions discussed above (Morse and Morse 1983:17-33). Until fairly recently, fewer large-scale excavations have been reported (but see Klinger 1974; Mainfort and Moore 1998; O'Brien and Holland 1994). Of particular importance is Upper Nodena, one of the largest known sites in the region (approximately 6.2 ha), and the type site for the Nodena phase (D. Morse 1989, 1990:80).

Upper Nodena is located near a relict channel of the Mississippi River in Mississippi County, Arkansas (Figure 63). The Alabama Museum of Natural History (AMNH) and University of Arkansas Museum (UAM) conducted excavations at the site in 1932, focusing on the excavation of burials and recovery of artifacts (Morse 1989). A fraction of the approximately 1,755 burials excavated at Upper Nodena have contributed to an understanding of health and disease among the Mississippian residents (D. Morse 1990:75; Powell 1989:65, 1990:99). In 1973, a combined Arkansas State University and University of Arkansas field school returned to the Upper Nodena site and opened three excavation blocks in a previously unexcavated portion of the site (Morse 1973a, 1989). More systematic analyses of Upper Nodena artifact assemblages and faunal remains have only recently begun to appear (e.g, Carroll 1997; Mainfort and Carroll 1996; Rees 2001).

Much of what is presently known about Upper Nodena is based loosely on the AMNH-UAM fieldwork (D. Morse 1989, 1990:70). Upper Nodena was a multiple mound site, with as many as five mounds organized around a central plaza and enclosed by a palisade wall (Morse and Morse 1983:287; Morse 1989:72-73). A fortified, tightly nucleated village plan is supported by aerial photography and the dense village midden encountered during the 1973 field school. This corresponds with early historic descriptions of palisaded towns in the region (Biedma 1993:238-240; Elvas 1993:113-120;

Rangel 1993:300-304). Habitation at Upper Nodena appears to date from ca. AD 1400 until just after the de Soto expedition (D. Morse 1990:76-77). This is indicated by late Mississippian ceramic assemblages, decorative ceramic styles, the recovery of Spanish trade goods in later contexts at other sites, and the scarcity of end scrapers (Brain 1985; Dye 1998; Mainfort 1996; Morse and Morse 1983:287, 1996b:133; P. Morse 1981; Phillips 1970:933-936; Price and Price 1990). The nearby Middle Nodena site appears to have been contemporaneous or slightly later (D. Morse 1990:77).

In contrast, the type site for the Parkin phase has been preserved as a State Park and has more recently become the subject of a long-term study (Mitchem 1996). Previous investigations by Phyllis Morse (1981, 1990:123) indicate that Parkin was by far the largest site among at least 20 other sites associated with the Parkin phase. It covered approximately 17.1 acres (6.9 ha), with at least seven earthen mounds arranged near a central plaza (P. Morse 1990:118). The largest mound, recorded at approximately 6.5 m (21.3 ft) high, overlooks the St. Francis River to the west and was likely to have served as the sub-structural platform for an elite residence or temple. The other three sides of the site were enclosed by a palisade and ditch (Morse and Morse 1983:291).

Building on Ford's analysis of the St. Francis-type site (Phillips et al. 1951:343-344), Phyllis Morse (1981, 1990) mapped the distribution of Parkin phase sites along the St. Francis and Tyronza rivers, arguing that these sites represented the province of Casqui, as mentioned in the narratives of the de Soto expedition. She further suggested that this nucleated, fortified settlement pattern was a reflection of warfare in the region (P. Morse 1990:132). Combined with the settlement pattern study, archaeological evidence in the form of Spanish artifacts and radiocarbon analysis of a post on the mound summit at Parkin generally support ethnohistorical research that suggests it was the principal town of Casqui (Hudson 1997:274-303; Mitchem 1996; P. Morse 1993). Despite lingering disagreement over the precise route of the de Soto expedition through the present-day southeastern U.S., there is mounting evidence that the site of Parkin and nearby sites in

the St. Francis drainage were in fact associated with the province of Casqui (Brain 1985a, 1985b; Brain et al. 1974:243-264; Hudson 1985, 1994:91-92; Mitchem 1993; P. Morse 1990, 1993; Morse and Morse 1983:305-315, 1990b; Phillips et al. 1951:347-421; Swanton 1985 [1939]; Weinstein 1985). As Phyllis Morse (1993) pointed out, this in turn implicates Nodena phase sites as representing the province of Pacaha (cf. Morse and Morse 1990b). Since the de Soto expedition went to the main town of Casqui before going on to Pacaha, the identification of Pacaha depends in part on its proximity to sites associated with Casqui.

Whether or not certain sites will ever be conclusively identified as specific towns visited by the de Soto expedition, the narratives provide an unparalleled source of information on protohistoric Mississippian polities in the Central Mississippi Valley. As Galloway (1991:467, 1997b) has argued, the resultant historical texts are interdependent, often metaphorical, and biased narratives, yet can be used to ascertain "genuine observations." Given the relative paucity of comparative archaeological information from sites in the region, the narratives of the de Soto expedition provide an indispensable point of departure for examining Mississippian political culture. Archaeological and ethnographic sources can in turn be cross-examined in developing a more detailed, comparative analysis.

The de Soto narratives suggest that protohistoric polities in the Central Mississippi Valley were in fact engaged in warfare, political alliances and conflicts, and attempts to subjugate nearby communities (Dye 1990, 1995; Elvas 1993:111-124; Rangel 1993:299-304). In May of 1541, the de Soto expedition reached Quizquiz, a province described as subordinate to the province of Pacaha (Biedma 1993:238; Elvas 1993:111; Rangel 1993:299-300). In a village near the Mississippi River the expedition encountered a large, well organized flotilla of canoes commanded by the chief (cacique) of Aquixo from across the river:

> The next day the cacique came with two hundred canoes full of Indians with their bows and arrows, painted with red ochre and having great plumes of white and many colored feathers on either side and holding shields in their hands with which they covered the paddlers, while the warriors were standing from prow to stern with their bows and arrows in their hands. The canoe in which the cacique came had an awning spread in the stern and he [the cacique] was seated under the canopy (Elvas 1993:112).

Rangel (1993:300) suggests that the canoes were under the command of Pacaha and that a very large number of natives (seven thousand) had gathered on the other side of the river. After this initial show of force, the war canoes retreated and the opposite bank was eventually left unguarded. After crossing the Mississippi River, the de Soto expedition passed through several towns in the province of Aquixo already abandoned by the residents (Elvas 1993:112-114). On his way to Pacaha, de Soto learned that the nearby province of Casqui had for some time been an enemy of Pacaha. With their numbers seriously diminished after years of fighting their way through the interior Southeast, the Spaniards went to the main town of Casqui and found the residents eager to enter into an alliance against the neighboring province of Pacaha (Biedma 1993:239-240; Elvas 1993:114-120; Rangel 1993:301-303).

The principal town of Pacaha was described as a large, palisaded town, with a water-filled ditch that encircled a stockade. There were reported to be fish in a canal specifically for the use of the chief of Pacaha. Based on preliminary site reconnaissance, Dan Morse (1990:78-80) has suggested the Bradley site as one likely location for the principal town of Pacaha (cf. Morse and Morse 1983:311, 1990b:202, 1996b:131-132). After the main town of Pacaha had been raided by a combined Spaniard-Casquin force, the Casquins fled in masse with the clothing and goods they had plundered, ostensibly

defying the military command of the Spaniards (Elvas 1993:117-119). In a notable turn of events, de Soto summoned the chief of Pacaha to enter into an alliance in retaliation against Casqui. The chiefly entourage of Pacaha, recently vanquished, arrived bearing gifts:

> Next day came the cacique accompanied by many Indians bringing a gift of many fish, skins, and blankets. He made a talk which all were glad to hear and concluded by saying that even though his lordship [de Soto] had wrought damage to his land and vassals without him having deserved it, nevertheless he would not cease to be his, and would always be at his service (Elvas 1993:119).

As Dye (1990, 1994, 1995) has argued, the de Soto narratives provide some indication of the political dynamics among Mississippian societies in the mid-sixteenth century Southeast. The ability of the de Soto expedition to enter into mutually antagonistic alliances in the Central Mississippi Valley, first with Casqui and then Pacaha, contrasts with the Southern Appalachians and interior Southeast, where seemingly autonomous and more distantly removed communities were ostensibly united in resistance to the violence and pillaging of the conquistadors. While warfare thus appears to have been a recurrent phenomenon in the Central Mississippi Valley, polities in the Southern Appalachians are described as having achieved some measure of political alliance or tributary relations, referred to as the province of Coosa (cf. Dickson 1981; Gibson 1974; Steinen 1992). The border or buffer zones between polities described for the interior Southeast appear to have been relatively narrower in the Central Mississippi Valley, where more efficient means of water transport would have made it possible to deliver a larger volume of goods over long distances, or rapidly field large numbers of warriors by canoe. The above description of the canoe flotilla contrasts with

the provinces of Coosa and Cofitachequi, in which chiefs were transported on litters and accompanied by a retinue of attendants.

The historic sources suggest that a Mississippian elite were accorded preferential treatment and prerogatives indicative of the authority and status attested to in archaeological correlates of regional polities (DePratter 1991; Peebles and Kus 1977; see Chapter Three). However, constituent social relations of authority are likely to have varied in different regions (Rees 1997). While certain details of the historical texts may or may not provide accurate representations of specific events, the narratives of the de Soto expedition can be utilized to examine regional similarities and differences in the Mississippian Southeast, in terms of political culture or "cultural themes" of political-symbolic action (Sabo 1993:206-208). A more detailed understanding of regional political dynamics will in turn facilitate a reexamination of theories concerning widespread disease epidemics, rapid depopulation, cultural collapse, and discontinuity. Contrasted with archaeological, ethnographic, and subsequent historic sources, it becomes possible to piece together a comparative analysis of the historical trajectories of Mississippian political culture.

Consolidation and Decentralization

As outlined in Chapter Three, a comparative, regional analysis of the archaeological correlates of political consolidation, centralization, and decentralization can shed light on the development and decline of Mississippian political culture as an historical process. The practices to be considered here fall under the general headings of: (1) feasting and food provisioning (e.g., Blitz 1993b; Jackson and Scott 1995b; Welch and Scarry 1995); (2) the crafting of certain forms of ceramic vessels as abstruse political symbolism (e.g., Costin 1998; Pauketat 1997b; Pauketat and Emerson 1991); and (3) the construction and alteration of monumental landscapes (e.g., Dalan 1997; Kidder 1998; Knight 1998); in the context of (4) warfare, alliances, and coercive violence (e.g., Dye

1994; Helms 1994; Redmond 1994a). As discussed earlier, the pursuit of symbolic capital through these and other practices was often simultaneous and invariably intertwined, as in the example of ritual feasts in which foods and craft goods may have been incorporated into peace negotiations, the securing of alliances, or coercive relations (Dye 1995:304-307; Redmond 1998b:86).

Feasting, food provisioning, and craft production represent a variable range of symbolic capital pertaining to social relations of authority, rather than independent or preexistent reservoirs of power (cf. Earle 1997). These practices entered into alliances and coalition formation in the context of exchange (Brumfiel 1994:10). Kin relations were the central, structuring principle in coalition formation, through which political contests and competition could be carried out (Bourdieu 1990:166-168; Knight 1990; Swartz 1968a). Such relationships carried the practical capacity to "institute frontiers and constitute groups" (Bourdieu 1990:170). The appropriation and circumvention of kin relations through coalition building and alliance formation characterized political consolidation and regional centralization in the Mississippian Southeast. Consequently, a comparative analysis of coalition building and alliance formation has the potential to shed light on regional variations in social relations of authority, as well as the historical trajectories of political development and decline.

Coalition formation implies a corresponding enlargement of factions and factional competition in regional polities (Caplow 1968). Brumfiel (1994:10) thus refers to "the construction of coalitions of support and participation in political contests" as "complementary processes." Much of the recent literature on Mississippian polities, and regional polities in the Americas, has emphasized the second half of this relationship (e.g., Anderson 1994a; Fox 1994; Pohl and Pohl 1994). As a form of political competition, factionalism ties in to earlier studies regarding the underlying influence of warfare, violent conflicts, and coercion in non-state, sedentary societies (Bailey 1969; Carneiro 1978, 1981, 1990). Yet it was coalition formation and its successful extension through

alliances, rather than factional competition, that formed the nexus of political consolidation. These practices were ultimately tied to aggrandizement and competition for prestige through the acquisition and distribution of foods and resources (Clark and Blake 1994:28). The archaeological correlates of feasting, food provisioning, and craft goods thus facilitate a comparative study of political consolidation.

The decentralizing tendencies of factionalism may have undermined or acted as a counterbalance to political consolidation. Similarly, warfare and coercive violence might have presented a barrier to further political consolidation by rendering coalition formation and alliances between certain groups unfeasible or ineffectual. Such groups included not only communities or factions within a polity, but distinct yet interacting political formations (cf. Anderson 1994a). In such instances, political consolidation may have proceeded only through a momentous restructuring of existing social relations, as exemplified in the subordination associated with the intensification of warfare and extraordinary, symbolic acts of coercive violence (Carneiro 1998:23; e.g., Fowler 1991). While the archaeological correlates of factionalism, warfare, and organized violence are often difficult to assess (Brumfiel 1994:11; see Chapter Three, this volume), decentralization in the Mississippian Southeast can be approached through a comparative examination of monumental landscapes and historic sources.

In drawing together comparative data from different regions, there is a potential to disregard the issue of historicity; the fact that such practices were dynamic and changeable social relations. This is due in part to the paucity of comparative data from different historical contexts. For most regions in the Mississippian Southeast, it is currently feasible to address the above practices from only a synchronic perspective, in some instances representing a century or longer time span. Ritual feasts and craft production, the residues of human agency, might otherwise be delineated as historical structures, rather than part of a long-term historical process. Such comparative analysis is also confounded by a shortage of commensurate sources of data from different

regions, thus necessitating the pursuit of multiple lines of evidence. The dearth of information in some instances, such as mound construction and settlement histories in the Central Mississippi Valley, is due in part to large-scale site destruction and inadequate recovery techniques associated with salvage (Davis 1973; Morse 1973b; Morse and Morse 1983:31-37).

Archaeological evidence for feasting, food provisioning, and the crafting of political symbolism must consequently be drawn from often incomplete sources and ambiguous contexts. Such a comparative study will inevitably raise more questions than are answered, point out crucial gaps in the archaeological database, and generate new directions for research. The further refinement of late prehistoric and protohistoric regional chronologies is foremost among the challenges facing archaeologists. This is particularly the case in the protohistoric Southern Appalachians and Central Mississippi Valley, where culture historical chronologies for Mississippian polities have relied heavily upon the chronicled events of European history and introduction of European trade goods (e.g., Mainfort 1996; Smith 1987). Only after greater chronometric precision has been established for a variety of well-provenienced, primary contexts will it become feasible to address practices such as feasting or ceramic production from both a comparative and diachronic perspective.

Evidence for these practices is considered below, in terms of understanding political consolidation, centralization, and decentralization as part of Mississippian political culture. A diachronic perspective is then presented in regards to the construction, alteration, and abandonment of monumental landscapes. The greater availability of chronologically-sensitive information on mound construction and settlement histories in the Black Warrior Valley is particularly useful in this respect. The political consolidation and decentralization of Moundville can be contrasted with other polities, of which comparatively less is known. Feasting, food provisioning, and the symbolic capital of ceramic vessels can then be reexamined in terms of regional

differences, as well as historical revaluations. Regional variations in Mississippian political culture are demonstrated by juxtaposing these different lines of evidence with historical and ethnographic sources. This research in turn presents intriguing new directions for research concerning the historical trajectories of Mississippian polities.

Foodways and Effigy Vessels

Foodways represent a central, recurrent theme in the negotiation of symbolic capital among Mississippian polities. The concept of foodways extends beyond production, storage, and distribution, to include culturally-appropriate mobilization, presentation, and consumption (Welch and Scarry 1995; Chapter Three in this volume). The distribution and consumption of different kinds of foods, whether in the context of ritual feasts or the provisioning of an elite, presented certain opportunities for the formation of coalitions and alliances. Maize in particular, was significant not only in terms of its potential to yield an agricultural surplus that could be stored and manipulated in social relations (DeBoer 1988; cf. Wesson 1999), but as an integral part of Mississippian political symbolism and ritual (Waring 1977:51-53). Mound summits served not only as platforms for mortuaries and elite residences, but as focal points for large-scale presentations of maize and other foods, in the context of ritual feasts (Blitz 1993b; Knight 1986:678-679).

Variation in foodways between regions and over time suggests that different comestibles were incorporated into social relations of authority as a form of expedient political currency, rather than prime movers in sociopolitical evolution (Fritz 1990; Fritz and Kidder 1993; Kidder 1992a; Kidder and Fritz 1993; Milanich 1998; Nassaney 1992; Scarry 1993c). Recent calls to transcend "zeacentrism" in Mississippian archaeology has implications for advancing knowledge of the changing relationships between foodways and political culture, as well as dietary practices and subsistence (Fritz 1992; Lopinot 1997:54). Of interest here are the ways in which various foodways articulated with

political-symbolic actions among Mississippian communities, as an integral aspect of political consolidation. Status-related differences in meat procurement and consumption in particular, may have included certain rare species of animals that legitimized and sanctified social relations of authority (Bogan and Polhemus 1987; Jackson and Scott 1995b; Kelly 1997; Rees 1997; VanDerwarker 1999). This is not surprising, given the symbolism generally associated cross-culturally with animals and hunting (Crabtree 1990; Kent 1989). Alternatively, plant food and meat procurement may have been associated with contested social relations, or resistance to a centralized authority.

Based on the evidence for differential processing of maize, acorn, and hickory nuts at different sites in the Black Warrior Valley, Welch and Scarry (1995:405-410) argue that these principal plant foods were supplied by commoners to an elite at Moundville, as a form of provisioning or tribute (see also Scarry and Steponaitis 1997). The argument is especially strong for maize, based on the relative abundance of kernels compared to cupules (as a byproduct of processing). As Welch and Scarry (1995:414) note, the evidence for differential processing of plant foods has clear implications in understanding the manner in which it was acquired and stored, as well as the contexts in which it was consumed. For the residents of Moundville and other large, ceremonial centers, maize agriculture not only provided a sufficient staple for demographic nucleation; it became an integral part of a yet earlier fertility ceremonialism that could in turn be appropriated through "rites of intensification" and abstract political symbolism (Emerson 1997b:214; Knight 1986:683; Pauketat and Emerson 1991:919-920).

A similar argument can be made for the procurement and ritual consumption of certain kinds of meat. There is evidence for the provisioning of an elite with preferential cuts of deer and its consumption in ritual feasting at sites in the Black Warrior and Tombigbee river valleys (Jackson and Scott 1995a; Michals 1990; Scott 1983; Welch 1991:77-103). Large mammal, consisting predominately of deer elements, are by far the most ubiquitous faunal class from both Moundville I phase contexts at Moundville and

Moundville III phase contexts at the White site, at approximately 85 percent and 83 percent by weight, respectively (Welch 1991:82-83). A similar pattern was noted by Michals (1998:171) for the Oliver site, an early Moundville I phase farmstead. Deer meat was procured for large-scale feasts in mound precincts, in which preferential cuts appear to have been consumed by an elite (Michals 1981, 1990). Variation in meat procurement and consumption in such contexts was likely representative of political-symbolic actions oriented toward coalition formation. Large mammals and deer in particular, might have been associated with the potency acquired by a hunter, as well as those who acquired and consumed the meat (Kent 1989; e.g., Scott and Jackson 1998).

The residents of Fosters Landing were likely to have held and participated in such ritual feasts. However, insufficient botanical and faunal remains were recovered during the Summer 1998 field season to contribute to this analysis (see Chapter Three, and notes in the Appendix). Vessel shapes and sizes, based on rim profiles and estimated orifice diameters, have also been used to assess the relationship between pottery use, foodways, and political economy (Blitz 1993b; Maxham 2000:341-347; Pauketat 1987, 1989; Taft 1996). This is based on the fact that vessel assemblages from different contexts may represent a different range of practices and/or social distinctions (Welch and Scarry 1995:412-414). Quantitative comparisons of vessel form and orifice diameter were not feasible given the fragmented condition of the ceramic assemblage and relatively small sample size of rim sherds from sealed contexts at Fosters Landing.

Indirect evidence for the display and consumption of food within different contexts can nonetheless be obtained from the Fosters Landing ceramic assemblage. Following Welch and Scarry (1995:412-413), the shell-tempered pottery assemblage from Fosters Landing can be incorporated in an analysis of the ratio of serving wares to cooking wares. This is based on the samples of burnished and painted to unburnished sherds recovered from the three principal excavation blocks (Appendix 7). Any such analysis is complicated by the fact that burnishing and painting may not correlate

entirely with vessel forms, sizes, and functions. For example, Alabama River Incised is an unburnished pottery, yet sherds of Alabama River Incised from Block 3 at Fosters Landing included at least one flaring rim bowl. Such vessels were likely to have been used as serving vessels. Furthermore, vessels with either surface treatment may have also been used for storage. Differences in serving and cooking wares are thus unclear without more specific information on vessel form and size (Blitz 1993b:84-90; Welch and Scarry 1995:412).

Nonetheless, the relative percentage of pottery sherds likely associated with serving ware and cooking ware from Fosters Landing can be compared with similar information from different sites in the Black Warrior Valley (Table 12). In general, relatively higher percentages of burnished or painted serving wares might be expected in mound contexts, in contrast to cooking or storage activities in domestic, non-mound contexts (Taft 1996:66-69; Welch and Scarry 1995:416). The ratio of serving ware (n=298; 16%) to cooking ware (n=1533; 84%) from the 3 principal excavation blocks at Fosters Landing is similar to the Oliver site (0.19), a small, early Moundville I phase farmstead (Michals 1998). Given that the assemblage from Fosters Landing may represent two separate Mississippian components dating from the early Moundville II phase (ca. AD 1250-1300) and Moundville IV phase (ca. AD 1550-1650), it is difficult to assess precisely what the serving-to-cooking ware ratio for the site as a whole might represent.

The expected pattern becomes apparent when sherd counts are separated according to different contexts. Although the sample size is reduced, the serving-to-cooking ware ratio from the mound summit excavation units (EU 5 and 9) is 0.47, comparable to mounds Q and E at Moundville. Taft (1996:68-69) suggests that Mound Q was the locus of large communal feasts based on vessel shapes and sizes, whereas Mound E is interpreted as an elite residence mound with a more diverse range of activities. It should be noted that much of the burnished pottery (n=55; 32 percent) from EU 5 and 9 at Fosters Landing probably represents one or more Bell Plain bowls

Table 12. Ratios of Serving to Cooking Ware Sherds from Sites in the Black Warrior Valley.

Site and Context	Serving		Cooking		Ratio
	n	%	n	%	
Community Center 1TU66	167	48	183	52	0.91
Moundville NR	1055	38	1731	62	0.61
Fosters Landing EU 5 & 9	**55**	**32**	**117**	**68**	**0.47**
Block 3, Feature 10	**65**	**27**	**177**	**73**	**0.37**
Moundville Mound Q	4388	25	13043	75	0.34
Moundville Mound E	1188	24	3672	76	0.32
Fosters Landing Block 3	**127**	**22**	**459**	**78**	**0.28**
Moundville Mound G	1028	21	3970	79	0.26
Fosters Landing Block 2	**65**	**21**	**251**	**79**	**0.26**
Moundville Riverbank	1309	20	5339	80	0.25
White Village	3304	20	13619	80	0.24
Hog Pen Mound	429	17	2133	83	0.20
Fosters Landing, Blocks 1-3	**298**	**16**	**1533**	**84**	**0.19**
Oliver Farmstead	167	16	863	84	0.19
Asphalt Plant Mound	94	15	513	85	0.18
Big Sandy Farmstead	34	13	228	87	0.15
Fosters Landing Block 1	**106**	**11**	**823**	**89**	**0.13**
Farmstead 1TU768	17	4	382	96	0.04

Source: Maxham (2000:343) and Welch and Scarry (1995:413).

associated with Feature 3, which dates to the early Moundville II phase (see Chapter Four). Nonetheless, the relative paucity of unburnished, cooking ware sherds in this context suggests an emphasis on the display and consumption of foods. While the small rim sherd sample from Fosters Landing is not conducive to a more in depth, comparative study of vessel shapes and sizes, the estimated orifice diameters for one Bell Plain (*variety Hale*) bowl (9.0 cm) and two Moundville Incised (*variety Moundville*) jars (10.5 and 15.0 cm) from Feature 3 indicate the use of relatively small vessels. This contrasts with the ceramic evidence for large-scale feasting in the Black Warrior and Tombigbee valleys (Blitz 1993b:86-89; Maxham 2000:344-346; Taft 1996).

The serving-to-cooking ware ratio is also higher in Feature 10 at Fosters landing, a daub and thatch house that dates from the late Moundville IV phase (Chapter Four, this volume). In contrast, a potentially disturbed, non-mound context (Block 1) at Fosters Landing produced a much lower ratio of serving-to-cooking ware sherds. Farmsteads and non-mound contexts are generally associated with lower percentages of serving wares. One notable exception is site 1TU66, what Maxham (2000) has referred to as a "community center." As Maxham (2000:350) has argued, it may be impractical to assume that certain practices such as ritual feasting conformed too closely with different types of sites. Instead, the archaeological correlates of feasting were produced by a variety of communities actively engaged in social relations of authority such as coalition building. In this case, there is indication of service-oriented foodways from both mound and domestic contexts at Fosters Landing, separated by as much as three and a half centuries. The context of these feasts may have been exclusionary or group-oriented, but was likely to have involved the consumption of foods such as maize and deer.

There is likewise evidence that foodways were an integral component of Mississippian political culture in the Southern Appalachians. Maize and hickory nuts were recovered in Barnett phase domestic contexts at Little Egypt (Hally 1981:728). The remains of persimmon, hickory nut, and honey locust occurred in relatively higher

frequencies in mound versus non-mound contexts, although it is unclear whether this was a reflection of status-related procurement and consumption, feasting, or other mitigating, depositional factors (Hally 1980:653-673, 1981). Evidence for the preferential procurement and consumption of plant foods at Toqua is less ambiguous. Relatively higher percentages of hickory nut shell in village and non-mound contexts suggest more frequent processing, whereas hickory nut shell was less common in a structure on the summit of Mound A (Polhemus 1987:1230; Shea et al. 1987:1113-1207).

Maize comprised a majority (50 percent) of the plant remains from the structure on the summit of Mound A at Toqua, while it occurred in relatively smaller amounts in village contexts. The differential processing and procurement of maize is suggested by the relative abundance and size of kernels and cupules in mound and village areas (Shea et al. 1987:1160-1164). As in the case of Moundville, maize and hickory nut appear to have been among the plant foods consumed in contexts associated with feasting and elite residential space (Welch and Scarry 1995). This is further supported by indirect evidence for granaries or corncribs that would have been used to store maize at both Toqua and Little Egypt, a practice also mentioned in the de Soto narratives (Hally 1980:439, 500; Polhemus 1987:241).

There is also evidence for the preferential consumption of certain classes of animals in mound contexts at Little Egypt and Toqua, likely to have been associated with ritual feasting. Deer and other mammal comprise a majority (94 percent) of the faunal elements from Mound A at Little Egypt (Hally 1980:424; Roth 1980:571-581). The relative frequencies of skeletal elements from excavation units at Little Egypt reflect differential procurement and consumption of various classes of fauna (Table 13; Roth 1980:570-591). Following Kelly (1997), number of identified specimens (NISP) and percent NISP are used here as indicators of the relative importance of different classes of fauna, since minimum number of individuals (MNI) have not been consistently calculated for different sites. Moreover, percent NISP is probably just as reliable a unit of

Table 13. Percent NISP for Faunal Classes from Sites in the Southern Appalachians and Tombigbee Drainage.

	Little Egypt		Toqua		Lubbub Creek Site	Yarborough Site
	Unit 1 (Md A)	Units 2, 4&5	Mound A	E. Village Midden		
Deer/Large Mammal	67.1	59.9	2.2	6.0	68.1	50.2
Other Mammal	27.1	16.5	61.9	63.5	8.6	11.8
Bird		3.7	11.8	6.3	10.5	7.1
Amphibians and Reptiles	2.4	5.3	8.6	17.9	8.3	27.0
Fish	3.5	14.6	15.5	6.3	4.5	4.1

Source: Roth (1980:571-81); Bogan and Polhemus (1987:979-80); Scott (1982, 1983).

measure as MNI when comparing assemblages, especially in cases where elements were highly fragmented (Grayson 1984; Marshall and Pilgram 1993).

Located just southeast of Mound A, it is likely that the faunal assemblage from Unit 1 at Little Egypt was comprised of subsistence remains discarded from the mound occupation (Hally 1980:439; Roth 1980:571-581; Smith and Williams 1994). Deer comprised a majority (67 percent) of the faunal remains from Unit 1 and together with other mammal, were by far the most common class of fauna. While deer elements were fairly ubiquitous throughout the site, relatively higher percentages of fish, amphibian, reptile, and bird elements were recovered in off-mound contexts, despite adequate bone preservation and comparable recovery techniques (Roth 1980:585-591). The relative scarcity of certain classes of fauna from the mound context at Little Egypt might in turn be significant, in that some animals were regarded as inappropriate for ritual feasts or elite consumption.

The faunal assemblage from the Toqua site further supports the preferential procurement and consumption of certain classes of animals (Bogan and Polhemus 1987). Bogan and Polhemus (1987:991-992, 1079-1082) suggest that the distributions of white-tailed deer, black bear, and turkey reflect differential access according to social status (cf. Bogan 1983). There also appears to have been preferential access to certain rare species of animals, as well as preferred cuts of deer and bear meat, based on the disproportionate distributions of skeletal elements in mound and non-mound contexts (Bogan and Polhemus 1987:992). In contrast, VanDerwarker's (1999:31) reanalysis of white-tailed deer distributions at Toqua indicates that large-scale feasts are represented in the more proportionate occurrence of deer parts from Mound A. Further, the distribution of faunal classes suggests that fish may have been consumed at such feasts. As Bogan and Polhemus (1987:991) point out, most of the fish remains (93.5 percent) in the mound context were from a single feature and may represent one or more meals. When this feature is omitted, fish elements occur in relatively the same amount (7.0

percent) as the village areas. It therefore seems likely that the higher percentage of fish elements (15.5 percent) in the mound context are an indication of opportunistic meat procurement associated with feasting.

In comparing the percent NISP for various faunal classes, it becomes apparent that deer and other large mammal were procured and consumed in larger quantities in the Southern Appalachians. A similar pattern has already been noted at sites in the Black Warrior and Tombigbee river valleys (e.g., Jackson and Scott 1995a, 1995b; Michals 1980, 1991; Welch 1991). One obvious implication is that deer were valued over other animals for both ritual feasting and elite consumption. While the distribution of deer elements may have been a product of ritual feasting, such activities would have simultaneously created and maintained status-related differences in food procurement and consumption (Blitz 1993b; Jackson and Scott 1995b). In comparison, fish, reptile, and amphibians are generally underrepresented at sites in the Southern Appalachians (Hally 1994b:231). These classes of fauna might have been consumed more frequently by lower status individuals or comprised a larger portion of the meat consumed in non-mound contexts.

Until recently, there have been few similar studies of foodways in the Eastern Lowlands of the Central Mississippi Valley, making it difficult to derive comparative data contemporaneous with Little Egypt and Toqua. Maize was recovered from Upper Nodena, along with hickory nut, persimmon, and beans (Blake and Cutler 1979). Some of the maize had been burned and may have been stored in a granary or corn crib, as noted at Little Egypt and Toqua (D. Morse 1990:75). Blake and Cutler (1979:53) interpreted the larger cupule and cob size in this feature as reflecting either differential selection for storage, or the result of a "particularly competent family or group." While the context of these remains is problematic, it is possible that this variation reflects preferential access associated with feasting or food provisioning.

Williams' (1996) analysis of botanical remains from the Parkin site indicates that maize was by far the most ubiquitous plant food, followed by acorn, persimmon, and cultigens such as squash. The majority of the maize (91 percent) came from a burned pit feature similar to the one noted at Upper Nodena. Williams (1996:81) argues that the ratio of kernels to cupules (approximately 2 to 1) in this pit is indicative of maize storage. Associated postmolds and burning are interpreted as a structure used for drying and processing. Maize agriculture and the use of corn cribs are mentioned in the narratives of the de Soto expedition (Elvas 1993:112, 117). Skeletal analyses also indicate that maize was a dietary staple at Upper Nodena (Powell 1989, 1990:113-115). Greenlee (1998:320) has more recently argued that there was considerable variation in maize consumption between communities in the Central Mississippi Valley, as well as relatively lower levels than elsewhere in the Southeast (cf. Lynott et al. 1986). At present, there is inconclusive evidence for elite provisioning or the consumption of maize in ritual feasts within mound contexts. It can only be surmised that the storage of large quantities of maize in the structures noted at Upper Nodena and Parkin might have been used to subsidize large-scale feasts.

Comparative information on faunal remains suggests a distinct range of practices in meat procurement and consumption at sites associated with the Nodena phase. Previous interpretations of Mississippian subsistence patterns emphasized a riverine-floodplain adaptation and annual cycle of aquatic animal exploitation, based largely on research by Smith (1975:121-146, 1978b, 1978c, 1985) in the Mississippi Valley (see Chapter Three, this volume). It comes as no surprise then, that fish were procured as a major source of meat at sites associated with the Nodena phase. This is indicated by the percent NISP for faunal classes from the Upper Nodena and Knappenberger sites in northeastern Arkansas (Table 14). The Upper Nodena faunal assemblage was recovered by D. Morse (1973a, 1990:77) from a wall-trench house and associated pit features that probably date within a century prior to AD 1550. The Knappenberger site was tested by

Table 14. Percent NISP for Faunal Classes from Sites in the Mississippi Valley.

	Upper Nodena	Knappen-berger	Hayti Bypass		Cahokia	
			Woodland	Miss.	Edelhardt	Lohmann
Deer/Large Mammal	6.6	1.2			5.9	62.9
Other Mammal	11.7	35.3	70.8	27.4	3.8	4.6
Bird	5.9	6.2	6.0	2.1	13.5	22.6
Amphibians and Reptiles	1.8	2.6	2.3	0.5		
Fish	74.0	54.8	6.0	62.7	76.8	9.9

Source: Bogan (1974:74-75); Yelton (1995:281); Kelly (1997:79).

Klinger (1974) in 1973 and appears to have been roughly contemporaneous with Upper Nodena.

Fish elements comprise approximately 74 percent and 55 percent NISP from Upper Nodena and Knappenberger respectively, while deer and other mammal elements are relatively less common (Bogan 1974). Deer and large mammal, most of which are likely fragmentary deer elements, comprised only 6.6 percent NISP. Other species of small mammal, including rabbit, squirrel, raccoon, coyote, and various unidentified mammal, comprise approximately 11.7 percent NISP. The remainder of the faunal assemblage is made up of bird (5.9 percent NISP) and reptile and amphibian (1.8 percent NISP). While the relative NISP of fish may have been inflated by the fragmentary nature of many of the elements, their prevalence is notable given generally poorer preservation and the fact that recovery techniques are frequently biased against the collection of smaller bone (Casteel 1976; Colley 1990). This trend becomes more apparent when recovery techniques were geared toward systematic sampling of features for smaller faunal remains. Fish elements were even more abundant (87 percent NISP) in a pit feature at Upper Nodena, from which a soil sample was water-screened. The cranium of a mink (*Mustela vison*) was also recovered from this feature, in a context with otherwise few mammal remains.

The higher percentages of NISP for fish at Upper Nodena and Knappenberger are noteworthy in comparison to the Little Egypt and Toqua faunal assemblages, in which deer and other mammal comprised a majority of the fauna. The relatively lower percentage of NISP for deer and mammal at Upper Nodena, one of the largest mound centers in the region, also contrasts starkly with evidence for the provisioning of an elite and consumption of deer at ritual feasts in the Black Warrior Valley and Southern Appalachians (D. Morse 1990:80). Likewise, Morse (1990:77) noted the paucity of deer elements recovered throughout the 1973 excavations.

Variation in regional faunal procurement might be attributed in part to ecological differences, such as the greater availability of aquatic resources in the Mississippi River floodplain. Conversely, it might also be argued that deer were a more abundant or accessible source of meat in the Southern Appalachians and Black Warrior Valley. The preferential procurement of deer might thus be viewed as a more efficient means of subsidizing ritual feasts and provisioning an elite. However, the apparent emphasis on fish procurement and consumption in the Upper Nodena sample can be contrasted with evidence for changes in faunal procurement elsewhere in the Mississippi Valley.

The percent NISP of faunal classes at the Hayti Bypass site in southeastern Missouri suggests a proportionate increase in fish consumption between the Woodland and Mississippian periods (Yelton 1995:279-289). As Yelton (1995:287, 289) states, this may indicate a long-term trend toward the harvesting of fish in larger quantities. In contrast, Kelly (1997:79) notes a dramatic *decrease* in the amount of fish being consumed in relation to white-tail deer at the Cahokia site, a trend that is particularly evident immediately preceding and following political consolidation. After AD 1050, fish elements decrease at Cahokia from approximately 77 to 10 percent NISP, while deer elements increase from 6 to 63 percent NISP (Kelly 1997:79).

Kelly (1997:79-82) suggests that changes in meat consumption in the American Bottom reflect a proportionate increase in the procurement of deer meat following the Emergent Mississippian to Mississippian transition, including the provisioning of Cahokian elite with preferential cuts of deer. This contrasts sharply with the increased use of fish and aquatic resources following the Late Woodland-Mississippian transition in southeastern Missouri. To the southwest, fish remains and non-mammalian taxa were notably scarce in an Early Caddo (ca. AD 900-1100) faunal assemblage from the Crenshaw mound site (Jackson and Scott 1995b:109-112; Schambach 1982). Given the location of Crenshaw in the Red River Valley, Jackson and Scott (1995b:111) attribute the paucity of fish in elite contexts to "ritual proscriptions which largely precluded their

consumption." While the above differences in faunal assemblages constitute part of the changing historical ecology of different regions, temporal and spatial variations in meat procurement and consumption also hint that foodways were being purposefully and opportunistically mediated as part of Mississippian political culture. At present, more detailed knowledge of the relationship between foodways and political culture is confounded by a deficiency of representative botanical and faunal samples from different sites and comparable contexts.

In this case, the narratives of the de Soto expedition can be culled as an archaeologically independent, albeit textually interdependent source of information (Galloway 1997b). Spaniards who came to southeastern North America during the sixteenth century relied on the indigenous foods acquired and produced by regional polities, even raiding stored foods from local inhabitants (Scarry and Reitz 1990). The de Soto expedition demonstrated a propensity to seize certain resources from Mississippian polities throughout the Southeast, often exerting coercive force to procure food, information, guides, porters, and native women (Biedma 1993; Elvas 1993:80-93, 113-121; Rangel 1993). Furthermore, it is likely that Mississippians dealt with the de Soto expedition and other intruders according to their own expectations regarding warfare, raids, and alliances (Dye 1995). While written from often biased and literary perspectives, the narratives can nevertheless provide a general source of corroborative or contradictory information for the above comparative analysis of foodways (Rees 1997).

Upon entering the Southern Appalachians, the de Soto expedition sought out, confiscated, and received foods from communities described as associated with the province of Coosa. Smith and Hally (1992) suggest that de Soto himself may have been viewed and dealt with as a paramount elite. Whether or not this is the case, the foods that local inhabitants presented, or had confiscated, are likely to have included comestibles typically procured and stored in large quantities for ritual feasts or

provisioning. Although the quantities of foodstuffs were rarely recorded and may be unreliable, maize was the most frequently mentioned item of food in the Southern Appalachians, along with deer skins, venison, bear's grease, and small birds (Rees 1997:117). Venison is mentioned less frequently, yet may have been obtained with deer skins. Maize appears to have been of such significance to the de Soto expedition that its *absence* is often noted. It was a shortage of maize that compelled de Soto's army to depart the province of Cofitachequi in search of Coosa. Upon reaching Coosa, the Spaniards were met by the inhabitants of Chiaha with a large quantity of maize (Biedma 1993:230; Elvas 1993:82-93; Rangel 1993:279, 282).

As in the towns of Coosa, maize is also mentioned as having been grown and stored in the provinces of Aquixo, Casqui, and Pacaha (Elvas 1993:112, 117). However, there is no mention of maize being presented to, or seized by, the de Soto expedition in the Central Mississippi Valley. As cited above, the chief of Pacaha greeted de Soto with "a gift of many fish, skins, and blankets" (Elvas 1993:119). Such gifts were likely intended as political currency in peace negotiations or alliance, since the principal town of Pacaha had been invaded in a combined Casquin-Spaniard raid (cf. Dye 1995).

Regardless, even a casual reading of the narratives implies that fish were by far the principal food item presented to the Spaniards in Casqui, Pacaha, and neighboring provinces. In comparison, maize appears to have been conspicuously absent as a political medium of exchange (Biedma 1993:241; Elvas 1993:112-120; Rangel 1993:300, 304). The implication here is that the chiefs of Casqui and Pacaha presented the de Soto expedition "gifts of fish in abundance" not simply to fulfill the subsistence needs of the Spaniards, but in the context of establishing and negotiating social relations of authority (Elvas 1993:118-119). Whether attempting to form a political alliance or appease a coercive, invading paramount, such gifts of food were most likely intended as symbolic capital (Smith and Hally 1992).

The availability of maize as indicated by the archaeological evidence and mentioned in the narratives is also significant, in that it was evidently cultivated and stored in the provinces of Quizquiz and Pacaha, yet is not mentioned as being presented to de Soto (Elvas 1993:112, 117). As discussed above, maize and deer meat were presented to de Soto in the Southern Appalachians, while fish were ostensibly omitted. Seasonality is unlikely to have been a contributing factor, since the de Soto expedition passed through the Southern Appalachians and Central Mississippi Valley at approximately the same time of year, in May through August of 1540 and 1541 (Swanton 1985:305-36). Considering the Spaniard's search for stored maize throughout the Southern Appalachians, it is unlikely that their food preferences changed so decisively, much less determined the kinds of food that were presented by Native Americans. Moreover, animal skins and blankets are consistently mentioned in the Elvas (1993) narrative in regards to both the Southern Appalachians and Central Mississippi Valley, further raising the likelihood of regional differences in Mississippian political culture related to foodways.

One additional source of comparative information can be considered before examining the monumental landscapes of regional political culture. Craft production, and the crafting of ceramic vessels in particular, has clear implications in understanding the changing relationships between political symbolism, social identity, and authority (Costin 1998; Pauketat and Emerson 1991; Sassaman 1998). Stylistic and morphological variations can be examined in the "social context of manufacture" (Dietler and Herbich 1998:241). Ceramic styles and traditions were in this sense actively negotiated, rather than simply functional or utilitarian indicators of social boundaries (Hegmon 1992:529; 1998:266-271). As containers for sharing and offering food and beverages, ceramic vessels were an integral part of Mississippian foodways (Welch and Scarry 1995). As a medium for displaying and containing social relations, pottery vessels were included in mortuary practices, ritual transactions, and a wide range of political-symbolism.

Working with Ramey Incised pots in the American Bottom, Pauketat and Emerson (1991: 929) demonstrate how Cahokian political ideology was reflected through ceramic vessels, and how that ideology articulated with an elite reordering of iconographic themes that emphasized symmetry and the "quadripartite division of space" (see also Emerson 1997a:212-220). Social relations of authority in the Black Warrior Valley can also be examined through the abstruse symbolism of vessel forms and iconography. The exteriors of burnished vessels at sites in the Black Warrior Valley are well-known for their geometric, zoomorphic, and anthropomorphic engravings (Steponaitis 1983a:58-63, 129). Among the more striking iconography is the winged serpent motif on Moundville Engraved (*variety Hemphill*) vessels, what Knight (1989a:209) refers to as the "*deliberately* obscure symbolism" of Mississippian monsters (see Figure 14). Although the specific meanings may be lost, the esoteric knowledge associated with the production and distribution of such abstract, representational themes can be viewed as having been tied to claims of supernatural, and by association, elite authority (Helms 1979:70-108).

Knight and Steponaitis (1998:20) point out that most of the engraved, representational art depicting such supernatural creatures at Moundville post-dates the era of regional consolidation (ca. AD 1300), when the ceremonial center had become a sparsely inhabited mortuary or "necropolis." Attempts by an elite to uphold social relations of authority may have resulted in the heightened embellishment and dispersal of engraved iconography, referred to elsewhere as the "communalization" of chiefly symbolism (Knight 1986:682, 1997:240; Knight and Steponaitis 1998:17-21). Likewise, if resistance to the authority of a Moundvillian elite increased after ca. AD 1300, it might have been more difficult to reinforce the existing social order through the abstract political symbolism of cosmological referents. The revaluation of portable and non-portable symbols was an historical process shared by Mississippian peoples, yet negotiated on the local and regional scales (Emerson and Hargrave 2000; Pauketat and Emerson 1999). The challenge here is to examine this process in regards to political

consolidation, centralization, and decentralization among non-contemporaneous regional polities in the Mississippian Southeast.

The ceramics to be considered here include a specific form of representational craft, what have been referred to as effigy features, rim effigies, human effigies, and head pots (e.g., Chapman and Anderson 1955; Phillips et al. 1951:160-169; Steponaitis 1983a:74-78). Here, effigy vessel refers more broadly to ceramic containers with otherwise "utilitarian" functions, that exhibit representational modeling of anthropomorphic or zoomorphic themes. Plants such as maize and gourds have also been represented, in the latter instance entailing the double meaning of a container that resembles *another kind* of container (Hathcock 1976:162-167; Phillips et al. 1951:162). Animal effigies were often crafted in sufficiently accurate fashion as to allow for the identification of species (Mainfort and Carroll 1996). The study of morphological variation in regards to particular effigy forms might thus contribute a greater understanding of the ways in which Mississippian communities utilized and depicted different species of animals (e.g., Mainfort and Carroll 1996).

Conventionalized representations are often more difficult to discern, as in the case of fish effigies with multiple, stylized fin appendages (Figure 65). Such representational themes were sometimes crafted in such abstract or minimalist fashion as to incorporate only one or more zoomorphic elements, as in the case of stylized rim tabs that exhibit only the slightest allusion of effigy forms (e.g., O'Brien and Holland 1996:222-223). Supernatural and surrealistic creatures were also occasionally represented, as in the case of composite human-maize heads and double-headed rim effigies (e.g., Hathcock 1976:122, 167, 175). However, in contrast to the engraved iconography and "*deliberately* obscure symbolism" of Mississippian monsters (Knight 1989a:209), the close correlation between various effigy vessel forms and naturalistic themes is readily apparent (e.g., Phillips et al. 1951:160-169; Steponaitis 1983a:74-78). Even the most conventionalized

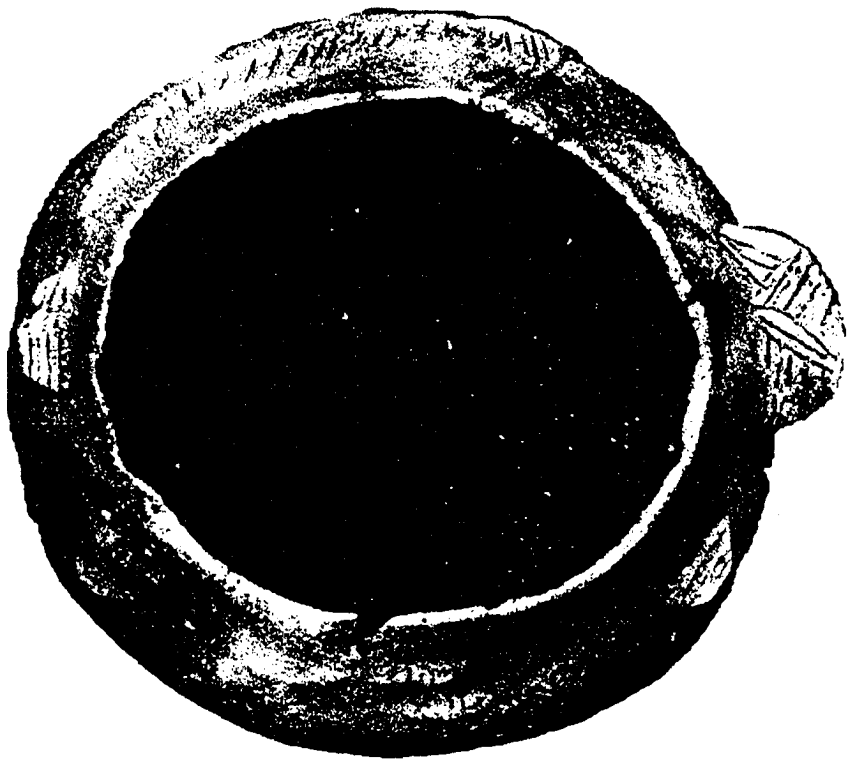


Figure 65. Stylized Fish Effigy Vessel from the Banks Village Site in Northeast Arkansas.

renderings are usually stylized or minimalist portrayals of living creatures, such as birds, fish or frogs.

Certain effigy forms have consequently been proposed as potential indicators of discrete social boundaries, such as clan affiliation (Chapman and Anderson 1955:114; cf. O'Brien and Holland 1996). There is little evidence to support a direct correspondence between certain effigy forms and kin-ordered groups, given the diversity of forms and what little is known about effigy vessel distributions. Of interest here is the potential for examining interregional variation in effigy vessels as political-symbolic referents for social relations of authority between groups and within Mississippian polities. That effigies articulated with such socially-circumscribed meanings is likely, given the repeated incorporation of ceramic vessels in ritual feasts, food provisioning, and mortuary practices. An assemblage of 91 effigy vessels from the Banks Village site in northeastern Arkansas included several vessels that contained fish elements in the context of mortuary practices (Perino 1966:123; Rees 1997:122). Effigy vessels might accordingly be examined not only as symbolic of animals, humans, or supernatural creatures, but as representations of recurrent, cultural themes.

Zoomorphic and anthropomorphic effigies are especially well-known for late prehistoric sites in the Central Mississippi Valley (e.g., Hathcock 1976:112-226). In fact, the notoriety and commercial value of these finely-crafted artifacts among pot hunters and collectors has detracted considerably from their potential usefulness as sources of information on Mississippian political culture. The available data and associated proveniences are rarely adequate to address temporal and spatial variability on site-specific or even regional levels. However, it is possible to contrast general information on effigy vessel distributions between regions (Rees 1997). In doing so, as many samples as possible should be employed, in order to counteract the bias introduced by the unsystematic or preferential acquisition of collections.

Among the most common of all effigy forms in the Central Mississippi Valley motifs are fish, frog, and bird (Carroll 1997; Chapman and Anderson 1955:46-48; Morse 1989:108, 1990:90; Price and Price 1980:36-40; Phillips et al. 1951:162-163). Fish effigies comprise the largest percentage of effigy forms at sites associated with the Nodena phase (Figure 66). Phillips, Ford and Griffin (1951:162) reported that 25 percent (n=18) of 71 effigy vessels from the Memphis area were fish. Carroll (1997:136) notes that fish effigies comprise 19 percent (n=25) of 130 effigy vessels recovered from the Upper Nodena site by the University of Arkansas and University of Alabama Museum.

Combining the totals for different areas, a rough estimate of 38.5 percent (n=70) can be derived for fish effigies in the Central Mississippi Valley study area surveyed by Phillips, Ford and Griffin (Table 15). The percentage of bird effigy vessels in this sample is probably unrealistically low, since Phillips, Ford and Griffin (1951:160-162) did not include rim effigy bowls in their study of effigy vessels. Since the association and context of these vessels have not been independently established, the relative percentages provide only a general indication of the regional occurrence of effigy forms. However, this pattern appears to be confirmed on the site-specific level. Fish effigies were even more common (41 percent) at the Campbell site in southeastern Missouri (Chapman and Anderson 1955; D. Morse 1989; 1990:81-82; O'Brien 1995:Appendix 2).

The relative percentages of fish effigy vessels in the Central Mississippi Valley contrasts starkly with roughly contemporaneous sites in the Southern Appalachians. Only 2 percent (n=1) of the effigy vessels from the Toqua site were fish. Fish comprised less than 3 percent of the effigy vessels recovered from Dallas and Mouse Creek phase sites examined by Lewis and Hendrick (1995:123). In this case, the apparent absence of mammal effigies such as bear, deer, and dog may be reflected in the higher percentages of conventional zoomorphic and unidentified animal effigies. While more precise estimates will require the reanalysis of individual collections, the relative percentages of fish effigies from the Central Mississippi Valley and Southern Appalachians roughly

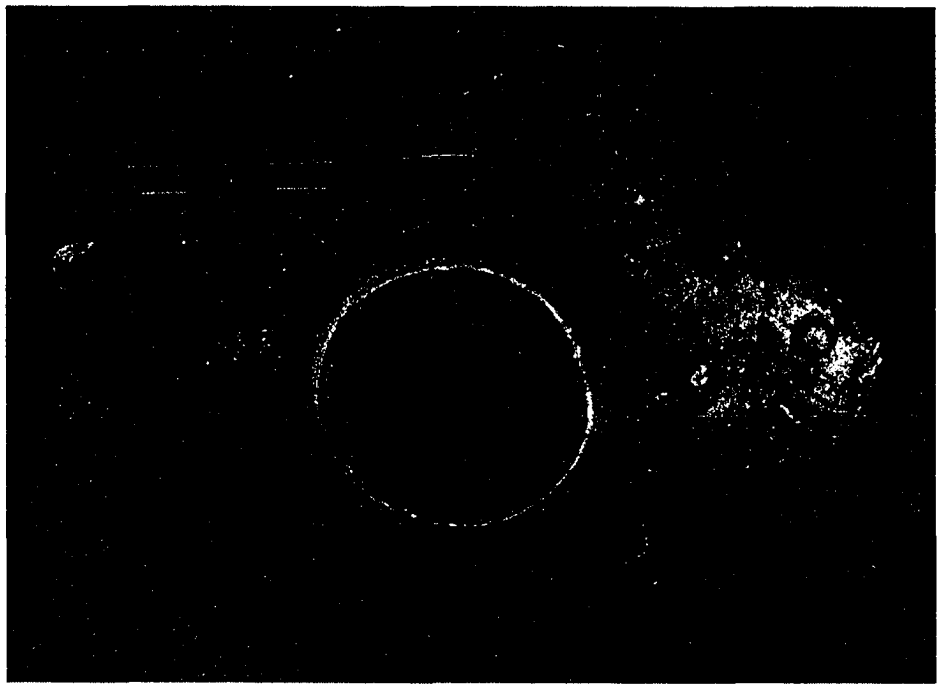


Figure 66. Fish Effigy Vessel from the Campbell Site in Southeastern Missouri.

Table 15. Effigy Vessels from Different Regions of the Southeast.

Effigy Form	Campbell		CMV		Toqua		Dallas		Mouse Creeks		Moundville ca. AD 1050-1300		Moundville ca. AD 1300-1550	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Human			32	17.6	7	14.9		4.0			10	22.7	8	9.3
Human Head	1	2.6						9.0		28.0				
Bear/Bat	6	15.4												
Beaver													2	2.3
Cat/Cat Monster	2	5.1											1	1.2
Deer	1	2.6												
Dog	1	2.6			1	2.1								
Opossum	1	2.6	11	6.0										
Bird	7	17.9	4	2.2	2	4.3		24.0		4.4	15	34.1	6	7.0
Owl			1	0.5										
Fish	16	41.0	70	38.5	1	2.1		3.0		1.4			24	27.9
Alligator													3	3.5
Frog			38	20.9	11	23.4		24.0		53.0	2	4.5	36	41.8
Snake					1	2.1								
Turtle	2	5.1											6	7.0
Conch/shell	2	5.1	8	4.4	4	8.5					14	31.8		
Gourd			3	1.6										
Conventional Zoomorphic					20	42.6		12.0		4.4				
Unidentified Animal			15	8.2				24.0		8.8	3	6.8		
TOTAL	39	100	182	100	47	100	128	100	67	100	44	100	86	100

Source: O'Brien (1994:377-387), Phillips, Ford and Griffin (1951:162-63), Polhemus (1987:578-82), Lewis and Kendrick (1995:123), and Steponaitis (1983a:131, 356-357).

correspond with the faunal evidence and historical sources discussed above. The predominance of fish effigies from sites in the Central Mississippi Valley is especially noteworthy in light of information culled from the de Soto narratives for the possible use of fish as a form of political currency among the provinces of Pacaha and Casqui (Rees 1997:116-118).

As discussed in relation to foodways and faunal remains, regional variation in effigy forms might again be attributed to differences in historical ecology. However, a collection of effigy vessels from the site of Moundville raises additional questions (Steponaitis 1983a:356-357). When considered together, fish comprise a relatively large percentage of the effigy vessels from Moundville, outnumbered only by frog (Table 15). Yet an interesting pattern emerges if Steponaitis' (1983a:131) chronological associations of various effigy vessels are included in this analysis. The fish effigy vessels from Moundville are thought to date to the Moundville III phase (AD 1400-1550) and most of the frog effigies probably also date from this time. The various effigy forms can be separated into two groups: the Moundville I to Early Moundville II phase (AD 1050-1300) and the Late Moundville II to Moundville III phase (AD 1300-1550). The relative percentages of both fish and frog effigies is shown to have increased dramatically with time, while bird and shell effigies declined. Also noteworthy is the overall increase in the number and diversity of various effigy forms (Steponaitis 1983a:131).

Changes in the relative percentages of effigy vessels at Moundville might be partly accounted for in relation to the increased number of interments at the Moundville site after AD 1300 (Steponaitis 1998). Nevertheless, the transformation of Moundville into a vacant ceremonial center and necropolis does not explain the selection and production of certain effigy forms among potters. Nor does long-distance exchange alone account for such wide-ranging stylistic and morphological changes in pottery assemblages. This is especially the case in the Black Warrior Valley, where the evidence for long-distance exchange actually *decreases* during the period in question (Steponaitis 1991:212).

Furthermore, Steponaitis (1983a:357) indicates that only a few of the fish effigies from Moundville appear to have been manufactured non-locally. Explanation of morphological changes in the local production of effigy vessels might thus focus on the likelihood for the diffusion of certain stylistic practices in pottery traditions between the Black Warrior and Central Mississippi valleys.

In fact, both stylistic and functional similarities in the pottery of these regions have long been noted (e.g. Holmes 1903:80-101; Phillips et al. 1951:127-129). The engraved pottery most comparable to Moundville Engraved at Nodena phase sites is Walls Engraved (*variety Walls*), yet little stylistic similarity is discernible in representational motifs (Dye 1998:84; Phillips and Brown 1978:198-202; Rands 1956). Perhaps due in part to a lack of representative samples, Moore (1908:483) noted the relative scarcity of burnished, engraved pottery similar to Moundville. Engraved pottery in both regions incorporated elements of a Mississippian chiefly cosmology, such as the winged serpent motif (Dye 1998:98; Phillips and Brown 1978:199-201). Supernatural iconography appears to have been less common on Walls Engraved vessels, which were more frequently decorated with geometric bands and scrolls (Dye 1998:83, 95-97; cf. House 1993; Phillips et al. 1951:127-129). Walls Engraved was also generally produced later than Moundville Engraved, from the late fourteenth century through the mid-seventeenth century (Dye 1998:98).

The long-distance transmission of thematic elements in craft production and pottery manufacture might account for some of the general stylistic similarities between the Black Warrior and Central Mississippi valleys, as well as the timing of overall trends in effigy forms (Anderson 1997:259-267; Payne and Scarry 1998:22-24; Pauketat 1997b:11; Pauketat and Emerson 1997a:275-276). Given the approximate time frame assigned to the Nodena phase (ca. AD 1400-1650), it is tempting to posit a west-to-east influence in the manufacture of effigy vessels. In fact, there are unambiguous antecedents of most effigy forms in the Central Mississippi Valley, as exemplified in the pottery assemblages

from Banks Village, Cherry Valley, Zebree, and southeastern Missouri (Chapman 1980:244-255; Morse and Morse 1983:237-269; Perino 1966, 1967; Rees 1997). The problem then becomes explaining the later appearance of particular effigy forms, such as fish and frog, in the Black Warrior Valley.

At present, insufficient chronological control makes it difficult to assess precisely when certain themes or styles may have been adopted by the residents of one region or another. Taking into account the variability exhibited in effigy vessel forms in each of the regions discussed above, it will be useful to instead relate style and tradition in the active sense, in terms of contrasting political-symbolic contexts of craft manufacture and use (Dietler and Herbich 1998:241). The contrast between the supernatural representations of engraved iconography, as reflected in themes such as the winged serpent motif, and naturalistic representations of animal effigies, subsequently takes on added importance (Knight 1989a:209). Otherwise fortuitous changes in iconography and representational themes might be better understood in terms of the variable political culture in the Black Warrior Valley.

The crafting of effigy forms, often molded into the vessel itself, can be thought of as dependent upon the actions of pottery manufacturers. Ethnographic and historical sources indicate that potters in the Mississippian Southeast were likely to have been women (Hudson 1976:388; Swanton 1946:549-555). This especially appears to have been the case when production was oriented at the household level (Sassaman 1993; Sinopoli 1991:99). Incising might similarly be thought of as a "nonpostponable" technique, in that it was generally completed before a vessel was fired (House 1993:154; Phillips and Brown 1978: 197; Steponaitis 1983a:28-29). In contrast, the engraving of pottery might have been performed at any time subsequent to manufacture.

The proliferation of "chiefly cult symbolism" of engraved iconography thus contrasts with the increased production of deliberately crafted, naturalistic effigy forms (Knight and Steponaitis 1998:20). Whether or not the crafting of effigy forms and

engraving of iconography can ever be more closely distinguished along lines of gender, there are broader implications for understanding the historical trajectory of Moundville. The people who were manufacturing and engraving pottery were clearly aware of different representational themes, yet made deliberate choices. These representational themes appear to have reflected the increased juxtaposition of a hierarchically-imposed political-religious authority and the segmentary, corporate organization of Moundville (Knight 1998). Overall trends in foodways and effigy vessel forms should be considered in relation to different historical trajectories, in turn raising new questions concerning Mississippian political culture in the Central Mississippi Valley and Southern Appalachians. Information on the construction and settlement histories of monumental landscapes facilitates a comparative analysis of changing political-symbolic contexts.

Monumental Landscapes and Coercion

Evidence for the construction and manipulation of monumental landscapes can provide additional insight into how regional political culture came to be associated with contrasting historical trajectories (e.g., Dalan 1997; Kidder 1998; Knight 1998). Settlement pattern histories can provide information on warfare, coercive violence, and decentralization (e.g., Dye 1994; Hally 1999; Kristiansen 1991; Redmond 1994a), as well as coalition formation and political consolidation (Brumfiel 1994:11). Previous studies of Moundville and outlying mound sites provide an excellent source of comparative information for this regional analysis (e.g., Bozeman 1982; Knight and Steponaitis 1998; Steponaitis 1978; Welch 1991, 1998). Combined with the results of the present study (Chapter Four), it is now possible to attempt a more detailed analysis of the historical trajectory of Mississippian political culture in the Black Warrior Valley. Moundville's political history can in turn be compared with the available evidence for the Southern Appalachians and Central Mississippi Valley.

As discussed earlier, the monumental landscape of Moundville is now thought to have been constructed in a sudden and decisive burst of activity, probably within a few decades between AD 1200 and 1250 (Knight and Steponaitis 1998:15; see Chapter Four, this volume). More than 20 platforms mounds and associated architecture, a purposefully constructed plaza, encompassing palisade, and population of approximately 1,000 people set Moundville apart from any contemporaneous site in the region (Knight 1998; Steponaitis 1998). Moundville was literally the "creative center" of political consolidation in the Black Warrior Valley (Helms 1993:173-191), as it appears to have had no rival in terms of the authority and labor invested into monumental architecture. The ornate, high status burials and differential segregation of residential space indicate as well that a comparable, monumental reordering of the physical and social landscape was never achieved at other sites in the valley (Knight 1998; Peebles and Kus 1977).

At the same time, Moundville was not the only site where political consolidation was negotiated and achieved. The present research indicates that mound construction was in progress or begun within a few decades at four outlying sites: Hog Pen, Poellnitz, Jones Ferry, and Fosters Landing (cf., Welch 1998:162-163). Knight and Steponaitis (1998:16) suggest that the establishment of three of these sites (Hog Pen, Poellnitz, and Jones Ferry) as subsidiary or "second-order" mound centers during this time might have facilitated the movement of tribute or provisions to Moundville. This is generally supported by the relatively small residential populations thought to have been associated with each of the outlying mound sites, in comparison to Moundville. An interesting pattern appears however, when the estimated dates of mound construction for each of these sites are plotted in relation to their respective distances to Moundville (Figure 67; cf. Bozeman 1982:303). Since the riverfront locations of the outlying mound sites suggest the central importance of the river as a mode of transportation, distances are converted into travel time to Moundville, via canoe (Table 4).

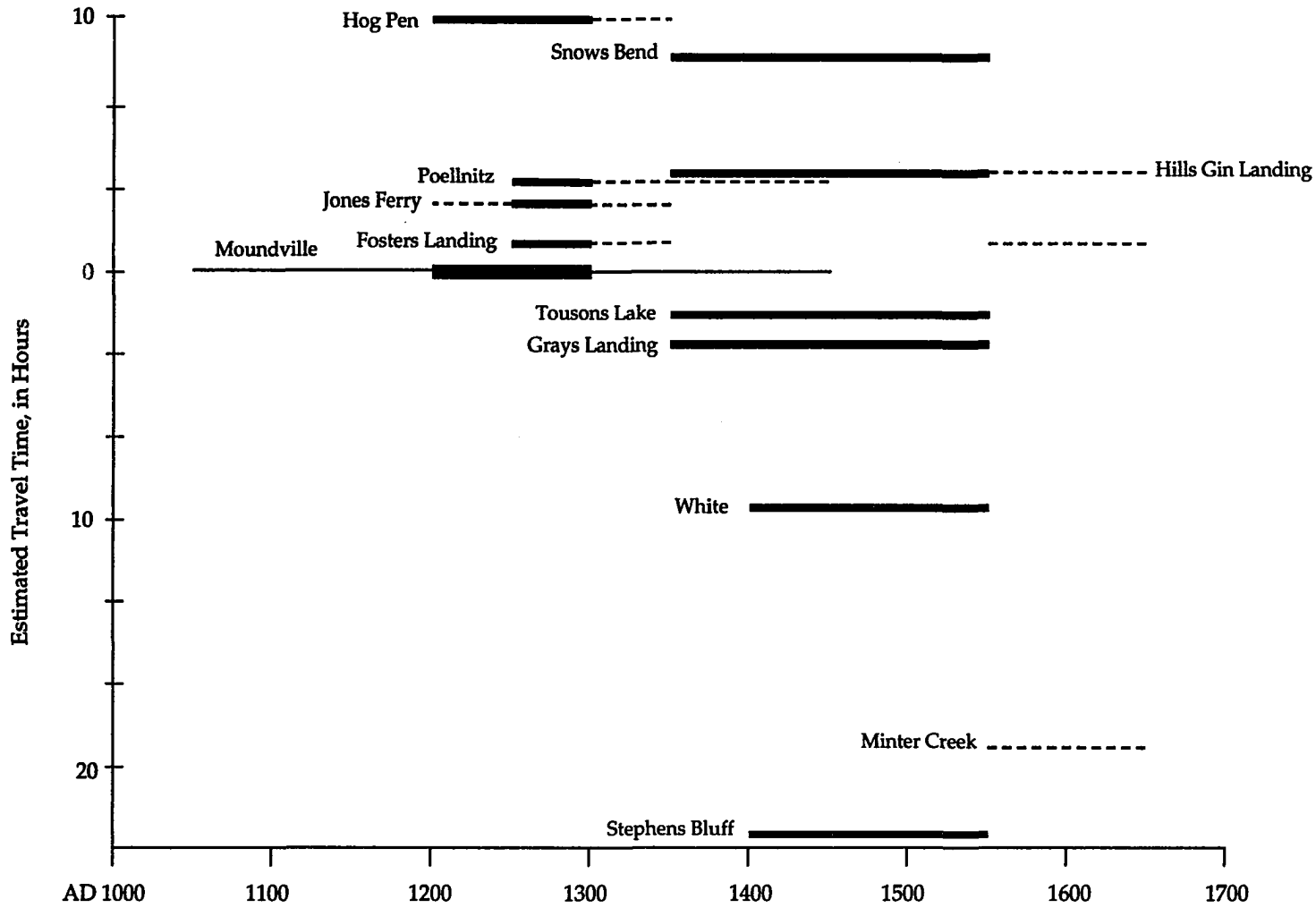


Figure 67. Mound Site Chronology and Travel Time by River to Moundville.

There is both archaeological and historical evidence for the use of canoes in the Mississippian Southeast, for transporting food and other cargo, as well as people (Hudson 1976:315, 1990:132-134; Lafferty 1994:206; Swanton 1911:66-67). Canoes would have made it possible to transport larger loads of foodstuffs such as maize, hickory nuts, and deer more efficiently, as well as reducing travel time. Yet rather than reflecting the spatial efficiency of secondary site locations in food provisioning or channeling tribute to the center, what results is more likely an indication of the respective social relations between the residents of these early mound sites and other outlying communities (cf. Steponaitis 1978). If spatial efficiency in moving comestibles through second-order centers was a major concern, then mound sites might be expected to be more evenly distributed north and south of Moundville. In fact, just the opposite appears to have occurred. Mound construction between AD 1250 and 1300 was undertaken at no less than three sites clustered to the north, within approximately 4 hours travel time to Moundville.

The residents of Fosters Landing, Jones Ferry, Poellnitz, and nearby communities were either drawn into Moundville's political consolidation, as reflected in the northward extension of the monumental landscape of the center. In contrast, the next closest mound site was Hog Pen, which was nearly 10 hours or 47.5 km by river to Moundville. That mound construction at Hog Pen appears to have been initiated earlier than these other outlying sites may also be significant, although the timing is unclear based on current levels of chronological refinement. Perhaps more importantly, there is presently no evidence for any second-order mound centers dating from this time south of Moundville.

If outlying mound sites were in fact second-order centers for moving foods, provisions, or other resources to Moundville during the thirteenth century, then the pattern of three mound sites clustered to the north suggests that farmsteads and households may have also been located within a relatively close range, approximately 4

to 6 km (Figure 68). Correspondingly, this suggests that Moundville-related communities were at this time either substantially fewer in number or practically nonexistent south of Moundville. It is also possible that communities to the south were not taking part in Moundville's political consolidation on the same scale or in the same manner as valley residents to the north. Since the distribution of farmsteads and non-mound sites throughout the valley is only beginning to be addressed (e.g., Hammerstedt 1999, 2000), the apparent cluster of mound sites can only point out the need for additional systematic survey both north and south of Moundville.

Nonetheless, it is noteworthy that at least four non-mound sites, with occupations attributed to either the Moundville I or early Moundville II phases, are all located north of Moundville (Maxham 2000; Michals 1998; Nielsen et al. 1973; Welch 1998). Hammerstedt (2000) has more recently identified what appear to be Late Woodland and Early Moundville I phase farmstead clusters in the vicinity of Fosters Landing and Grays Landing. In this light, the evidence for earlier than expected mound construction at Fosters Landing may roughly correspond with earlier and contemporaneous farmsteads in the vicinity. It also raises the possibility that mound construction dates from this time at Grays Landing, as well (Welch 1998:157-158). There otherwise appears to have been a notable disparity in the distribution of farmstead and mound site clusters north and south of Moundville.

The construction of monumental landscapes within a relatively short distance from the ceremonial center also suggests an alternative to the three-tiered political-administrative hierarchy of ceremonial center, secondary sites, and farmsteads. Platform mounds at the three closest sites might have served not only as the residences of a subordinate elite who collected tribute or mobilized foodstuffs for a Moundville elite, but as ritual platforms for the expansion and augmentation of Moundville's authority through ritual feasting and coalition building. If this is the case, these sites might have served as ceremonial outposts for a visiting elite entourage from Moundville, rather

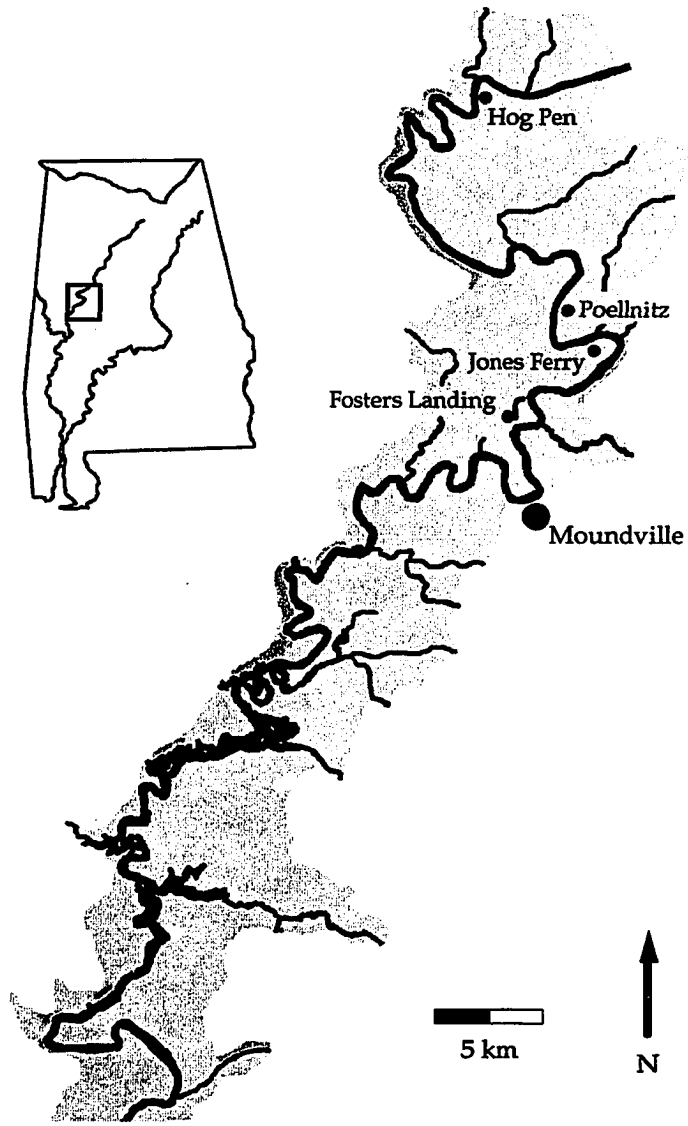


Figure 68. Outlying Mound Sites in the Black Warrior Valley, ca. AD 1250-1300.

than the permanent residences of an elite who were subordinate to the paramount elite of Moundville (i.e., Smith and Hally 1992). In contrast to the three-tiered political-administrative model, this would account for the apparent clustering of farmstead and mound sites to the north.

In fact, there is some evidence for the display of foods in the context of ritual feasting in mound contexts at both Fosters Landing and Hog Pen (Welch and Scarry 1995; this Chapter). Unfortunately, there is presently insufficient data to further assess the possible residential uses of platform mounds. In contrast to the monumental landscape of Moundville however, an important distinction can be made in regards to mound use. Knight (1998) points out that the pairing of mounds at Moundville corresponded with their uses as substructures for elite residences and mortuaries:

> In my reading of this phenomenon, each elite residential mound is paired with at least one adjacent mound showing a mortuary use. This suggests that the basic building block of the Moundville mound group, so often repeated throughout the Mississippian sphere, is the functional pairing of a noble residence with an ancestral mortuary temple. It seems reasonable to suppose that each such pair at Moundville is an architectural manifestation of one of the primary corporate segments of the Moundville community (Knight 1998:51-52).

If this principle of corporate group organization is extended to outlying mound sites, it becomes apparent that the "basic building block" so evident at Moundville is missing. Rather than paired residential and mortuary mounds, the usual pattern in Moundville's countryside appears to have been the single platform mound. Furthermore, there is no evidence that the mounds at outlying sites were used as mortuaries. Some of the mounds may well have supported elite residences, but rather

than an elite subordinate *to* Moundville, it is just as likely that the platform mounds at these early outlying sites served as focal points for feasting activities and coalition building by an elite *from* Moundville.

Following a century or more of political consolidation, another important trend can be discerned in the monumental landscape of the Black Warrior Valley. Much of this information was made available as a result of the UMMA survey in the late 1970s (Bozeman 1982:303), yet can now be reinterpreted based on further refinements to the regional chronology (i.e., Knight and Steponaitis 1998; Steponaitis 1998). Within a century and a half after the initial political consolidation at Moundville, at around AD 1350 and probably no later than AD 1400, additional mound construction was begun at 7 or more outlying mound sites (Welch 1998:163-164). Coincidentally, mound construction and use at three of the four earlier outlying mound sites appears to have ceased (Fosters landing, Jones Ferry, and Hog Pen), at sometime between AD 1300 and 1350 (Figure 69). Difficulties in obtaining more precise dates for alterations in the monumental landscape of Moundville's countryside are partly a reflection of the earlier phase-based chronology. Contrasted with the recent chronology of demographic trends and events proposed for Moundville (e.g., Steponaitis and Knight 1998; Steponaitis 1998), the regional pattern of mound abandonment and construction takes on added significance.

While it is possible that mound construction or use may have continued at Poellnitz after AD 1300, Welch (1998:154) notes that there may instead have been "two discontinuous occupations" dating from ca. AD 1200-1300 and sometime after AD 1350. A somewhat similar pattern of mound construction, use, abandonment, and reoccupation may be surmised for Fosters Landing and other outlying sites, although evidence for post-AD 1300 mound construction episodes at Fosters Landing appears to have been destroyed. The Hog Pen mound, for which more information is available, dates primarily from the late Moundville I phase and may have been occupied as late as

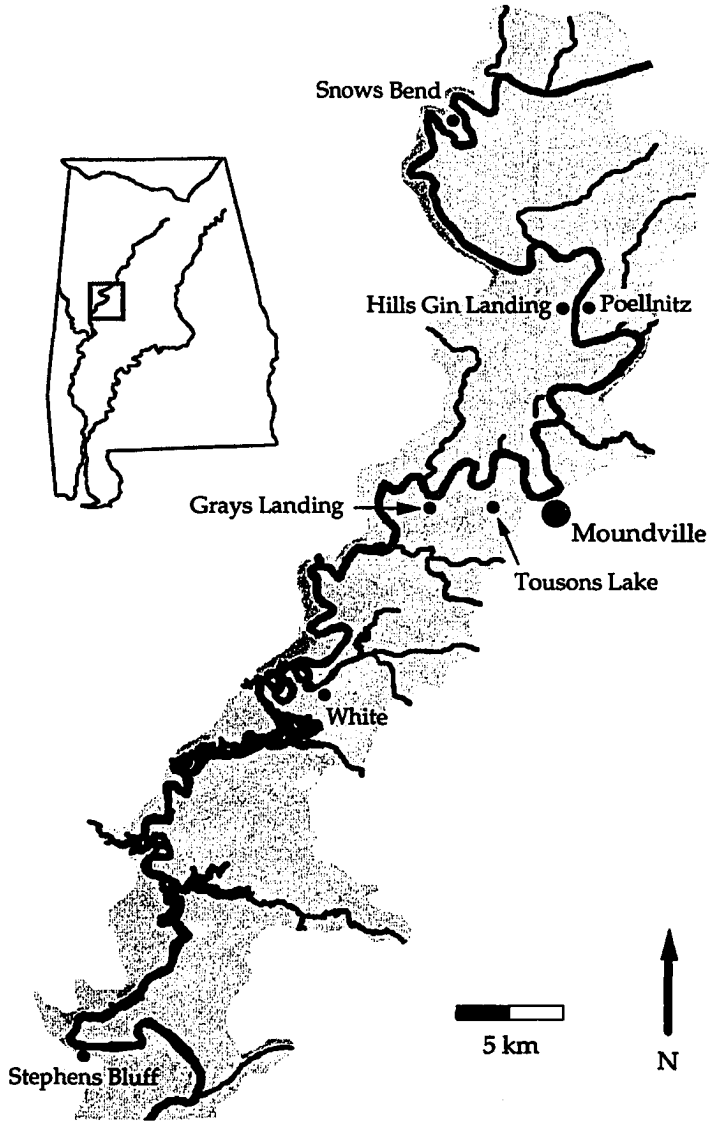


Figure 69. Outlying Mound Sites in the Black Warrior Valley, ca. AD 1400.

AD 1350 (Welch 1998:150-152; Welch and Scarry 1995:401). Although the mound construction chronologies still lack adequate chronological refinement, it is notable that out-migration from Moundville after AD 1300 appears to have been paralleled by the abandonment of several mound precincts within 10 km to the north. A yet earlier instance of mound abandonment occurred at the Asphalt Plant site, immediately prior to political consolidation (Steponaitis 1992:9).

During the mid-fourteenth century, what Knight and Steponaitis (1998:17-21) refer to as the "paramountcy entrenched," additional mounds were constructed at outlying sites north and south of Moundville (Figure 67). At least 4 mound sites were constructed beginning at approximately AD 1350, 2 to the north and 2 to the south of Moundville. These include Snows Bend, Hills Gin Landing, Tousons Lake, and Grays Landing. Welch (1998:163) suggests that mound construction at Poellnitz, Fosters Landing, and Cook may also date to this time. As mentioned earlier, the information on the mound at the Cook site is fairly inconclusive. The present study indicates that the primary mound construction episodes at Fosters Landing date from the early Moundville II phase. Nonetheless, the Poellnitz mound may have been reoccupied at this time, bringing the number of outlying mound sites to five.

In terms of travel time by river, four of these sites were once again within 4 hours of Moundville. In contrast, Snows Bend was 40 km by river, or approximately 8.4 hours. The successive abandonment and potential relocation of mound precincts north of Moundville is suggested not only by the proximity of Hog Pen and Snows Bend, but roughly equivalent distance to the ceremonial center. Welch (1998:163) thus suggests that Snows Bend might have replaced Hog Pen as a secondary center. Similarly, the Jones Ferry mound may have been abandoned prior to the reoccupation of Poellnitz or construction of Hills Gin Landing mound. By around AD 1400, or the early Moundville III phase, additional mounds were constructed at two sites: White and Stephens Bluff (Hayward et al. 1995; Welch 1998:163-164). White was slightly closer to Moundville than

Snows Bend (30.6 km by river, or approximately 9.6 hours), but Stephens Bluff was considerably more remote, at approximately twice the distance (74 km by river, or approximately 23 hours).

Mound construction and use at Snows Bend, Hills Gin Landing, Tousons Lake, Grays Landing, White, and Stephens Bluff appear to have continued well into the Moundville III phase, perhaps as late as the mid-sixteenth century at some sites (Welch 1998; see Chapter Four, this volume). The mound at the Poellnitz site was once again abandoned, probably by AD 1450. Although the abandonment and construction of mound precincts from ca. AD 1300 to 1350 suggests a half-century hiatus, this may again be a product of the lack of precision in the phase-based chronology and subsequent dating of mound construction. Given what is known regarding the rapidity of mound abandonment and construction at Asphalt Plant and Moundville, it seems likely that the fourteenth century establishment of outlying mound sites corresponded more closely to the proposed out-migration from Moundville (Knight and Steponaitis 1998; Steponaitis 1998). Considering the drastic decline in residential structures and middens at Moundville after AD 1300, the possibility of mound construction and elite residences at these sites dating within the first decades of the fourteenth century must be reexamined through future research.

The transformation of Moundville into a nearly vacated mortuary center or "necropolis" and elimination of the palisade, likely followed in quick succession by the abandonment and establishment of outlying mound sites, suggests further changes in the political culture of the Black Warrior Valley (Knight and Steponaitis 1998:18-19). As noted for the mound sites constructed prior to AD 1300, the mound precincts at these sites may have served as focal points for ritual feasts, as well as elite residences. The ceremonial center appears to have served as the principal mortuary facility for residents of outlying sites, since the number of burials at Moundville increased during this time

(Steponaitis 1998). These appear to have included among the most exotic burial goods associated with a paramount elite (Knight and Steponaitis (1998:18).

At the same time, additional changes in mortuary practices suggest that the prominence of Moundville as a ceremonial center might have eventually been met with increased opposition. The earliest evidence for cemeteries at outlying mound sites dates to AD 1400 at Snows Bend and White (Welch 1998:164). Both of these sites would have been at considerable distances from the mortuary facilities at Moundville, approximately 8 to 10 hours by river. The lack of evidence for cemeteries at other outlying mound sites may in one sense reflect their greater proximity to the mortuary facilities at Moundville. It might also provide some indication of the respective social relations between residents of outlying sites and Moundville.

The political culture of Moundville after approximately AD 1300 to 1350 can be characterized as increasingly decentralized based on the above information on mound construction and settlement histories (cf., Kristiansen 1991:19-20). Knight and Steponaitis (1998:16) suggest that additional outlying mound sites might have been required "to serve and administer an increased rural population, expanded no doubt by the virtual emptying of the primary center" (cf. Welch 1998:165). The sequence of changes in the monumental landscape might also be attributed to a purposeful reemphasis of the preexisting corporate organization (i.e., Knight 1998), in direct contrast to the ranked order established at Moundville. In this case, the outlying mound precincts were established as local centers for ritual feasting and coalition building activities, by the same corporate groups that Knight (1998:52-54) describes for Moundville.

Although there are additional mound sites of which little is known, the number of outlying mound sites known to date after AD 1400 corresponds rather closely with the eight residential and mortuary mound pairs described by Knight (1998:53) for Moundville. Such decisive political restructuring on a larger scale would certainly

account for the relatively abrupt out-migration from the center, abandonment of mound sites in the vicinity, and construction of additional mound precincts at greater distances from Moundville. In contrast, neither gradual population increase or resource depletion can fully explain this sequence of changes in the monumental landscape (Knight and Steponaitis 1998:18; Schoeninger and Schurr 1998:132). Just as out-migration from Moundville may have been a "conscious decision by the elite to enhance the sanctity of the center" (Knight and Steponaitis 1998:18), the abandonment and establishment of mound precincts at more distant outlying sites may have represented increased opposition among corporate groups to the ranked structure imposed at the center. In this respect, the location of Stephens Bluff not only calls into question whether the residents of the more distant outlying sites were part of the Moundville polity (Welch 1998:160), but whether the political and symbolic capital of thirteenth century Moundville was being undermined by a newly resurgent corporate group orientation.

While it is possible to only begin to address such arguments based on the available settlement data, one additional source of information can be reconsidered in this light. The proliferation of engraved iconography depicting supernatural themes such as the winged serpent motif appears to coincide with the settlement history outlined above, in that such craft items became less restricted to elite contexts after AD 1300. In an increasingly decentralized polity, attempts to reaffirm or reanimate the legitimate authority represented in the ceremonial center may well have resulted in "a communalization of the chiefly cult symbolism" (Knight and Steponaitis 1998:20). At roughly the same time however, naturalistic representations of animal effigy forms increase and become more diversified, as evident in the numbers of fish, frog, turtle, and other effigy vessels dating after AD 1300 from Moundville (Table 15). That the juxtaposition of such representational themes occurred after out-migration and appears to have coincided with decentralization lends further support to the increased

opposition between a hierarchically-imposed political-religious authority and segmentary, corporate organization (i.e., Knight 1998).

In comparison to the above mound construction and settlement chronology, relatively less is known archaeologically regarding the historical trajectories of Mississippian polities in the Southern Appalachians and Central Mississippi Valley. Hally (1993, 1996a, 1999) has produced the most extensive survey to date of settlement pattern histories of Mississippian polities in the Southern Appalachians, focusing specifically on the sixteenth century Coosa polity (cf. Hally 1994b; Hally and Langford 1988; Hally et al. 1990; Hudson et al. 1985). Interpretations of the de Soto narratives have provided considerable insight into the archaeological manifestations of Coosa, as well as Mississippian political culture in the Southern Appalachians (Hudson 1988, 1997; Smith and Hally 1992). As noted earlier, Coosa would have subsumed at least two distinct pottery traditions (referred to as Lamar and Dallas culture), and as many as five different phases. Lacking the more obvious similarities in pottery type distributions evident in the Black Warrior Valley, the Citico-style gorget has instead been proposed to loosely reflect the boundaries of Coosa (Hally et al. 1990:133; Hudson et al. 1985:732-733; Smith 1987:108-112). The Citico-style gorget is thought to have been "symbolically associated with some institutional order or status group within the chiefdom of Coosa" (Hudson et al. 1985:732-733).

When the settlement histories and monumental landscapes of the region are examined however, it becomes apparent that the Coosa polity would have incorporated as many as seven roughly contemporaneous site clusters in the Southern Appalachians (Hally et al. 1990:124-131). Further, the existence of a pre-imminent or primary ceremonial center, as evident in the Black Warrior Valley, is not clearly evident in the Southern Appalachians. Hally (1994b:239-241; 1999:102) estimates that platform mounds were constructed at 12 sites in the upper Coosa and Etowah river drainages, with considerably more located in the Tennessee River Valley to the north. As mentioned

earlier, the Little Egypt site has been proposed as the political-administrative center of Coosa. Yet in terms of monumental architecture, at least three other sites in the region appear to have rivaled Little Egypt (Hally 1999:100-104).

Historical and archaeological sources have consequently been interpreted as evidence that political authority in the province of Coosa was loosely integrated through alliances, possibly involving periodic visits by an elite (Hally 1994b; Smith and Hally 1992). As in the Black Warrior Valley, ritual feasts and food provisioning appear to have included maize and preferential cuts of deer, likely oriented around mound precincts. Yet Coosa was distinct from thirteenth century Moundville, with its tightly nucleated population and well-ordered monumental landscape. The term "paramount chiefdom" has consequently been used to describe Coosa, in order to distinguish its relatively more decentralized settlement hierarchy and political alliances (e.g., Hally 1994b:227). In contrast to Moundville, political consolidation in the Southern Appalachians did not entail a similar, centripetal restructuring of social relations. Instead, ritual feasts and activities aimed at coalition formation appear to have resulted in a series of decentralized political alliances and rivalries, among otherwise autonomous polities. Mississippian communities associated with Coosa nonetheless appear to have been united in resistance to the demands of the de Soto expedition for slaves and women (Hudson 1997:199-219).

As suggested by the evidence for the cessation of mound construction at sites in the region, political alliances within Coosa appear to have been disrupted by the de Soto expedition and may have led to a decline of political authority within a few decades, as early as AD 1565 (Hally 1994b:249). Alternatively, the disappearance of Citico-style rattlesnake gorgets within the first decades of the seventeenth century have also been associated with the demise of the Coosa polity (Smith 1987:143-145, 1994:261-272). Smith (1997, 1994, 2000) provides a detailed study of the decline of Coosa, based on archaeological and early historical sources. He attributes political fragmentation and a

loss of centralized authority to the depopulation and demographic disruption that resulted from the spread of disease epidemics and arrival of European explorers. Smith (1987:89-112) suggests that the Coosa polity had ceased to exist by AD 1630, based on evidence for the cessation of mound and palisade construction, loss of hierarchical settlement pattern, decline in craft specialization, and discontinuation of mortuary practices that incorporated ornate burial goods.

Based on the evidence for changes in mortuary practices and decline in the number of sites dating between AD 1540 and 1630, Smith (1987:113-142) presents a detailed examination of regional depopulation, the "deculturation" of Mississippian peoples, and subsequent migration into what became the eighteenth-century homeland of the Creek Confederacy. Rather than reiterate the above argument as an example of "deculturation" or cultural collapse, the subsequent formation of the Creek Confederacy might also be understood in terms of an earlier, yet reinvented Mississippian political culture. From this perspective, the process of confederacy formation outlined by Smith (1987:129-142) and Knight (1994b) argues against any widespread "loss of culture." Smith (1987:129-137) states that the formation of the Creek Confederacy during the late seventeenth century was a response to "external pressures" that included warfare, slave raids, the introduction of firearms, and movement of groups from the north. These "refugee groups" appear to have banded together for mutual defense, ultimately forming a confederation through intermarriage and continued interaction (Smith 1987:142; cf. Waselkov 1993). The formation of proto-Creek alliances might be understood not only in terms of these external pressures, but based on the deliberate reproduction of earlier political alliances in the Southern Appalachians.

As a fundamental political unit of the Creek Confederacy, the *talwa* (town) may have been organized in a fashion similar to earlier political alliances in the Southern Appalachians (Knight 1985:27-32, 1994b:387). Knight (1994b:375, 379) suggests that alliances among the core towns were structured as "status relationships" that

culminated in the political consolidation of previously distinct Mississippian-Lamar peoples in the Coosa, Lower Tallapoosa, and Lower Chattahoochee river valleys. Subsequent arrivals were incorporated not as equal members as implied by the term confederacy, but as "peripheral" communities (Knight 1994b:374). Knight (1994b:389) suggests that a shared Muskogee language might have been the foundation for a "common ethnicity," that might have in turn contributed to the process of confederation. The practical necessities of political alliance may have proved unattainable when differences in identity were insurmountable (cf.. Smith 1987:142). The shared practices of alliance formation would have likewise set the historical precedent for the creation of new political identities.

In comparison, a substantially different historical trajectory has been proposed for Mississippian political culture in the Central Mississippi Valley. Any such study is limited by the relative scarcity of reliable information on mound construction and settlement histories in the region (Mainfort 1996). The densely populated, nucleated settlements dating from the first half of the sixteenth century have been contrasted with the large-scale abandonment of sites by the late seventeenth century (Morse 1991, 1993; Phillips et al. 1951:343). As noted earlier, the Nodena phase alone is thought to have included as many as 61 contemporaneously occupied sites in three distinct clusters in northeastern Arkansas (Morse 1990:77-83). Additional communities ostensibly associated with the Nodena phase were located east of the Mississippi River (Mainfort and Moore 1998). Unfortunately, a long history of site destruction and lack of more systematic surveys make it difficult to assess how many sites in the region had platform mounds (D. Morse 1990:77-78; P. Morse 1981:56).

In contrast to the Black Warrior Valley, numerous mound centers associated with the Nodena phase were located within relatively close proximity, throughout a considerably larger area (D. Morse 1990). As in the Black Warrior Valley, water transportation would have facilitated the efficient movement of goods and people across

the landscape. The large number of warriors in canoes that confronted de Soto on the Mississippi River demonstrate their use in mobilizing a military force (Hudson 1997:284-285). Even more so than the Southern Appalachians, it might be expected that the potential productivity of the Eastern Lowlands and relative ease of transportation would have contributed to a region-wide political consolidation. The entire province of Coosa appears to have been drawn together through a series of alliances within a relatively short period that may have lasted no more than a century. Political consolidation was achieved in the Moundville polity in half that time. Yet within a century and a half prior to the de Soto expedition, region-wide political consolidation had eluded the polities in the Central Mississippi Valley.

These contrasting historical trajectories reflect distinct variations in coercive violence and warfare. Mississippian political culture in the Central Mississippi Valley appears to have involved authority that was contested and resisted more often than acquiesced, with violent conflicts between polities that likely predated mid-sixteenth century Spanish intrusion (e.g. Dye 1990, 1994, 1995). While palisaded towns were noted primarily in the northern and southern hinterlands of the Coosa province, the capitals of Casqui and Pacaha were both heavily fortified with palisades and moats. The palisade at Moundville was in contrast abandoned after AD 1300, suggesting that there were few if any remaining external threats (Knight and Steponaitis 1998:18). Most of the towns in the province of Pacaha were described as being enclosed by palisade walls (Elvas 1993:80-93, 113-121). In fact, archaeological evidence for Parkin phase sites indicates that fortifications were common in the province of Casqui, where residents apparently lived behind the walls, in tightly nucleated villages (Morse 1981:58-59). The Casquins are reported to have desecrated the mortuary temples of Pacaha, looting the town, and destroying crops growing in the fields (Elvas 1993:118-119; de la Vega 1993:397-404).

Rather than pursuing inter-polity alliances or compliance, Pacaha is described as having subjugated other provinces in the region (Hudson 1997:293-303). The chiefs of

Casqui and Pacaha both entered into alliances with the Spaniards against one another, in quick succession. Ongoing conflicts between Pacaha and Casqui might thus have presented a barrier of sorts to the political consolidation of the region by other means. Warfare in the form of raids and ambushes may in one sense have been common throughout the Mississippian Southeast, but warfare alone did not invariably result in political consolidation (Dickson 1981; Gibson 1974; Peregrine 1993; Steinen 1992). Nor should such conflicts be attributed solely to invading European armies (Dye 1995).

Warfare and coercive violence might have also been related to a different expression of symbolic capital in the Central Mississippi Valley. In contrast to the Southern Appalachians, it has been suggested that the de Soto expedition was more frequently presented with gifts of fish in the provinces of Pacaha and Casqui. Although the archaeological evidence is inconclusive, fish may have also been consumed in large quantities at ritual feasts. Relatively higher percentages of fish effigy vessels among polities in the Central Mississippi Valley might have also been related to its use as a political currency and consumption in ritual feasts. In the context of coercive violence and warfare, fish would have represented a more opportunistic political currency for ritual feasts, coalition building, and peace negotiations. Stores of surplus maize might have more easily been destroyed, as the Casquins appear to have demonstrated in their raid on Pacaha (de la Vega 1993:400). Warfare among polities in the Central Mississippi Valley might have ultimately constrained the use of maize as symbolic capital in ritual feasts, in contrast to what is known regarding foodways in the Black Warrior Valley and Southern Appalachians.

As in the province of Coosa, political decline in the Central Mississippi Valley has been tied to population loss following the introduction of Old World diseases. Nodena phase sites were abandoned within a century following the de Soto expedition. Morse (1990:81) states that Upper Nodena and twenty other sites in the Wilson-Joiner cluster all appear to have been abandoned even sooner, by the end of the sixteenth century.

Depopulation as a result of disease epidemics following the de Soto expedition has been estimated at between 80 and 95 percent (D. Morse 1990:96; Phillips et al. 1951:419). Ramenofsky (1987:69) extends the argument for a late sixteenth to early seventeenth century "catastrophic population loss" throughout the entire Lower Mississippi Valley, based on a rapid decline in available settlement counts. A cultural collapse is thought to have ensued, resulting in the amalgamation of populations into historic villages, such as those of the Quapaw (cf. Dobyns 1983). While the arguments for disease-induced population loss and regional abandonment are convincing, this does not account for differential responses among Mississippian peoples. Nor does it explain why apparently "similar and equally dramatic attrition" among Caddoan and Southern Appalachian polities resulted in strikingly different historic tribal confederacies (Ramenofsky 1987:69; cf. Baird 1980; Hoffman 1993b:265-266, 1994; Perttula 1992).

Population loss and regional abandonment might have been effected by numerous factors, including population density, the proximity of communities to one another, demographic movements, and interaction between polities. The disintegration of polities might have been especially rapid in the Central Mississippi Valley considering the archaeological and historical evidence for high population densities, combined with the evidence for protohistoric warfare and coercive violence (Dye 1994, 1995). Given the considerable difficulties in identifying the early historic descendants of Mississippian peoples in the region, the potential ethnic affiliation of the Quapaw continues to be debated and cannot be resolved here (Baird 1980; Brain 1988:312-322; Hoffman 1990, 1993a, 1993b, 1995; House 1991; Morse 1990, 1991; Rollings 1995; Sabo 1995:77-80; Schambach 1999; Swanton 1946:176). Nonetheless, protohistoric ethnogenesis in the Central Mississippi Valley followed a distinctly different course than in the Southern Appalachians. The available evidence suggests that different regional polities did not coalesce to form historic groups similar to the Creek Confederacy. Instead, regional abandonment of the Eastern Lowlands was followed by out-migration and

establishment of isolated towns encountered by seventeenth-century French explorers (Phillips et al. 1951:399-419). Differential responses to population loss in the Southern Appalachians and Central Mississippi Valley thus appear to have also involved contrasting historical trajectories of Mississippian political culture.

In history, power begins at the source.

– M. Trouillot (1995:29), *Silencing the Past: Power and the Production of History.*

American history is longer, larger, more various, more beautiful, and more terrible than anything anyone has ever said about it.

– J. Baldwin

CHAPTER SIX:

Summary

As an investigation of regional political development and decline as an historical process, the present study has argued for a rapprochement of archaeology, historical anthropology, and political theory. This argument began with a reconsideration of political anthropology and its various applications in the study of prehistory. As a result, the development of a political approach during the past three decades was made explicit. By the 1970s, a major revision was underway in how archaeologists studied and conceptualized Mississippian culture, drawn forward by earlier neoevolutionary anthropology and systemic-processual archaeology. One of the most salutary achievements of Mississippian archaeology during this time was the identification of distinct, politically-integrated societies, or chiefdoms (e.g., Peebles and Kus 1977).

The archaeological correlates of social ranking were identified, including differentiation in mortuary practices (e.g., Peebles 1974). The importance of regional centralization was recognized as reflected in settlement hierarchies and the political mobilization of food or tribute (e.g., Steponaitis 1978). Systemic-processualism thus provided the impetus for the study of political development within the explanatory framework of cultural and sociopolitical evolution (e.g., Fried 1962; Sahlins). Instead of a pan-regional, cultural expansion, the origin of Mississippian culture was accounted for in terms of the *in situ* evolution of sociopolitical hierarchy and complexity.

Systemic processualism has continued to provide the working model for Mississippian culture as a functioning system well-adapted to riverine environments (e.g., Smith 1978b). Maize agriculture, formerly regarded as one of many culture traits, is now less often thought of as a prime mover in sociopolitical evolution. Instead, it is viewed as one of many factors in political consolidation and the Mississippianization of indigenous southeastern societies (Fritz 1992; Lopinot 1997; Pauketat and Emerson

1997b; Scarry 1993a, 1993c). Mississippian polities have increasingly been described in terms of regional variation and historical trajectories that followed different paths to complexity (e.g., Pauketat 1994; Steponaitis 1991).

Yet greater appreciation of regional variation has not loosened the hold of systemic-processualism in explanations regarding political development and decline. For those Mississippian polities that declined prior to European contact, evidence has been sought for maladaptive behaviors, environmental causes, or biological determinants (e.g., Lopinot and Woods 1993; Schoeninger and Schurr 1998). Sixteenth century Mississippian polities and culture have in turn been described as prematurely terminated by the diseases carried by European explorers. This has in turn prompted some speculation as to the evolutionary potential or inherent constraints of Mississippian polities (e.g., Krause 1985:39). One egregious shortcoming of this systemic-processual view of culture has been a dismissal of the capacity of Mississippians, and ultimately Native Americans to reproduce cultural traditions under the onslaught of depopulation, colonization, or significant environmental changes. Cultural practices are from this view either "pristine," acculturated, or deculturated (Ramenofsky 1987:71; Smith 1987:128). It is noteworthy that this notion of the demise of cultural systems resembles earlier arguments regarding a pan-regional Mississippian decline.

Emphasis on the culture concept in American archaeology, what in the past bound it closely to cultural anthropology, has been increasingly fragmented within the past few decades (Brumfiel 1992; Watson 1995). Beginning in the 1980s, the application of certain elements of anthropological political economy challenged many of the assumptions of cultural evolution and systemic-processualism, including the notion that certain cultures were more or less well-adapted (Cobb 1993; e.g., Kohl 1984; Spriggs 1984; Welch 1986). What Brumfiel and Earle (1987) refer to as a political approach has called into question earlier assumptions regarding culture and the development of cultural systems. From

the perspective of political economy, maize agriculture was not merely an ecological cause of sociopolitical evolution, but an opportunity for the political and symbolic manipulation of a potential surplus.

Yet the historical materialism employed in the study of prehistoric political economy, in contrast to structural Marxism or neo-Marxist perspectives in anthropology, has been decidedly materialist, influenced as much by cultural materialism (Godelier 1977). Occasionally drawing on World Systems theory, the study of Mississippian political economy has focused on prestige goods as a form of divisible wealth that generated prestige and power (e.g., Peregrine 1992). Applications of central place theory have similarly produced synchronic models of political economy (e.g., Steponaitis 1978). Prehistoric political economy has even been subsumed within earlier models of cultural evolution, suggesting that political and economic development represent an unmitigated response to population growth (e.g., Johnson and Earle 1987; cf. McGuire 1992).

Beginning in the 1990s, interest has focused on prehistoric political economy as non-capitalist social relations of authority, manifested through various sources of power and elite-nonelite interactions (e.g., Blanton et al. 1996; Cobb 1993; Earle 1991c; Pauketat 1992; Steponaitis 1991). In particular, Earle (1997:193-211) identifies three principle sources of power (economic, military, and ideological) that he suggests roughly corresponded with different types of regional political economy. Although Earle ultimately correlates these types of power with multilinear cultural evolution, it is the constituent social relations of authority within prehistoric political economy that have become the focus of study. These sources of power are comparable to the power relationships and structural power addressed in historical anthropology (Gellner 1988:20-23, 261-272; Wolf 1990, 1999). In short, a political approach has emerged from archaeological political economy that seeks to examine the different historical trajectories of regional polities.

The ongoing critique of neoevolutionism and interest in political dynamics, as opposed to political economy, has led to an emphasis on the inherent instabilities of Mississippian polities, and chiefdoms in general (e.g., Hally 1996a; Redmond 1998a; Scarry 1996b; Spencer 1994). The focus on factionalism has in this respect involved greater interest in historical variation (Anderson 1994a; Brumfiel 1989, 1994). In Mississippian archaeology and elsewhere, the development and decline of regional polities has been described in terms of cycling based on the observation that political and economic structures were ostensibly recurrent (Anderson 1994b, 1996b; Redmond et al. 1999; Wright 1984). While a clear advance over system-centered perspectives of cultural evolution (Brumfiel 1992), models of political cycling have reemphasized simple and complex chiefdoms (or tribes) as repetitive sociopolitical stages. It was argued in Chapter Three that political cycling parallels to large extent the concept of medium-term conjunctures in historical anthropology. Rather than refocus on recurrent, medium-term structures, or confine human agency to factional competition, it was argued that different historical trajectories would be represented in a broader range of political-symbolic actions (praxis).

The development and decline of Mississippian polities was not recurrent when viewed on a regional scale, nor is it fully accounted for by explanations of pan-regional expansion, evolution, or collapse. Political culture was instead proposed as an historical dialectic of structural power and praxis, involving not only factionalism, but a range of social relations of authority that varied from ideological compliance and domination to coercion and resistance. Practices such as factional competition, coalition building, alliance formation, and coercion were part of an historical process of political consolidation, centralization, and decentralization. As with power, Mississippian political culture was in this sense relational and negotiated. Rather than portray power as one-sided or incomplete (as in economic *versus* ideological power), it was argued that social relations of authority might instead be described in terms of symbolic capital (e.g.,

Bourdieu 1990:112-121). The symbolic capital examined here involved a wide range of activities that included gifts of food and feasting, the political symbolism of ceramic vessels, the construction of monumental landscapes, and coercive violence.

One of the key factors in the advancement of this approach is the further refinement of regional chronologies. Prior to the 1980s, archaeologists were ill-equipped with a single culture historical unit in the Black Warrior Valley to explain political development and decline as an historical process. Considerable variation and temporal distinctions were masked within the Moundville phase of AD 1200-1500 (or AD 1050-1550). This included generalizations regarding political and economic structure based on the assumed contemporaneous occupation of outlying mound sites (McKenzie 1966; Peebles 1978:373; Steponaitis 1978). Sociopolitical boundaries were from this view geographically extensive or amorphous, reflecting similarities in material culture and landscapes broadly representative of Mississippian culture. The main points of contrast in this scheme were the Woodland period precursors and protohistoric societies from which Moundville had ostensibly evolved and devolved. The three-phase ceramic chronology established by Steponaitis (1983a:79-132) brought greater temporal resolution to this chronology and identified two important junctures in this cultural homogeneity, at approximately AD 1250 and AD 1400.

More chronologically sensitive information have been accumulated as additional investigations of site stratigraphy, mound construction, and stylistic changes in pottery have been augmented by chronometric dating (e.g., Bozeman 1982; Knight 1992, 1994a; Knight and Steponaitis 1998; Steponaitis 1998; Welch 1998). The developmental stages forwarded by Knight and Steponaitis (1998:8-24) essentially revised the earlier concept of phases as homogenous "space-time-culture" units, instead postulating "a new history of Moundville" based on regional political dynamics and social interactions (cf., Phillips and Willey 1953:620). An overview of archaeological research conducted in the Black Warrior Valley during the past century demonstrated a trend toward the study of

political development and decline as an historical process (see Chapter Four). Similar advances in Mississippian archaeology have elsewhere led to even more refined regional chronologies and reinvented the concepts of phases and sub-phases as heuristics with which to organize, study, and understand Mississippian political history (e.g., Pauketat 1994:40-65; Pauketat and Emerson 1997b). Armed with this understanding of temporal-spatial units as delineating an historical process, a comparative analysis of Mississippian polities can examine the evidence for political consolidation, centralization, and decentralization.

The present study focused primarily on the development and decline of the Moundville polity in the Black Warrior Valley of west-central Alabama, arguably one of the most well-known archaeological manifestations of Mississippian culture. This research benefited enormously from previous investigations of the Moundville site and outlying mound sites, especially recent research that has further delineated the political and economic dynamics of the polity (e.g., Bozeman 1982; Knight 1992, 1994a, 1998; Knight and Steponaitis 1998; Scarry 1995, 1998; Steponaitis 1983a, 1991, 1998; Welch 1986, 1996, 1998; Welch and Scarry 1995). Given the long tradition of archaeological research in the region, the present research has contributed only a small part of the information necessary for better understanding Moundville's political history. The extensive database available for sites in this region has provided a more detailed understanding of Moundville's regional political dynamics and historical trajectory. It has also placed archaeologists in the advantageous position of being able to reformulate an earlier culture historical approach (e.g., Knight 1997; Knight and Steponaitis 1998:25). The further refinement of a regional chronology is perhaps one of the most important steps in this direction, followed by the evidence for population movements and the construction of monumental landscapes (Knight 1998; Knight and Steponaitis 1998:10-24; Steponaitis 1991, 1998). As Knight and Steponaitis (1998:25) note, this revised

understanding of historical development will ultimately pave the way toward a more detailed consideration of human agency and praxis.

Contrasting Historical Trajectories

A comparative analysis of the historical trajectories of Mississippian political culture was facilitated through an examination of the Moundville polity. In terms of monumental architecture and the size of the mound center, Moundville was among the largest of at least two dozen non-contemporaneous Mississippian polities (Payne 1994:86-129). Yet in another sense, the political consolidation of Moundville appears to have been unique. In comparison to smaller polities that lasted a century or less, the political symbolism of the ceremonial center appears to have endured three times as long (Anderson 1996a; Hally 1996a, 1996b). However, the social meanings of the monumental landscape are likely to have changed, just as the symbolism of craft goods was crafted and revalued. Investigation of outlying mound sites can thus contribute a better understanding of the changes in social landscape and political dynamics that made up Moundville's history.

Research was conducted as part of this study at two outlying mound sites north of Moundville in order to obtain more chronologically precise information on the post-AD 1400 decline of the regional polity. Preliminary investigations at the Hills Gin Landing site were inconclusive, indicating that a major portion of the Mississippian occupation may have been impacted by historic landscape modification and agriculture. In contrast, investigation of the Fosters Landing site confirmed the existence of a sizeable late Mississippian, Moundville IV phase (ca. AD 1550-1650) occupation. Limited testing at Fosters Landing revealed distinctive architectural remains, domestic refuse, and episodes of mound construction. A portion of a daub and thatch structure dating to the Moundville IV phase was uncovered, revealing an earlier, wall-trench structure beneath. Unexpectedly, the evidence for mound construction dated much earlier than

anticipated, toward the end of Moundville's period of regional consolidation (AD 1200-1300). A hearth that had been built on the surface of a lower mound layer produced a radiocarbon date of ca. AD 1285 (Beta-121581), corroborated by radiocarbon dates of AD 1290 (Beta-121585) for nearby mound fill and AD 1280 (Beta-121583) for charcoal beneath what appeared to be redeposited mound fill.

The multicomponent nature and vertical mixing of deposits at Fosters Landing greatly complicated the interpretation of features outside of the mound precinct. Given the generally poor preservation of faunal and botanical remains little data exist with which to assess the political symbolism or foodways or feasting. Nonetheless, the relative percentages of serving and cooking wares from the site do suggest activities oriented around the presentation and consumption of food in the mound precinct, dating from the early Moundville II (AD 1250-1300) phase. Whether or not subsequent additions were made to the mound could not be conclusively determined due to the conflation of the mound in the surrounding field. Given the large size of the surrounding Moundville IV phase village (approximately 2.2 ha), it is reasonable to suggest that the mound may have been resurfaced or reoccupied at this time. This would account for what appeared to be a large amount of redeposited mound fill recorded in excavation units adjacent to the mound. There is similar evidence for a potential Moundville IV phase mound occupation at the Hills Gin Landing site (Bozeman 1982:112-117).

Given the limited information obtained from the fieldwork, it was necessary to place the Fosters Landing site in the context of other mound sites located in Moundville's periphery. Similar regional studies have already demonstrated the usefulness of such an approach (Bozeman 1982; Steponaitis 1978; Welch 1998). Drawing on these earlier studies and recent interpretations of evidence from the ceremonial center (i.e., Knight 1998; Scarry 1998; Steponaitis 1998), it was possible to construct a regional chronology for mound construction. Rather than portraying mound sites as

secondary centers for a resident elite, these sites might as well have been focal points for an elite from Moundville. Such sites would have been important locations for feasting and coalition-building activities related to political consolidation.

What is noteworthy here is that the chronology of mound construction and occupation at outlying sites appears closely related to demographic nucleation and monumental construction at the ceremonial center (Knight 1998; Knight and Steponaitis 1998; Steponaitis 1998). At the time in which the Moundville site was most densely populated, and probably within a decade after most of the mounds and monumental architecture had been completed (Knight and Steponaitis 1998:15), mound precincts were constructed at three nearby sites (Poellnitz, Jones Ferry, and Fosters Landing) within 10 km to the north. The mound at a fourth site (Hog Pen) was probably begun earlier, but lies at approximately twice the distance from Moundville. This period of intense activity within mound precincts near the center coincides with the period of regional consolidation (AD 1200-1300).

Despite the process of cultural homogeneity and orthodoxy that it may have entailed, evidence for rapid demographic nucleation attests to the political consolidation of diverse groups, as well as the inherent labor requirements of monument building (Knight 1997, 1998; Pauketat 1993a, 1995; Steponaitis 1998). The establishment of a political-religious orthodoxy in the Black Warrior Valley, in spite of potential resistance to such regional consolidation, is suggested by the influx of people into the ceremonial center. The outburst of mound and plaza construction, socially-directed reordering of the built environment, and erection of an immense, encompassing palisade between AD 1200 and 1300 represent previously unparalleled circumstances of consolidation (Knight and Steponaitis 1998; Knight 1998). The reorganization of households behind the palisade walls along the riverbank may indicate that an increased need for defense was associated with consolidation (Scarry 1998:93). A centralized political economy is also evident during this time, involving status-related distinctions in foodways, the

acquisition of nonlocal or exotic goods, and craft production (Knight and Steponaitis 1998:16). The evidence is most convincing for the provisioning of an elite with maize, preferential cuts of deer, and perhaps certain species such as beaver and turkey (Michals 1990; Welch and Scarry 1995).

Yet as Knight (1998) has argued, it may not be entirely accurate to view Moundville solely in terms of the distinctions between elite and non-elite, or as a class-divided society. The dominant political culture produced at the ceremonial center may have from the beginning been contested among ranked corporate groups. The political and religious aggrandizement of hereditary chiefs or particular corporate groups would have rested in part on their abilities to build coalitions, make alliances, and foment ideological compliance through political symbolism and ritual. One of the primary sites for these activities appear to have been the symbolism of platform mounds as ancestral mortuary shrines, elite domiciles, and places for ritual feasts (Knight 1989b; Milanich et al. 1984:91-119; Smith and Williams 1994).

At around the same time that the residential population largely abandoned the ceremonial center, the mounds at these sites also appear to have been abandoned. By AD 1350 mound construction was again initiated on at least five sites 20 km to the north and 5 km to the south of Moundville (Snows Bend, Hills Gin, Poellnitz, Tousons Lake, and Grays Landing). Within a half century mound precincts were added at two other sites to the south, White and Stephens Bluff. It is important to note that as of yet there is no evidence for mound construction or occupation at two of the three closest sites north of Moundville immediately after AD 1300. The movement of people out of the ceremonial center appears to have been paralleled by the abandonment of nearby mound precincts.

The flurry of ostensibly coordinated mound construction north and south of Moundville corresponds with a period that Knight and Steponaitis (1998:17-21) describe as the paramountcy entrenched, referring to the increased production of finely crafted

goods such as Moundville Engraved pottery, the ornate copper, shell, and exotic goods in the burials of a superordinate elite, and remaking of the ceremonial center as a nearly abandoned mortuary site or "necropolis." Considering that this chronology still lacks sufficient precision, it is likely that the apparent 50 year lapse (AD 1300-1350) from the movement of residents out of Moundville and construction of mound precincts at outlying sites may actually reflect the earlier use of phases. An alternative scenario can be proposed, in which the emptying of the ceremonial center was followed contiguously by the initiation of mound construction at a as many as five sites. The political event that instigated this decentralization might well have been the succession or death of one or more elite buried in mounds C and D (Knight and Steponaitis 1998:18). The relatively close correspondence of the number of *known* outlying mound sites that date to ca. AD 1400 with the number of corporate groups proposed by Knight (1998:53) for Moundville also raises interesting questions and possibilities for future research. In particular, the evidence for corporate groups maintaining residences at the Moundville site after AD 1300 might be contrasted with evidence for corporate groups located at outlying mound sites to the north and south. Clearly, additional information and more precise chronological controls are needed before these inferences can be examined in more detail.

An especially intriguing aspect of the regional chronology in the Black Warrior Valley is its relatively long duration after the ceremonial center had been abandoned. The addition of earthen mantles and continued use of mound precincts at 6 outlying sites appears to have continued as late as AD 1550. There may have even been mound construction and/or reoccupation after this time at 3 outlying sites: Hills Gin Landing, Fosters Landing, and Minter Creek. Unfortunately, more chronologically precise data are still lacking from these sites in order to assess the possibility of mound construction during the Moundville IV phase (AD 1550-1650). Nonetheless, this roughly five century span of initial centralization, regional consolidation, and decentralization is distinctive.

Somewhat similar to the historical trajectories of other large Mississippian polities such as Cahokia (e.g., Knight 1997), it contrasts greatly with other Mississippian polities that appear to have lasted no more than a century (Hally 1996a:113). The evidence for the longevity of the ceremonial center raises additional questions concerning the relationship between regional decentralization and political decline (Knight and Steponaitis 1998:24).

The monumental landscape of Moundville appears to have been unique in this respect, because its presence was immovable yet could be redefined. As a ceremonial center where feasting, food provisioning, and coalition building may have been replaced by mortuary ritual, the monumental landscape itself may have been revalued by successive generations. Helms (1992b) describes the general process in which monumental landscapes become imbued with symbolic capital that may defy a particular political agenda or historical moment:

> Even if active political life seems to shift, decentralize, or localize, former elite centers may continue to function as places of power, that is, as places where ancestral connections can still be made. Just as contemporary Lacandon Indians continue to make offerings at ruined Mayan pyramids because they are power-filled sites where the dead can be contacted (McGee 1990:52, 57), so seemingly abandoned elite centers in the prehistoric Southeast may have continued to function as "centers- out there" (Turner 1972). Such centers frequently serve as regional places of pilgrimage. As burial sites they may be further identified with crucial points on the cosmological horizon where direct contact may be believed to occur between the earth and the heavens (or the underworld) allowing passage of ancestral souls between cosmological domains (Helms 1992b:191).

The implication here is that such cosmological referents were implicated in the reproduction of compliance ideologies in social relations of authority, as an historical process that ultimately involved political consolidation and decentralization. Whether outlying mound sites served as the permanent residences for a subordinate elite, gathering places for ritual feasting, or both, clearly needs to be addressed through additional research. The principal point made here is that political consolidation (AD 1200-1300) in the production of a dominant cultural orthodoxy at the site of Moundville appears to have been followed by centuries of decentralization (ca. AD 1300-1550). During this time, the political consolidation of corporate groups at the ceremonial center may have been superimposed on the landscape to the north and south. Moundville continued to serve as to a mortuary center where the remains of ancestors would have been maintained by ritual specialists.

A final trend can be discerned in the cessation of mound construction and subsequent changes in mortuary practices associated with urn burial, or the burial urn culture (Hill 1996; Sheldon 1974). Diagnostic pottery from Snows Bend, Tousons Lake, Grays Landing, White, and Stephens Bluff suggest the abandonment of both mound and village areas around the mid-sixteenth century. However, there is evidence from Hills Gin Landing for later mound occupation, at the end of the sixteenth century and perhaps into the early seventeenth century. As mentioned earlier, it is unclear as to whether this was associated with the nearby, protohistoric Lon Robertson site (Bozeman 1982:112-117; Welch 1998:153). The evidence for mound construction at Fosters Landing during this time is inconclusive, although the surrounding terrace was clearly the site of a sizeable protohistoric village. The mound at Minter Creek may have been occupied during the protohistoric Moundville IV phase, although Welch (1998:160) casts doubt on whether or not its residents were affiliated with the Moundville polity.

While there were clearly a larger number of protohistoric villages that were not associated with mounds, it would be inaccurate to suggest that cessation of mound construction reflects abrupt cultural discontinuity (Curren 1984; Sheldon 1974). As Knight (1989b:281) has argued, the symbolism of earthen mounds and political-religious uses of mound summits did not simply end with European contact. As a symbol of world renewal, purification, and fertility, it persisted well into the eighteenth century. In this context, the evidence for demographic nucleation in villages during the sixteenth century in the Black Warrior Valley supports fragmentary evidence for mound construction and occupation. Yet the political culture of Moundville as it had been established during thirteenth century political consolidation differed markedly from a decentralized polity having begun to experience the effects of European epidemics (cf. Hill 1996; Little and Curren 1990:186). Rather than a precipitous collapse, it is possible to discern earlier and more variegated changes in the regional chronology of mound construction, changes that reflect the dynamic political history of Moundville.

The protohistoric, Moundville IV phase and cultural transformations that it represents have been dated to AD 1550, a decade after the de Soto expedition passed through the area (cf., Hill 1996:29; Little and Curren 1995). The de Soto narratives mention only briefly the province of Apafalaya, thought to be associated with Moundville (e.g., Hudson 1997:250-256; Rangel 1993:296). The practice of urn burial, often associated with multiple interments, offers convincing evidence for a transformation as well in attitudes towards death. Such changes in mortuary practices may have even been related to the manner in which people died, as a result of disease epidemics transferred by contact with Europeans. The virtual abandonment of the Black Warrior Valley during the mid-seventeenth century was part of protohistoric population movements related not only to population loss, but to political histories related to Spanish military expeditions and the colonies and missions of *La Florida* (Knight and Steponaitis 1998:22; McEwen, ed. 1993; Worth 1994). Knight and Steponaitis (1998:22)

suggest that the abandonment of this portion of the Black Warrior Valley was associated with events that ultimately led to the formation of the Creek and Choctaw confederacies. Although the subsequent ethnic affiliation of Moundvillians is uncertain, Galloway (1994:399-402, 1995:353-359) suggests that they were among at least four distinct groups of Muskogean-speakers who coalesced to form the Choctaw tribal confederacy by the early eighteenth century.

The historical trajectories of the protohistoric Mississippian polities examined as part of this study followed distinctly different paths. Among the impediments to such comparative analysis are the difficulties in distinguishing politically-integrated societies based on limited archaeological investigations. While certain methodological problems have been posed in the use of phases as units of analysis (e.g., Fox 1998:58; Phillips and Willey 1953:621), this in no way vitiates the study of political dynamics through multiple lines of evidence (e.g., Dye 1994, 1995; Hally 1994b). Archaeological evidence for monumental architecture, material culture, and settlement patterns indicates that regional polities existed in the Southern Appalachians and Central Mississippi Valley during late prehistory and protohistory. Narratives of the mid-sixteenth century de Soto expedition corroborate this evidence and provide additional contextual information with which to further examine Mississippian political culture in these regions.

As many as five distinct archaeological phases are thought to have comprised the polity of Coosa in the Southern Appalachians (Hally 1994b). Yet similarities in pottery type frequencies have made it difficult to distinguish a comparable number of phases in the Central Mississippi Valley, each thought to represent a discrete polity (Mainfort 1999; Morse and Morse 1983:271-301; Phillips 1970:523-524. While it is tempting to assume that such spatial-temporal units should correspond with social groups or ethnic identities, pottery styles and technologies may permeate social boundaries (Hegmon 1998:275; cf. Sackett 1990:36). Instead, it is necessary to view craft production and pottery traditions as an active process, as a "style of action" (Dietler and Herbich

1998:236). The active uses of style through pottery production may in one sense have legitimized certain political ideologies, but it does not follow that compliance was acquiesced or uncontested (Earle 1990; Pauketat and Emerson 1991). In contrast to the Black Warrior Valley, difficulties in distinguishing regional polities in terms of archaeological phases may reflect the nature of indigenous political culture. In the Central Mississippi Valley it may be more productive to start from an ethnohistorical approach to settlement patterning in order to discern the implications of stylistic variations in pottery vessels and material culture, rather than examining minute technological differences and expect that these will reflect concrete social boundaries.

Based on combined archaeological and historical sources, the polity Coosa in the Southern Appalachians has been described as a series of polities linked by political alliances and social relations of authority. Smith and Hally (1992:107) suggest that an elite entourage traveling between sites in the Southern Appalachians might have drawn towns or polities together in the dominant-subordinate relations of a paramount chiefdom. The presentation of maize to de Soto throughout the Coosa province has been interpreted as an indicator not only of its availability, but its use as a form of political currency or symbolic capital in feasting and gift-giving (Rees 1997). Archaeological evidence for the preferential consumption of maize and deer in mound precincts at sites such as Toqua and Little Egypt also suggests a common symbolic capital in ritual feasting, a practice not unlike that described for polities in the central Tombigbee and Black Warrior river valleys (Blitz 1993a; Welch 1991; Welch and Scarry 1995). Yet in contrast to the Moundville polity, considerable variation in pottery types is discernible over a much larger area in the Southern Appalachians. Furthermore, the Coosa province appears to have lacked the demographically nucleated, hierarchical settlement pattern demonstrated for Moundville prior to AD 1300, nor was there a single ceremonial center constructed on the scale of Moundville.

Rather than suggest that the mid-sixteenth century polity of Coosa was not yet fully evolved or developed, contrasting historical trajectories are argued to have involved different regional manifestations of Mississippian political culture (cf. DePratter 1991:161). During the late fourteenth and early fifteenth centuries, the residents of the decentralized polity of Moundville continued to be drawn to the ceremonial center, through common cosmological referents, represented in mortuary practices and the monumental landscape (i.e., Helms 1992b:191). In contrast, there is sparse archaeological evidence for similar political consolidation in the Southern Appalachians on the scale of Moundville. Instead, the province of Coosa appears to have developed as a decentralized polity, facilitated through the symbolic capital of ritual feasts and alliance formation. Compliance ideologies were emphasized differently in these contrasting historical trajectories of Mississippian political culture.

Late prehistoric and protohistoric political culture in the Central Mississippi Valley, although roughly contemporaneous, is argued to have varied considerably. The precise nature of this variation is far from clear, given the available archaeological information. The de Soto narratives describe the polities of Pacaha and Casqui as embroiled in warfare, quickly entering into political alliances with the Spaniards. This is supported by archaeological evidence for densely nucleated, fortified towns (Dye 1995:294), and contrasts with the decentralized settlement pattern of Moundville after AD 1300. Dye (1995:295) thus suggests that warfare aimed at subjugation, rather than conquest, may have characterized Mississippian political culture in the Central Mississippi Valley.

The Province of Pacaha is described as having been an impressive coercive force in the region, having subjugated nearby polities. In an atmosphere of such coercive violence, gifts of fish may have been a more opportunistic form of symbolic capital. The potential significance of fish is reflected in faunal remains from Nodena phase sites, distributions of effigy vessels, and the de Soto narratives. The numerous site clusters

and historical evidence for inter-polity conflict suggest that the region was not politically consolidated. Nor is there any reason to suggest that polities in the Central Mississippi Valley were on the verge of a region-wide political consolidation or alliance comparable to the polities of Moundville or Coosa. In short, both historical and archaeological evidence point toward an historical trajectory and political culture in the Central Mississippi Valley incommensurate with the other regions examined here. A more detailed understanding of the protohistoric decline of polities in the Southern Appalachians and Central Mississippi Valley will ultimately require developing regional chronologies based on settlement histories and mound construction. Assumed cultural discontinuities between prehistoric and protohistoric contexts will otherwise continue to pose an insurmountable impediment to a diachronic, comparative analysis.

Conclusion

The present study began by considering the concepts of culture and cultural evolution in anthropology, in order to demonstrate how archaeologists have moved from systemic-processualism and a critique of neoevolutionary theory, to a consideration of political economy and historical process. Contrasting historical trajectories of Mississippian polities in the Black Warrior Valley, Southern Appalachians, and Central Mississippi Valley suggest that political development and decline in these regions can best be explained in terms of historical variations in political culture, variations that were not simply the systemic outcomes of different adaptations, or consequences of culture contact, European exploration, or colonization. It is impossible to understand the development or decline of Mississippian polities without addressing Mississippian political culture on its own terms, as an *historical process* of cultural production. Further advancement of knowledge regarding the development and decline of Mississippian polities will require the continued refinement of regional chronologies and pursuit of multiple lines of evidence.

It is appropriate to end here with a final observation regarding a problem traced throughout this study: the uneasy relationship between culture and history in archaeological practice. The unresolved debate between unilinear and multilinear cultural evolution reflects the fact that culture is itself a product of history. McGuire (1992:155) thus points out that cultural evolution "makes the course of history inevitable" and tends to disregard human agency. In terms of political economy, the explanation of culture in terms of evolution is "not radical enough" (Roseberry 1989:50). The culture concept, once a hallmark of anthropology, has been redefined as a history of contested and unevenly shared practices (Comaroff and Comaroff 1991:17; cf. Watson 1995). Proponents of neo-Darwinist archaeology have recognized as much and have suggested that culture itself be excised from cultural evolution through a focus on variation and selection (e.g., Dunnell 1980). Yet as Gould (1996:219, 1997a) states, selection is only one dimension of natural history and the "Darwinian natural paradigm" is an inappropriate analogue for social history. Advocates of systemic-processualism have meanwhile dealt increasingly with human agency, social heterogeneity, and dissimilitude in order to explain historical variation (Brumfiel 1992; Spencer 1997).

The challenge then, is to reformulate the culture concept as a contested and negotiated historical process that can be examined on different temporal and spatial scales (Comaroff and Comaroff 1991; Sahlins 1999; Wolf 1990). Wolf (1999:289) thus situates political-symbolic actions and ideologies in relation to structural power, in order to "make culture more flexible and open-ended and connect it with power." The prospect of protohistoric cultural discontinuity is thus a chimera of sorts, attributing cultural collapse or deculturation to population loss, without sufficient consideration of cultural production or power relations. It may become possible to examine the perpetuation and reinvention of Mississippian traditions in more detail as additional information is made available from protohistoric sites. Reconsideration of culture

history in terms of political dynamics promises to lay open earlier assumptions regarding the detachment of history from process and shed light on Mississippian political development and decline as a regional, historical process.

Since the 1980s, many cultural anthropologists have re-engaged history as a focus of study, just as historians have rediscovered culture (Burke 1987; Krech 1996). To some anthropologists, history never stopped being relevant (e.g., Wolf 1959, 1969). The recent trend toward an historical anthropology has been characterized by Ohnuki-Tierney (1990) as the "historicization of anthropology." In her review of anthropological theory since the 1960s, Ortner (1984) similarly described the rapprochement of anthropology and history as one of the most significant recent trends, along with practice theory. Sahlins (1985, 1994, 1999) refers to "exploding the concept of history" through the experience of culture. A comparative, historical anthropology can thus shed light on history itself as an unfolding process of power relations and cultural production (e.g., J. L. Comaroff 1982; Wolf 1999).

The present study has attempted to examine the regional development and decline of political culture in the late prehistoric and protohistoric Southeast as just such an historical process, albeit with limited archaeological and historical evidence. In addressing political culture as an historical dialectic of structural power and political-symbolic action, it becomes possible to bridge the gap between documented and undocumented pasts. History in this sense was not always an "intended project" (Giddens 1984:27). However, it does suggest that investigation of historical production can disclose connections between culture and power (Trouillot 1995, 1997; Wolf 1999:285-289). Historical anthropology is in this respect an ideal common ground for archaeologists interested in cultural traditions than span prehistory and history.

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Appendices

Following Scarry and Scarry (1995:17), small and fragmented pottery sherds were sorted through a 0.5 inch mesh screen in the laboratory. Except for the shovel test pits (STP) at Fosters Landing (Appendix 2), these small fragments of pottery were weighed but not counted, and are referred to here as "sherdlets." Sherdlets and other small pottery sherds with indeterminate tempering are listed in the appendices, but were not tabulated or otherwise included in the analyses. All daub collected from the STP and excavation units (EU) was weighed, but not counted.

For information on corresponding grid coordinate locations and excavation blocks for the excavation units and features listed in the Appendices, please refer to Table 7 in the text. The plow zone (PZ) was usually excavated as a single level in each STP and EU, except where noted. Strata and level (S/L) thus generally refer to the plow zone as level one (PZ/1), followed by arbitrary 10 cm levels, unless strata are specified (e.g., PZ/1, 0-30 cm; 2, 30-40 cm; 3, 40-50 cm ...).

As it is used here, class refers to: daub, faunal, historic, pottery, and stone (flaked, ground, and unmodified), listed in that order by provenience. Following Rice (1987:5), the term "pottery" refers more specifically to low-fired, unvitrified ceramic vessels and sherds. This encompasses a wide variety of terra-cotta and earthenwares, but is used here primarily in distinguishing Native American from European-American ceramic industries. Since "ceramic" is more inclusive and the distinction somewhat tenuous, the terms are often used interchangeably by archaeologists (Rice 1987:4; e.g., Sinopoli 1991; Steponaitis 1983a).

The type/material category in the Appendices refers to pottery type and/or tempering, stone (and mineral) type, content, or source, and other general information more specific than class. Pottery type and variety, if given, subsume mention of tempering agents. For example, it is widely recognized that Mississippi Plain (*variety*

Warrior) consists of an unburnished, medium to coarse shell-tempered pottery (e.g., Phillips 1970:130-131; Scarry and Scarry 1995:18-19; Steponaitis 1983a:54). If type variety is undetermined, it may be listed as unspecified. Pottery sherds that lack clear distinguishing characteristics as to type have been described according to temper (i.e., grog, sand, or shell). Identification of stylistic treatment, decoration, manufacturing technique, function, or other physical features is provided under artifact description. This includes indication of body or rim sherds, as well as vessel shape (i.e., bowl or jar), whenever discernible.

Flaked, ground, and unmodified stone have been described according to local or nonlocal type whenever possible (e.g., Tuscaloosa gravel chert, Fort Payne chert), and are otherwise characterized by material composition (e.g., chert, sandstone, micaceous sandstone, quartz, quartzite) and color (e.g., gray, brown, white). Following Scarry and Scarry (1995:68), the more inclusive designation Fort Payne/Bangor chert is adopted here in referring to blue-gray and black-gray, medium to fine-grained chert from outcrops in northern Alabama. Ensor (1981:10) noted considerable variation and similarities, making these materials difficult to distinguish. The numbers of chert artifacts reported in this category are therefore greater than might have otherwise been possible, given the limited expertise of the author. Projectile point types and worked stone types are included in the type/material category (e.g., Madison projectile point, Tuscaloosa gravel chert; celt, greenstone; palette, micaceous sandstone). Metric dimensions of projectile points are provided under artifact description in the following order: maximum length, maximum width (at the base of small triangular points), and maximum thickness (L x W x T).

Faunal specimens from the excavation units at Fosters Landing were counted and weighed, but otherwise unclassified. As noted elsewhere in the Black Warrior Valley (e.g., Scarry and Scarry 1995:89), bone and shell preservation is often exceedingly poor. Faunal remains from the Winter 1997-1998 and Summer 1998 excavations at Fosters

Landing were comprised mostly of minute fragments, frequently calcined, and generally difficult to distinguish with respect to specific element or class.

Abbreviations

Alex. Incised	Alexander Incised
cp agate	coastal plain agate
Coord	coordinates
cm	centimeters
EU	excavation unit
FPC	Fort Payne chert
FP/BC	Fort Payne/Bangor chert
g	grams (weight)
n	number (quantity)
PZ	plow zone
ppt	projectile point
sandstone, he	sandstone, hematitic
sandstone, mi	sandstone, micaceous
STP	shovel test pit
stone, fl	stone, flaked
stone, gr	stone, ground
stone, un	stone, unmodified
S/L	strata/level
SF	surface find
TQ	Tallahatta quartzite
TGC	Tuscaloosa gravel chert
unid	unidentified
un	unmodified

Appendix 1. Shovel Test Coordinates and Depths at Fosters Landing, Winter 1997-98.

STP	Coord	cm	STP	Coord	cm	STP	Coord	cm
1	N0 E200	50	42	N100 E140	70	83	N180 E240	70
2	N0 E240	50	43	N100 E160	40	84	N180 E260	70
3	N0 E260	52	44	N100 E180	27	85	N180 E280	60
4	N0 E280	50	45	N100 E200	50	86	N180 E300	70
5	N0 E300	50	46	N100 E220	34	87	N180 E320	88
6	N0 E320	40	47	N100 E240	50	88	N200 E200	70
7	N0 E340	50	48	N100 E260	60	89	N200 E220	70
8	N0 E360	60	49	N100 E280	60	90	N200 E240	50
9	N20 E200	70	50	N100 E300	100	91	N200 E260	60
10	N20 E220	50	51	N100 E320	60	92	N200 E280	60
11	N20 E240	30	52	N100 E340	50	93	N200 E300	70
12	N20 E260	50	53	N120 E220	50	94	N200 E320	55
13	N20 E280	40	54	N120 E240	80	95	N220 E200	50
14	N20 E300	50	55	N120 E260	80	96	N220 E220	50
15	N20 E320	50	56	N120 E280	70	97	N220 E240	50
16	N20 E340	40	57	N120 E300	70	98	N220 E260	50
17	N20 E360	50	58	N120 E320	60	99	N220 E280	50
18	N40 E200	50	59	N120 E340	65	100	N220 E300	50
19	N40 E220	50	60	N140 E220	70	101	N220 E320	60
20	N40 E240	50	61	N140 E240	75	102	N240 E200	50
21	N40 E260	50	62	N140 E260	50	103	N240 E220	40
22	N40 E280	50	63	N140 E280	103	104	N240 E240	60
23	N40 E300	50	64	N140 E300	70	105	N240 E260	60
24	N40 E320	50	65	N140 E320	71	106	N240 E280	50
25	N40 E340	50	66	N140 E340	63	107	N240 E300	70
26	N60 E200	50	67	N160 E60	50	108	N240 E320	60
27	N60 E220	70	68	N160 E80	50	109	N260 E200	46
28	N60 E240	50	69	N160 E100	50	110	N260 E220	60
29	N60 E260	50	70	N160 E120	70	111	N260 E240	100
30	N60 E280	50	71	N160 E140	70	112	N260 E260	70
31	N60 E300	50	72	N160 E160	60	113	N260 E280	48
32	N60 E320	50	73	N160 E180	70			
33	N80 E200	50	74	N160 E220	70			
34	N80 E220	45	75	N160 E240	72			
35	N80 E240	50	76	N160 E260	77			
36	N80 E260	50	77	N160 E280	65			
37	N80 E280	50	78	N160 E300	60			
38	N80 E300	48	79	N160 E320	70			
39	N80 E320	62	80	N160 E340	64			
40	N100 E100	60	81	N180 E200	55			
41	N100 E120	70	82	N180 E220	49			

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
1			no artifacts recovered			
2	PZ/1	pottery	shell-tempered	small body sherds	3	2.0
2	PZ/1	stone, un	sandstone, micaceous	small angular piece	1	1.7
3	PZ/1	pottery	shell-tempered	small fragment	1	0.3
3	PZ/1	stone, un	Tuscaloosa gravel chert	pebble	1	1.3
4	PZ/1	pottery	sand-tempered	small fragment	1	0.2
4	PZ/1	pottery	shell-tempered	small body fragments	3	3.0
4	PZ/1	stone, un	sandstone, micaceous	angular	1	3.9
5	PZ/1	pottery	Baytown Plain, Roper	body	1	1.0
6	PZ/1	pottery	shell-tempered	body	1	0.6
7	PZ/1	daub				4.2
7	PZ/1	pottery	sand-tempered	body	1	2.2
7	PZ/1	pottery	shell-tempered	body	1	1.7
7	PZ/1	stone, un	sandstone, micaceous	angular	1	21.5
7	2	daub				0.2
8	PZ/1	pottery	grog-tempered	body	1	0.3
9	PZ/1	daub				0.1
9	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.1
9	PZ/1	stone, un	petrified wood		1	37.4
9	2	pottery	shell-tempered	body	1	1.0
10	PZ/1	stone, fl	quartzite	flake, fine grained, brown	1	0.1
11			no artifacts recovered			
12			no artifacts recovered			
13	PZ/1	historic	coal		1	1.9
13	PZ/1	pottery	Baytown Plain, Roper	small fragment	1	1.2
14	PZ/1	pottery	shell-tempered	body	2	0.6
14	2	pottery	Alexander Incised	two curved, incised lines	1	0.5
14	2	pottery	Baytown Plain, Roper	body	1	2.9
15	PZ/1	daub				0.6
15	PZ/1	pottery	shell-tempered	body	2	0.5
16	PZ/1	daub				1.8
16	PZ/1	pottery	shell-tempered	body	1	1.0
17	PZ/1	daub				0.4
18	PZ/1	daub			1	0.2
18	2	stone, fl	Tuscaloosa gravel chert	fire cracked	1	0.9
19	PZ/1	daub				0.8
19	PZ/1	pottery	grog-tempered	body	1	0.6
19	PZ/1	pottery	shell-tempered	body	4	2.2
19	PZ/1	stone	sandstone, hematitic	heat-treated	1	60.7
20	PZ/1		no artifacts recovered			
21	PZ/1	daub				0.1

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
21	PZ/1	pottery	shell-tempered	body	1	0.3
21	PZ/1	pottery	Moundville Incised, unspec.	3 curved lines, exterior	1	0.6
21	PZ/1	stone, fl	quartz	flake	1	0.3
21	PZ/1	stone, un	sandstone, micaceous	angular	2	2.3
22	PZ/1	pottery	Mississippi Plain, Warrior	body	1	0.7
22	PZ/1	stone, fl	quartzite	flake, broken	1	0.1
23	PZ/1	pottery	sand-tempered	fragment	1	0.5
24	PZ/1		no artifacts recovered			
25	PZ/1	pottery	sand-tempered	fragment	1	0.4
25	PZ/1	pottery	shell-tempered	fragment	1	0.1
26	PZ/1	pottery	sand-tempered	fragment	1	0.2
26	PZ/1	pottery	shell-tempered	fragment	1	0.5
27	PZ/1	daub				1.1
27	PZ/1	historic	nail	square head, fragment	1	2.3
27	PZ/1	pottery	shell-tempered	small fragments	5	2.0
28	PZ/1	pottery	sand-tempered	small fragment	1	0.4
29	PZ/1	daub				0.6
29	PZ/1	pottery	shell-tempered	small fragments	3	0.7
30	PZ/1	pottery	grog-tempered	small fragment	1	2.2
30	PZ/1	pottery	shell-tempered	small fragment	1	0.2
30	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.1
31	PZ/1	daub				1.0
31	PZ/1	pottery	shell-tempered	small body sherds	4	2.1
31	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.3
31	PZ/1	stone, un	sandstone, hematitic	tabular	1	1.3
31	2	daub				0.5
32	PZ/1	daub				1.3
32	PZ/1	pottery	shell-tempered	small fragment	1	0.2
33	PZ/1		no artifacts recovered			
34	PZ/1	pottery	Bell Plain, unspecified	body, eroded	1	0.8
34	PZ/1	pottery	Mississippi Plain, Warrior	body	2	1.4
34	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	2	6.7
34	PZ/1	stone, fl	quartz	flake	1	0.1
35	PZ/1	historic	plastic	electrical insulator	2	1.2
36	PZ/1	pottery	shell-tempered	small fragment	1	0.2
37	PZ/1	daub				1.1
37	PZ/1	pottery	Baytown Plain, Roper	body	2	3.0
37	PZ/1	pottery	sand-tempered	body	2	5.2
37	PZ/1	pottery	shell-tempered	body, with some grog	3	1.3
38	PZ/1	daub				12.0
38	PZ/1	pottery	Baytown Plain, Roper	body	2	3.6

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
38	PZ/1	pottery	shell-tempered	small fragments	5	5.6
39	PZ/1	daub				20.9
39	PZ/1	faunal	unidentified	calcined, small fragment	1	0.2
39	PZ/1	pottery	Baytown Plain	body	8	8.2
39	PZ/1	pottery	sand-tempered	small fragments	10	6.2
39	PZ/1	pottery	shell-tempered	small fragments	47	17.2
39	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	2	0.4
39	PZ/1	stone, fl	Fort Payne/Bangor chert	flake	1	2.2
39	PZ/1	stone, fl	chert, unidentified	flake	1	0.5
39	PZ/1	stone, gr	sandstone, micaceous	angular	1	25.9
39	2	daub				4.2
39	2	historic	iron	unidentified hook/ring	1	28.3
39	2	pottery	Baytown Plain	small fragments	4	4.0
39	2	pottery	shell-tempered	small fragments	9	3.6
39	2	stone, fl	Tuscaloosa gravel chert	flake	1	0.1
39	2	stone, fl	quartz	flakes	2	0.5
39	2	stone, fl	quartzite	flakes	2	0.3
39	2	stone, un	sandstone		2	13.3
39	3	daub				7.1
39	3	historic	nail	fragments	2	7.3
39	3	pottery	grog-tempered	small fragment	1	0.2
39	3	pottery	shell-tempered	single incised line, exterior	1	0.4
39	3	pottery	shell-tempered	small fragments	8	4.1
39	3	stone, fl	greenstone	flake	1	0.5
39	4	pottery	grog-tempered	small fragment	1	0.2
39	4	pottery	shell-tempered	small fragments	3	0.8
40	PZ/1	daub				4.8
40	PZ/1	pottery	shell-tempered	small fragments	7	2.9
41	PZ/1	daub				1.5
41	PZ/1	pottery	shell-tempered	small fragments	2	1.2
41	2	pottery	shell-tempered	small fragments	1	0.4
41	2	stone, un	sandstone	angular	1	3.0
42	PZ/1	pottery	grog-tempered	body	3	2.9
42	PZ/1	pottery	shell-tempered	small fragments	4	1.6
42	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.2
43	PZ/1	pottery	grog-tempered	body	2	0.7
44	PZ/1	pottery	grog-tempered	small body fragment	1	1.0
44	PZ/1	pottery	shell-tempered	small body fragment	1	0.3
45	PZ/1	pottery	grog-tempered	body	1	0.4
45	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.8
46	PZ/1	pottery	shell-tempered	body	1	1.5

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
46	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.3
47	PZ/1	historic	plastic	unidentified fragment	1	0.5
47	PZ/1	pottery	grog-tempered	small fragments	3	2.9
47	PZ/1	pottery	shell-tempered	small fragment	1	0.3
48	PZ/1	daub				4.4
48	PZ/1	pottery	grog-tempered	body	3	1.6
48	PZ/1	pottery	shell-tempered	small fragment	7	2.6
48	PZ/1	stone, un	quartzite	small fragment	1	1.4
49	PZ/1	daub				4.6
49	PZ/1	pottery	grog-tempered	body	3	3.0
49	PZ/1	pottery	grog-tempered	rim sherd	1	1.3
49	PZ/1	pottery	sand-tempered	body	4	1.5
49	PZ/1	pottery	shell-tempered	small fragments	6	3.6
49	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	2	0.5
49	PZ/1	stone, fl	chert, unidentified	flakes, gray	2	0.6
49	PZ/1	stone, fl	quartzite	flake	1	1.9
49	2	daub				0.6
50	PZ/1	daub				86.6
50	PZ/1	faunal	unidentified	calcined, small fragment	1	0.7
50	PZ/1	pottery	Baytown Plain	body	1	2.4
50	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	2	0.9
50	PZ/1	pottery	sand-tempered	fragment	1	0.9
50	PZ/1	pottery	shell-tempered	small fragments	6	7.5
50	PZ/1	pottery	no temper	unidentified fragments	3	1.5
50	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.4
50	PZ/1	stone, fl	chert, unidentified	flake, brown	1	0.3
50	PZ/1	stone, fl	quartzite	flake	1	0.2
50	PZ/1	stone, un	sandstone	angular	1	2.0
50	2	daub				2.5
50	2	stone, fl	quartz	flake, white	1	0.1
50	3	daub				1.8
50	3	pottery	shell-tempered	small fragment	1	0.2
51	PZ/1	daub				19.9
51	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	4	3.0
51	PZ/1	pottery	grog-tempered	body	1	0.5
51	PZ/1	stone, un	sandstone	small fragment	1	0.7
51	2	daub				1.9
51	2	pottery	Mississippi Plain, Warrior	small fragments	3	1.9
51	2	stone, fl	Fort Payne/Bangor chert	flake	1	0.7
51	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.4
51	2	stone, fl	Tuscaloosa gravel chert	shatter	1	0.3

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
51	2	stone, un	sandstone	body	1	1.2
51	3	pottery	Mississippi Plain, Warrior	body	1	1.9
52	PZ/1	daub				5.5
52	PZ/1	pottery	sand-tempered	body	1	1.9
52	PZ/1	pottery	shell-tempered	small fragments	5	1.8
52	2	daub				0.8
52	2	pottery	Wheeler Plain	body	1	0.4
53	PZ/1	pottery	sand-tempered	body	1	1.2
53	PZ/1	pottery	shell-tempered	small fragment	1	0.3
54	PZ/1	daub				10.3
54	PZ/1	pottery	grog-tempered	body	1	0.4
54	PZ/1	pottery	sand-tempered	body	1	0.7
54	PZ/1	pottery	shell-tempered	small pieces	18	9.0
54	PZ/1	pottery	no temper	unidentified fragments	2	0.4
54	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	0.7
54	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes	3	0.7
54	PZ/1	stone, un	sandstone, micaceous		1	3.1
54	2	daub				1.2
54	2	pottery	shell-tempered		1	0.2
54	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.3
54	2	stone, un	sandstone		1	2.1
54	3	daub				0.2
54	3	pottery	grog-tempered	body	1	0.7
54	3	pottery	shell-tempered	small fragment	1	0.1
54	3	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	1	0.1
54	3	stone, fl	Tuscaloosa gravel chert	shatter	2	0.2
54	4	daub				0.1
55	PZ/1	daub				22.5
55	PZ/1	pottery	Alabama River Incised	body, 2 curved lines ext.	1	2.6
55	PZ/1	pottery	Baytown Plain	body	1	1.5
55	PZ/1	pottery	Mississippi Plain, Warrior	body sherds	19	8.1
55	PZ/1	pottery	Mississippi Plain, Warrior	rim sherd	1	0.8
55	PZ/1	stone, fl	chert, unidentified	gray	1	0.4
55	PZ/1	stone, un	limonite	small nodule	1	0.3
55	PZ/1	stone, un	sandstone	angular	3	5.2
55	2	daub				10.6
55	2	pottery	Baytown Plain	rim sherd	1	1.7
55	2	pottery	Carthage Incised	3 curved lines on exterior	1	2.0
55	2	pottery	sand-tempered	body	1	0.2
55	2	pottery	shell-tempered	small fragemnts	5	4.8
55	2	pottery	shell-tempered	perforated body sherd	1	0.5

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
55	2	stone, un	sandstone, micaceous	tabular	1	1.0
55	3	daub				0.7
55	3	pottery	shell-tempered	small fragments	3	0.8
55	3	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
55	4	daub				0.8
55	4	pottery	grog-tempered	very small fragment	1	0.2
55	4	stone, fl	quartz	biface fragment	1	3.8
55	5	daub				0.5
55	5	pottery	grog-tempered	body	1	0.2
55	5	pottery	shell-tempered	small fragment	1	0.1
55	6	daub				0.5
55	6	pottery	grog-tempered	body	1	0.4
56	PZ/1	daub				39.2
56	PZ/1	pottery	Baytown Plain	body	1	2.3
56	PZ/1	pottery	shell-tempered	small fragments	4	2.6
56	PZ/1	pottery	sand-tempered	body	1	0.4
56	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	5	0.9
56	PZ/1	stone, fl	Tuscaloosa gravel chert	core fragment, heat-treated	1	2.1
56	PZ/1	stone, un	sandstone	angular	2	41.6
56	2	daub				12.9
56	2	pottery	sand-tempered	body	1	1.2
56	3	daub				0.4
56	3	pottery	shell-tempered	small fragment	2	0.3
56	4	daub				0.6
56	4	pottery	fiber-tempered	body	1	2.3
57	PZ/1	pottery	Baytown Plain	small fragments	3	3.8
57	PZ/1	pottery	sand-tempered	body	1	3.2
57	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.9
57	PZ/1	stone, fl	quartzite	flake	1	0.9
57	2	stone, un	sandstone	angular	1	0.8
58	PZ/1	daub				44.9
58	PZ/1	pottery	shell-tempered	small fragments	14	9.7
58	PZ/1	pottery	grog-tempered	small fragments	10	6.3
58	PZ/1	stone, fl	quartz	flake	1	0.7
58	PZ/1	stone, fl	chert, unidentified	flake, white	1	0.3
58	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.1
58	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	2	0.3
58	PZ/1	stone, un	sandstone	angular	1	1.0
58	2	daub				3.6
58	2	pottery	Mississippi Plain, Warrior	body sherds	5	2.1
58	2	pottery	Mississippi Plain, Warrior	folded rim sherd	1	0.7

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
58	2	pottery	grog-tempered	small fragments	2	1.0
58	2	pottery	sand-tempered	body	3	3.3
58	3	daub				1.4
58	3	pottery	shell-tempered	small fragments	3	1.6
58	3	stone, fl	quartzite	flakes	2	1.2
58	4	daub				0.2
58	4	pottery	shell-tempered	small fragment	1	0.3
59	PZ/1	daub				2.0
59	PZ/1	historic	nails, wire	rusted fragments	2	3.1
59	PZ/1	pottery	grog-tempered	body	2	3.0
59	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.4
59	PZ/1	stone, un	sandstone	angular	3	4.0
59	2	daub				1.1
59	2	historic	nail	rusted fragment	1	0.6
59	2	pottery	grog-tempered	small fragments	2	1.0
59	2	pottery	sand-tempered	body	3	10.3
59	2	pottery	shell-tempered	small fragments	4	1.9
59	2	stone, un	quartzite	pebble	1	12.7
59	3	daub				1.3
59	3	pottery	sand-tempered	small fragment	1	0.5
59	3	pottery	shell-tempered	small fragments	5	0.8
59	3	pottery	Wheeler Plain	body	1	0.4
59	4	daub				0.1
59	4	pottery	shell-tempered	small fragments	2	0.8
59	4	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
60	PZ/1	pottery	Baytown Plain	body	11	27.4
60	PZ/1	pottery	sand-tempered	body	4	5.9
60	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.2
60	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	5	0.8
60	PZ/1	stone, fl	quartz	flake, white	1	0.2
60	2	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	1.1
60	3	pottery	grog-tempered	small fragment	1	0.1
60	4	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
61	PZ/1	pottery	Baytown Plain	body	2	3.1
61	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	4	6.3
61	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.7
61	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	2	4.4
62	PZ/1	pottery	grog-tempered	body	1	3.3
62	PZ/1	pottery	shell-tempered	small fragments	4	3.2
62	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
62	2	pottery	Mississippi Plain, Warrior	body	1	2.8

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
63	PZ/1	daub				10.2
63	PZ/1	pottery	grog-tempered	body	2	1.2
63	PZ/1	pottery	sand-tempered	small fragment	1	0.4
63	PZ/1	pottery	shell-tempered	small fragments	10	4.7
63	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	5	2.3
63	2	daub				10.1
63	2	pottery	Baytown Plain	body	1	1.2
63	2	pottery	Mississippi Plain, Warrior	small fragments	19	12.1
63	2	pottery	shell-tempered	little grog-temper	7	3.5
63	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.1
63	2	stone, un	quartzite	pebble	1	14.9
63	3	daub				7.5
63	3	pottery	Baytown Plain	body	2	3.1
63	3	pottery	Bell Plain, unspecified	small fragments	2	0.7
63	3	pottery	grog-tempered	body	2	2.1
63	3	pottery	shell-tempered	small fragments	13	21.9
63	3	pottery	shell-tempered	little grog-temper	3	2.0
63	3	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.4
63	3	stone, fl	Tuscaloosa gravel chert	shatter	1	0.5
63	3	stone, fl	quartz	shatter, pebble	1	2.1
63	3	stone, un	quartz	pebble	1	15.0
63	4	pottery	Baytown Plain	body	3	4.3
63	4	pottery	shell-tempered	small fragments	3	1.7
63	4	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	0.4
63	5	daub				1.3
63	5	pottery	shell-tempered	small fragments	3	2.7
63	5	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.6
63	5	stone, fl	Tuscaloosa gravel chert	shatter	2	2.0
63	6	pottery	Baytown Plain	body	3	2.2
63	6	pottery	Mississippi Plain, Warrior	small fragments	3	12.5
63	6	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	4	0.7
63	6	stone, un	sandstone	angular	1	29.8
63	7	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	1	0.5
63	7	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	0.7
63	7	stone, fl	quartz	flake, white	1	0.5
63	7	stone, un	quartzite	pebbles	2	0.8
64	PZ/1	pottery	Baytown Plain	body	2	5.4
64	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	2	2.9
64	1	pottery	Mississippi Plain, Warrior	rim	1	0.6
64	1	pottery	sand-tempered	body	2	3.0
64	1	stone, fl	Fort Payne/Bangor chert	flake	1	0.5

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
64	1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	2	0.3
64	1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	2	0.5
64	2	pottery	Mississippi Plain, Warrior	body & small fragments	5	39.4
64	3	pottery	Baytown Plain	rim	1	4.2
64	3	pottery	Baytown Plain	body sherd	1	0.9
64	4	pottery	Alexander Incised	rim	1	8.8
64	4	pottery	Mississippi Plain, Warrior	body	2	5.9
64	5	daub				0.2
64	5	pottery	Baytown Plain	body	1	1.3
64	5	pottery	Mississippi Plain, Warrior	body	1	4.4
64	5	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	38.6
64	5	stone, un	petrified stone		1	12.6
65	PZ/1	daub				0.1
65	PZ/1	pottery	Bell Plain, unspecified	small fragments	3	1.2
65	PZ/1	pottery	grog-tempered	body	1	1.4
65	PZ/1	pottery	sand-tempered	small fragments	2	1.0
65	PZ/1	pottery	shell-tempered	small fragment	1	0.4
65	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	1.4
65	2	pottery	Baytown Plain	body	1	1.6
65	2	pottery	sand-tempered	body	1	2.7
65	2	pottery	shell-tempered	small fragment	1	0.1
65	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.8
66	PZ/1	daub				3.5
66	PZ/1	pottery	grog-tempered	body	2	6.2
66	PZ/1	pottery	sand-tempered	body	1	3.7
66	PZ/1	pottery	shell-tempered	small fragments	2	1.8
66	PZ/1	stone, fl	chert, unidentified	flakes, brown	5	1.9
66	PZ/1	stone, fl	quartz	flake, white	1	0.3
66	PZ/1	stone, un	sandstone		1	3.4
66	PZ/1	stone, un	quartzite	cobble fragment	1	39.1
66	2	pottery	shell-tempered	small fragment	1	0.5
66	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
66	2	stone, fl	Tuscaloosa gravel chert	shatter, cortex	1	0.3
67			no artifacts recovered			
68			no artifacts recovered			
69	PZ/1	daub				0.3
69	PZ/1	pottery	shell-tempered	small fragments	6	2.3
70	PZ/1	faunal	shell	unidentified fragment	1	0.3
70	PZ/1	pottery	Baytown Plain	body	1	1
70	PZ/1	pottery	shell-tempered	small fragments	5	2.2
71	PZ/1	daub				1.2

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
71	PZ/1	pottery	Baytown Plain	body	2	2.7
71	PZ/1	pottery	sand-tempered	body	1	6.1
71	PZ/1	pottery	shell-tempered	small fragments	4	0.9
71	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.4
72	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	3	1.8
72	PZ/1	pottery	grog-tempered	small fragment	1	0.2
72	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	2	0.8
73	PZ/1	daub				1.3
73	PZ/1	pottery	Baytown Plain	body	7	8.9
73	PZ/1	pottery	shell-tempered	body sherds	9	2.6
73	PZ/1	pottery	shell-tempered	rim sherd	1	0.6
73	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	2	0.7
73	PZ/1	stone, un	sandstone		1	1.7
73	2	daub				1.2
73	3	pottery	shell-tempered	small fragment	1	0.1
74	PZ/1	pottery	Baytown Plain	body	5	26.5
74	PZ/1	pottery	Bell Plain, unspecified	small fragment	1	0.9
74	PZ/1	pottery	Carthage Incised	rim with single line	1	2.2
74	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	1.2
74	PZ/1	stone, un	Tuscaloosa gravel chert	flake	1	0.4
74	2	faunal	shell	unidentified fragments	3	1.2
74	2	pottery	Baytown Plain	body	1	1.1
74	2	pottery	Mississippi Plain, Warrior	rim sherd, with grog temper	1	3.4
74	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.3
75	PZ/1	daub				15.5
75	PZ/1	faunal	small mammal	unid long bone fragment	1	0.3
75	PZ/1	pottery	Baytown Plain	small fragments	7	1.9
75	PZ/1	pottery	Bell Plain, unspecified	rim sherd	1	0.2
75	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	12	4.7
75	PZ/1	pottery	sand-tempered	body	2	2.0
75	PZ/1	pottery	shell-tempered	small fragments	17	7.6
75	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	2	0.7
75	PZ/1	stone, fl	quartz	flake, white	1	0.2
75	PZ/1	stone, un	sandstone	possibly ground	3	77.2
75	2	pottery	Mississippi Plain, Warrior	small fragments	4	5.3
75	3	daub				0.3
75	3	pottery	Baytown Plain	body	1	4.2
75	3	pottery	Bell Plain, unspecified	small fragment	1	0.2
75	4	pottery	Bell Plain, unspecified	small fragments	2	1.0
76	PZ/1	daub				44.8
76	PZ/1	faunal	shell	unidentified fragment	1	0.1

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
76	PZ/1	pottery	Baytown Plain	body	3	4.5
76	PZ/1	pottery	Baytown Plain	incised line	1	1.1
76	PZ/1	pottery	Bell Plain, unspecified	small fragments	19	14.1
76	PZ/1	pottery	Mississippi Plain, Warrior	body	9	6.2
76	PZ/1	pottery	Mississippi Plain, Warrior	rim sherd	1	2.5
76	PZ/1	pottery	shell-tempered	with grog temper	2	3.6
76	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.5
76	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	3.8
76	PZ/1	stone, fl	quartzite	large flake	1	9.6
76	PZ/1	stone, un	sandstone, hematitic	tabular	1	2.0
76	2	pottery	Bell Plain, unspecified	small fragment	1	0.5
76	2	pottery	Mississippi Plain, Warrior	body	2	2.9
76	3	daub				0.9
76	4	daub				1.0
76	4	pottery	Mississippi Plain, Warrior	small fragment	1	0.4
76	5	daub				0.6
77	PZ/1	daub				21.5
77	PZ/1	faunal	shell	unidentified fragments	2	1.4
77	PZ/1	pottery	Baytown Plain	body	1	2.8
77	PZ/1	pottery	Bell Plain, unspecified	small fragments	2	0.6
77	PZ/1	pottery	sand-tempered	small fragment	1	0.3
77	PZ/1	stone, fl	Dover chert	flake	1	4.2
77	PZ/1	stone, fl	Fort Payne/Bangor chert	flake	1	0.4
77	PZ/1	stone, fl	Tuscaloosa gravel chert	biface, heat-treated	1	5.7
77	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	10	1.1
77	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.2
77	PZ/1	stone, un	Tuscaloosa gravel chert	pebble	1	3.2
77	2	daub			1	0.3
77	2	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	2.0
77	3	stone, fl	Fort Payne/Bangor chert	flake	1	0.6
77	3	stone, fl	Tuscaloosa gravel chert	flake	1	0.2
77	4	pottery	grog-tempered	with sand	1	0.9
77	5	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
77	5	stone, fl	quartz	flake, clear	1	0.1
78	PZ/1	pottery	Baytown Plain	small fragments	5	13.8
78	PZ/1	pottery	Bell Plain	single incised line	1	0.7
78	PZ/1	pottery	Mississippi Plain, Warrior	applique handle	1	1.1
78	PZ/1	pottery	Mississippi Plain, Warrior	body	8	4.7
78	PZ/1	pottery	Mississippi Plain, Warrior	rim	1	1.2
78	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	4	2.1
78	PZ/1	stone, un	sandstone	tabular	1	14.9

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
78	PZ/1	stone, un	sandstone, hematitic	angular	1	1.9
78	PZ/1	pottery	Alabama River Applique	neck with one applique	1	2.6
78	2	pottery	Mississippi Plain, Warrior	body	2	2.7
79	PZ/1	daub				15.3
79	PZ/1	faunal	shell	unidentified fragments	2	0.1
79	PZ/1	pottery	Alexander Pinched	body	1	5.7
79	PZ/1	pottery	Baytown Plain	body	7	5.5
79	PZ/1	pottery	Bell Plain, unspecified	small fragments	7	3.4
79	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	11	11.6
79	PZ/1	pottery	sand-tempered	body	5	4.1
79	PZ/1	pottery	shell-tempered	with grog temper	1	0.5
79	PZ/1	stone, fl	cp agate/chalcedony	flake	1	0.3
79	PZ/1	stone/fl	Fort Payne	flake	1	0.8
79	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	2	0.5
79	PZ/1	stone, fl	quartzite	flakes	2	0.5
79	2	daub				4.6
79	2	faunal	large mammal	unid. tooth fragment	1	0.7
79	2	pottery	shell-tempered	small fragments	11	3.3
79	2	stone, fl	Fort Payne/Bangor chert	flake	1	0.2
79	2	stone, fl	Tallahatta quartzite	flakes	2	1.2
79	2	stone, fl	quartzite	flake, broken, dark brown	1	1.1
79	3	daub				0.9
79	3	pottery	Mississippi Plain, Warrior	body	1	1.1
79	3	stone, fl	quartz	drill, fragment, white	1	0.3
79	4	pottery	shell-tempered	small fragment	1	0.3
79	4	stone, fl	chert, unidentified	flake, light gray	1	0.1
79	5	daub				1.0
79	5	stone, fl	Tuscaloosa gravel chert	biface		13.3
80	PZ/1	daub				22.1
80	PZ/1	historic	iron wire	rusted fragment	1	3.3
80	PZ/1	pottery	Alex. Incised, Bodka Creek	body	1	21.0
80	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	5	4.5
80	PZ/1	pottery	shell-tempered	with grog temper	1	0.9
80	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	3.5
80	PZ/1	stone, fl	quartz	shatter, white	1	1.4
80	PZ/1	stone, un	sandstone	angular	2	3.7
80	2	daub				4.4
80	2	pottery	grog-tempered	single incised line, interior	1	13.8
80	2	pottery	sand-tempered	body	2	4.9
80	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	1.1
80	3	daub				20.0

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
80	3	pottery	Baytown Plain	body	1	15.3
80	3	pottery	Bell Plain, unspecified	small fragments	5	5.9
80	3	pottery	Mississippi Plain, Warrior	small fragments	7	10.7
80	3	pottery	sand-tempered	body	1	2.8
80	3	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	1.0
80	4	daub				3.2
80	4	pottery	Baytown Plain, Roper	body	1	9.2
80	4	pottery	Bell Plain, unspecified	body	2	3.0
80	4	pottery	Mississippi Plain, Warrior	body	3	1.2
80	4	pottery	Mississippi Plain, Warrior	rim	1	0.7
80	4	pottery	sand-tempered	podal support, black	1	8.4
80	4	stone, fl	quartzite	flake, black	1	0.9
80	4	stone, gr	sandstone	angular	1	4.6
81	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.3
81	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter	1	0.3
81	PZ/1	stone, fl	chert, unidentified	flake, gray	1	0.2
81	PZ/1	stone, un	sandstone	tabular	1	5.2
82	PZ/1	pottery	Baytown Plain	small fragments	4	7.3
82	PZ/1	pottery	Bell Plain	small fragments	4	3.3
82	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	7	7.6
82	PZ/1	stone, fl	quartz	flakes, white	2	2.9
82	2	pottery	Baytown Plain	body	1	2.2
82	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.3
83	PZ/1	daub				6.3
83	PZ/1	pottery	Baytown Plain	small fragments	7	11.9
83	PZ/1	pottery	Bell Plain	small fragments	9	4.4
83	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	7	6.0
83	PZ/1	pottery	shell-tempered	with grog temper	1	1.5
83	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	7	1.9
83	PZ/1	stone, fl	quartz	shatter, white	1	0.7
83	PZ/1	stone, gr	sandstone	ground & polished, engraved	1	11.9
83	PZ/1	stone, un	sandstone	angular	5	35.0
83	2	daub				2.4
83	2	pottery	grog-tempered	body	2	1.4
83	3	faunal	unidentified	burned fragment	1	0.3
83	3	pottery	grog-tempered	body	2	0.5
83	4	pottery	Baytown Plain	body	1	2.8
83	4	pottery	shell-tempered	small fragment	1	0.7
84	PZ/1	daub				70.7
84	PZ/1	pottery	grog-tempered	small fragments	13	13.4
84	PZ/1	pottery	shell-tempered	small fragments	17	6.5

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
84	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	7	2.0
84	PZ/1	stone, un	sandstone, micaceous	tabular	3	3.2
84	2	pottery	Bell Plain	small fragments	2	0.7
84	3	pottery	shell-tempered	some grog temper	1	0.3
84	4	daub				0.2
84	4	pottery	Baytown Plain, Roper	small fragment	1	0.3
84	4	pottery	grog-tempered	small fragment	1	0.6
84	4	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.1
84	5	pottery	grog-tempered	small fragment	1	0.1
84	5	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.1
85	PZ/1	daub				17.1
85	PZ/1	pottery	grog-tempered	body	4	9.0
85	PZ/1	pottery	shell-tempered	body	9	6.8
85	PZ/1	stone, fl	Madison ppt, TGC	base fragment, heat-treated	1	0.7
85	PZ/1	stone,fl	Tuscaloosa gravel chert	flakes, heat-treated	9	4.0
85	PZ/1	stone, fl	chert, unidentified	flakes, gray	2	0.2
85	2	daub				9.1
85	2	pottery	grog-tempered	body	2	2.7
85	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.1
85	3	daub				0.9
85	3	pottery	Baytown Plain	body	1	1.4
85	4	daub				3.0
86	PZ/1	daub				68.1
86	PZ/1	faunal	bone, unidentified	small fragments, calcined	2	0.6
86	PZ/1	faunal	shell, unidentified	fragment	1	0.2
86	PZ/1	pottery	Baytown Plain	body	7	6.2
86	PZ/1	pottery	Baytown Plain	rim sherd	1	2.2
86	PZ/1	pottery	Bell Plain	small fragments	15	12.5
86	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	14	9.0
86	PZ/1	pottery	grog-tempered	small fragments	1	0.4
86	PZ/1	pottery	shell-tempered	small fragments	2	0.8
86	PZ/1	stone, fl	Fort Payne/Bangor chert	flake	1	0.5
86	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	4.1
86	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	0.5
86	PZ/1	stone, fl	quartz	shatter, pebble	1	5.3
86	2	daub				0.9
86	2	pottery	grog-tempered	body	2	1.2
86	2	pottery	shell-tempered	body, with grog temper	4	6.2
86	2	pottery	shell-tempered	rim	1	1.1
86	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.6
86	2	stone, un	sandstone	angular and tabular	6	50.5

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
86	3	daub				0.6
86	3	pottery	Mississippi Plain, Warrior	rim	1	7.5
86	4	faunal	bone, unidentified	small fragments, calcined	2	0.5
86	4	pottery	Mississippi Plain, Warrior	rim	1	0.4
86	4	pottery	shell-tempered	body	3	4.9
86	4	pottery	shell-tempered	small rim	1	1.2
87	PZ/1	daub				75.5
87	PZ/1	faunal	bone, unidentified	small fragment, calcined	1	0.7
87	PZ/1	historic	ceramic, stoneware	salt-glazed	2	14.0
87	PZ/1	pottery	grog-tempered	body	1	1.1
87	PZ/1	pottery	shell-tempered	small fragments	6	3.4
87	PZ/1	stone, fl	chert, unidentified	flake	1	1.1
87	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	0.9
87	PZ/1	stone, fl	quartz	flake, white	1	0.7
87	PZ/1	stone, gr	sandstone, hematitic	abrader	1	17.9
87	PZ/1	stone, gr	sandstone	tabular, possibly ground	2	2.7
87	PZ/1	stone, un	quartz	pebble	1	2.2
87	2	daub				2.3
88	PZ/1	daub				0.2
88	PZ/1	pottery	Baytown Plain, Roper	body	6	33.6
88	PZ/1	pottery	shell-tempered	body, with grog temper	3	3.8
88	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	5	1.5
88	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.4
88	PZ/1	stone, fl	Fort Payne/Bangor chert	flake	1	0.2
88	PZ/1	stone, gr	sandstone	tabular, possibly ground	1	6.3
88	PZ/1	stone, un	Tuscaloosa gravel chert	pebble	1	1.7
88	2	pottery	grog-tempered	small fragment	1	0.3
88	2	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	2	0.2
88	2	stone, fl	chert, unidentified	flake, tan	1	0.1
89	PZ/1	daub				0.6
89	PZ/1	pottery	Baytown Plain	small fragments	4	13.8
89	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	7	1.8
89	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	2	3.9
89	PZ/1	stone, fl	unidentified chert	flake, white	1	0.5
90	PZ/1	daub				0.6
90	PZ/1	historic	nail, cut	rusted fragment	1	3.2
90	PZ/1	pottery	Baytown Plain	small fragments	6	8.2
90	PZ/1	pottery	shell-tempered	small fragments	6	1.7
90	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	0.5
90	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter	1	1.1
90	PZ/1	stone, fl	unidentified chert	flake, gray	1	0.5

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
90	PZ/1	stone, gr	sandstone	tabular, possibly ground	1	2.3
90	PZ/1	stone, un	unidentified material	pebble	1	0.3
91	PZ/1	daub				30.8
91	PZ/1	pottery	Baytown Plain	small fragments	12	13.1
91	PZ/1	pottery	shell-tempered	small fragments	13	4.9
91	PZ/1	pottery	shell-tempered	with grog temper	3	3.0
91	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	6	3.9
91	PZ/1	stone, fl	quartz	shatter, white	1	0.8
91	PZ/1	stone, un	sandstone		3	4.4
91	2	pottery	shell-tempered	small fragment	1	0.5
92	PZ/1	daub				47.2
92	PZ/1	historic	glass	bottle fragment, clear	1	0.5
92	PZ/1	pottery	grog-tempered	body	17	15.2
92	PZ/1	pottery	sand-tempered	body	1	2.1
92	PZ/1	pottery	shell-tempered	small fragments	14	3.9
92	PZ/1	pottery	shell-tempered	with grog temper	2	2.4
92	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	5	2.0
92	PZ/1	stone, fl	quartz	shatter, white	1	0.4
92	PZ/1	stone, fl	quartzite	shatter	1	1.9
92	PZ/1	stone, un	sandstone	angular	1	24.0
92	2	daub				9.8
92	2	pottery	grog-tempered	body	1	1.4
92	2	pottery	shell-tempered	small fragment	1	0.3
92	2	stone, fl	quartzite	flake	1	0.6
92	3	daub				1.6
93	PZ/1	daub				8.4
93	PZ/1	historic	glass	bottle fragment, clear	1	1.7
93	PZ/1	historic	glass	window fragment	1	0.6
93	PZ/1	historic	iron	fence staple	1	4.1
93	PZ/1	historic	iron	rusted fragments	3	1.9
93	PZ/1	historic	nail, wire	fragment	1	1.4
93	PZ/1	pottery	shell-tempered	body	8	5.4
93	PZ/1	pottery	shell-tempered	rim	1	0.7
93	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	0.6
93	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.3
93	PZ/1	stone, fl	unidentified chert	flakes, tan with gray mottles	3	2.1
93	PZ/1	stone, fl	unidentified chert	flakes, gray	2	0.5
93	PZ/1	stone, fl	quartzite	flake	1	0.2
93	PZ/1	stone, un	sandstone, hematitic	angular	7	2.7
93	2	daub				3.4
93	2	pottery	shell-tempered	small fragment	1	0.4

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
93	2	pottery	unidentified temper	burned	1	1.0
93	2	stone, fl	Tuscaloosa gravel chert	flake	1	0.6
93	3	pottery	shell-tempered	small fragment	1	0.3
93	3	stone, fl	Tuscaloosa gravel chert	flake	1	2.0
94	PZ/1	daub				37.7
94	PZ/1	historic	glass	bottle fragments, clear	2	2.7
94	PZ/1	historic	nail, wire	rusted fragment	1	3.6
94	PZ/1	pottery	grog-tempered	body	1	2.0
94	PZ/1	pottery	shell-tempered	small fragments	4	0.6
94	PZ/1	stone, fl	Fort Payne/Bangor chert	flake	1	0.6
94	PZ/1	stone, fl	Tuscaloosa gravel chert	core/biface fragment	1	38.0
94	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	4	2.1
94	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	5	36.5
94	PZ/1	stone, fl	chert, unidentified	flake, grayish	1	0.2
94	PZ/1	stone, fl	chert, unidentified	shatter, pebble	1	5.6
94	PZ/1	stone, fl	petrified wood	shatter	1	11.2
94	PZ/1	stone, fl	quartz	flake, white	1	0.3
94	PZ/1	stone, fl	quartz	shatter	4	6.6
94	PZ/1	stone, fl	quartzite	flake	1	1.0
94	PZ/1	stone, un	sandstone	tabular	1	2.7
94	2	daub				5.6
94	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
94	2	stone, fl	quartz	flakes/shatter	6	5.8
94	2	stone, un	Tuscaloosa gravel chert	pebble	2	13.6
94	3	daub				0.4
94	3	pottery	shell-tempered	small fragment	1	0.3
94	3	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	3	1.8
94	3	stone, fl	quartz	flake	1	0.2
95	PZ/1	daub				0.3
95	PZ/1	pottery	grog-tempered	body	1	1.2
95	PZ/1	stone, fl	chert, unidentified	flake	1	0.4
95	PZ/1	stone, un	limestone		1	3.2
95	2	historic	glass	bottle fragment, green	1	0.8
95	2	pottery	grog-tempered	body	1	1.4
95	2	pottery	shell-tempered	small fragment	1	0.3
95	2	stone, un	Tuscaloosa gravel chert	pebble	1	3.3
96	PZ/1	historic	ceramic, stoneware		1	1.0
96	PZ/1	pottery	grog-tempered	small fragment	1	0.3
96	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	0.4
97	PZ/1	daub				0.2
97	PZ/1	pottery	Bell Plain	small fragment	1	0.2

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
97	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
98	PZ/1	daub				1.8
98	PZ/1	pottery	grog-tempered	body	4	4.3
98	PZ/1	pottery	sand-tempered	body	1	1.3
98	PZ/1	pottery	shell-tempered	small fragments	5	2.1
98	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	0.4
98	PZ/1	stone, un	sandstone	tabular	2	9.3
99	PZ/1	daub				1.7
99	PZ/1	pottery	Evansville Punctated, unspec.	body	1	3.4
99	PZ/1	pottery	Baytown Plain	body	2	1.0
99	PZ/1	pottery	shell-tempered	small fragments	2	0.8
99	PZ/1	stone, fl	chert, unidentified	flake, grayish-brown	1	0.1
99	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	4	1.1
100	PZ/1	daub				19.4
100	PZ/1	historic	glass	melted, clear	1	0.3
100	PZ/1	historic	iron	unidentified fragment	1	0.9
100	PZ/1	pottery	Baytown Plain	body	2	5.6
100	PZ/1	pottery	Baytown Plain	rim	1	0.4
100	PZ/1	pottery	sand-tempered	body	1	0.7
100	PZ/1	pottery	shell-tempered	small fragments'	6	3.7
100	PZ/1	stone, fl	Tuscaloosa gravel chert	flakes, heat-treated	4	3.8
101	PZ/1	daub				19.7
101	PZ/1	historic	iron	unidentified fragments	3	2.8
101	PZ/1	pottery	grog-tempered	small fragment	1	0.7
101	PZ/1	pottery	shell-tempered	small fragments	10	3.6
101	PZ/1	pottery	shell-tempered	with grog temper	1	0.7
101	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.1
101	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	0.2
101	PZ/1	stone, fl	quartzite	flake, dark brown	1	6.1
101	PZ/1	stone, gr	sandstone	tabular, possibly ground	1	23.0
101	PZ/1	stone, un	sandstone, hematitic	tabular	1	1.7
102	PZ/1	pottery	grog-tempered	body	3	2.3
102	PZ/1	pottery	shell-tempered	small fragment	1	0.1
102	PZ/1	stone, fl	Tuscaloosa gravel chert	flaked pebble	1	4.2
103	PZ/1		no artifacts recovered			
104	PZ/1	daub				0.2
104	PZ/1	pottery	sand-tempered	small fragment	1	0.6
104	PZ/1	pottery	shell-tempered	small fragment	2	0.4
104	PZ/1	pottery	shell-tempered	with grog temper	1	0.9
104	PZ/1	stone, fl	chert, unidentified	flake, white-gray	1	0.1
104	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	1.4

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
104	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.1
104	PZ/1	stone, fl	quartzite	shatter	1	2.4
104	PZ/1	stone, un	sandstone	tabular	1	1.9
104	2	stone, un	sandstone	angular	1	2.8
105	PZ/1	daub				1.4
105	PZ/1	pottery	Baytown Plain	body	1	1.7
105	PZ/1	pottery	Bell Plain	body	2	2.0
105	PZ/1	pottery	Mississippi Plain, Warrior	small fragments	5	2.8
105	PZ/1	pottery	shell-tempered	with grog temper	1	1.4
105	PZ/1	stone, fl	quartzite	flake, black	1	0.9
106	PZ/1	daub				1.4
106	PZ/1	historic	iron	unidentified fragments	2	1.9
106	PZ/1	pottery	shell-tempered	small fragments	2	1.2
106	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.4
106	PZ/1	stone, fl	quartz	shatter, white	1	0.4
106	PZ/1	stone, un	sandstone	tabular	1	4.5
107	PZ/1	daub				1.1
107	PZ/1	pottery	Baytown Plain	body	4	8.4
107	PZ/1	pottery	Bell Plain	body	1	1.4
107	PZ/1	pottery	shell-tempered	small fragments	4	3.0
107	PZ/1	stone, un	Tuscaloosa gravel chert	pebble	1	5.4
108	PZ/1	daub				7.5
108	PZ/1	pottery	Baytown Plain	body	5	10.4
108	PZ/1	pottery	shell-tempered	small fragments	4	1.5
108	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.1
108	PZ/1	stone, fl	Tuscaloosa gravel chert	shatter, heat-treated	1	0.1
108	2	daub				2.9
108	2	pottery	shell-tempered	small fragments	3	0.5
108	2	pottery	shell-tempered	with grog temper	4	5.6
108	2	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.2
108	3	daub				4.5
108	3	pottery	shell-tempered	small fragments	3	0.6
109	PZ/1		no artifacts recovered			
110	PZ/1	stone, fl	Tuscaloosa gravel chert	flake	1	0.8
110	PZ/1	stone, un	sandstone	angular and tabular	3	3.4
111	PZ/1	daub				1.0
111	PZ/1	historic	ceramic, whiteware	annular	1	0.5
111	PZ/1	historic	iron	fence staple	1	5.1
111	PZ/1	pottery	shell-tempered	small fragment	1	0.5
111	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat-treated	1	0.3
112	PZ/1	daub				12.0

Appendix 2. Artifacts from Shovel Tests at Fosters Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
112	PZ/1	pottery	grog-tempered	body	1	1.0
112	PZ/1	pottery	shell-tempered	small fragments	4	2.3
112	2	daub				0.7
113	PZ/1	pottery	shell-tempered	with grog temper	1	0.5

Appendix 3. Artifacts Surface Collected from Fosters Landing, Winter 1997-98 and Summer 1998.

SF	Coord	Class	Type/Material	Description	n	g
1	N138 E222	stone, gr	celt, greenstone	fragment	1	57.5
2	N141 E221	stone, fl	Madison ppt, TGC	base fragment	1	1.2
3	N218 E195	stone, gr	celt, greenstone	70 x 3.7 x 1.6 cm	1	74.8
4	N150 E207	stone, fl	Madison ppt, quartz	1.7 x 1.1 x 0.3	1	0.6
5	N196 E242	stone, fl	Madison ppt, TGC	base fragment	1	0.5
6	N163 E235	historic	tobacco pipe, gray clay	elbow fragment, glazed	1	5.1
7	N188 E229	pottery	sand-tempered	rim, exterior incised line	1	8.2
8	N199 E239	stone, fl	Madison ppt, quartz	base fragment	1	1.4
9	N189 E221	stone, fl	Madison ppt, TGC	1.6 x 1.4 x 0.4 cm	1	0.7
10	N205 E220	stone, fl	Madison ppt, TGC	1.5 x 1.3 x 0.2 cm	1	0.5
11	N230 E237	stone, fl	biface, quartzite	fragment	1	3.8
12	N181 E218	pottery	Alex. Incised, unspecified	body, 3 ext. parallel lines	1	1.3
13	N149 E216	stone, fl	Madison ppt, quartz	base fragment, white	1	0.9
14	N166 E225	pottery	Alexander Pinched	body	1	19.0
15	N122 E222	stone, fl	Madison ppt, TGC	base fragment	1	1.4
16	N201 E229	stone, gr	celt, greenstone	fragment	1	76.6
17	N162 E261	pottery	Mississippi Plain, Warrior	rim, jar (0.9 cm t)	1	15.1
18	N195 E211	historic	ceramic, stoneware	gray, base fragment, bowl	1	35.8
19	N158 E183	stone, gr	celt, greenstone	fragment, expended	1	183.7
20	N176 E198	pottery	Carthage Incised, unspec.	flaring rim bowl	1	8.3
21	N137 E207	stone, fl	Madison ppt, TGC	2.1 x 1.7 x 0.5 cm	1	1.0
22	N132 E207	pottery	Wright Check Stamped	body sherd	1	7.6
23	N138 E204	stone, fl	Madison ppt, TGC	base fragment	1	0.9
24	N198 E162	stone, fl	Hamilton ppt, TGC	2.6 x 1.6 x 0.4 cm	1	1.5
25	N93 E350	pottery	Wheeler Plain, Wheeler	body sherds	3	72.3
26	N93 E350	pottery	sand-tempered	body sherd	1	2.8

Appendix 4. Shovel Test Coordinates and Depths at Hills Gin Landing, Winter 1997-98.

STP	Coord	cm
1	N200 E340	60
2	N200 E400	70
3	N220 E340	60
4	N220 E400	45
5	N240 E240	28
6	N240 E260	40
7	N240 E280	30
8	N240 E300	60
9	N240 E320	50
10	N240 E340	50
11	N240 E360	60
12	N240 E380	50
13	N240 E400	16
14	N260 E340	48
15	N260 E400	55
16	N280 E340	38
17	N280 E400	50
18	N300 E340	40
19	N300 E400	70
20	N320 E340	50
21	N320 E400	60
22	N340 E320	40
23	N340 E340	40
24	N340 E360	50
25	N340 E380	50
26	N340 E400	50
27	N360 E400	70
28	N380 E400	50
29	N400 E400	30

Appendix 5. Artifacts from Shovel Tests at Hills Gin Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
1	PZ/1	pottery	Mississippi Plain, Warrior	body	1	3.0
1	PZ/1	pottery	grog-tempered	small fragment	1	1.0
1	PZ/1	pottery	shell-tempered	small fragments	2	0.6
1	PZ/1	stone, fl	quartz	shatter	1	1.7
1	PZ/1	stone, un	sandstone, micaceous	reddish, tabular	2	3.8
1	2	pottery	sand-tempered	small fragment	1	0.6
1	2	pottery	shell-tempered	small fragments	2	0.5
2	PZ/1	historic	nail	small fragments	3	2.8
2	PZ/1	pottery		sherdlets		1.3
3	PZ/1	pottery	grog-tempered	small fragment	1	1.2
3	PZ/1	pottery	shell-tempered	small fragment	1	0.6
3	PZ/1	pottery		sherdlets		1.1
3	PZ/1	stone, fl	Fort Payne/Bangor chert	flake, broken	1	0.1
3	2	stone, un	hematite	small nodule	1	0.4
4	PZ/1	historic	brick	small fragment	1	0.7
5			no artifacts recovered			
6			no artifacts recovered			
7			no artifacts recovered			
8	PZ/1	pottery		sherdlet		0.3
8	2	pottery	Mississippi Plain, Warrior	body	1	4.9
8	2	stone, un	sandstone, micaceous	gray	1	9.9
9	PZ/1	stone, fl	Fort Payne chert	flake, broken	1	0.2
9	PZ/1	stone, fl	quartzite	flake	1	1.0
10	PZ/1	pottery	grog-tempered	small fragments	2	1.4
10	PZ/1	pottery	shell-tempered	small fragments	2	0.5
10	PZ/1	pottery	no tempered	black	1	1.1
11	PZ/1	pottery	grog-tempered	small fragment	1	0.5
11	PZ/1	stone, un	sandstone, micaceous	tabular	1	2.8
11	PZ/2	pottery	grog-tempered	small fragments	2	1.0
11	PZ/2	pottery	Mississippi Plain, Warrior	body	3	5.5
11	PZ/2	stone, fl	Tuscaloosa gravel chert	flake, broken	1	0.2
11	3	pottery	sand-tempered	body sherd, incised interior	1	1.6
11	3	pottery	shell-tempered	small fragment, burned	1	0.4
11	4	pottery	shell-tempered	small fragment	1	0.3
12	PZ/1	pottery	shell-tempered	small fragments	4	0.7
13	PZ/1	stone, un	sandstone, micaceous	gray	1	2.0
14			no artifacts recovered			
15	PZ/1	stone, un	sandstone, micaceous	gray	1	10.2
15	PZ/1	stone, un	sandstone	reddish	2	4.9
15	2	pottery	shell-tempered	body	1	1.4
16			no artifacts recovered			

Appendix 5. Artifacts from Shovel Tests at Hills Gin Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
17	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, broken	1	0.2
17	PZ/1	stone, fl	quartzite pebble	shatter	1	1.6
18	PZ/1	pottery	Mississippi Plain, Warrior	small body sherds	2	1.7
18	PZ/1	stone, fl	quartzite pebble	shatter	1	4.9
18	PZ/1	stone, un	chert & quartzite	tabular	1	4.8
19	3	pottery	shell-tempered	small body sherds	4	3.9
19	3	stone, fl	Tuscaloosa gravel chert	flake	1	0.1
19	4	historic	glass	bottle, clear	1	0.6
19	4	pottery	Bell Plain, unspecified	body	2	7.0
19	4	pottery	Mississippi Plain, Warrior	body	5	20.0
19	4	pottery		sherdlets		3.3
19	5	pottery	Bell Plain, unspecified	body	1	0.7
19	5	pottery	Mississippi Plain, Warrior	body	4	10.4
19	5	pottery		sherdlets		1.6
19	6	daub		small fragments		9.2
19	6	pottery	Bell Plain, unspecified	body	1	1.3
19	6	pottery	Bell Plain, unspecified	rim	1	1.3
19	6	pottery	Mississippi Plain, Warrior	body	3	10.3
19	6	pottery		sherdlets		3.4
19	6	stone, un	Tuscaloosa gravel chert	pebble	1	6.4
19	6	stone, un	sandstone, micaceous	gray, tabular	1	65.1
19	6	stone, un	quartzite cobble	brown, oblong	1	135.5
19	7	stone, un	sandstone, micaceous	reddish, tabular	1	5.1
20			no artifacts recovered			
21	PZ/1	faunal	large mammal	tooth fragment	1	2.2
21	PZ/1	historic	brick	fragments		265.5
21	PZ/1	historic	ceramic, whiteware	undecorated body	1	3.1
21	PZ/1	historic	nails & bolt	rusted fragments	10	123.4
21	PZ/1	historic	iron washer	rusted	1	5.4
21	PZ/1	pottery	grog-tempered	small body sherds	3	4.0
21	PZ/1	pottery	shell-tempered	small body sherds	2	1.5
22	2	stone, fl	Tuscaloosa gravel chert	flake	1	0.9
23	PZ/1	historic	nail	rusted fragments	1	1.3
23	PZ/1	historic	iron	flat, rusted fragment	1	0.8
24			no artifacts recovered			
25	PZ/1	historic	brick	fragment	1	0.3
25	PZ/1	historic	glass	bottle, clear	4	3.2
25	PZ/1	historic	glass	canning jar, aqua	1	0.9
25	PZ/1	historic	iron, barbed wire	fragments	2	7.4
25	PZ/1	historic	iron, button	rusted fragment	1	1.5
25	PZ/1	historic	iron	rusted fragments	4	2.5

Appendix 5. Artifacts from Shovel Tests at Hills Gin Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
25	PZ/1	pottery	grog-tempered	small body sherd	1	2.8
25	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat treated	1	0.2
25	2	historic	brick	small fragment	1	0.9
26	PZ/1	historic	ceramic, whiteware	undecorated body	2	2.0
26	PZ/1	historic	glass	bottle, clear	6	4.8
26	PZ/1	historic	glass	canning jar lid,white	1	0.8
26	PZ/1	historic	iron bolt & nut	rusted	1	62.3
26	PZ/1	historic	plastic	white	1	0.1
26	PZ/1	stone, gr	sandstone, micaceous	fine gray, tabular	1	33.3
26	PZ/1	stone, un	Tuscaloosa gravel chert	cobble fragment	1	32.8
26	2	historic	glass	bottle, clear	4	2.5
27	PZ/1	historic	brick	fragments	3	18.6
27	PZ/1	historic	ceramic, whiteware	undecorated plate rim	1	1.7
27	PZ/1	historic	ceramic, whiteware	undecorated body	1	2.3
27	PZ/1	historic	glass	bottle, clear	11	5.9
27	PZ/1	historic	glass	bottle, brown	1	0.2
27	PZ/1	historic	glass	canning jar lid,white	1	1.3
27	PZ/1	historic	glass	flat, clear	4	2.1
27	PZ/1	historic	glass	melted, clear	3	1.2
27	PZ/1	historic	nail	rusted fragments	12	18.5
27	PZ/1	historic	iron spring	small rusted fragment	1	1.4
27	PZ/1	pottery	Baytown Plain, Roper	body sherd	1	3.2
27	PZ/1	pottery	Bell Plain, unspecified	small body sherd	1	0.8
27	PZ/1	pottery	grog-tempered	small body sherds	4	10.0
27	PZ/1	pottery	Mississippi Plain, Warrior	body	2	8.7
27	PZ/1	pottery	shell-tempered	small body sherds	4	3.5
27	PZ/1	pottery		sherdlets		1.1
27	PZ/1	stone, fl	Fort Payne/Bangor chert	flakes	2	0.4
27	PZ/1	stone, fl	Tuscaloosa gravel chert	flake, heat treated	1	0.1
27	PZ/1	stone, un	sandstone, micaceous	tabular	2	14.6
27	2	historic	brick	fragments	2	19.6
27	2	historic	glass	decorative, clear	1	1.8
27	2	historic	plastic	electrical insulator fragment	1	2.7
27	2	historic	nail	rusted fragments	8	5.2
27	2	historic	nail, wire		1	4.1
27	2	historic	iron	unidentified fragment	1	9.2
27	2	pottery	grog-tempered	body	1	3.3
27	2	pottery		sherdlets	2	1.1
27	2	stone, fl	Tuscaloosa gravel chert	flakes	3	0.4
27	3	historic	brick	fragments	5	17.8
27	3	historic	glass	curved, clear	2	2.6

Appendix 5. Artifacts from Shovel Tests at Hills Gin Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
27	3	historic	nail	rusted fragments	14	11.4
27	3	pottery	shell-tempered	body	1	2.1
27	3	pottery		sherdlet		0.5
27	3	stone, un	sandstone, micaceous	gray	1	6.5
27	4	faunal	unid. mammal element	fragment, cut	1	0.3
27	4	historic	brick	fragments	4	21.7
27	4	historic	ceramic, stoneware	gray salt-glazed body	1	1.6
27	4	historic	ceramic, whiteware	undecorated body	2	2.4
27	4	historic	ceramic, whiteware	undecorated rim	1	0.5
27	4	historic	glass	bottle/curved, amethyst	1	0.4
27	4	historic	glass	bottle/curved, clear	7	4.5
27	4	historic	glass	bottle lip, brown	1	1.7
27	4	historic	glass	canning jar lid, white	1	1.2
27	4	historic	glass	flat, aqua	1	4.1
27	4	historic	glass	flat, clear	2	1.1
27	4	historic	nail	fragments	3	22.9
27	4	historic	iron	fragments	12	21.5
27	4	historic	metal, iron & lead	fastener fragment	1	1.4
27	4	pottery	grog-tempered	body	6	10.1
27	4	pottery	shell-tempered	body	1	1.1
27	4	stone, fl	Tuscaloosa gravel chert	flakes, heat treated	2	0.8
27	4	stone, gr	sandstone, micaceous	fine gray	1	0.9
27	4	stone, un	sandstone, micaceous	gray, tabular	3	15.4
27	4	stone, un	sandstone, micaceous	reddish	1	17.9
27	5	historic	brick	fragment	1	0.7
27	5	historic	ceramic, whiteware	undecorated body	2	9.4
27	5	historic	ceramic, whiteware	undecorated rim	1	5.2
27	5	historic	glass	bottle/curved, brown	1	0.5
27	5	historic	glass	bottle/curved, clear	8	7.2
27	5	historic	glass	curved, light blue	1	0.4
27	5	historic	glass	flat, clear	3	2.7
27	5	historic	nail	rusted fragments	6	29.7
27	5	historic	iron	fragments	14	8.6
27	5	pottery	Baytown Plain, Roper	body	3	10.0
27	5	pottery	grog-tempered	small body sherds	6	5.5
27	5	stone, fl	Tuscaloosa gravel chert	flake, heat treated	1	0.2
27	5	stone, fl	Tuscaloosa gravel chert	shatter, heat treated	1	3.1
27	5	stone, un	sandstone, micaceous	reddish, tabular	1	5.7
28	PZ/1	historic	ceramic, stoneware	gray salt-glazed body	1	4.7
28	PZ/1	historic	ceramic, whiteware	undecorated body	1	2.5
28	PZ/1	historic	glass	bottle/curved, clear	2	0.4

Appendix 5. Artifacts from Shovel Tests at Hills Gin Landing, Winter 1997-98.

STP	S/L	Class	Type/Material	Description	n	g
28	PZ/1	historic	glass	flat, aqua	1	1.5
28	PZ/1	historic	iron	rusted fragments	2	1.2
28	PZ/1	pottery	shell-tempered	body	1	1.3
28	PZ/1	stone, un	sandstone, micaceous	reddish	1	4.3
29			no artifacts recovered			

Appendix 6. Artifacts Surface Collected from the Northern Mound Slope at Hills Gin Landing, Winter 1997-98.

Coord	Class	Type/Material	Description	n	g
N310-N320 E360-E380					
"	daub		fragments		28.4
"	pottery	Baytown Plain	body	1	3.8
"	pottery	Bell Plain, unspecified	body	10	53.7
"	pottery	grog & shell-tempered	body	3	7.1
"	pottery	Mississippi Plain, Warrior	body	20	136.3
"	pottery	Moundville Engraved, Hemphill	body	1	9.6
"	pottery	sand-tempered	body	1	4.4
"	pottery	sand-tempered	red painted body	4	10.4
"	pottery	sand-tempered	red painted rim	2	18.0
"	stone, fl	quartzite, heat-treated	shatter	1	1.1
"	stone, gr	sandstone, micaceous	fine gray	1	4.4
"	stone, gr	sandstone, micaceous	reddish	2	94.5
"	stone, un	sandstone, micaceous	reddish, tabular	2	12.9
"	stone, un	sandstone, micaceous	reddish	1	4.9
"	stone, un	Tuscaloosa gravel chert	fragment	1	7.9

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
1	PZ/1	Baytown Plain, Roper	body	7	18.7
1	PZ/1	Mississippi Plain, Warrior	body	1	2.6
1	PZ/1	sand-tempered	body	1	2.0
1	PZ/1		sherdlets		27.3
1	PZ/2	Baytown Plain, Roper	body	1	2.7
1	PZ/2	Bell Plain	body	1	3.8
1	PZ/2	Mississippi Plain, Warrior	body	15	31.6
1	PZ/2	shell-tempered, incised	body, eroded surface	2	3.4
1	PZ/2		sherdlets		36.6
1	PZ/3	Baytown Plain, Roper	body	3	6.9
1	PZ/3	Bell Plain	body	3	6.6
1	PZ/3	Mississippi Plain, Warrior	body	15	29.8
1	PZ/3	shell-tempered, white filmed	body	1	2.5
1	PZ/3		sherdlets		46.9
1	PZ/4	Baytown Plain, Roper	body	1	5.5
1	PZ/4	Mississippi Plain, Warrior	body	3	12.7
1	PZ/4	shell-tempered	body	1	1.8
1	PZ/4		sherdlets		21.9
1	CM2/5	Alabama River Applique	small fragment, neck	1	1.5
1	CM2/5	Baytown Plain, Roper	body	2	5.3
1	CM2/5	Baytown Plain, Roper	rim, jar; 0.9 cm	1	8.7
1	CM2/5	Bell Plain	body	3	5.7
1	CM2/5	Carthage Incised, Carthage	body	1	3.2
1	CM2/5	Carthage Incised, Moon Lake	rim, short-neck bowl; 0.8 cm	1	9.2
1	CM2/5	Mississippi Plain, Warrior	body	21	40.9
1	CM2/5	Mississippi Plain, Warrior	rim, large jar; 0.9 cm	1	10.5
1	CM2/5	Mississippi Plain, Warrior	rim, unid; 0.5 cm	1	2.6
1	CM2/5	Moundville Incised, Mdvl	body	1	3.4
1	CM2/5	Moundville Incised, unspec.	body	2	2.5
1	CM2/5	shell tempered, incised	small fragments, eroded	2	2.5
1	CM2/5	shell-tempered, red painted	body	2	7.1
1	CM2/5	shell-tempered, red painted	rim, flaring rim bowl; 0.5 cm	1	4.3
1	CM2/5	shell-temp., red on white	body	1	2.6
1	CM2/5		sherdlets		21.9
1	CM2/6	Baytown Plain, Roper	body	9	29.9
1	CM2/6	Bell Plain	body	5	14.7
1	CM2/6	Carthage Incised, Carthage	body	1	3.6
1	CM2/6	Mississippi Plain, Warrior	body	8	19.0
1	CM2/6	Moundville Engraved, unspec.	small fragments, body	2	2.2
1	CM2/6		sherdlets		19.5
1	CM2/7	Baytown Plain, Roper	body	16	59.8

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
1	CM2/7	Bell Plain	body	1	5.3
1	CM2/7	Mississippi Plain, Warrior	body	8	22.0
1	CM2/7	Mississippi Plain, Warrior	rim and strap handle, jar	3	14.7
1	CM2/7	Moundville Incised, unspec.	small fragment, body	1	1.1
1	CM2/7	shell-tempered, incised	small fragment, body	1	1.5
1	CM2/7	shell-tempered	body	3	9.1
1	CM2/7		sherdlets		17.2
1	CM1/8	Baytown Plain, Roper	body	20	106.6
1	CM1/8	Bell Plain	body	3	15.2
1	CM1/8	Mississippi Plain, Warrior	body	19	83.5
1	CM1/8	Mississippi Plain, Warrior	rim, jar; 0.7 cm	1	4.9
1	CM1/8		sherdlets		34.3
1	CM1/9	Alexander Incised, unspec.	body	1	3.3
1	CM1/9	Baytown Plain, Roper	body	17	53.0
1	CM1/9	Mississippi Plain, Warrior	body	20	63.0
1	CM1/9	Mississippi Plain, Warrior	rim, jar; 0.6 cm	1	3.4
1	CM1/9	no temper	body, small fragments	2	4.4
1	CM1/9	sand-tempered	body	3	9.7
1	CM1/9		sherdlets		29.5
1	Feature 1	Alexander Incised, unspec.	body	1	4.1
1	Feature 1	Baytown Plain, Roper	body	11	40.3
1	Feature 1	Mississippi Plain, Warrior	body	5	5.3
1	Feature 1		sherdlets		16.7
1	Feature 5	Baytown Plain, Roper	body	6	18.7
1	Feature 5	Mississippi Plain, Warrior	body, small fragments	3	2.4
1	Feature 5		sherdlets		6.1
4	PZ/1	Baytown Plain, Roper	body	5	11.3
4	PZ/1	Mississippi Plain, Warrior	body	2	3.7
4	PZ/1	shell-tempered	body, with some grog	4	9.7
4	PZ/1	Wheeler Punctated, unspec.	body, small fragment	1	1.8
4	PZ/1		sherdlets		33.7
4	PZ/2	Baytown Plain, Roper	body	1	3.2
4	PZ/2	Mississippi Plain, Warrior	body, small fragments	4	5.1
4	PZ/2		sherdlets		33
4	PZ/3	Baytown Plain, Roper	body	4	13.9
4	PZ/3	Mississippi Plain, Warrior	body	10	19.4
4	PZ/3	grog-tempered, incised	body, with sand-temper	1	4.4
4	PZ/3	shell-tempered	small fragments	3	5.0
4	PZ/3		sherdlets		76.6
4	PZ/4	Baytown Plain, Roper	body	5	18.8
4	PZ/4	Mississippi Plain, Warrior	body	6	19.0

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
4	PZ/4	sand-tempered, punctate	rim, bowl; 0.7 cm	1	10.6
4	PZ/4	shell-tempered	body, small fragments	12	25.8
4	PZ/4		sherdlets		37.6
4	CM2/5	Alabama River Applique	body, neck	3	14.1
4	CM2/5	Baytown Plain, Roper	body	5	22.5
4	CM2/5	Baytown Plain, Roper	rim, jar; 0.5 cm	1	2.2
4	CM2/5	Bell Plain	body	8	25.4
4	CM2/5	Bell Plain	rim, deep flaring rim bowl; 0.7 cm	1	5.3
4	CM2/5	Bell Plain	rim, bowl; 0.6 cm	1	3.3
4	CM2/5	Carthage Incised, unspec.	body, small fragment	1	0.7
4	CM2/5	Mississippi Plain, Warrior	body	44	94.5
4	CM2/5	Moundville Incised, unspec.	body, small fragment	1	1.9
4	CM2/5	shell-tempered, incised	body, eroded fragment	1	2.0
4	CM2/5	shell-tempered, painted	red & white	1	15.8
4	CM2/5		sherdlets		78.5
4	CM2/6	Baytown Plain, Roper	body	6	31.0
4	CM2/6	Bell Plain	body	1	1.3
4	CM2/6	Bell Plain	rim, bottle?; 0.5 cm	1	1.8
4	CM2/6	Mississippi Plain, Warrior	body	15	50.8
4	CM2/6	grog-tempered	body	1	3.1
4	CM2/6	sand-tempered, incised	body, eroded surface	1	19.5
4	CM2/6	sand-tempered	body	1	5.7
4	CM2/6	shell-tempered, painted	body, white	2	3.9
4	CM2/6	shell-tempered	body	18	40.1
4	CM2/6		sherdlets		43.2
4	CM2/7	Baytown Plain, Roper	body	9	36.7
4	CM2/7	Baytown Plain, Roper	rim, bowl; 0.5 cm	1	2.6
4	CM2/7	Mississippi Plain, Warrior	body	5	15.6
4	CM2/7	Moundville Incised, Moundville	body	1	9.6
4	CM2/7	grog-tempered	body	3	7.8
4	CM2/7	shell-tempered, incised	body, eroded surface	4	10.6
4	CM2/7	shell-tempered	body	16	22.7
4	CM2/7		sherdlets		35.4
4	CM1/8	Baytown Plain, Roper	body	11	56.8
4	CM1/8	Bell Plain	body	3	9.6
4	CM1/8	Mississippi Plain, Warrior	body	8	137.0
4	CM1/8	Mississippi Plain, Warrior	standard rim, jar; 0.7 cm	1	9.8
4	CM1/8	Mississippi Plain, Warrior	flattened rim, jar; 0.8 cm	1	9.6
4	CM1/8	sand-tempered	body	1	2.3
4	CM1/8	shell-tempered, incised	body, eroded surface	1	5.5
4	CM1/8	shell-tempered, painted	red & white body	1	2.7

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
4	CM1/8	shell-tempered	body	7	14.8
4	CM1/8		sherdlets		44.3
4	CM1/Fea.1	Baytown Plain, Roper	body		24.9
4	CM1/Fea.1	Baytown Plain, Roper	rim, jar; 0.6 cm	1	6.3
4	CM1/Fea.1	Baytown Plain, Roper	rim, jar; 0.6 cm	1	14.9
4	CM1/Fea.1	Mississippi Plain, Warrior	body	3	17.1
4	CM1/Fea.1	shell-tempered	body, small fragments	2	3.1
4	CM1/Fea.1		sherdlets		12.7
4	Fea. 1	Mississippi Plain, Warrior	body	5	10.9
4	Fea. 1		sherdlets		4.2
4	Fea. 5	Baytown Plain, Roper	body	8	50.6
4	Fea. 5	Bell Plain	body	1	3.7
4	Fea. 5	Mississippi Plain, Warrior	body	3	8.5
4	Fea. 5	Mississippi Plain, Warrior	handle fragment, 0.9 cm	1	2.5
4	Fea. 5	Mississippi Plain, Warrior	standard rim, bowl; 0.8 cm	1	9.3
4	Fea. 5	sand-tempered	body	2	8.6
4	Fea. 5	shell-tempered	body, fine shell with sand	1	34.7
4	Fea. 5		sherdlets		5.5
7	PZ/1	Barton Incised, Demopolis	rim, jar; 0.7 cm	1	4.2
7	PZ/1	Baytown Plain, Roper	body	8	37.9
7	PZ/1	Baytown Plain, Roper	rim, bowl; 0.5 cm	1	1.7
7	PZ/1	Baytown Plain, Roper	rim, jar; 1.0 cm	1	19.2
7	PZ/1	Mississippi Plain, Warrior	body	29	72.2
7	PZ/1	Mississippi Plain, Warrior	rim, jar; 0.9 cm	1	17.0
7	PZ/1	Mulberry Creek Cord Marked	rim, jar; 0.6 cm	1	8.4
7	PZ/1	sand-tempered	body	2	9.6
7	PZ/1	shell-temper, red painted	body	1	1.2
7	PZ/1	shell-temper, red painted	rim, small fragment, 0.6 cm	1	1.2
7	PZ/1	shell-temper, red painted	rim, small fragment, broken	1	0.8
7	PZ/1		sherdlets		44.3
7	CM2/2	Baytown Plain, Roper	body	6	51.9
7	CM2/2	Bell Plain	body	5	22.8
7	CM2/2	Mississippi Plain, Warrior	body	27	59.3
7	CM2/2	shell-tempered, white filmed	body	1	16.3
7	CM2/2		sherdlets		42.0
7	CM2/3	Baytown Plain, Roper	body	17	68.3
7	CM2/3	Baytown Plain, Roper	rim, jar;	1	8.0
7	CM2/3	Bell Plain	body	3	4.3
7	CM2/3	Bell Plain	rim, small fragment; 0.7 cm	1	1.3
7	CM2/3	Carthage Incised, unspec.	body, small fragments	2	4.1
7	CM2/3	Mississippi Plain, Warrior	body	39	103.4

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
7	CM2/3	Mississippi Plain, Warrior	rim, jar; 0.6 cm	1	6.7
7	CM2/3	Mississippi Plain, Warrior	rim, small fragment; 0.6 cm	1	1.9
7	CM2/3	Mississippi Plain, Warrior	shoulder	1	7.5
7	CM2/3	sand-temper	body	1	3.3
7	CM2/3		sherdlets		38.4
7	CM2/4	Baytown Plain, Roper	body	20	73.9
7	CM2/4	Mississippi Plain, Warrior	body	17	62.3
7	CM2/4	Mississippi Plain, Warrior	handle fragment, 1.0 cm	1	3.0
7	CM2/4		sherdlets		36.7
7	CM1/5	Baytown Plain, Roper	body	9	54.0
7	CM1/5	Bell Plain	body	1	20.5
7	CM1/5	Bell Plain	rim and neck, bottle; 0.5 cm	1	18.8
7	CM1/5	Mississippi Plain, Warrior	body	17	59.4
7	CM1/5	grog-tempered	body	7	18.6
7	CM1/5	sand-tempered	body	1	5.6
7	CM1/5		sherdlets		32.6
7	CM1/6	Baytown Plain, Roper	body	6	20.9
7	CM1/6	Mississippi Plain, Warrior	body	8	22.7
7	CM1/6	Mississippi Plain, Warrior	standard rim, jar; 0.9 cm	1	10.4
7	CM1/6		sherdlets		18.6
7	7/Feature 5	Baytown Plain, Roper	body	28	104.7
7	7/Feature 5	Baytown Plain, Roper	rim, jar; 0.9 cm	1	9.7
7	7/Feature 5	Baytown Plain, Roper	rim, jar; 0.8 cm	1	5.7
7	7/Feature 5	Mississippi Plain, Warrior	body	6	30.4
7	7/Feature 5	Mississippi Plain, Warrior	handle, jar; 1.3 cm	1	7.6
7	7/Feature 5	Mississippi Plain, Warrior	jar shoulder	1	4.6
7	7/Feature 5	Mississippi Plain, Warrior	rim, bowl; 0.5 cm	1	2.5
7	7/Feature 5	Mississippi Plain, Warrior	rim, jar; 0.6 cm	1	1.6
7	7/Feature 5	Mississippi Plain, Warrior	rim, jar; 0.8 cm	1	6.8
7	7/Feature 5	Mississippi Plain, Warrior	rim, bottle?; 0.6 cm	1	3.7
7	7/Feature 5	Moundville Incised, Carrollton	rim, jar; 0.9 cm	1	51.9
7	7/Feature 5	Moundville Incised, unspec.	body, small fragment	1	0.6
7	7/Feature 5	sand-tempered	body	6	22.1
7	7/Feature 5	shell-tempered, incised	body, eroded surface	1	2.6
7	7/Feature 5	shell-tempered	body	16	35.7
7	7/Feature 5		sherdlets		37.8
7	8/Feature 5	Baytown Plain, Roper	body	9	46.7
7	8/Feature 5	Mississippi Plain, Warrior	body	2	5.6
7	8/Feature 5		sherdlets		9.4
7	9/Feature 5	Baytown Plain, Roper	body	11	110.8
7	9/Feature 5	sand-tempered	body	1	5.4

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
7	9/Feature 5		sherdlets		4.2
8	PZ/1	Baytown Plain, Roper	body	7	29.6
8	PZ/1	Mississippi Plain, Warrior	body	3	3.6
8	PZ/1	grog-tempered	body	6	10.8
8	PZ/1		sherdlets		12.4
8	CM2/2	Baytown Plain, Roper	body	7	23.7
8	CM2/2	Bell Plain	rim, bowl; 0.6 cm	1	1.9
8	CM2/2	Bell Plain	rim, bowl; 0.5 cm	1	0.9
8	CM2/2	Mississippi Plain, Warrior	body	48	129.9
8	CM2/2	Moundville Incised, unspecified	body, small fragment	1	1.3
8	CM2/2	shell-tempered, incised	body, small fragments	2	2.5
8	CM2/2	shell-tempered, white filmed	body	2	13.9
8	CM2/2		sherdlets		86.9
8	CM2/3	Baytown Plain, Roper	body	12	36.1
8	CM2/3	Mississippi Plain, Warrior	body	23	87.8
8	CM2/3	shell-tempered	body, small fragments	17	30.7
8	CM2/3	shell-tempered, incised	body, small fragment	1	0.7
8	CM2/3		sherdlets		45.9
8	CM2/4	Baytown Plain, Roper	body	13	42.2
8	CM2/4	Bell Plain	body	4	14.8
8	CM2/4	Mississippi Plain, Warrior	body	8	16.5
8	CM2/4	Mississippi Plain, Warrior	rim, jar or bowl; 0.8 cm	1	6.9
8	CM2/4	Mulberry Creek Cord Marked	body	2	11.5
8	CM2/4	shell-tempered	body, small fragments	8	13.0
8	CM2/4		sherdlets		27.6
8	CM2/5	Baytown Plain, Roper	body	14	77.0
8	CM2/5	Bell Plain	body	1	2.3
8	CM2/5	grog-tempered	body	1	1.7
8	CM2/5	Mississippi Plain, Warrior	body	10	39.1
8	CM2/5	Moundville Incised, Moundville	body	1	4.3
8	CM2/5	sand-tempered	body	1	3.6
8	CM2/5	shell-tempered	body	7	12.9
8	CM2/5		sherdlets		21.2
8	CM2/6	Baytown Plain, Roper	body	11	58.6
8	CM2/6	Bell Plain	rim, small fragment; 0.6 cm	1	1.2
8	CM2/6	Mississippi Plain, Warrior	body	11	28.6
8	CM2/6	sand-tempered	rim, small fragment; 0.7 cm	1	2.8
8	CM2/6	shell-tempered, incised	body, eroded surface	1	5.2
8	CM2/6		sherdlets		17.2
8	CM1/7	Mississippi Plain, Warrior	body	1	1.7
8	CM1/7		sherdlets		2.8

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
8	CM1/8	Baytown Plain, Roper	body	8	53.9
8	CM1/8	Baytown Plain, Roper	rim, jar; 0.7 cm	1	10.1
8	CM1/8	Mississippi Plain, Warrior	body	4	12.7
8	CM1/8	Mississippi Plain, Warrior	rim, bowl or jar; 0.8 cm	1	4.4
8	CM1/8	shell-tempered	body, small fragments	8	14.4
8	CM1/8		sherdlets		15.3
8	9/Fea. 5	Baytown Plain, Roper	body	6	27.0
8	9/Fea. 5	grog-tempered	body	2	4.2
8	9/Fea. 5	sand-tempered	body	3	7.2
8	9/Fea. 5	sand-tempered	podal support; length 6.6 cm	1	121.4
8	9/Fea. 5		sherdlets		4.7
8	10/Fea. 5	Mississippi Plain, Warrior	rim, bowl or jar; 0.7 cm	1	7.1
14	PZ1/1	Baytown Plain, Roper	body	7	16.6
14	PZ1/1	Mississippi Plain, Warrior	body	13	19.5
14	PZ1/1	Mississippi Plain, Warrior	standard rim, jar; 0.9 cm	1	2.9
14	PZ1/1	grog-tempered	small fragments	5	10.6
14	PZ2/2	Baytown Plain, Roper	body	6	40.0
14	PZ2/2	Baytown Plain, Roper	rim, jar; 0.9 cm	1	2.8
14	PZ2/2	Bell Plain, unspecified	body	2	10.7
14	PZ2/2	Bell Plain, Hale	beaded rim, bowl; 0.6 cm	1	2.9
14	PZ2/2	Mississippi Plain, Warrior	body	7	14.7
14	PZ2/2	Mississippi Plain, Warrior	standard rim, jar; 1.0 cm	1	5.6
14	PZ2/2	sand-tempered	body	1	2.4
14	PZ2/2	shell-tempered	small fragments	23	39.3
14	PZ2/2	shell-tempered, incised	body, eroded	1	1.8
14	PZ2/2		sherdlets		114.7
14	CM2/3	Alabama River Applique	neck fragments	6	6.9
14	CM2/3	Baytown Plain, Roper	body	17	51.0
14	CM2/3	Bell Plain	body	8	17.8
14	CM2/3	Bell Plain, unspecified	rim, bowl; 0.5 cm	1	5.6
14	CM2/3	Carthage Incised, Carthage	body	1	1.2
14	CM2/3	Carthage Incised, unspec.	body	1	2.4
14	CM2/3	Mississippi Plain, Warrior	body	22	66.2
14	CM2/3	Mississippi Plain, Warrior	rim, jar; 1.0 cm	1	10.8
14	CM2/3	Mississippi Plain, Warrior	rim, jar; 0.7 cm	1	2.0
14	CM2/3	shell-tempered	small fragments	11	20.6
14	CM2/3	shell-tempered, incised	body, small fragment	1	1.0
14	CM2/3	shell-tempered, white filmed	body, white filmed interior	1	4.2
14	CM2/3		sherdlets		54.5
14	CM2/4	Baytown Plain, Roper	body	22	93.2
14	CM2/4	Bell Plain	body	4	21.8

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
14	CM2/4	Bell Plain	rim, bowl; 0.6 cm	1	1.3
14	CM2/4	Mississippi Plain, Warrior	body	8	15.4
14	CM2/4	Moundville Incised, unspec.	flattened rim, jar; 0.8 cm	1	3.9
14	CM2/4	sand-tempered	body	1	4.4
14	CM2/4	shell-tempered	small fragments	13	19.3
14	CM2/4		sherdlets		69.5
14	CM1/5	Baytown Plain, Roper	body	25	119.8
14	CM1/5	Baytown Plain, Roper	standard rim, jar; 0.8 cm	1	10.5
14	CM1/5	Bell Plain	body	2	4.2
14	CM1/5	Mississippi Plain, Warrior	body	24	138.1
14	CM1/5	Mississippi Plain, Warrior	standard rim, jar; 0.7 cm	1	10.5
14	CM1/5	Mississippi Plain, Warrior	standard rim, jar; 0.7 cm	1	6.1
14	CM1/5	grog-tempered	small fragments	3	5.2
14	CM1/5	sand-tempered	body	3	27.7
14	CM1/5	shell-tempered	small fragments	13	27.0
14	CM1/5		sherdlets		56.5
14	Feature 1	Baytown Plain	body	6	19.7
14	Feature 1	Mississippi Plain, Warrior	body	10	52.9
14	Feature 1	sand-tempered	body	1	3.0
14	Feature 1		sherdlets		4.4
14	Feature 5	Baytown Plain	body	7	32.9
14	Feature 5	Baytown Plain	standard rim, jar; 7.0 cm	1	7.0
14	Feature 5	Baytown Plain	standard rim, jar; 7.0 cm	1	8.6
14	Feature 5	Mississippi Plain, Warrior	body	3	8.2
14	Feature 5	grog-tempered	body	2	4.6
14	Feature 5	sand-tempered	body	5	13.1
14	Feature 5	shell-tempered	small fragments	5	5.8
14	Feature 5		sherdlets		15.4
5	PZ/1	Baytown Plain, Roper	body	3	9.6
5	PZ/1	sand-tempered	body	2	6.4
5	PZ/1		sherdlets		11.0
5	PZ/2	Baytown Plain, Roper	body	4	6.6
5	PZ/2	Baytown Plain, Roper	rim, jar; 0.8 cm	1	7.9
5	PZ/2	Mississippi Plain, Warrior	body	1	1.5
5	PZ/2		sherdlets		9.6
5	M2/3	Alex. Incised, Pleasant Valley	rim, bowl or jar; 0.9 cm	1	7.0
5	M2/3	Alexander Pinched, unspec.	body, small fragment	1	1.5
5	M2/3	Baytown Plain, Roper	body	2	10.3
5	M2/3	Mississippi Plain, Warrior	body	2	2.9
5	M2/3	shell-tempered	body, small fragment	1	0.6
5	M2/3		sherdlets		3.3

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
5	M2/4	Alexander Incised, unspec.	body	1	4.6
5	M2/4	Baytown Plain, Roper	body	1	0.9
5	M2/4	Mississippi Plain, Warrior	body	5	6.7
5	M2/4		sherdlets		6.3
5	M2/5	Baytown Plain, Roper	body	2	11.6
5	M2/5	Bell Plain	body	4	5.5
5	M2/5	Moundville Incised, unspec.	body	1	1..8
5	M2/5	sand-tempered	body	1	6.0
5	M2/5		sherdlets		3.0
5	M2/6	Baytown Plain, Roper	body	1	3.0
5	M2/6	Bell Plain	body	2	12.1
5	M2/6	Mississippi Plain, Warrior	body, small fragments	2	3.1
5	M2/6	sand-tempered	body	3	10.1
5	M2/6		sherdlets		2.6
5	M1/7	Alexander Incised, unspec.	body	1	4.6
5	M1/7	Baytown Plain, Roper	body	5	15.1
5	M1/7	Bell Plain	body, eroded surface	19	43.2
5	M1/7	Bell Plain, Hale	rim, bowl, small fragments; 0.5 cm	5	4.1
5	M1/7	Bell Plain, Hale	beaded shoulder	3	6.3
5	M1/7	Bell Plain, Hale	beaded shoulder, rim, rest. bowl; 0.5 cm	1	3.5
5	M1/7	Mississippi Plain, Warrior	body	8	52.8
5	M1/7	Moundville Incised, Moundville	body	2	1.8
5	M1/7	Moundville Incised, Moundville	rim, jar, flattened; 0.6 cm	5	32.4
5	M1/7	Moundville Incised, Moundville	rim, jar, with strap handle; 0.5 cm	1	10.8
5	M1/7	Salomon Brushed, Fairfield	body	1	37.3
5	M1/7	sand-tempered	body	3	22.6
5	M1/7	shell-tempered	body	31	57.2
5	M1/7		sherdlets		29.4
5	M1/8	Baytown Plain, Roper	body	11	66.4
5	M1/8	Baytown Plain, Roper	rim, jar; 0.5 cm	1	3.1
5	M1/8	Moundville Engraved, var. unspec.	body	1	2.9
5	M1/8	sand-tempered	body	4	12.1
5	M1/8	shell-tempered	body	5	6.8
5	M1/8		sherdlets		20.6
5	M1/9	Baytown Plain, Roper	body	2	11.1
5	M1/9	sand-tempered	body	2	12.8
5	M1/9		sherdlets		2.7
5	10		sherdlets		2.1
5	11	Baytown Plain, Roper	body	2	5.9
5	11		sherdlets		0.8
5	12		sherdlets		0.6

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
9	PZ/1	Baytown Plain, Roper	body	11	27.9
9	PZ/1	shell-tempered	body, small fragment	1	1.4
9	PZ/1		sherdlets		1.4
9	PZ/2	Baytown Plain, Roper	body	1	1.3
9	PZ/2	Baytown Plain, Roper	rim, bowl, 0.6 cm	1	3.0
9	PZ/2	Evansville Punctated, unspec.	body	1	3.4
9	PZ/2	shell-tempered	body	1	2.3
9	PZ/2		sherdlets		3.6
9	M2/3	Alexander Pinched, Prairie Farms	body	2	66.1
9	M2/3	Baytown Plain, Roper	body	2	6.3
9	M2/3	Moundville Incised, unspec.	body, small fragment	1	0.4
9	M2/3	sand-tempered	body	2	12.3
9	M2/3	shell-tempered	body, small fragments	2	2.6
9	M2/3		sherdlets		3.9
9	M2/4	Baytown Plain, Roper	body	3	11.9
9	M2/4	Baytown Plain, Roper	rim, small fragment; 0.6 cm	1	0.9
9	M2/4	Bell Plain	body, small fragment	1	0.9
9	M2/4	grog-tempered	body	1	3.0
9	M2/4	Mississippi Plain, Warrior	body	3	3.6
9	M2/4	sand-tempered	body	1	2.0
9	M2/4	shell-tempered	body	1	1.4
9	M2/4		sherdlets		3.2
9	M2/5	sand-tempered	body	1	3.8
9	M2/5	grog and sand-tempered	body	1	1.8
9	M2/5		sherdlets		3.2
9	M2/6	Alexander Pinched, Prairie Farms	body	1	2.3
9	M2/6	Alexander Pinched, unspec.	body	1	3.8
9	M2/6	Baytown Plain, Roper	body	3	8.4
9	M2/6	Bell Plain, Hale	rim, restricted bowl; 0.5 cm	1	0.8
9	M2/6	shell-tempered	body, small fragments	3	3.5
9	M2/6		sherdlets		0.9
9	M1/7	Baytown Plain, Roper	body	2	8.0
9	M1/7	Bell Plain	body	1	0.8
9	M1/7	Moundville Incised, Moundville	body, small fragment	1	1.5
9	M1/7	sand-tempered	body	2	10.8
9	M1/7	shell-tempered	body	6	6.6
9	M1/7		sherdlets		4.5
9	7/Feature 3	Baytown Plain, Roper	body	1	3.9
9	7/Feature 3	Bell Plain, Hale	body	1	3.2
9	7/Feature 3	Bell Plain, Hale	rim, beaded shoulder, rest. bowl; 0.5 cm	3	17.1
9	7/Feature 3	Bell Plain, Hale	rim, restricted bowl; 0.5 cm	1	3.2

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
9	7/Feature 3	Mississippi Plain, Warrior	body	3	13.0
9	7/Feature 3	Mississippi Plain, Warrior	rim, large jar; 1.3 cm	1	22.9
9	7/Feature 3	Moundville Incised, unspec.	body	2	8.1
9	7/Feature 3	sand-tempered	body	1	12.5
9	7/Feature 3	shell-tempered	body	4	7.6
9	7/Feature 3		sherdlets		3.6
9	8/Feature 3	Bell Plain	body	8	13.8
9	8/Feature 3	Bell Plain, Hale	rim, restricted bowl; 0.5 cm	1	1.3
9	8/Feature 3	Mississippi Plain, Warrior	body	4	7.2
9	8/Feature 3	sand-tempered	body	3	6.8
9	8/Feature 3	shell tempered	body	8	20.1
9	8/Feature 3	shell tempered	handle fragment	1	1.3
9	8/Feature 3		sherdlets		13.4
9	M1/8	Bell Plain	body	3	2.8
9	M1/8	Mississippi Plain, Warrior	body	2	60.1
9	M1/8	sand-tempered, incised	body	1	7.5
9	M1/8	shell tempered	body, small fragments	2	2.7
9	M1/8	shell tempered	rim, jar; 0.6 cm	1	2.7
9	M1/8		sherdlets		5.2
9	M1/9	Baytown Plain, Roper	body	6	38.0
9	M1/9	Baytown Plain, Roper	rim, jar; 0.6 cm	1	3.6
9	M1/9	Moundville Incised, unspec.	body, small fragement	1	0.8
9	M1/9	shell-tempered	body	5	11.7
9	M1/9		sherdlets		7.3
9	10	Baytown Plain, Roper	body	4	11.8
9	10	sand-tempered	body	1	3.3
9	10		sherdlets		4.9
9	11	Baytown Plain, Roper	body	2	14.1
9	11		sherdlets		0.3
9	12	Baytown Plain, Roper	body	1	1.6
9	12		sherdlets		0.5
9	13	Baytown Plain, Roper	body	2	8.0
9	13	Mulberry Creek Cord Marked	rim, jar; 0.6 cm	1	2.9
T-1	PZ/1	Baytown Plain, Roper	body	20	48.6
T-1	PZ/1	Bell Plain	body	1	1.6
T-1	PZ/1	Mississippi Plain, Warrior	body	5	12.3
T-1	PZ/1	Moundville Engraved, unspec.	body, small fragment	1	0.7
T-1	PZ/1	sand-tempered	body	4	14.0
T-1	PZ/1	shell-tempered	body	15	18.4
T-1	2	Baytown Plain, Roper	body	1	1.9
T-1	2	Mississippi Plain, Warrior	body	6	76.6

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
T-1	2	shell-tempered	body	8	16.6
T-1	2		sherdlets		9.2
T-1	3	Baytown Plain, Roper	body	3	8.3
T-1	3	Bell Plain	body	1	1.5
T-1	3	Mississippi Plain, Warrior	body	2	4.3
T-1	3	Moundville Engraved, unspec.	body, small fragment	1	0.5
T-1	3	shell-tempered	body	1	1.4
T-1	4	Baytown Plain, Roper	body	7	27.4
T-1	4	Bell Plain	body	2	1.9
T-1	4	Mississippi Plain, Warrior	body	14	48.5
T-1	4	Mississippi Plain, Warrior	handle fragment	1	1.6
T-1	4	Mississippi Plain, Warrior	rim, large jar; 1.2 cm	1	6.1
T-1	4	sand-tempered	body	2	7.0
T-1	4	shell-tempered	body, small fragments	21	21.9
T-1	4		sherdlets		13.3
T-1	5	Baytown Plain, Roper	body	7	46.2
T-1	5	Baytown Plain, Roper	rim, jar; 0.9 cm	1	15.7
T-1	5	Baytown Plain, Roper	rim, jar; 0.8 cm	1	8.9
T-1	5	Bell Plain	body	1	1.0
T-1	5	grog-tempered	body	2	5.4
T-1	5	Mississippi Plain, Warrior	body	12	95.7
T-1	5	Mississippi Plain, Warrior	rim, large jar; 0.9 cm	1	8.0
T-1	5	sand-tempered	body	1	5.9
T-1	5	shell-tempered	body	3	4.2
T-1	5		sherdlets		2.4
T-1	6	Baytown Plain, Roper	body	7	36.3
T-1	6	Bell Plain	body	2	1.8
T-1	6	Bell Plain	rim, small fragment; 0.3 cm	1	1.4
T-1	6	grog-tempered	body	3	4.2
T-1	6	Benson Punctate	rim, jar; 0.6 cm	1	4.5
T-1	6	Mississippi Plain, Warrior	body	14	37.4
T-1	6	Moundville Incised, Moundville	standard rim, jar; 0.7 cm	1	3.9
T-1	6	Mulberry Creek Cordmarked	body	1	16.6
T-1	6	sand-tempered	body	1	4.4
T-1	6	shell-tempered	body, small fragments	10	8.7
T-1	7	Baytown Plain, Roper	body	1	21.3
T-1	7	Mississippi Plain, Warrior	body	6	24.2
T-1	7	shell-tempered	body, small fragments	3	2.5
T-1	8	Baytown Plain, Roper	body	4	11.1
T-1	8	sand-tempered	body	3	16.7
T-1	8	shell-tempered	body	7	14.4

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
T-1	8		sherdlets		9.1
T-1	9	Moundville Incised, unspec.	body	1	0.8
T-1	9	sand-tempered	body	1	1.6
T-1	9	shell-tempered	body	2	1.4
10	1	Alabama River Incised, Alford	rim, flaring rim bowl; 0.9 cm	1	89.5
10	1	Alabama River Incised, Alford	body, flaring rim bowl	1	5.2
10	2/Feature 10	Alabama River Incised, Alford	body, flaring rim bowl	1	9.5
10	2/Feature 10	Baytown Plain, Roper	body	1	4.5
10	2/Feature 10	shell-tempered	standard rim; 0.6 cm	1	2.2
10	2/Feature 10	shell-tempered	rim, small fragment; 0.4 cm	1	1.1
10	2/Feature 10	shell-tempered	rim, small fragment; 0.6 cm	1	1.7
10	3/Fea. 10	Alexander Incised, Pleasant Valley	rim, jar; 0.9 cm	1	8.3
10	3/Fea. 10	Alexander Incised, Prairie Farms	body	1	4.6
10	3/Fea. 10	Alexander Incised, unspecified	body	2	10.4
10	3/Fea. 10	Alexander Incised, unspecified	rim, jar; 0.6 cm	1	1.7
10	3/Fea. 10	Alexander Pinched, Prairie Farms	body	2	7.9
10	3/Fea. 10	Bell Plain	body	1	2.1
10	3/Fea. 10	grog-tempered	body	4	5.9
10	3/Fea. 10	Mississippi Plain, Warrior	body	2	11.5
10	3/Fea. 10	sand-tempered	body	2	6.8
10	3/Fea. 10	sand-tempered	rim, small fragment; 0.6 cm	1	2.0
10	3/Fea. 10	shell-tempered	body	2	6.6
10	3/Fea. 10	shell & grog-tempered	body	7	68.6
10	3/Fea. 10		sherdlets		14.1
10	4	Alexander Pinched, Prairie Farms	body	8	57.5
10	4	Alexander Pinched, Prairie Farms	rim, jar; 1.1 cm	1	12.8
10	4	Alexander Incised, unspecified	body	3	6.0
10	4	Baytown Plain, Roper	rim, bowl; 0.6 cm	1	2.8
10	4	grog-tempered	body	4	17.5
10	4	sand-tempered	body	8	20.9
10	4		sherdlets		18.3
10	5a	Alexander Incised, Pleasant Valley	body	2	4.7
10	5a	Alexander Incised, Pleasant Valley	rim, jar; 1.0 cm	1	24.5
10	5a	Alexander Incised, unspecified	body	1	7.6
10	5a	Alexander Pinched, Prairie Farms	body	1	5.9
10	5a	Alexander Pinched, Prairie Farms	rim, small fragment; 0.8 cm	1	3.0
10	5a	grog-tempered	body	2	6.2
10	5a	sand-tempered	body	4	16.5
10	5a	shell-tempered	body	1	1.8
10	5a		sherdlets		10.2
10	5b	Alexander Pinched, Prairie Farms	body	2	8

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
10	5b	Alexander Incised, unspecified	body	4	8.4
10	5b	Alexander Incised, unspecified	rim, small fragment; 0.5 cm	1	1.5
10	5b	sand-tempered	body	1	4.2
10	5b		sherdlets		4.3
10	6	Alexander Incised, unspecified	body, small fragment	1	2.2
10	6	Alexander Pinched, Prairie Farms	body, small fragment	1	2.3
10	6		sherdlets		1.5
10	Feature 7		sherdlets		0.9
10	Feature 12	Alexander Incised, unspecified	body	1	3.1
10	Feature 12	Alexander Pinched, Prairie Farms	body	4	12.3
10	Feature 12	Baytown Plain, Roper	body	4	10.8
10	Feature 12	Baytown Plain, Roper	standard rim; 0.5 cm	1	1.6
10	Feature 12	Bell Plain	body, small fragments	10	19.9
10	Feature 12	Bell Plain	standard rim; 0.5 cm	1	2.1
10	Feature 12	Mississippi Plain, Warrior	body, small fragments	25	54.1
10	Feature 12	sand-tempered	body	8	24.9
10	Feature 12	shell-tempered	with sand-temper	2	4.3
10	Feature 12		sherdlets		19.1
11	1	Alexander Incised, unspecified	boby, small fragment	1	1.8
11	1	Baytown Plain, Roper	body	1	2.7
11	1	Bell Plain	standard rim, 0.8 cm	1	2.6
11	1	grog-tempered	body	1	2.2
11	1	Mississippi Plain, Warrior	body, small fragments	3	4.3
11	1		sherdlets		9.7
11	2/Feature10	Alexander Pinched, unspecified	body	1	5.2
11	2/Feature10	Baytown Plain, Roper	body	2	6.0
11	2/Feature10	Mississippi Plain, Warrior	body	3	4.6
11	2/Feature10	shell-tempered	body	9	22.9
11	2/Feature10		sherdlets		6.0
11	3/Feature10	Alexander Incised, Pleasant Valley	standard rims, jar; 0.6 cm	2	4.3
11	3/Feature 10	Alexander Incised, Prairie Farms	body	2	6.7
11	3/Feature 10	Bell Plain	body	1	2.6
11	3/Feature 10	grog-tempered	body	1	13.2
11	3/Feature 10	Mississippi Plain, Warrior	body	1	3.5
11	3/Feature 10	Mississippi Plain, Warrior	folded rim, jar; 0.8 cm	1	2.6
11	3/Feature 10	sand-tempered	body	2	3.4
11	3/Feature 10	shell-tempered	body	8	36.0
11	3/Feature 10	shell-tempered	flaring rim, bowl; 1.0 cm	1	4.8
11	3/Feature 10		sherdlets		5.7
11	4a	Alexander Incised, unspecified	rim, jar; 0.8 cm	1	12.5
11	4a	Alexander Incised, unspecified	rim, jar; 1.0 cm	1	3.6

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
11	4a	Alexander Pinched, unspecified	body	1	3.3
11	4a	Baytown Plain, Roper	body	1	8.8
11	4a	Bell Plain	body, small fragment	1	0.5
11	4a	grog-tempered	body	5	21.1
11	4a	Mississippi Plain, Warrior	body, large jar	3	46.9
11	4a	sand-tempered	body	7	19.0
11	4a	shell-tempered	body	10	11.7
11	4a	shell-tempered, red painted	body	1	5.5
11	4a	Wheeler Check Stamped, Sipsey	body	2	17.3
11	4a		sherdlets		3.9
11	4b	Alexander Incised, Prairie Farms	body	1	10.6
11	4b	Bell Plain	standard rim, bowl or bottle; 0.5 cm	1	4.3
11	4b	Bell Plain	standard rim, bowl or bottle ; 0.4 cm	1	3.1
11	4b	shell-tempered	body	2	5.4
11	5a	Alexander Pinched, Prairie Farms	body	3	37.4
11	5a	Alexander Incised, unspecified	rim, jar; 0.6 cm	1	3.6
11	5a	grog-tempered	body	2	7.2
11	5a	Mississippi Plain, Warrior	body	3	8.3
11	5a	sand-tempered	body	3	15.1
11	5a	shell-tempered	body, small fragments	3	2.4
11	5b	Baytown Plain, Roper	body	1	3.1
11	5b	shell-tempered	body	2	2.0
11	6/Feature 12	Alexander Incised, Pleasant Valley	rim, jar; 1.0 cm	1	33.8
11	6/Feature 12	Bell Plain	body	1	2.5
11	6/Feature 12	Mississippi Plain, Warrior	body, large jar	1	19.4
11	6/Feature 12	sand-tempered	body	1	3.6
11	6/Feature 12		sherdlets		2.2
11	6a	Alexander Pinched, Prairie Farms	body	2	11.9
11	6a	Baytown Plain, Roper	body	6	26.8
11	6a	Baytown Plain, Roper	rim, bowl; 0.5	1	1.8
11	6a	Bell Plain	body	1	1.3
11	6a	Carthage Incised, Akron	standard rim, bowl; 0.5	1	6.7
11	6a	Mississippi Plain, Warrior	body	1	3.5
11	6a	Mississippi Plain, Warrior	folded rim, large bowl; 0.9 cm	1	48.6
11	6a	sand-tempered	body	4	10.9
11	6a	shell-tempered	body	2	2.7
11	6a	shell-tempered	standard rim, jar; 0.6	1	1.6
11	6a		sherdlets		9.7
11	7	Alexander Pinched, Prairie Farms	rim, jar; 1.0 cm	1	7.7
11	7	Alexander Pinched, unspecified	body	1	3.0
11	7	grog-tempered	body	1	1.9

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
11	7	sand-tempered	body	1	1.8
11	7	shell-tempered	body	3	5.3
11	7	Wheeler Check Stamped, Sipsey	body	1	5.5
11	7		sherdlets		3.1
11	8	no temper	body	1	2.1
11	9	Alexander Pinched, unspecified	body	1	6.8
11	9		sherdlets		1.2
11	Feature 11	Baytown Plain, Roper	body	1	14.6
11	Feature 11	Bell Plain	body	2	36.1
11	Feature 11	Mississippi Plain, Warrior	body	4	10.5
11	Feature 11	sand-tempered	body	1	4.2
11	Feature 11		sherdlets		2.3
12	1	shell-tempered	body	2	3.1
12	1	shell-tempered	node, from strap handle	1	6.0
12	1		sherdlets		6.4
12	2/Feature 10	Alexander Incised, Pleasant Valley	body	1	9.0
12	2/Feature 10	Bell Plain	body	2	3.1
12	2/Feature 10	grog-tempered	body	1	2.9
12	2/Feature 10	sand-tempered	body	3	9.9
12	2/Feature 10	shell-tempered	body	15	26.6
12	2/Feature 10		sherdlets		5.5
12	3	Alexander Pinched, Prairie Farms	body	1	10.3
12	3	Alexander Incised, unspecified	body	1	3.5
12	3	Baytown Plain, Roper	body	5	28.8
12	3	Bell Plain	body	1	2.4
12	3	Bell Plain	standard rim, bowl; 0.5 cm	1	1.6
12	3	sand-tempered	body	3	4.6
12	3	shell-tempered	body	6	13.1
12	3		sherdlets		8.5
12	4	Alexander Incised, Pleasant Valley	rim, bowl; 0.5 cm	1	3.8
12	4	Alexander Incised, unspecified	body	1	2.8
12	4	Alexander Pinched, unspecified	body	1	6.0
12	4	Baytown Plain, Roper	body	5	16.0
12	4	Baytown Plain, Roper	standard rim, bowl; 0.6 cm	2	20.0
12	4	Bell Plain	body	1	2.6
12	4	Moundville Incised, unspec.	body	1	2.2
12	4	sand-tempered	body	5	24.8
12	4	shell-tempered	body	5	12.9
12	4		sherdlets		14.2
12	5	Alexander Incised, Pleasant Valley	body	4	24.7
12	5	Baytown Plain, Roper	body	3	13.4

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
12	5	Baytown Plain, Roper	standard rim, jar; 0.7 cm	1	9.1
12	5	Mississippi Plain, Warrior	body	11	31.3
12	5	sand-tempered	body	3	7.1
12	5	shell-tempered, white filmed	standard rim, bowl or bottle; 0.5 cm	1	1.6
12	5		sherdlets		11.5
12	6	Alexander Pinched, unspecified	body	2	8.3
12	6	Baytown Plain, Roper	body	5	21.8
12	6	Bell Plain	body	1	1.4
12	6	Bell Plain	standard rim, bottle; 0.5 cm	1	2.1
12	6	sand-tempered	body	6	26.4
12	6	sand-tempered	rim, small fragment; 0.7 cm	1	2.1
12	6	sand-tempered, incised	rim, small fragment; 0.7 cm	1	3.4
12	6		sherdlets		8.7
12	7/Feature 11	Alexander Pinched, unspecified	body	1	3.7
12	7/Feature 11	Baytown Plain, Roper	body	5	24.2
12	7/Feature 11	Bell Plain	standard rim, bowl; 0.7 cm	1	1.8
12	7/Feature 11	Bell Plain	body	2	1.9
12	7/Feature 11	Mississippi Plain, Warrior	body	5	8.2
12	7/Feature 11	Mississippi Plain, Warrior	folded rim, large jar; 0.9 cm	2	22.5
12	7/Feature 11	Moundville Engraved, unspec.	body, small fragment	1	0.8
12	7/Feature 11	sand-tempered	body	5	14.5
12	7/Feature 11		sherdlets		10.5
12	8	Alexander Incised, unspecified	body	1	3.6
12	8/Feature 8	shell-tempered	body	1	1.4
12	8/Feature 11	Baytown Plain, Roper	body	2	8.8
12	8/Feature 11	Baytown Plain, Roper	standard rim, bowl; 0.7 cm	1	2.4
12	8/Feature 11	Mississippi Plain, Warrior	body	2	20.9
12	8/Feature 11	sand-tempered	body	1	8.2
12	8/Feature 11	shell-tempered	body	2	3.8
12	8/Feature 11		sherdlets		6.3
12	10	Nashville Negative Painted	body, black on white	1	1.9
12	10	sand-tempered	body	1	1.9
12	10	shell-tempered	body	2	1.5
12	10	shell-tempered	rim, small fragment; 0.7 cm	1	1.2
12	10		sherdlets		2.4
13	1	Alexander Pinched, Prairie Farms	body	1	3.1
13	1	Bell Plain	body	3	12.0
13	1	grog-tempered	body	3	4.8
13	1	sand-tempered	body	1	2.8
13	1	shell-tempered	body, small fragments	3	4.4
13	1		sherdlets		12.4

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
13	2/Feature 10	Alabama River Applique	applique fragment	1	0.9
13	2/Feature 10	grog-tempered	body	1	2.1
13	2/Feature 10	shell-tempered	body	9	27.5
13	2/Feature 10		sherdlets		6.4
13	3/Feature 10	Alabama River Applique	body & neck sherds from one jar	36	116.8
13	3/Feature 10	Alexander Incised, unspecified	standard rim, possible bowl; 0.7 cm	1	4.8
13	3/Feature 10	Alexander Pinched, unspecified	body	1	3.7
13	3/Feature 10	Bell Plain	body, probably from same vessel	37	178.7
13	3/Feature 10	Bell Plain	standard rim, bowl or bottle; 0.4 cm	1	4.2
13	3/Feature 10	Bell Plain	standard rims, small fragments; 0.5 cm	3	6.0
13	3/Feature 10	grog-tempered	body	1	5.1
13	3/Feature 10	sand-tempered, cordmarked	body	1	4.9
13	3/Feature 10	sand-tempered	body	4	11.7
13	3/Feature 10	shell-tempered	body	5	8.6
13	3/Feature 10		sherdlets		12.5
13	4	Alexander Incised, Pleasant Valley	body	1	16.3
13	4	Alexander Incised, Pleasant Valley	rim, jar; 0.7 cm	1	7.8
13	4	Alexander Incised, Pleasant Valley	rims, jar; 0.9 cm	2	34.3
13	4	Alexander Pinched, Prairie Farms	body	4	15.6
13	4	Baytown Plain, Roper	body	2	9.8
13	4	sand-tempered, punctate	body	1	1.9
13	4	sand-tempered	body	9	23.1
13	4		sherdlets		21.1
13	5	Alexander Incised, Pleasant Valley	body	1	10.6
13	5	Alexander Incised, Pleasant Valley	rim, jar; 0.7 cm	1	6.1
13	5	Alexander Incised, Pleasant Valley	rim, jar; 0.9 cm	1	7.4
13	5	Alexander Pinched, Prairie Farms	body	2	4.4
13	5	Bell Plain	body	1	2.1
13	5	grog-tempered	body	2	6.3
13	5	sand-tempered	body	10	44.6
13	5	sand-tempered	podal support	1	20.4
13	5		sherdlets		16.4
13	6	Alexander Incised, unspecified	body	1	1.7
13	6	Alexander Pinched, unspecified	body	1	4.6
13	6	grog-tempered	rim, small fragment; 0.7 cm	1	0.8
13	6	shell-tempered	rim, bowl; 0.5 cm	1	3.0
13	6		sherdlets		1.5
13	9	sand-tempered, punctate	body	1	23.6
15	2/Feature 10	Baytown Plain, Roper	body	4	10.4
15	2/Feature 10	grog-tempered	body	2	5.2
15	2/Feature 10	Mississippi Plain, Warrior	body	4	9.8

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
15	2/Feature 10	sand-tempered	body	3	6.5
15	2/Feature 10	shell-tempered	body	7	8.0
15	2/Feature 10	shell-tempered, incised	body, unburnished	1	3.6
15	2/Feature 10		sherdlets		8.1
15	3	grog-tempered	body	2	2.7
15	3	shell-tempered	body	6	4.3
15	4	Alexander Incised, Pleasant Valley	standard rim, jar; 0.9 cm	1	23.0
15	4	Alexander Incised, unspecified	body	1	5.5
15	4	Alexander Incised, unspecified	standard rim, jar; 0.7 cm	1	5.3
15	4	Alexander Pinched, Prairie Farms	body	3	10.6
15	4	Baytown Plain, Roper	body	3	13.4
15	4	Mississippi Plain, Warrior	body	7	30.6
15	4	grog-tempered	body	6	23.1
15	4	grog-tempered	standard rim, jar or bowl; 0.7 cm	1	2.9
15	4	sand-tempered	body	3	6.9
15	4	shell-tempered	body	7	81.4
15	4	shell-tempered, red painted	body	1	3.4
15	4		sherdlets		5.8
15	5	Alexander Incised, Prairie Farms	body	1	17.3
15	5	Alexander Incised, unspecified	body	5	8.6
15	5	Alexander Incised, unspecified	rims, small fragments; 0.7 cm	2	4.2
15	5	Alexander Pinched, Prairie Farms	body	6	24.9
15	5	Bell Plain	body	1	0.9
15	5	Mississippi Plain, Warrior	body	4	9.4
15	5	sand-tempered	body	5	18.0
15	5	sand-tempered, incised	body	1	2.1
15	5	shell-tempered	body	2	1.4
15	5		sherdlets		14.6
15	6	Alexander Incised, Pleasant Valley	body	5	20.9
15	6	Alexander Incised, Pleasant Valley	rim, small fragments; 0.6 cm	1	2.5
15	6	Alexander Incised, Pleasant Valley	rim, small fragments; 0.7 cm	1	2.1
15	6	Alexander Pinched, Prairie Farms	body	2	7.7
15	6	Alexander Pinched, Prairie Farms	standard rim, jar; 0.9 cm	1	14.4
15	6	Baytown Plain, Roper	body	2	5.9
15	6	Bell Plain	body	1	1.8
15	6	Mississippi Plain, Warrior	body	3	31.3
15	6	sand-tempered	body	2	5.4
15	6		sherdlets		20.3
15	Feature 12	Alexander Incised, Pleasant Valley	body	1	3.1
15	Feature 12	Alexander Pinched	body	4	12.1
15	Feature 12	shell-tempered, incised	body, small fragment, unburnished	1	0.6

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
15	7	Baytown Plain, Roper	body	2	7.2
15	7	sand-tempered	body	4	9.0
15	7	sand-tempered, punctate	body	1	4.8
15	7		sherdlets		4.8
15	8	Alexander Pinched, Prairie Farms	body	1	9.1
15	8	Mississippi Plain, Warrior	body	1	4.7
15	8	sand-tempered	body	1	1.2
15	Feature 11	Bell Plain	body	1	0.6
15	Feature 11	sand-tempered, punctate	body, eroded	1	4.1
15	Feature 11	shell-tempered	body	1	0.6
16	1	Baytown Plain, Roper	body	1	2.8
16	1	sand-tempered	body	4	7.2
16	1	shell-tempered	body, some with sand-temper	6	11.4
16	1	shell-tempered	rim, small fragment; 0.5 cm	1	1.7
16	2/Feature 10	Alabama River Incised	body, flaring rim bowl	1	9.1
16	2/Feature 10	Baytown Plain, Roper	body	1	2.2
16	2/Feature 10	Bell Plain	body	2	5.5
16	2/Feature 10	sand-tempered	body	3	6.2
16	2/Feature 10	shell-tempered	body, some with sand-temper	2	3.5
16	2/Feature 10		sherdlets		7.8
16	3	Alexander Incised, Pleasant Valley	body	1	15.1
16	3	Alexander Pinched, Prairie Farms	body	1	3.9
16	3	Baytown Plain, Roper	body	4	21.8
16	3	shell-tempered	body	3	7.5
16	3	shell-tempered, incised	body, small fragment, unburnished	1	0.8
16	3	no temper	body	1	1.1
16	3		sherdlets		4.0
16	4	Alexander Incised, Pleasant Valley	body	1	7.8
16	4	Alexander Incised, Pleasant Valley	standard rims, jar; 0.9 cm	2	14.7
16	4	Alexander Pinched, Prairie Farms	body	1	3.3
16	4	Alexander Pinched, unspecified	body	1	6.6
16	4	Baytown Plain, Roper	body	7	31.2
16	4	Bell Plain	body	2	3.6
16	4	Mississippi Plain, Warrior	body	3	6.8
16	4	sand-tempered	body	6	44.6
16	4	shell-tempered	body	4	12.1
16	4		sherdlets		27.2
16	5a	Alexander Incised, Pleasant Valley	rim, small fragment; 0.9 cm	1	1.7
16	5a	Alexander Incised, Prairie Farms	body	1	6.6
16	5a	Alexander Incised, unspecified	body	1	1.1
16	5a	Alexander Pinched, Prairie Farms	body	3	22.8

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
16	5a	sand-tempered	body	8	26.0
16	5a	sand-tempered	rims, small fragments; 0.7 cm	2	4.1
16	5a	shell-tempered	body	2	1.5
16	5a	Wheeler Plain	body	1	4.8
16	5a		sherdlets		16.8
16	5b	Alexander Incised, Pleasant Valley	rim, jar; 1.0 cm	1	9.8
16	5b	Alexander Pinched, Prairie Farms	body	2	12.5
16	5b	Mississippi Plain, Warrior	body, large jar	1	56.5
16	5b	grog-tempered	body	1	10.2
16	5b	sand-tempered	body	1	2.4
16	5b		sherdlets		9.4
16	6	Alexander Incised, Pleasant Valley	body, eroded surface	3	14.5
16	6	Alexander Incised, Pleasant Valley	rims, small fragments; 0.9 cm	2	3.9
16	6	Alexander Pinched, Prairie Farms	body	2	4.3
16	6	Baytown Plain, Roper	body	1	8.5
16	6	sand-tempered	body	3	4.5
16	6	sand-tempered	rim, small fragment; 0.7 cm	1	1.5
16	6	shell-tempered	body, some with sand-temper	2	4.3
16	6		sherdlets		6.0
16	7	sand-tempered	body	2	5.0
17	1	Alexander Incised, unspecified	body	1	10.7
17	1	Baytown Plain, Roper	body	5	11.2
17	1	Bell Plain	body	5	8.1
17	1	Mississippi Plain, Warrior	body	7	16.7
17	1	shell-tempered	body	6	7.3
17	1	shell-tempered	standard rim, fragment; 0.8 cm	1	3.3
17	1	shell-tempered, incised	body, eroded surface, unburnished	2	3.1
17	1	shell-tempered, red painted	body, with some sand-temper	4	9.0
17	1		sherdlets		20.8
17	2/Feature 10	grog-tempered	body	4	7.3
17	2/Feature 10	Mississippi Plain, Warrior	body	13	58.7
17	2/Feature 10	sand-tempered	body	2	6.9
17	2/Feature 10	shell-tempered	body	17	21.3
17	2/Feature 10	shell-tempered, incised	body, eroded surface, unburnished	1	8.0
17	2/Feature 10		sherdlets		5.5
17	3/Feature 10	Alexander Incised, Pleasant Valley	body	2	15.7
17	3/Feature 10	Alexander Incised, Prairie Farms	body	2	10.2
17	3/Feature 10	Alexander Pinched, Prairie Farms	body	5	31.5
17	3/Feature 10	Alexander Pinched, Prairie Farms	standard rim, jar, same vessel; 0.7 cm	4	19.1
17	3/Feature 10	Baytown Plain, Roper	body	3	7.7
17	3/Feature 10	Bell Plain	body	5	5.6

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
17	3/Feature 10	Mississippi Plain, Warrior	body	10	22.2
17	3/Feature 10	sand-tempered	body	8	29.9
17	3/Feature 10	shell-tempered	body, with some sand-temper	6	10.9
17	3/Feature 10	shell-tempered	standard rim, bowl; 0.5 cm	1	5.3
17	3/Feature 10	shell-tempered, red painted	body, small fragment	1	0.7
17	3/Feature 10		sherdlets		17.7
17	4	Alexander Incised, Pleasant Valley	body	1	4.0
17	4	Alexander Pinched, Prairie Farms	body	2	5.7
17	4	Alexander Pinched, Prairie Farms	rim, jar; 0.9 cm	1	8.6
17	4	Baytown Plain, Roper	body	1	5.1
17	4	Bell Plain	body	3	2.7
17	4	Mississippi Plain, Warrior	body	7	33.1
17	4	Moundville Incised, unspecified	body, incised arch & 3 lines	1	2.1
17	4	sand-tempered	body	3	6.9
17	4	shell-tempered	body	3	8.5
17	4		sherdlets		27.5
17	5	Alexander Pinched, unspecified	body	2	17.0
17	5	grog-tempered	body	1	3.5
17	5	Mississippi Plain, Warrior	body	1	2.9
17	5	sand-tempered	body	4	10.9
17	5	shell-tempered	body	2	1.7
17	5		sherdlets		9.5
17	7	shell-tempered	body	1	1.1
17	8		sherdlets		0.2
17	Feature 11	sand-tempered	body	2	6.0
17	Feature 11		sherdlets		0.6
18	1	Alabama River Incised, Alford	rim, flaring rim bowl; 0.9 cm	1	11.1
18	1	Baytown Plain, Roper	body	2	4.6
18	1	Bell Plain	body	4	11.7
18	1	Moundville Engraved, unspecified	body, single engraved line & punctation	1	2.5
18	1	shell-tempered	body	4	6.0
18	1		sherdlets		26.0
18	2/Feature 10	Baytown Plain, Roper	body	3	11.6
18	2/Feature 10	Bell Plain	body	7	10.3
18	2/Feature 10	Mississippi Plain, Warrior	body	9	18.1
18	2/Feature 10	Mississippi Plain, Warrior	folded rim, jar; 0.6 cm	1	3.5
18	2/Feature 10	sand-tempered	body	1	2.6
18	2/Feature 10	shell-tempered	body	9	13.3
18	2/Feature 10		sherdlets		22.2
18	3/Feature 10	Alexander Pinched, Prairie Farms	body	1	3.0
18	3/Feature 10	Baytown Plain, Roper	body	3	7.2

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
18	3/Feature 10	Bell Plain	body	5	6.9
18	3/Feature 10	Mississippi Plain, Warrior	body	20	61.0
18	3/Feature 10	sand-tempered	body	4	11.8
18	3/Feature 10	shell-tempered	body	7	11.6
18	3/Feature 10		sherdlets		26.2
18	4	Alexander Pinched, unspecified	body	2	9.5
18	4	Baytown Plain, Roper	body	6	18.8
18	4	Bell Plain	body	3	2.0
18	4	Mississippi Plain, Warrior	body	22	47.5
18	4	Mississippi Plain, Warrior	folded rim, jar; 0.8 cm	1	3.3
18	4	Mississippi Plain, Warrior	standard rim, jar; 0.7 cm	1	1.9
18	4	Moundville Incised, Carrollton	body, 3 incised arches	1	3.4
18	4	Moundville Incised, unspecified	body, 2 incised lines	1	2.2
18	4	sand-tempered	body	8	37.9
18	4	shell-tempered	body	5	5.0
18	4		sherdlets		24.1
18	5	Alexander Incised, Pleasant Valley	standard rim, jar 0.8 cm	1	3.1
18	5	Mississippi Plain, Warrior	body	4	7.1
18	5	sand-tempered	body	3	9.5
18	5	shell-tempered	body	2	1.5
18	5		sherdlets		8.0
18	6	Alexander Incised, Pleasant Valley	body	1	7.0
18	6	Alexander Pinched, Prairie Farms	body	1	14.6
18	6	Baytown Plain, Roper	body	2	6.2
18	6	Mississippi Plain, Warrior	body	2	3.4
18	6	sand-tempered	body	3	10.8
18	6	shell-tempered	body	2	2.2
18	6		sherdlets		4.1
18	7		sherdlets		1.4
18	Feature 11	Alexander Pinched, unspecified	body	1	3.9
18	Feature 11	sand-tempered	body	1	1.4
18	Feature 11		sherdlets		1.8
18	Feature 12	Alexander Pinched, Prairie Farms	body	1	19.0
2	PZ/1	Baytown Plain, Roper	body	2	4.9
2	PZ/1	Mississippi Plain, Warrior	body	4	7.0
2	PZ/1	grog-tempered	body	2	4.5
2	PZ/1	sand-tempered	body	1	2.7
2	PZ/1	shell-tempered	body	4	9.3
2	PZ/1		sherdlets		28.1
2	PZ/2	Baytown Plain, Roper	body	9	20.4
2	PZ/2	shell-tempered	body	6	8.3

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
2	PZ/2	shell-tempered, incised	body, eroded surface	1	3.4
2	PZ/2		sherdlets		42.2
2	PZ/3	Alexander Pinched, unspecified	body	1	12.0
2	PZ/3	Baytown Plain, Roper	body	6	37.2
2	PZ/3	Baytown Plain, Roper	rim; 0.6	1	3.6
2	PZ/3	grog-tempered	body	3	5.3
2	PZ/3	Mississippi Plain, Warrior	body	4	7.6
2	PZ/3	Moundville Incised, unspecified	body	1	1.1
2	PZ/3	shell-tempered	body	3	4.6
2	PZ/3		sherdlets		30.8
2	4	grog-tempered	body	2	3.2
2	4	Mississippi Plain, Warrior	body	2	2.5
2	4	sand-tempered	body	3	5.8
2	4	shell-tempered	body	4	4.5
2	4		sherdlets		11.6
2	5	Baytown Plain, Roper	body	2	7.6
2	5	Mississippi Plain, Warrior	body	1	1.1
2	5	shell-tempered	body	1	0.7
2	5		sherdlets		3.5
2	6	shell-tempered	body	1	0.5
2	6		sherdlets		0.9
2	7		sherdlets		0.1
3	PZ/1	Mississippi Plain, Warrior	body	2	5.4
3	PZ/1	shell-tempered	body	1	2.1
3	PZ/1		sherdlets		2.7
3	PZ/2	Baytown Plain, Roper	body	1	2.1
3	PZ/2	Mississippi Plain, Warrior	body	2	6.2
3	PZ/2		sherdlets		3.7
3	PZ/3	Baytown Plain, Roper	body	3	24.6
3	PZ/3	Mississippi Plain, Warrior	body	9	21.2
3	PZ/3	Moundville Engraved, unspecified	body, single engraved line	1	1.1
3	PZ/3	shell-tempered	rim, standard; 0.8 cm	1	0.8
3	PZ/3		sherdlets		10.5
3	4	Bell Plain	body	1	2.4
3	4	Mississippi Plain, Warrior	body	15	40.7
3	4	sand-tempered	body, eroded surface	1	4.9
3	4		sherdlets		17.9
3	5	Mississippi Plain, Warrior	body	9	16.2
3	5	Moundville, Incised, unspecified	body, two incised arches	1	2.2
3	5	sand-tempered	body	1	2.4
3	5	shell-tempered	body	1	0.9

Appendix 7. Pottery from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Feature	Type/Temper	Description	n	g
3	5		sherdlets		11.2
3	6	shell-tempered	body	1	1.2
3	6		sherdlets		0.2
6	PZ/1	Alexander Pinched, unspecified	body	1	3.7
6	PZ/1	Baytown Plain, Roper	body	6	21.2
6	PZ/1	Bell Plain	body	1	3.4
6	PZ/1	Mississippi Plain, Warrior	body	2	3.8
6	PZ/1	sand-tempered	body	1	3.7
6	PZ/1	shell-tempered	body	12	27.1
6	PZ/1		sherdlets		56.1
6	PZ/2	Baytown Plain, Roper	body	14	48.9
6	PZ/2	Mississippi Plain, Warrior	body	1	1.7
6	PZ/2	sand-tempered	body	1	3.4
6	PZ/2	shell-tempered	body	8	14.9
6	PZ/2		sherdlets		32.2
6	PZ/3	shell-tempered	body	6	7.7
6	PZ/3	shell-tempered	rim, standard; 0.4 cm	1	2.1
6	PZ/3	shell-tempered, white slip	body	1	4.1
6	PZ/3		sherdlets		26.3
6	4	Alabama River Applique	neck sherd	1	3.7
6	4	Baytown Plain, Roper	body	7	18.6
6	4	Bell Plain	body	10	36.3
6	4	Mississippi Plain, Warrior	body	4	6.9
6	4		sherdlets		16.6
6	5	Alexander Pinched, unspecified	body	1	9.9
6	5	Baytown Plain, Roper	body	1	21.2
6	5	Mississippi Plain, Warrior	body	7	47.2
6	5		sherdlets		1.5
6	6	Barton Incised	neck sherd	1	0.9
6	6	Baytown Plain, Roper	body	1	4.1
6	6	shell-tempered	body	3	3.3

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
1	PZ/1-4	daub			197.4
1	PZ/1-4	historic	whiteware, blue shell edge	1	4.9
1	PZ/1-4	historic	whiteware	1	1.4
1	PZ/1-4	mineral	hematite	1	0.7
1	PZ/1-4	mineral	limonite	1	1.8
1	PZ/1-4	stone, flaked	coastal plain agate	4	1.1
1	PZ/1-4	stone, flaked	Dover chert	1	0.6
1	PZ/1-4	stone, flaked	Fort Payne/Bangor chert	2	1.0
1	PZ/1-4	stone, flaked	quartz	2	0.7
1	PZ/1-4	stone, flaked	quartz	2	8.5
1	PZ/1-4	stone, flaked	quartzite	2	1.6
1	PZ/1-4	stone, flaked	Tuscaloosa gravel chert	3	1.4
1	PZ/1-4	stone, flaked	TGC, heat-treated	33	12.8
1	PZ/1-4	stone, flaked	TGC, heat-treated	2	4.9
1	PZ/1-4	stone, ground	sandstone, micaceous	2	47.8
1	PZ/1-4	stone, unmodified	sandstone	28	103.3
1	PZ/1-4	stone, unmodified	Tuscaloosa gravel chert	2	4.9
1	CM2/5	daub			37.9
1	CM2/5	stone, flaked	coastal plain agate	3	1.7
1	CM2/5	stone, flaked	Fort Payne chert	2	0.9
1	CM2/5	stone, flaked	petrified wood	1	0.5
1	CM2/5	stone, flaked	Tuscaloosa gravel chert	2	0.8
1	CM2/5	stone, flaked	TGC, heat-treated	10	3.0
1	CM2/5	stone, flaked	TGC, heat-treated, utilized flake	1	0.3
1	CM2/5	stone, ground	sandstone, micaceous	1	0.7
1	CM2/5	stone, unmodified	sandstone	3	5.7
1	CM2/5	stone, unmodified	sandstone, hematitic	1	6.8
1	CM2/6	daub			9.6
1	CM2/6	stone, flaked	Fort Payne chert	1	0.3
1	CM2/6	stone, flaked	quartz	1	0.5
1	CM2/6	stone, flaked	Tuscaloosa gravel chert	6	2.9
1	CM2/6	stone, flaked	TGC, heat-treated	17	5.8
1	CM2/6	stone, flaked	TGC, heat-treated	3	11.4
1	CM2/6	stone, flaked	unidentified chert	3	0.6
1	CM2/6	stone, unmodified	sandstone	6	19.9
1	CM2/6	stone, unmodified	Tuscaloosa gravel	6	22.8
1	CM2/7	daub			25.0
1	CM2/7	stone, flaked	coastal plain agate	1	1.0
1	CM2/7	stone, flaked	Dover chert	1	2.5
1	CM2/7	stone, flaked	Fort Payne chert	2	1.6
1	CM2/7	stone, flaked	quartz	3	1.3

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
1	CM2/7	stone, flaked	tan chert, possibly Mill Creek	1	0.4
1	CM2/7	stone, flaked	TGC, heat-treated	19	5.5
1	CM2/7	stone, flaked	TGC, heat-treated	2	6.3
1	CM2/7	stone, flaked	unidentified chert	6	1.2
1	CM2/7	stone, unmodified	sandstone	7	37.8
1	CM2/7	stone, unmodified	sandstone, micaceous	4	29.0
1	CM2/7	stone, unmodified	Tuscaloosa gravel	12	23.7
1	CM1/8	daub			3.9
1	CM1/8	stone, flaked	coastal plain agate	1	0.7
1	CM1/8	stone, flaked	Fort Payne	1	0.2
1	CM1/8	stone, flaked	Fort Payne/Bangor chert	2	2.5
1	CM1/8	stone, flaked	quartz	2	0.4
1	CM1/8	stone, flaked	TGC, heat-treated	15	4.1
1	CM1/8	stone, flaked	unidentified chert, dark brown	4	1.4
1	CM1/8	stone, ground	sandstone, micaceous	1	23.2
1	CM1/8	stone, unmodified	sandstone	5	8.5
1	CM1/8	stone, unmodified	sandstone, hematitic	1	5.3
1	CM1/8	stone, unmodified	sandstone, micaceous	11	242.8
1	CM1/8	stone, unmodified	Tuscaloosa gravel	6	26.8
1	CM1/9	daub			5.0
1	CM1/9	stone, flaked	coastal plain agate	4	1.7
1	CM1/9	stone, flaked	quartz	2	0.3
1	CM1/9	stone, flaked	quartz	1	0.7
1	CM1/9	stone, flaked	tan chert, possibly Mill Creek	4	0.7
1	CM1/9	stone, flaked	TGC, heat-treated	23	9.1
1	CM1/9	stone, flaked	TGC, heat-treated, biface	1	2.8
1	CM1/9	stone, flaked	TGC, heat-treated	2	10.2
1	CM1/9	stone, flaked	unidentified chert	1	0.3
1	CM1/9	stone, flaked	unidentified chert	7	8.0
1	CM1/9	stone, ground	sandstone abrader	1	13.4
1	CM1/9	stone, unmodified	quartzite	1	92.7
1	CM1/9	stone, unmodified	sandstone	13	38.3
1	CM1/9	stone, unmodified	sandstone, hematitic	4	10.2
1	CM1/9	stone, unmodified	sandstone, micaceous	5	37.8
1	CM1/9	stone, unmodified	Tuscaloosa gravel	4	15.9
1	Fea. 1/Fea. 5	stone, flaked	Fort Payne	1	0.1
1	Fea. 1/Fea. 5	stone, flaked	quartz	1	0.3
1	Fea. 1/Fea. 5	stone, flaked	tan chert, possibly Mill Creek	1	0.5
1	Fea. 1/Fea. 5	stone, flaked	Tuscaloosa gravel chert	4	0.9
1	Fea. 1/Fea. 5	stone, flaked	TGC, heat-treated	19	4.2
1	Fea. 1/Fea. 5	stone, flaked	TGC, heat-treated	3	2.7

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
1	Fea. 1/Fea. 5	stone, flaked	unidentified chert	1	0.1
1	Fea. 1/Fea. 5	stone, flaked	unidentified chert	6	3.3
1	Fea. 1/Fea. 5	stone, unmodified	sandstone	12	13.6
1	Fea. 1/Fea. 5	stone, unmodified	sandstone, hematitic	4	2.8
1	Fea. 1/Fea. 5	stone, unmodified	sandstone, micaceous	4	12.2
1	Fea. 1/Fea. 5	stone, unmodified	Tuscaloosa Gravel	6	6.0
1	Feature 5	daub			0.8
1	Feature 5	stone, flaked	Tallahatta quartzite	4	1.2
1	Feature 5	stone, flaked	Tuscaloosa Gravel chert	1	0.2
1	Feature 5	stone, flaked	TGC, heat-treated	4	1.4
1	Feature 5	stone, flaked	TGC, heat-treated	7	29.3
1	Feature 5	stone, flaked	unidentified chert	3	0.8
1	Feature 5	stone, flaked	unidentified chert, white	1	0.9
1	Feature 5	stone, unmodified	sandstone, micaceous	1	0.8
1	Feature 5	stone, unmodified	sandstone	4	2.8
1	Feature 5	stone, unmodified	Tuscaloosa Gravel	3	20.0
4	PZ/1-6	daub			144.8
4	PZ/1-6	mineral	hematite	1	1.7
4	PZ/1-6	stone, flaked	petrified wood	1	0.3
4	PZ/1-6	stone, flaked	quartz	1	0.3
4	PZ/1-6	stone, flaked	quartz	3	4.1
4	PZ/1-6	stone, flaked	quartzite	1	0.2
4	PZ/1-6	stone, flaked	quartzite	3	3.0
4	PZ/1-6	stone, flaked	Tallahatta quartzite	3	2.8
4	PZ/1-6	stone, flaked	Tuscaloosa Gravel chert	5	1.7
4	PZ/1-6	stone, flaked	TGC, heat-treated, biface	1	0.7
4	PZ/1-6	stone, flaked	TGC, heat-treated, core fragment	1	5.5
4	PZ/1-6	stone, flaked	TGC, heat-treated	28	9.3
4	PZ/1-6	stone, flaked	TGC, heat-treated	2	6.6
4	PZ/1-6	stone, flaked	unidentified chert	3	1.5
4	PZ/1-6	stone, unmodified	petrified wood	1	2.2
4	PZ/1-6	stone, unmodified	sandstone	58	178.4
4	PZ/1-6	stone, unmodified	Tuscaloosa Gravel	10	20.2
4	CM2/6	daub			69.0
4	CM2/6	stone, flaked	Fort Payne chert	1	0.4
4	CM2/6	stone, flaked	quartzite	1	0.5
4	CM2/6	stone, flaked	Tuscaloosa Gravel chert	2	1.0
4	CM2/6	stone, flaked	TGC, heat-treated	9	2.6
4	CM2/6	stone, flaked	unidentified chert	2	0.6
4	CM2/6	stone, unmodified	sandstone	12	98.3
4	CM2/6	stone, unmodified	Tuscaloosa Gravel	8	22.7

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
4	CM2/7	daub			28.0
4	CM2/7	stone, flaked	coastal plain agate	3	0.6
4	CM2/7	stone, flaked	Dover chert	1	0.2
4	CM2/7	stone, flaked	quartz	4	0.9
4	CM2/7	stone, flaked	quartz	1	9.4
4	CM2/7	stone, flaked	quartzite	1	0.3
4	CM2/7	stone, flaked	Tallahatta quartzite	2	2.2
4	CM2/7	stone, flaked	TGC, heat-treated	23	6.1
4	CM2/7	stone, flaked	TGC, heat-treated	3	15.3
4	CM2/7	stone, flaked	unidentified chert, pink	2	0.6
4	CM2/7	stone, flaked	unidentified chert, grey	3	10.0
4	CM2/7	stone, unmodified	sandstone	25	50.4
4	CM2/7	stone, unmodified	sandstone, micaceous	2	6.9
4	CM2/7	stone, unmodified	Tuscaloosa Gravel	8	10.5
4	CM1/8	daub			22.3
4	CM1/8	stone, flaked	coastal plain agate	1	0.2
4	CM1/8	stone, flaked	Fort Payne/Bangor chert	1	0.5
4	CM1/8	stone, flaked	quartz	2	0.6
4	CM1/8	stone, flaked	quartz	1	0.4
4	CM1/8	stone, flaked	TGC, heat-treated	35	7.3
4	CM1/8	stone, flaked	TGC, heat-treated	7	12.1
4	CM1/8	stone, flaked	unidentified chert	5	0.9
4	CM1/8	stone, flaked	unidentified chert	4	0.5
4	CM1/8	stone, unmodified	petrified wood	1	6.2
4	CM1/8	stone, unmodified	sandstone	56	136.3
4	CM1/8	stone, unmodified	sandstone, hematitic	1	5.0
4	CM1/8	stone, unmodified	Tuscaloosa Gravel	12	47.5
4	CM1/9	daub			14.4
4	CM1/9	stone, flaked	Fort Payne chert	1	0.8
4	CM1/9	stone, flaked	Fort Payne/Bangor chert	1	5.0
4	CM1/9	stone, flaked	quartz	2	0.7
4	CM1/9	stone, flaked	Tuscaloosa gravel chert	2	0.4
4	CM1/9	stone, flaked	TGC, heat-treated	22	5.5
4	CM1/9	stone, flaked	unidentified chert	5	1.0
4	CM1/9	stone, flaked	unidentified chert	3	2.0
4	CM1/9	stone, unmodified	sandstone	27	58.7
4	CM1/9	stone, unmodified	sandstone, micaceous	2	11.0
4	CM1/9	stone, unmodified	Tuscaloosa Gravel	9	18.5
4	CM1/Fea.1	daub			1.7
4	CM1/Fea.1	stone, flaked	quartz	1	3.7
4	CM1/Fea.1	stone, flaked	TGC, heat-treated	12	2.2

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
4	CM1/Fea.1	stone, unmodified	sandstone	16	72.7
4	CM1/Fea.1	stone, unmodified	Tuscaloosa Gravel	7	6.2
4	Feature 1	stone, unmodified	petrified wood	1	5.3
4	Feature 1	stone, unmodified	sandstone	5	7.2
4	Feature 1	stone, unmodified	Tuscaloosa Gravel	2	2.2
4	Feature 5	daub			29.0
4	Feature 5	stone, flaked	quartz	2	0.5
4	Feature 5	stone, flaked	Tallahatta quartzite	2	0.5
4	Feature 5	stone, flaked	Tallahatta quartzite	1	0.3
4	Feature 5	stone, flaked	Tuscaloosa gravel chert	2	1.4
4	Feature 5	stone, flaked	TGC, heat-treated	17	6.8
4	Feature 5	stone, flaked	TGC, heat-treated	2	4.5
4	Feature 5	stone, flaked	unidentified chert, cortex	2	0.9
4	Feature 5	stone, flaked	unidentified chert, grey	2	0.2
4	Feature 5	stone, unmodified	sandstone	12	10.3
4	Feature 5	stone, unmodified	Tuscaloosa Gravel	13	27.9
7	PZ/1	daub			48.7
7	PZ/1	stone, flaked	quartz	1	0.2
7	PZ/1	stone, flaked	Tuscaloosa Gravel chert	1	0.7
7	PZ/1	stone, flaked	TGC, heat-treated	15	4.1
7	PZ/1	stone, flaked	TGC, heat-treated	8	13.3
7	PZ/1	stone, flaked	unidentified chert, cortex	1	0.5
7	PZ/1	stone, flaked	unidentified chert	1	0.2
7	PZ/1	stone, unmodified	petrified wood	3	3.8
7	PZ/1	stone, unmodified	sandstone	5	116.1
7	PZ/1	stone, unmodified	Tuscaloosa Gravel	5	17.4
7	CM2/2	daub			26.4
7	CM2/2	stone, flaked	quartz	1	0.4
7	CM2/2	stone, flaked	quartzite	1	0.8
7	CM2/2	stone, flaked	TGC, heat-treated	19	10.5
7	CM2/2	stone, ground	sandstone, micaceous	1	33.5
7	CM2/2	stone, unmodified		5	20.3
7	CM2/2	stone, unmodified	Tuscaloosa Gravel	3	8.9
7	CM2/3	daub			19.3
7	CM2/3	stone, flaked	quartz	1	0.2
7	CM2/3	stone, flaked	Tuscaloosa Gravel chert	1	0.3
7	CM2/3	stone, flaked	TGC, heat-treated	24	10.7
7	CM2/3	stone, flaked	TGC, heat-treated, biface fragment	1	0.5
7	CM2/3	stone, flaked	TGC, heat-treated	3	5.2
7	CM2/3	stone, flaked	unidentified chert, cortex	1	0.3
7	CM2/3	stone, flaked	unidentified chert, grayish brown	3	0.5

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
7	CM2/3	stone, flaked	sandstone	13	29.1
7	CM2/3	stone, flaked	sandstone, micaceous	2	33.3
7	CM2/3	stone, flaked	Tuscaloosa Gravel	7	86.7
7	CM2/4	daub			31.4
7	CM2/4	stone, flaked	coastal plain agate	2	0.9
7	CM2/4	stone, flaked	Fort Payne	1	0.1
7	CM2/4	stone, flaked	Fort Payne	1	0.7
7	CM2/4	stone, flaked	Madison ppt, TGC, heat-treated	1	1.3
7	CM2/4	stone, flaked	quartz	4	0.7
7	CM2/4	stone, flaked	quartz	3	1.4
7	CM2/4	stone, flaked	Tuscaloosa Gravel chert	5	1.3
7	CM2/4	stone, flaked	TGC, biface fragment	1	1.6
7	CM2/4	stone, flaked	TGC, heat-treated	38	11.1
7	CM2/4	stone, flaked	TGC, heat-treated	11	11.1
7	CM2/4	stone, flaked	unidentified chert	8	1.7
7	CM2/4	stone, unmodified	sandstone	20	117.1
7	CM2/4	stone, unmodified	Tuscaloosa Gravel	10	72.8
7	CM1/5	daub			31.7
7	CM1/5	stone, flaked	Fort Payne/Bangor chert	2	0.2
7	CM1/5	stone, flaked	Fort Payne/Bangor chert	1	1.0
7	CM1/5	stone, flaked	quartz	3	1.4
7	CM1/5	stone, flaked	Tallahatta quartzite	1	0.2
7	CM1/5	stone, flaked	Tuscaloosa gravel chert	2	0.6
7	CM1/5	stone, flaked	TGC, heat-treated	21	4.9
7	CM1/5	stone, flaked	TGC, heat-treated, core fragment	1	9.7
7	CM1/5	stone, flaked	TGC, heat-treated	3	4.6
7	CM1/5	stone, flaked	TGC, heat-treated, utilized flake	1	2.5
7	CM1/5	stone, unmodified	sandstone	19	120.5
7	CM1/5	stone, unmodified	sandstone, micaceous	2	35.0
7	CM1/5	stone, unmodified	Tuscaloosa Gravel	5	19.4
7	CM1/6	daub			11.6
7	CM1/6	stone, flaked	quartz	1	0.3
7	CM1/6	stone, flaked	TGC, heat-treated	15	4.7
7	CM1/6	stone, flaked	TGC, heat-treated	1	0.3
7	CM1/6	stone, unmodified	sandstone	12	196.0
7	CM1/6	stone, unmodified	Tuscaloosa Gravel	4	21.3
7	7/Feature 5	daub			2.7
7	7/Feature 5	stone, flaked	coastal plain agate	3	0.5
7	7/Feature 5	stone, flaked	Fort Payne/Bangor chert	4	1.1
7	7/Feature 5	stone, flaked	quartz	7	1.4
7	7/Feature 5	stone, flaked	Madison ppt, Dover chert	1	1.3

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
7	7/Feature 5	stone, flaked	Tallahatta quartzite	3	1.1
7	7/Feature 5	stone, flaked	Tuscaloosa gravel chert	4	0.8
7	7/Feature 5	stone, flaked	TGC, heat-treated	73	19.5
7	7/Feature 5	stone, flaked	TGC, heat-treated	13	12.9
7	7/Feature 5	stone, flaked	unidentified chert	1	0.5
7	7/Feature 5	stone, flaked	unidentified chert, tan/light brown	7	1.0
7	7/Feature 5	stone, unmodified	sandstone	12	18.9
7	7/Feature 5	stone, unmodified	Tuscaloosa Gravel	10	38.7
7	8/Feature 5	daub			3.1
7	8/Feature 5	stone, flaked	coastal plain agate	1	0.1
7	8/Feature 5	stone, flaked	Tallahatta quartzite	1	0.7
7	8/Feature 5	stone, flaked	Tuscaloosa Gravel chert	1	0.1
7	8/Feature 5	stone, flaked	TGC, heat-treated	26	6.7
7	8/Feature 5	stone, flaked	TGC, heat-treated, ppt tip	1	0.6
7	8/Feature 5	stone, flaked	unidentified chert	1	0.1
7	8/Feature 5	stone, unmodified	sandstone	6	1.9
7	9/Feature 5	daub			0.8
7	9/Feature 5	stone, flaked	quartz	2	0.3
7	9/Feature 5	stone, flaked	Tuscaloosa gravel chert	2	0.5
7	9/Feature 5	stone, flaked	TGC, heat-treated	12	2.5
7	9/Feature 5	stone, flaked	TGC, heat-treated	1	1.9
7	9/Feature 5	stone, unmodified	sandstone	7	5.3
7	9/Feature 5	stone, unmodified	Tuscaloosa Gravel	3	7.8
8	PZ/1	daub			4.3
8	PZ/1	stone, flaked	Madison ppt, TGC, heat-treated	1	0.4
8	PZ/1	stone, flaked	quartz	1	1.2
8	PZ/1	stone, flaked	TGC, heat-treated	7	3.6
8	PZ/1	stone, flaked	TGC, heat-treated	1	4.6
8	PZ/1	stone, ground	sandstone	1	8.0
8	PZ/1	stone, unmodified	sandstone	8	111.5
8	CM2/2	daub			68.6
8	CM2/2	stone, flaked	Fort Payne/Bangor chert	4	1.6
8	CM2/2	stone, flaked	quartz	2	0.7
8	CM2/2	stone, flaked	quartzite	2	2.2
8	CM2/2	stone, flaked	Tuscaloosa Gravel chert	2	0.3
8	CM2/2	stone, flaked	TGC, heat-treated	18	7.1
8	CM2/2	stone, flaked	TGC, heat-treated	5	5.3
8	CM2/2	stone, unmodified	petrified wood	3	8.2
8	CM2/2	stone, unmodified	quartz	1	0.3
8	CM2/2	stone, unmodified	sandstone	11	49.8
8	CM2/2	stone, unmodified	Tuscaloosa Gravel	11	83.8

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
8	CM2/3	daub			195.8
8	CM2/3	stone, flaked	coastal plain agate	1	0.2
8	CM2/3	stone, flaked	Dover chert	1	0.5
8	CM2/3	stone, flaked	Fort Payne/Bangor chert	2	0.6
8	CM2/3	stone, flaked	quartz	5	1.9
8	CM2/3	stone, flaked	quartz	1	2.1
8	CM2/3	stone, flaked	quartzite	1	0.4
8	CM2/3	stone, flaked	Tuscaloosa Gravel chert	2	0.6
8	CM2/3	stone, flaked	TGC, heat-treated	27	11.3
8	CM2/3	stone, flaked	TGC, heat-treated, ppt fragment	1	0.4
8	CM2/3	stone, flaked	TGC, heat-treated	3	3.4
8	CM2/3	stone, flaked	TGC, heat-treated, utilized flake	1	0.6
8	CM2/3	stone, flaked	unidentified chert, brown	1	0.1
8	CM2/3	stone, ground	sandstone abrader	1	73.4
8	CM2/3	stone, unmodified	sandstone	1	2.8
8	CM2/3	stone, unmodified	sandstone	18	75.5
8	CM2/3	stone, unmodified	Tuscaloosa Gravel	8	43.4
8	CM2/4	daub			3.6
8	CM2/4	mineral	limonite	1	0.5
8	CM2/4	stone, flaked	Fort Payne/Bangor chert	3	0.8
8	CM2/4	stone, flaked	quartz	2	2.7
8	CM2/4	stone, flaked	quartzite	1	2.1
8	CM2/4	stone, flaked	Tuscaloosa Gravel chert	1	0.2
8	CM2/4	stone, flaked	TGC, heat-treated	41	12.4
8	CM2/4	stone, flaked	TGC, heat-treated	3	11.6
8	CM2/4	stone, flaked	unidentified chert, grey	1	0.3
8	CM2/4	stone, unmodified	sandstone, micaceous	2	14.1
8	CM2/4	stone, unmodified	sandstone	12	33.3
8	CM2/4	stone, unmodified	Tuscaloosa Gravel	11	67.7
8	CM2/5	daub			9.0
8	CM2/5	stone, flaked	Fort Payne chert	3	1.2
8	CM2/5	stone, flaked	quartz	2	0.4
8	CM2/5	stone, flaked	quartz	1	0.3
8	CM2/5	stone, flaked	quartzite	1	0.3
8	CM2/5	stone, flaked	Tuscaloosa gravel chert	2	0.2
8	CM2/5	stone, flaked	Tuscaloosa gravel chert	1	0.7
8	CM2/5	stone, flaked	TGC, heat-treated, biface	1	1.0
8	CM2/5	stone, flaked	TGC, heat-treated, cobble	1	46.9
8	CM2/5	stone, flaked	TGC, heat-treated	37	8.8
8	CM2/5	stone, flaked	TGC, heat-treated	7	14.0
8	CM2/5	stone, flaked	unidentified chert, grey	2	1.5

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
8	CM2/5	stone, unmodified	petrified wood	1	0.6
8	CM2/5	stone, unmodified	sandstone	21	92.1
8	CM2/5	stone, unmodified	Tuscaloosa Gravel	6	26.6
8	CM2/6	daub			3.7
8	CM2/6	stone, flaked	quartz	2	0.6
8	CM2/6	stone, flaked	TGC, heat-treated	25	8.9
8	CM2/6	stone, flaked	tan chert, possibly Mill Creek	1	0.2
8	CM2/6	stone, unmodified	sandstone	8	5.9
8	CM2/6	stone, unmodified	Tuscaloosa Gravel	9	43.6
8	CM1/7	stone, flaked	Tuscaloosa Gravel chert	1	0.1
8	CM1/8	daub			1.0
8	CM1/8	stone, flaked	Dover chert	1	0.6
8	CM1/8	stone, flaked	Tuscaloosa Gravel chert	1	0.3
8	CM1/8	stone, flaked	Tuscaloosa Gravel chert	2	5.2
8	CM1/8	stone, flaked	TGC, heat-treated	22	7.1
8	CM1/8	stone, flaked	TGC, heat-treated	3	7.8
8	CM1/8	stone, flaked	unidentified chert, cortex	2	0.4
8	CM1/8	stone, unmodified	sandstone	10	17.6
8	CM1/8	stone, unmodified	sandstone, micaceous	4	16.5
8	CM1/8	stone, unmodified	Tuscaloosa Gravel	10	16.7
8	9/Fea. 5	stone, flaked	Fort Payne/Bangor chert	1	0.1
8	9/Fea. 5	stone, flaked	Tuscaloosa Gravel	1	0.1
8	9/Fea. 5	stone, flaked	TGC, heat-treated	12	3.2
8	9/Fea. 5	stone, flaked	unidentified chert, grey	1	0.1
8	9/Fea. 5	stone, unmodified	petrified wood	1	1.3
8	9/Fea. 5	stone, unmodified	sandstone	8	45.1
8	9/Fea. 5	stone, unmodified	Tuscaloosa Gravel	2	9.2
14	PZ1/1-2	daub			119.5
14	PZ1/1-2	mineral	hematite	2	3.5
14	PZ1/1-2	stone, flaked	quartz	2	0.2
14	PZ1/1-2	stone, flaked	quartz	4	10.0
14	PZ1/1-2	stone, flaked	quartzite	2	0.9
14	PZ1/1-2	stone, flaked	TGC, heat-treated, biface fragment	1	0.5
14	PZ1/1-2	stone, flaked	TGC, heat-treated, core fragment	1	5.0
14	PZ1/1-2	stone, flaked	TGC, heat-treated	17	4.2
14	PZ1/1-2	stone, flaked	TGC, heat-treated	4	20.1
14	PZ1/1-2	stone, unmodified	petrified wood	2	22.0
14	PZ1/1-2	stone, unmodified	sandstone	9	119.3
14	PZ1/1-2	stone, unmodified	sandstone, micaceous	2	8.9
14	PZ1/1-2	stone, unmodified	Tuscaloosa Gravel	13	184.2
14	CM2/3	daub			26.5

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
14	CM2/3	mineral	hematite	1	1.0
14	CM2/3	stone, flaked	Fort Payne chert	2	0.6
14	CM2/3	stone, flaked	quartz	3	0.7
14	CM2/3	stone, flaked	sandstone	1	1.5
14	CM2/3	stone, flaked	Tallahatta quartzite	1	2.9
14	CM2/3	stone, flaked	Tuscaloosa Gravel chert	1	0.8
14	CM2/3	stone, flaked	TGC, heat-treated	20	7.9
14	CM2/3	stone, flaked	TGC, heat-treated	2	6.3
14	CM2/3	stone, flaked	TGC, heat-treated, utilized flake	1	2.4
14	CM2/3	stone, unmodified	sandstone	12	139.1
14	CM2/3	stone, unmodified	sandstone, micaceous	5	14.6
14	CM2/3	stone, unmodified	Tuscaloosa Gravel	10	51.9
14	CM2/4	daub			6.1
14	CM2/4	stone, flaked	Fort Payne/Bangor chert	3	0.6
14	CM2/4	stone, flaked	quartz	2	1.4
14	CM2/4	stone, flaked	Tallahatta quartzite	1	22.4
14	CM2/4	stone, flaked	TGC, heat-treated	30	13.6
14	CM2/4	stone, flaked	TGC, heat-treated	7	4.6
14	CM2/4	stone, flaked	unidentified chert, cortex	1	0.4
14	CM2/4	stone, ground	sandstone	1	28.6
14	CM2/4	stone, unmodified	sandstone	15	28.8
14	CM2/4	stone, unmodified	Tuscaloosa Gravel	9	53.5
14	CM1/5	daub			35.4
14	CM1/5	stone, flaked	quartz	1	1.3
14	CM1/5	stone, flaked	quartzite	1	0.8
14	CM1/5	stone, flaked	sandstone	2	3.0
14	CM1/5	stone, flaked	Tallahatta quartzite	1	0.3
14	CM1/5	stone, flaked	Tuscaloosa Gravel chert	1	0.7
14	CM1/5	stone, flaked	Tuscaloosa Gravel chert	4	3.2
14	CM1/5	stone, flaked	Tuscaloosa Gravel chert, utilized flake	1	2.6
14	CM1/5	stone, flaked	TGC, heat-treated	36	11.1
14	CM1/5	stone, flaked	unidentified chert, grey	1	0.4
14	CM1/5	stone, unmodified	sandstone	20	428.8
14	CM1/5	stone, unmodified	sandstone, micaceous	3	17.2
14	CM1/5	stone, unmodified	Tuscaloosa Gravel	8	15.0
14	CM1/6	stone, flaked	Fort Payne/Bangor chert	1	0.2
14	CM1/6	stone, flaked	quartz	1	0.1
14	CM1/6	stone, flaked	TGC, heat-treated	8	2.2
14	CM1/6	stone, ground	sandstone, micaceous	2	51.3
14	CM1/6	stone, unmodified	sandstone	3	210.3
14	Feature 5	stone, flaked	quartz	3	0.5

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
14	Feature 5	stone, flaked	Tuscaloosa Gravel chert	2	0.4
14	Feature 5	stone, flaked	TGC, tested gravel	1	4.5
14	Feature 5	stone, flaked	TGC, heat-treated, biface fragment	1	1.2
14	Feature 5	stone, flaked	TGC, heat-treated	27	9.9
14	Feature 5	stone, flaked	unidentified chert, brown	3	1.3
14	Feature 5	stone, unmodified	sandstone	10	32.9
14	B/8	stone, flaked	TGC, heat-treated	1	0.1
14	B/8	stone, unmodified	quartzite	1	6.1
14	B/8	stone, unmodified	sandstone	4	2.8
14	B/8	stone, unmodified	sandstone, micaceous	1	4.1
14	B/9	stone, flaked	TGC, heat-treated	2	0.4
5	PZ/1	mineral	limonite	1	0.2
5	PZ/1	stone, flaked	quartz	2	0.5
5	PZ/1	stone, flaked	quartzite	1	0.1
5	PZ/1	stone, flaked	quartzite	2	1.6
5	PZ/1	stone, flaked	TGC, heat-treated, biface fragment	1	0.8
5	PZ/1	stone, flaked	TGC, heat-treated	12	4.4
5	PZ/1	stone, flaked	TGC, heat-treated	2	8.2
5	PZ/1	stone, unmodified	sandstone	2	16.7
5	PZ/1	stone, unmodified	Tuscaloosa Gravel	1	15.1
5	PZ/2	historic	nail fragment, rusted	1	1.5
5	PZ/2	stone, flaked	Tallahatta quartzite	4	2.3
5	PZ/2	stone, flaked	TGC, heat-treated, biface	1	5.0
5	PZ/2	stone, flaked	TGC, heat-treated	10	6.5
5	PZ/2	stone, flaked	TGC, heat-treated	1	9.3
5	PZ/2	stone, flaked	unidentified chert	1	3.5
5	PZ/2	stone, unmodified	petrified wood	1	1.1
5	PZ/2	stone, unmodified	sandstone	10	12.3
5	PZ/2	stone, unmodified	sandstone, micaceous	3	8.3
5	M2/3	stone, flaked	Fort Payne chert	1	0.8
5	M2/3	stone, flaked	Tallahatta quartzite	2	2.3
5	M2/3	stone, flaked	TGC, heat-treated	4	1.9
5	M2/3	stone, unmodified	sandstone	1	24.0
5	M2/3	stone, unmodified	sandstone, micaceous	1	57.7
5	M2/3	stone, unmodified	quartz	2	15.9
5	M2/3	stone, unmodified	Tuscaloosa Gravel	1	1.6
5	M2/4	stone, flaked	sandstone	1	0.4
5	M2/4	stone, flaked	Tallahatta quartzite	1	0.1
5	M2/4	stone, flaked	TGC, heat-treated	2	0.5
5	M2/4	stone, flaked	TGC, heat-treated	2	8.1
5	M2/4	stone, flaked	unidentified chert, brown	1	0.6

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
5	M2/4	stone, unmodified	sandstone	7	16.1
5	M2/4	stone, unmodified	sandstone, micaceous	1	11.7
5	M2/5	stone, flaked	Tallahatta quartzite	5	3.7
5	M2/5	stone, flaked	TGC, heat-treated	1	1.1
5	M2/5	stone, flaked	TGC, heat-treated	1	1.3
5	M2/5	stone, unmodified	sandstone	4	11.7
5	M2/5	stone, unmodified	sandstone, micaceous	1	132.4
5	M2/6	stone, flaked	Tallahatta quartzite	2	0.3
5	M2/6	stone, flaked	tan chert, possibly Mill Creek	1	0.2
5	M2/6	stone, flaked	Tuscaloosa Gravel chert	1	0.3
5	M2/6	stone, flaked	TGC, heat-treated	4	1.0
5	M2/6	stone, flaked	unidentified chert	1	0.3
5	M2/6	stone, unmodified	quartzite	3	34.6
5	M2/6	stone, unmodified	sandstone	1	0.6
5	M2/6	stone, unmodified	Tuscaloosa Gravel	1	4.8
5	M1/7	stone, flaked	Tallahatta quartzite	4	5.8
5	M1/7	stone, flaked	TGC, heat-treated	8	1.3
5	M1/7	stone, flaked	TGC, heat-treated	1	0.8
5	M1/7	stone, unmodified	sandstone	8	51.8
5	M1/8	stone, flaked	Fort Payne chert	1	0.7
5	M1/8	stone, flaked	quartz	3	3.5
5	M1/8	stone, flaked	quartzite	1	1.0
5	M1/8	stone, flaked	Tallahatta quartzite	11	5.5
5	M1/8	stone, flaked	Tuscaloosa Gravel chert	3	0.5
5	M1/8	stone, flaked	TGC, heat-treated, drill	1	1.7
5	M1/8	stone, flaked	TGC, heat-treated	18	6.3
5	M1/8	stone, flaked	TGC, heat-treated	1	7.0
5	M1/8	stone, unmodified	sandstone	16	75.2
5	M1/8	stone, unmodified	sandstone, micaceous	4	8.1
5	M1/8	stone, unmodified	Tuscaloosa Gravel	7	54.0
5	M1/9	stone, flaked	Fort Payne/Bangor chert	1	0.1
5	M1/9	stone, flaked	Tallahatta quartzite	7	8.9
5	M1/9	stone, flaked	Tuscaloosa Gravel chert	3	1.8
5	M1/9	stone, flaked	TGC, heat-treated, drill	1	0.8
5	M1/9	stone, flaked	TGC, heat-treated	21	6.6
5	M1/9	stone, flaked	unidentified chert, brown	1	0.8
5	M1/9	stone, flaked	unidentified chert, white	1	0.1
5	M1/9	stone, unmodified	sandstone	4	26.1
5	M1/9	stone, unmodified	Tuscaloosa Gravel	1	2.9
5	10	stone, flaked	quartz	1	0.2
5	10	stone, flaked	Tallahatta quartzite	4	1.3

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
5	10	stone, flaked	TGC, heat-treated	4	2.0
5	11	stone, flaked	TGC, heat-treated	1	0.1
5	11	stone, unmodified	sandstone, micaceous	1	0.3
5	12	stone, flaked	Tallahatta quartzite	1	0.2
5	12	stone, flaked	tan chert, possibly Mill Creek	2	0.4
5	12	stone, flaked	unidentified chert	2	0.1
9	PZ/1	historic	plastic fragments	2	0.1
9	PZ/1	stone, flaked	Fort Payne/Bangor chert	1	4.4
9	PZ/1	stone, flaked	TGC, heat-treated, biface fragment	1	8.6
9	PZ/1	stone, flaked	TGC, heat-treated	2	0.7
9	PZ/1	stone, unmodified	quartz	1	2.4
9	PZ/1	stone, unmodified	sandstone	4	31.0
9	PZ/2	stone, flaked	quartz	1	0.3
9	PZ/2	stone, flaked	TGC, heat-treated	1	0.8
9	PZ/2	stone, flaked	TGC, heat-treated	1	10.1
9	PZ/2	stone, unmodified	Tuscaloosa Gravel	4	7.1
9	M2/3	stone, flaked	Tallahatta quartzite	4	9.9
9	M2/3	stone, flaked	TGC, heat-treated	9	3.5
9	M2/3	stone, unmodified	sandstone	2	2.5
9	M2/3	stone, unmodified	Tuscaloosa Gravel	1	8.2
9	M2/4	mineral	limonite	1	0.9
9	M2/4	stone, flaked	quartz	1	0.6
9	M2/4	stone, flaked	sandstone	1	0.4
9	M2/4	stone, flaked	Tallahatta quartzite	3	8.0
9	M2/4	stone, flaked	TGC, heat-treated	3	0.5
9	M2/4	stone, flaked	TGC, heat-treated	1	0.8
9	M2/4	stone, flaked	unidentified chert, brown	1	0.3
9	M2/5	stone, flaked	Madison ppt, TGC heat-treated	1	1.6
9	M2/5	stone, flaked	Tallahatta quartzite	2	0.2
9	M2/5	stone, flaked	Tuscaloosa Gravel chert	1	0.1
9	M2/5	stone, flaked	TGC, heat-treated	1	0.3
9	M2/6	stone, flaked	chalcedony	1	0.8
9	M2/6	stone, flaked	chalcedony	1	5.1
9	M2/6	stone, flaked	Fort Payne chert	1	3.5
9	M2/6	stone, flaked	quartz	1	0.2
9	M2/6	stone, flaked	Tallahatta quartzite	4	3.3
9	M2/6	stone, flaked	TGC, heat-treated	5	1.7
9	M2/6	stone, flaked	unidentified chert	1	1.0
9	M2/6	stone, unmodified	quartzite	1	1.5
9	M2/6	stone, unmodified	sandstone	2	56.3
9	M1/7	stone, flaked	Tallahatta quartzite	3	3.0

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
9	M1/7	stone, flaked	TGC, heat-treated	4	1.5
9	M1/7	stone, heated	sandstone	1	10.4
9	M1/7	stone, unmodified	sandstone	1	43.8
9	M1/7	stone, unmodified	Tuscaloosa Gravel	2	3.5
9	7/Feature 3	stone, unmodified	quartz	1	1.5
9	7/Feature 3	stone, unmodified	sandstone	1	3.3
9	8/Feature 3	mineral	limonite	1	0.1
9	8/Feature 3	stone, flaked	TGC, heat-treated	3	1.9
9	8/Feature 3	stone, unmodified	sandstone	5	16.0
9	M1/8	stone, flaked	Dover chert	1	0.2
9	M1/8	stone, flaked	Tallahatta quartzite	3	0.7
9	M1/8	stone, flaked	TGC, heat-treated	2	0.2
9	M1/8	stone, flaked	unidentified chert	1	0.3
9	M1/8	stone, unmodified	sandstone	5	140.0
9	M1/8	stone, unmodified	Tuscaloosa Gravel	3	38.4
9	M1/9	mineral	limonite	1	2.5
9	M1/9	stone, flaked	coastal plain agate	1	5.4
9	M1/9	stone, flaked	Dover chert	1	0.2
9	M1/9	stone, flaked	quartz	7	5.3
9	M1/9	stone, flaked	quartz	1	3.4
9	M1/9	stone, flaked	Tallahatta quartzite	6	1.6
9	M1/9	stone, flaked	Tuscaloosa Gravel chert	1	0.6
9	M1/9	stone, flaked	Tuscaloosa Gravel chert	2	7.8
9	M1/9	stone, flaked	TGC, heat-treated	11	4.2
9	M1/9	stone, flaked	unidentified chert, grey	1	0.2
9	M1/9	stone, unmodified	quartzite	1	1.3
9	M1/9	stone, unmodified	sandstone	7	57.5
9	M1/9	stone, unmodified	sandstone, micaceous	1	0.9
9	10	stone, flaked	quartz	1	0.2
9	10	stone, flaked	Tallahatta quartzite	58	38.9
9	10	stone, flaked	Tuscaloosa Gravel chert	2	1.1
9	10	stone, flaked	TGC, heat-treated	5	1.4
9	10	stone, flaked	unidentified chert, white	1	0.2
9	10	stone, unmodified	sandstone	10	17.5
9	11	stone, flaked	quartz	1	0.4
9	11	stone, flaked	Tallahatta quartzite	22	17.5
9	11	stone, flaked	TGC, heat-treated	1	0.1
9	11	stone, unmodified	sandstone	2	25.0
9	11	stone, unmodified	Tuscaloosa Gravel	3	3.6
9	12	stone, flaked	quartz, possible drill tip	1	0.2
9	12	stone, flaked	Tallahatta quartzite	1	0.8

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
9	12	stone, flaked	TGC, heat-treated	2	1.0
9	12	stone, unmodified	Tuscaloosa Gravel	3	13.5
9	13	stone, flaked	Tuscaloosa Gravel chert	2	0.1
9	13	stone, unmodified	sandstone, micaceous	1	0.2
T-1	PZ/1	mineral	limonite	1	2.9
T-1	PZ/1	stone, flaked	quartz	1	1.6
T-1	PZ/1	stone, flaked	Tallahatta quartzite	1	2.8
T-1	PZ/1	stone, flaked	Tuscaloosa Gravel chert	1	1.6
T-1	PZ/1	stone, flaked	TGC, heat-treated, hammerstone	1	82.6
T-1	PZ/1	stone, flaked	TGC, heat-treated	3	4.4
T-1	PZ/1	stone, ground	soapstone	1	7.5
T-1	PZ/1	stone, unmodified	sandstone	16	134.0
T-1	PZ/1	stone, unmodified	Tuscaloosa Gravel	13	59.6
T-1	2	stone, flaked	quartz	1	0.3
T-1	2	stone, flaked	TGC, heat-treated	5	1.4
T-1	2	stone, flaked	unidentified chert, cortex	1	0.1
T-1	2	stone, flaked	unidentified chert, grey	2	1.1
T-1	2	stone, unmodified	sandstone	4	17.8
T-1	2	stone, unmodified	sandstone, micaceous	1	2.3
T-1	2	stone, unmodified	Tuscaloosa Gravel	14	11.4
T-1	3	stone, flaked	TGC, heat-treated	2	0.5
T-1	3	stone, heated	quartzite	1	6.1
T-1	4	mineral	limonite	2	4.2
T-1	4	stone, flaked	Fort Payne/Bangor chert	1	0.3
T-1	4	stone, flaked	quartz	1	0.5
T-1	4	stone, flaked	quartzite	1	11.2
T-1	4	stone, flaked	TGC, heat-treated	3	1.4
T-1	4	stone, flaked	unidentified chert	1	3.7
T-1	4	stone, unmodified	petrified wood	2	2.5
T-1	4	stone, unmodified	sandstone	7	101.5
T-1	4	stone, unmodified	sandstone, hematitic	2	5.5
T-1	4	stone, unmodified	sandstone, micaceous	1	6.3
T-1	4	stone, unmodified	Tuscaloosa Gravel	9	36.9
T-1	5	stone, flaked	quartz	1	0.9
T-1	5	stone, flaked	quartz	1	2.6
T-1	5	stone, flaked	Tuscaloosa Gravel chert	1	4.6
T-1	5	stone, flaked	TGC, heat-treated	1	0.2
T-1	5	stone, flaked	TGC, heat-treated	4	87.9
T-1	5	stone, unmodified	sandstone	7	112.2
T-1	5	stone, unmodified	Tuscaloosa Gravel	2	11.1
T-1	6	stone, flaked	TGC, heat-treated	4	2.5

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
T-1	6	stone, unmodified	quartz	1	10.0
T-1	6	stone, unmodified	sandstone	5	38.3
T-1	6	stone, unmodified	sandstone, micaceous	1	3.4
T-1	7	stone, flaked	Madison ppt, TGC heat-treated	1	1.3
T-1	7	stone, flaked	Tallahatta quartzite	3	4.1
T-1	7	stone, flaked	TGC, heat-treated	1	0.6
T-1	7	stone, flaked	TGC, heat-treated	1	3.0
T-1	7	stone, ground	sandstone	1	14.8
T-1	7	stone, unmodified	sandstone	2	12.5
T-1	7	stone, unmodified	Tuscaloosa Gravel	2	8.5
T-1	8	stone, flaked	coastal plain agate	1	0.5
T-1	8	stone, flaked	quartz	3	2.3
T-1	8	stone, flaked	Tallahatta quartzite	2	0.3
T-1	8	stone, flaked	TGC, heat-treated, biface fragment	1	1.3
T-1	8	stone, flaked	TGC, heat-treated	12	4.4
T-1	8	stone, flaked	TGC, heat-treated	1	5.8
T-1	8	stone, unmodified	sandstone	8	97.2
T-1	8	stone, unmodified	sandstone, hematitic	1	3.0
T-1	8	stone, unmodified	Tuscaloosa Gravel	4	8.8
T-1	9	stone, flaked	quartzite	1	12.2
T-1	9	stone, flaked	Tallahatta quartzite	1	0.3
10	1	daub			1800.0
10	1	historic	iron handle	1	70.5
10	1	stone, flaked	quartz	1	9.3
10	2/Feature 10	daub			9550.0
10	2/Feature 10	historic	wire	1	8.6
10	2/Feature 10	stone, flaked	quartzite	1	0.9
10	2/Feature 10	stone, flaked	TGC, heat-treated	4	1.8
10	2/Feature 10	stone, unmodified	sandstone	1	54.8
10	3/Fea. 10	daub			7000.0
10	3/Fea. 10	stone, flaked	Dover chert	1	0.3
10	3/Fea. 10	stone, flaked	Fort Payne/Bangor chert	1	4.5
10	3/Fea. 10	stone, flaked	quartz	4	5.7
10	3/Fea. 10	stone, flaked	quartz	1	10.3
10	3/Fea. 10	stone, flaked	quartzite	1	0.2
10	3/Fea. 10	stone, flaked	quartzite, tested cobble	1	75.8
10	3/Fea. 10	stone, flaked	Tallahatta quartzite	6	4.9
10	3/Fea. 10	stone, flaked	Tuscaloosa Gravel chert, core	1	42.6
10	3/Fea. 10	stone, flaked	Madison ppt, TGC heat-treated	1	5.0
10	3/Fea. 10	stone, flaked	TGC, heat-treated	6	9.3
10	3/Fea. 10	stone, flaked	unidentified chert, grey	1	0.2

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
10	3/Fea. 10	stone, ground	sandstone	3	73.9
10	3/Fea. 10	stone, unmodified	sandstone	6	247.0
10	3/Fea. 10	stone, unmodified	sandstone, hematitic	1	2.5
10	3/Fea. 10	stone, unmodified	sandstone, micaceous	1	0.4
10	3/Fea. 10	stone, unmodified	Tuscaloosa Gravel	9	14.1
10	4	mineral	hematite	1	0.2
10	4	stone, flaked	coastal plain agate	1	0.7
10	4	stone, flaked	quartz	3	0.5
10	4	stone, flaked	sandstone	1	0.8
10	4	stone, flaked	Tallahatta quartzite	9	4.3
10	4	stone, flaked	TGC, heat-treated	1	1.2
10	4	stone, flaked	unidentified chert, brown	1	8.1
10	4	stone, ground	sandstone	3	133.2
10	4	stone, unmodified	sandstone	15	69.7
10	4	stone, unmodified	sandstone, micaceous	2	14.4
10	4	stone, unmodified	Tuscaloosa Gravel	11	20.3
10	5a	historic	nail, cut	1	1.9
10	5a	stone, flaked	coastal plain agate, biface fragment	1	2.9
10	5a	stone, flaked	Mill Creek chert	1	1.4
10	5a	stone, flaked	quartz	1	1.2
10	5a	stone, flaked	quartzite	2	85.1
10	5a	stone, flaked	Tallahatta quartzite	3	0.6
10	5a	stone, flaked	TGC, heat-treated	1	0.1
10	5a	stone, unmodified	sandstone	6	82.0
10	5a	stone, unmodified	Tuscaloosa Gravel	5	4.3
10	5b	stone, flaked	Tallahatta quartzite	2	0.2
10	5b	stone, unmodified	sandstone	10	35.5
10	6	stone, flaked	chalcedony	1	0.4
10	6	stone, flaked	quartz	1	0.3
10	6	stone, flaked	quartz	1	14.2
10	6	stone, flaked	TGC, heat-treated, triangular ppt	1	0.6
10	6	stone, flaked	TGC, heat-treated	3	1.7
10	6	stone, flaked	unidentified chert, white	1	0.1
10	6	stone, unmodified	sandstone	8	65.7
10	6	stone, unmodified	sandstone, hematitic	3	1.1
10	6	stone, unmodified	sandstone, micaceous	2	18.5
10	6	stone, unmodified	Tuscaloosa Gravel	5	2.4
10	7	stone, flaked	Tallahatta quartzite	1	0.3
10	7	stone, flaked	TGC, heat-treated	1	0.2
10	8	stone, flaked	quartzite	1	0.2
10	8	stone, flaked	unidentified chert, cortex	1	0.9

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
10	8	stone, unmodified	sandstone, micaceous	1	30.0
10	Feature 7	stone, flaked	Hamilton ppt, TGC heat-treated	1	0.6
10	Feature 7	stone, unmodified	Tuscaloosa Gravel	2	2.4
10	Feature 12	mineral	hematite	2	1.8
10	Feature 12	stone, flaked	quartz	4	2.2
10	Feature 12	stone, flaked	sandstone	1	9.9
10	Feature 12	stone, flaked	TGC, heat-treated	5	2.1
10	Feature 12	stone, flaked	TGC, heat-treated, hoe flake	1	1.1
10	Feature 12	stone, unmodified	petrified wood	1	0.9
10	Feature 12	stone, unmodified	sandstone	26	59.2
10	Feature 12	stone, unmodified	Tuscaloosa Gravel	3	11.5
11	1	daub			3250.0
11	1	historic	glass, amber bottle	1	0.5
11	1	historic	iron, rusted fragment	1	0.4
11	1	stone, flaked	Dover chert	1	0.6
11	1	stone, flaked	TGC, heat-treated	1	0.2
11	1	stone, unmodified	petrified wood	1	5.8
11	1	stone, unmodified	sandstone	5	17.9
11	2/Feature10	daub			6550.0
11	2/Feature10	historic	glass, melted	1	4.5
11	2/Feature10	historic	nail fragment, wire	1	1.7
11	2/Feature10	stone, flaked	coastal plain agate	1	0.1
11	2/Feature10	stone, flaked	quartz	1	2.1
11	2/Feature10	stone, flaked	TGC, heat-treated, biface fragment	1	0.2
11	2/Feature10	stone, flaked	TGC, heat-treated	1	0.3
11	2/Feature10	stone, ground	sandstone	1	50.8
11	2/Feature10	stone, unmodified	petrified wood	1	4.1
11	2/Feature10	stone, unmodified	sandstone	5	12.7
11	2/Feature10	stone, unmodified	Tuscaloosa Gravel	2	1.9
11	3/Feature 10	daub			11300.0
11	3/Feature 10	historic	glass, amber bottle	1	3.6
11	3/Feature 10	stone, flaked	quartz	2	12.8
11	3/Feature 10	stone, flaked	quartzite	1	3.6
11	3/Feature 10	stone, flaked	Tallahatta quartzite	2	2.2
11	3/Feature 10	stone, flaked	TGC, heat-treated, stemmed ppt	1	7.8
11	3/Feature 10	stone, flaked	TGC, heat-treated	2	1.1
11	3/Feature 10	stone, flaked	TGC, heat-treated	1	2.8
11	3/Feature 10	stone, flaked	unidentified chert, white	1	0.2
11	3/Feature 10	stone, ground	sandstone abrader, micaceous	1	142.1
11	3/Feature 10	stone, unmodified	sandstone	6	9.1
11	3/Feature 10	stone, unmodified	sandstone, hematitic	1	6.8

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
11	3/Feature 10	stone, unmodified	sandstone, micaceous	1	13.5
11	3/Feature 10	stone, unmodified	Tuscaloosa Gravel	1	6.2
11	4a	daub			350.0
11	4a	stone, flaked	quartzite	1	1.2
11	4a	stone, flaked	TGC, heat-treated	2	1.6
11	4a	stone, ground	sandstone	1	85.8
11	4a	stone, unmodified	sandstone	4	17.4
11	4a	stone, unmodified	sandstone, micaceous	1	25.9
11	4a	stone, unmodified	Tuscaloosa Gravel	4	16.7
11	5a	stone, flaked	sandstone	1	0.1
11	5a	stone, flaked	TGC, heat-treated	2	0.9
11	5a	stone, unmodified	sandstone	5	107.4
11	5a	stone, unmodified	sandstone, micaceous	1	16.1
11	5a	stone, unmodified	Tuscaloosa Gravel	4	4.4
11	6a	stone, flaked	quartz	1	0.2
11	6a	stone, flaked	quartz	1	3.3
11	6a	stone, flaked	Tallahatta quartzite	3	1.3
11	6a	stone, flaked	TGC, heat-treated	4	1.9
11	6a	stone, ground	sandstone	1	36.4
11	6a	stone, unmodified	petrified wood	2	11.5
11	6a	stone, unmodified	sandstone	11	56.5
11	6a	stone, unmodified	Tuscaloosa Gravel	7	8.4
11	7	stone, flaked	quartzite	1	4.8
11	7	stone, flaked	Tallahatta quartzite	2	0.9
11	9	stone, flaked	sandstone	1	4.2
11	Feature 11	stone, flaked	quartz	1	0.1
11	Feature 11	stone, flaked	TGC, heat-treated	3	3.2
11	Feature 11	stone	Tuscaloosa Gravel, heat-treated	1	43.5
11	Feature 12	stone, flaked	Tallahatta quartzite	1	0.6
12	1	daub			2900.0
12	1	historic	glass, aqua	1	3.4
12	1	historic	glass, clear bottle	2	2.8
12	1	historic	iron, harness ring	1	29.7
12	1	historic	nails, cut	2	4.8
12	1	stone, flaked	TGC, heat-treated, ppt tip	1	0.8
12	1	stone, flaked	TGC, heat-treated	2	1.7
12	1	stone, flaked	TGC, heat-treated	1	0.4
12	1	stone, flaked	unidentified chert, white	1	0.1
12	1	stone, unmodified	sandstone	1	40.9
12	1	stone, unmodified	Tuscaloosa Gravel	2	9.1
12	2/Feature 10	daub			5150.0

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
12	2/Feature 10	stone, flaked	Madison ppt, Dover chert	1	1.2
12	2/Feature 10	stone, flaked	quartz	2	1.0
12	2/Feature 10	stone, flaked	Tallahatta quartzite	3	1.4
12	2/Feature 10	stone, flaked	TGC, heat-treated	2	0.9
12	2/Feature 10	stone, flaked	TGC, heat-treated	1	0.4
12	2/Feature 10	stone, unmodified	sandstone	4	46.0
12	2/Feature 10	stone, unmodified	Tuscaloosa Gravel	5	22.5
12	3	daub			650.0
12	3	stone, flaked	chalcedony	1	0.2
12	3	stone, flaked	Mill Creek chert	1	2.6
12	3	stone, flaked	Tallahatta quartzite	4	1.9
12	3	stone, flaked	Tuscaloosa Gravel chert	3	3.3
12	3	stone, flaked	TGC, heat-treated	7	2.1
12	3	stone, flaked	TGC, heat-treated	1	5.3
12	3	stone, unmodified	petrified wood	1	4.0
12	3	stone, unmodified	sandstone	2	27.8
12	3	stone, unmodified	Tuscaloosa Gravel	6	36.0
12	4	historic	iron, wire fragments	2	0.4
12	4	stone, flaked	Fort Payne/Bangor chert, biface fragment	1	1.8
12	4	stone, flaked	quartz	2	0.5
12	4	stone, flaked	quartzite	1	0.1
12	4	stone, flaked	quartzite	1	0.6
12	4	stone, flaked	Tallahatta quartzite	2	3.4
12	4	stone, flaked	TGC, heat-treated	2	0.5
12	4	stone, flaked	TGC, heat-treated	1	2.7
12	4	stone, unmodified	sandstone	14	122.0
12	4	stone, unmodified	sandstone, hematitic	1	2.9
12	4	stone, unmodified	Tuscaloosa Gravel	11	17.5
12	5	stone, flaked	quartz	2	0.2
12	5	stone, flaked	Tallahatta quartzite	3	2.9
12	5	stone, flaked	Tuscaloosa Gravel chert	1	0.1
12	5	stone, flaked	TGC, heat-treated	3	0.8
12	5	stone, flaked	TGC, heat-treated	1	15.7
12	5	stone, unmodified	sandstone	14	46.1
12	5	stone, unmodified	sandstone, hematitic	1	1.6
12	5	stone, unmodified	sandstone, micaceous	1	1.7
12	5	stone, unmodified	Tuscaloosa Gravel	5	3.5
12	6	stone, flaked	Fort Payne/Bangor chert	1	0.4
12	6	stone, flaked	quartz	2	0.6
12	6	stone, flaked	Tallahatta quartzite	2	1.0
12	6	stone, flaked	Tuscaloosa Gravel chert	1	1.9

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
12	6	stone, flaked	TGC, heat-treated	11	3.2
12	6	stone, unmodified	sandstone	17	126.6
12	6	stone, unmodified	sandstone, micaceous	1	1.2
12	7	stone, flaked	Fort Payne/Bangor chert	1	0.1
12	7	stone, flaked	quartz	1	1.8
12	7	stone, flaked	quartzite	3	9.6
12	7	stone, flaked	Tallahatta quartzite	1	0.2
12	7	stone, flaked	TGC, heat-treated, triangular ppt	1	0.4
12	7	stone, flaked	TGC, heat-treated	3	1.1
12	7	stone, unmodified	sandstone	5	36.9
12	7	stone, unmodified	Tuscaloosa Gravel	3	10.0
12	8/Feature 11	stone, flaked	Fort Payne/Bangor chert	1	0.1
12	8/Feature 11	stone, flaked	TGC, heat-treated	2	0.8
12	8/Feature 11	stone, unmodified	sandstone	1	0.9
12	9	stone, flaked	sandstone	1	13.9
12	9	stone, unmodified	sandstone, micaceous	1	3.3
12	10	stone, flaked	sandstone	1	2.9
12	10	stone, flaked	unidentified chert, pink	1	0.8
12	10	stone, unmodified	Tuscaloosa Gravel	2	5.0
13	1	daub			4750.0
13	1	historic	glass, clear bottle	3	4.6
13	1	historic	iron, wire fragments	4	10.3
13	1	stone, flaked	quartz	1	0.3
13	1	stone, flaked	TGC, heat-treated	5	2.9
13	1	stone, flaked	TGC, heat-treated	2	3.8
13	1	stone, unmodified	petrified wood	1	26.8
13	1	stone, unmodified	sandstone	5	58.2
13	1	stone, unmodified	Tuscaloosa Gravel	6	12.8
13	2/Feature 10	daub			19400.0
13	2/Feature 10	historic	glass, amber bottle	1	0.9
13	2/Feature 10	historic	glass, clear bottle	1	0.6
13	2/Feature 10	stone, flaked	quartz	2	0.7
13	2/Feature 10	stone, flaked	TGC, heat-treated	6	5.1
13	2/Feature 10	stone, flaked	TGC, heat-treated	27	255.0
13	2/Feature 10	stone, unmodified	Tuscaloosa Gravel	7	30.3
13	3/Feature 10	daub			410.0
13	3/Feature 10	stone, flaked	chalcedony	1	0.3
13	3/Feature 10	stone, flaked	Fort Payne/Bangor chert	5	1.4
13	3/Feature 10	stone, flaked	quartz	14	5.4
13	3/Feature 10	stone, flaked	quartz	7	15.7
13	3/Feature 10	stone, flaked	sandstone	2	0.8

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
13	3/Feature 10	stone, flaked	Tallahatta quartzite	5	2.8
13	3/Feature 10	stone, flaked	Tuscaloosa Gravel chert	1	0.1
13	3/Feature 10	stone, flaked	TGC, heat-treated	15	4.7
13	3/Feature 10	stone, flaked	TGC, heat-treated	7	10.5
13	3/Feature 10	stone, unmodified	sandstone	4	66.8
13	3/Feature 10	stone, unmodified	sandstone, micaceous	4	10.6
13	4	stone	TGC, heat-treated	1	7.5
13	4	stone, flaked	quartz	2	0.5
13	4	stone, flaked	quartz	2	1.2
13	4	stone, flaked	quartzite	1	0.3
13	4	stone, flaked	Tallahatta quartzite	2	1.5
13	4	stone, flaked	Tuscaloosa Gravel chert	3	0.9
13	4	stone, flaked	TGC, heat-treated, side-notched ppt	1	8.5
13	4	stone, flaked	TGC, heat-treated	8	2.4
13	4	stone, flaked	unidentified chert, cortex	1	0.1
13	4	stone, ground	sandstone, micaceous	2	341.4
13	4	stone, unmodified	sandstone	18	190.4
13	4	stone, unmodified	sandstone, micaceous	1	126.6
13	4	stone, unmodified	Tuscaloosa Gravel	7	4.4
13	5	stone, flaked	quartz	1	0.1
13	5	stone, flaked	Tallahatta quartzite	2	0.5
13	5	stone, flaked	TGC, heat-treated	4	1.3
13	5	stone, flaked	TGC, heat-treated	1	2.1
13	5	stone, unmodified	sandstone	4	30.7
13	5	stone, unmodified	sandstone, micaceous	1	0.8
13	6	stone, unmodified	sandstone	3	34.1
13	7	stone, flaked	TGC, heat-treated	1	0.1
13	7	stone, flaked	TGC, heat-treated	1	94.3
13	9	stone, flaked	Fort Payne/Bangor chert	1	0.6
13	9	stone, flaked	quartzite	1	1.8
13	9	stone, flaked	Tallahatta quartzite, biface	1	6.7
13	9	stone, unmodified	sandstone	2	7.8
13	9	stone, unmodified	sandstone, micaceous	1	37.9
15	1	daub			600.0
15	2/Feature 10	daub			6850.0
15	2/Feature 10	historic	iron, rusted fragment	1	0.4
15	2/Feature 10	stone, flaked	quartz	1	0.5
15	2/Feature 10	stone, flaked	quartzite	1	5.0
15	2/Feature 10	stone, flaked	sandstone, micaceous	1	0.7
15	2/Feature 10	stone, flaked	Tallahatta quartzite	1	0.2
15	2/Feature 10	stone, flaked	Tuscaloosa Gravel chert	1	1.7

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
15	2/Feature 10	stone, flaked	TGC, heat-treated, biface fragment	1	4.6
15	2/Feature 10	stone, flaked	TGC, heat-treated	2	1.0
15	3/Feature 10	daub			28100.0
15	3/Feature 10	stone, flaked	TGC, heat-treated	2	0.6
15	3/Feature 10	stone, unmodified	sandstone	3	20.5
15	4	daub			900.0
15	4	stone, flaked	Fort Payne/Bangor chert	1	0.1
15	4	stone, flaked	quartz	3	1.7
15	4	stone, flaked	quartz	1	1.6
15	4	stone, flaked	quartzite	2	2.4
15	4	stone, flaked	Tallahatta quartzite	4	1.8
15	4	stone, flaked	Tuscaloosa Gravel chert	1	1.7
15	4	stone, flaked	TGC, heat-treated	5	1.7
15	4	stone, flaked	unidentified chert	2	0.9
15	4	stone, unmodified	sandstone	6	48.2
15	4	stone, unmodified	sandstone, micaceous	1	33.2
15	4	stone, unmodified	Tuscaloosa Gravel	2	31.2
15	5	mineral	hematite	1	0.2
15	5	stone, flaked	Fort Payne/Bangor chert	2	1.7
15	5	stone, flaked	sandstone	1	3.8
15	5	stone, flaked	Tallahatta quartzite	2	0.6
15	5	stone, flaked	TGC, heat-treated, biface fragment	1	3.0
15	5	stone, flaked	TGC, heat-treated	5	2.2
15	5	stone, unmodified	petrified wood	1	0.4
15	5	stone, unmodified	sandstone	17	46.1
15	5	stone, unmodified	Tuscaloosa Gravel	10	9.5
15	6	stone, flaked	Fort Payne/Bangor chert	1	0.1
15	6	stone, flaked	quartz	1	0.2
15	6	stone, flaked	quartz	1	0.8
15	6	stone, flaked	Tallahatta quartzite	1	0.5
15	6	stone, flaked	Tuscaloosa Gravel chert	2	2.3
15	6	stone, flaked	TGC, heat-treated	3	0.8
15	6	stone, unmodified	sandstone	10	69.3
15	6	stone, unmodified	Tuscaloosa Gravel	3	7.4
15	7	stone, unmodified	petrified wood	1	5.5
15	7	stone, unmodified	Tuscaloosa Gravel	1	1.7
15	8	stone	TGC, heat-treated, cobble	1	59.7
15	9	stone, unmodified	sandstone	1	4.7
15	9	stone, unmodified	Tuscaloosa Gravel	1	0.4
15	10	stone, flaked	Tuscaloosa Gravel chert	1	7.2
15	10	stone, unmodified	Tuscaloosa Gravel	4	12.3

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
15	Feature 11	stone, unmodified	sandstone	2	5.1
16	1	daub			2400.0
16	1	historic	glass, clear bottle	2	6.3
16	1	historic	iron, fence staples	4	3.9
16	1	historic	iron, rusted fragment	1	1.4
16	1	historic	nail, wire	1	2.3
16	1	stone, flaked	TGC, heat-treated	1	1.0
16	1	stone, flaked	TGC, heat-treated	1	7.5
16	1	stone, unmodified	sandstone	1	7.0
16	1	stone, unmodified	sandstone, micaceous	2	4.9
16	2/Feature 10	daub			2250.0
16	2/Feature 10	historic	nails, wire	4	19.5
16	2/Feature 10	mineral	hematite	1	6.9
16	2/Feature 10	stone, flaked	quartz	1	1.3
16	2/Feature 10	stone, flaked	quartz	1	1.4
16	2/Feature 10	stone, flaked	TGC, heat-treated	6	1.5
16	2/Feature 10	stone, flaked	TGC, heat-treated	1	0.7
16	2/Feature 10	stone, flaked	unidentified chert, grey	1	0.8
16	2/Feature 10	stone, ground	sandstone, micaceous	1	68.6
16	2/Feature 10	stone, unmodified	Tuscaloosa Gravel	1	1.0
16	3/Feature 10	daub			18700.0
16	3/Feature 10	stone, flaked	quartz	1	0.8
16	3/Feature 10	stone, flaked	TGC, heat-treated	2	0.4
16	3/Feature 10	stone, unmodified	sandstone	6	20.4
16	4	stone, flaked	quartz	4	1.8
16	4	stone, flaked	quartz	1	1.0
16	4	stone, flaked	Tallahatta quartzite	3	1.0
16	4	stone, flaked	Tuscaloosa Gravel chert	1	0.2
16	4	stone, flaked	TGC, heat-treated	9	4.7
16	4	stone, unmodified	quartz, crystal	1	0.4
16	4	stone, unmodified	sandstone	13	221.1
16	4	stone, unmodified	Tuscaloosa Gravel	5	100.6
16	5a	stone, flaked	quartz	3	5.3
16	5a	stone, flaked	quartz	2	1.9
16	5a	stone, flaked	Tallahatta quartzite	1	0.1
16	5a	stone, flaked	Tuscaloosa Gravel chert	1	0.1
16	5a	stone, flaked	TGC, heat-treated, triangular ppt	1	2.8
16	5a	stone, flaked	TGC, heat-treated	5	1.7
16	5a	stone, flaked	TGC, heat-treated	1	3.4
16	5a	stone, flaked	unidentified chert, white	1	0.1
16	5a	stone, unmodified	sandstone	11	97.9

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
16	5a	stone, unmodified	sandstone, micaceous	1	25.9
16	5a	stone, unmodified	Tuscaloosa Gravel	2	33.2
16	5b	stone, flaked	quartz	4	1.8
16	5b	stone, flaked	sandstone	1	0.3
16	5b	stone, flaked	TGC, heat-treated	1	0.5
16	5b	stone, unmodified	sandstone	2	10.6
16	5b	stone, unmodified	Tuscaloosa Gravel	3	4.9
16	6	stone, flaked	quartz	2	1.7
16	6	stone, flaked	Tallahatta quartzite	1	0.9
16	6	stone, flaked	Tuscaloosa Gravel chert	1	0.1
16	6	stone, flaked	TGC, heat-treated	3	1.2
16	6	stone, unmodified	sandstone	2	43.6
16	6	stone, unmodified	sandstone, micaceous	2	10.8
16	7	stone, flaked	sandstone	3	6.2
16	7	stone, flaked	Tallahatta quartzite	1	0.3
16	7	stone, flaked	TGC, heat-treated	1	2.5
16	7	stone, unmodified	petrified wood	1	1.4
16	7	stone, unmodified	sandstone	1	22.0
16	8	stone, flaked	quartz	1	0.2
16	8	stone, unmodified	sandstone	2	23.5
17	1	daub			7100.0
17	1	historic	glass, aqua	1	10.3
17	1	historic	glass, clear bottle	1	2.4
17	1	historic	iron, wire	1	3.4
17	1	historic	nails, wire	3	12.8
17	1	stone, flaked	quartz	1	0.2
17	1	stone, flaked	sandstone	1	0.3
17	1	stone, flaked	Tallahatta quartzite	1	0.5
17	1	stone, flaked	TGC, heat-treated	3	1.3
17	1	stone, flaked	TGC, heat-treated	1	1.4
17	1	stone, flaked	unidentified chert, white	1	1.3
17	1	stone, unmodified	sandstone	4	11.9
17	1	stone, unmodified	sandstone, hematitic	1	0.6
17	1	stone, unmodified	sandstone, micaceous	1	35.1
17	1	stone, unmodified	shale	1	0.3
17	1	stone, unmodified	Tuscaloosa Gravel	4	24.8
17	2/Feature 10	daub			19500.0
17	2/Feature 10	stone, flaked	quartz, cobble	1	40.9
17	2/Feature 10	stone, flaked	sandstone	1	1.7
17	2/Feature 10	stone, flaked	Tallahatta quartzite, biface	1	3.2
17	2/Feature 10	stone, flaked	Tallahatta quartzite	1	0.3

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
17	2/Feature 10	stone, flaked	TGC, heat-treated, biface fragment	1	0.4
17	2/Feature 10	stone, flaked	TGC, heat-treated	2	10.0
17	2/Feature 10	stone, unmodified	sandstone	2	25.5
17	2/Feature 10	stone, unmodified	sandstone, micaceous	3	22.8
17	2/Feature 10	stone, unmodified	Tuscaloosa Gravel	3	138.9
17	3/Feature 10	daub			730.0
17	3/Feature 10	stone, flaked	quartz	1	0.9
17	3/Feature 10	stone, flaked	Tallahatta quartzite	3	4.8
17	3/Feature 10	stone, flaked	Tuscaloosa Gravel chert	1	0.2
17	3/Feature 10	stone, flaked	TGC, heat-treated	1	2.3
17	3/Feature 10	stone, flaked	unidentified chert, grey	1	0.2
17	3/Feature 10	stone, unmodified	sandstone	6	107.4
17	3/Feature 10	stone, unmodified	sandstone, micaceous	2	38.2
17	3/Feature 10	stone, unmodified	Tuscaloosa Gravel	8	26.6
17	4	stone, flaked	chalcedony	1	0.9
17	4	stone, flaked	sandstone	1	1.0
17	4	stone, flaked	Tallahatta quartzite	3	1.7
17	4	stone, flaked	TGC, heat-treated	3	2.2
17	4	stone, flaked	unidentified chert, brown	1	6.7
17	4	stone, unmodified	petrified wood	1	6.0
17	4	stone, unmodified	sandstone	15	94.4
17	4	stone, unmodified	sandstone, hematitic	1	5.2
17	4	stone, unmodified	sandstone, micaceous	1	25.4
17	4	stone, unmodified	Tuscaloosa Gravel	3	32.3
17	5	stone, flaked	quartz	1	0.2
17	5	stone, flaked	sandstone	1	0.1
17	5	stone, flaked	Tallahatta quartzite	2	0.9
17	5	stone, flaked	TGC, heat-treated	2	0.7
17	5	stone, flaked	unidentified chert, cortex	1	0.2
17	5	stone, unmodified	sandstone	12	114.1
17	5	stone, unmodified	Tuscaloosa Gravel	5	4.4
17	6	stone, flaked	TGC, heat-treated	1	0.3
17	6	stone, flaked	unidentified chert, grey	1	8.3
17	7	stone, flaked	quartz	1	0.3
17	7	stone, flaked	sandstone	2	1.2
17	7	stone, flaked	Tallahatta quartzite	1	0.7
17	7	stone, flaked	unidentified chert, grey	1	0.2
17	Feature 11	stone, flaked	quartz	1	0.4
17	Feature 11	stone, flaked	sandstone	2	1.2
17	Feature 11	stone, flaked	Tallahatta quartzite	2	0.4
18	1	daub			7900.0

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
18	1	historic	glass, aqua	1	0.9
18	1	historic	nail, wire	1	9.2
18	1	stone, flaked	coastal plain agate	1	2.2
18	1	stone, flaked	quartz	1	0.8
18	1	stone, flaked	quartzite	1	0.3
18	1	stone, flaked	sandstone	1	0.2
18	1	stone, flaked	Tallahatta quartzite, biface fragment	1	2.0
18	1	stone, unmodified	sandstone	3	65.2
18	1	stone, unmodified	sandstone, micaceous	3	54.8
18	1	stone, unmodified	Tuscaloosa Gravel	4	3.9
18	2/Feature 10	daub			11000.0
18	2/Feature 10	stone, flaked	quartzite	1	2.0
18	2/Feature 10	stone, flaked	sandstone	1	1.9
18	2/Feature 10	stone, flaked	Tallahatta quartzite	4	1.6
18	2/Feature 10	stone, flaked	TGC, heat-treated	1	0.9
18	2/Feature 10	stone, unmodified	sandstone	2	221.2
18	2/Feature 10	stone, unmodified	Tuscaloosa Gravel	2	5.9
18	3/Feature 10	daub			750.0
18	3/Feature 10	stone, flaked	Fort Payne/Bangor chert	2	0.5
18	3/Feature 10	stone, flaked	quartz	1	0.1
18	3/Feature 10	stone, flaked	quartzite	1	2.5
18	3/Feature 10	stone, flaked	Tallahatta quartzite, biface	1	14.8
18	3/Feature 10	stone, flaked	Tallahatta quartzite	6	2.6
18	3/Feature 10	stone, flaked	Tuscaloosa Gravel chert	2	1.4
18	3/Feature 10	stone, flaked	TGC, heat-treated	2	0.4
18	3/Feature 10	stone, unmodified	petrified wood	3	10.9
18	3/Feature 10	stone, unmodified	sandstone	4	13.7
18	3/Feature 10	stone, unmodified	sandstone, hematitic	1	1.4
18	3/Feature 10	stone, unmodified	sandstone, micaceous	2	4.4
18	3/Feature 10	stone, unmodified	Tuscaloosa Gravel	5	9.6
18	4	daub			450.0
18	4	stone, flaked	quartz	2	1.7
18	4	stone, flaked	Tallahatta quartzite	1	0.8
18	4	stone, flaked	TGC, heat-treated	6	3.9
18	4	stone, unmodified	sandstone	10	156.6
18	4	stone, unmodified	sandstone, hematitic	1	0.5
18	4	stone, unmodified	sandstone, micaceous	1	27.2
18	4	stone, unmodified	Tuscaloosa Gravel	11	48.0
18	5	stone, flaked	TGC, heat-treated	2	5.8
18	6	stone, flaked	Tuscaloosa Gravel chert	1	0.2
18	6	stone, flaked	TGC, heat-treated	1	0.1

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
18	6	stone, unmodified	sandstone	3	15.8
18	6	stone, unmodified	sandstone, micaceous	2	6.5
18	6	stone, unmodified	Tuscaloosa Gravel	2	2.7
18	7	stone, flaked	Mill Creek chert, hoe flakes	3	3.1
18	7	stone, unmodified	sandstone	1	2.6
18	7	stone, unmodified	sandstone, micaceous	2	3.1
18	7	stone, unmodified	Tuscaloosa Gravel	1	9.7
18	8	stone, flaked	Mill Creek chert	8	4.9
18	8	stone, flaked	quartz	1	0.3
18	8	stone, flaked	TGC, heat-treated	1	0.2
18	8	stone, unmodified	Tuscaloosa Gravel	2	3.9
18	9	stone, flaked	TGC, heat-treated	1	0.7
18	Feature 11	stone, flaked	TGC, heat-treated	2	1.5
18	Feature 11	stone, flaked	TGC, heat-treated	1	7.4
18	Feature 11	stone, flaked	unidentified chert, white	1	0.8
18	Feature 11	stone, flaked	unidentified chert, cortex	1	1.5
18	Feature 11	stone, unmodified	sandstone	1	9.1
18	Feature 12	stone, flaked	TGC, heat-treated, cobble	1	37.5
2	PZ/1	daub			119.5
2	PZ/1	stone, flaked	coastal plain agate	1	0.4
2	PZ/1	stone, flaked	Fort Payne/Bangor chert	4	2.6
2	PZ/1	stone, flaked	Madison ppt base, TGC, heated	1	0.7
2	PZ/1	stone, flaked	quartz	2	0.7
2	PZ/1	stone, flaked	quartz	1	1.6
2	PZ/1	stone, flaked	quartzite	1	1.1
2	PZ/1	stone, flaked	TGC, heat-treated, biface fragment	1	0.5
2	PZ/1	stone, flaked	TGC, heat-treated, core fragment	2	10.8
2	PZ/1	stone, flaked	TGC, heat-treated	28	12.1
2	PZ/1	stone, flaked	TGC, heat-treated	2	2.8
2	PZ/1	stone, flaked	unidentified chert, cortex	1	0.4
2	PZ/1	stone, flaked	unidentified chert, reddish brown	2	1.1
2	PZ/1	stone, ground	sandstone, micaceous	1	10.1
2	PZ/1	stone, unmodified	petrified wood	1	11.9
2	PZ/1	stone, unmodified	sandstone	2	9.7
2	PZ/1	stone, unmodified	sandstone, micaceous	1	4.2
2	PZ/2	daub			233.5
2	PZ/2	stone, flaked	Dover chert	1	0.2
2	PZ/2	stone, flaked	Fort Payne/Bangor chert	4	1.2
2	PZ/2	stone, flaked	Madison ppt base, TGC, heated	1	0.7
2	PZ/2	stone, flaked	Mill Creek chert	3	0.7
2	PZ/2	stone, flaked	quartz	2	0.4

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
2	PZ/2	stone, flaked	quartz	1	0.4
2	PZ/2	stone, flaked	TGC, heat-treated	19	7.3
2	PZ/2	stone, flaked	TGC, heat-treated	3	4.1
2	PZ/2	stone, flaked	unid chert, pink, biface fragment	1	0.8
2	PZ/2	stone, flaked	unidentified chert, cortex	1	0.7
2	PZ/2	stone, unmodified	petrified wood	1	1.5
2	PZ/2	stone, unmodified	sandstone	7	40.3
2	PZ/2	stone, unmodified	sandstone, micaceous	1	0.8
2	PZ/3	daub			154.5
2	PZ/3	historic	whiteware	1	0.7
2	PZ/3	stone, flaked	Dover chert	1	0.3
2	PZ/3	stone, flaked	Fort Payne/Bangor chert	5	1.5
2	PZ/3	stone, flaked	quartz	3	1.8
2	PZ/3	stone, flaked	sandstone	1	0.2
2	PZ/3	stone, flaked	Tallahatta quartzite	1	0.1
2	PZ/3	stone, flaked	Tallahatta quartzite	1	1.0
2	PZ/3	stone, flaked	Tuscaloosa Gravel chert	10	2.8
2	PZ/3	stone, flaked	TGC, heat-treated, biface fragment	1	5.4
2	PZ/3	stone, flaked	TGC, heat-treated, ppt tip	1	0.2
2	PZ/3	stone, flaked	TGC, heat-treated	24	8.3
2	PZ/3	stone, flaked	TGC, heat-treated	2	1.9
2	PZ/3	stone, flaked	unidentified chert, cortex	1	0.2
2	PZ/3	stone, unmodified	sandstone	1	0.9
2	PZ/3	stone, unmodified	Tuscaloosa Gravel	1	3.5
2	4	daub			54.4
2	4	stone, flaked	coastal plain agate	1	0.8
2	4	stone, flaked	Mill Creek chert	1	0.1
2	4	stone, flaked	Fort Payne/Bangor chert	5	2.1
2	4	stone, flaked	Tallahatta quartzite	2	0.4
2	4	stone, flaked	TGC, heat-treated	7	1.9
2	4	stone, flaked	TGC, heat-treated	2	2.5
2	4	stone, unmodified	sandstone	3	101.5
2	4	stone, unmodified	sandstone, micaceous	1	1.8
2	5	daub			12.9
2	5	stone, flaked	quartz	2	1.2
2	5	stone, flaked	TGC, heat-treated	1	0.1
2	5	stone, flaked	TGC, heat-treated	7	2.4
2	5	stone, unmodified	sandstone, micaceous	1	2.8
2	6	daub			20.1
2	6	stone, flaked	Tuscaloosa Gravel chert	2	0.8
2	6	stone, flaked	TGC, heat-treated	6	1.5

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
2	6	stone, flaked	unidentified chert, cortex	1	0.1
2	6	stone, unmodified	sandstone, micaceous	2	3.9
2	7	daub			12.1
2	7	stone, flaked	quartz	1	2.1
2	7	stone, flaked	Tuscaloosa Gravel chert	3	1.1
2	7	stone, flaked	TGC, heat-treated	1	0.2
2	7	stone, flaked	unidentified chert, cortex	1	0.2
2	8	daub			0.9
2	8	stone, flaked	Tuscaloosa Gravel chert	6	1.4
2	8	stone, unmodified	Tuscaloosa Gravel	1	6.7
3	PZ/1	daub			16.0
3	PZ/1	historic	glass, clear bottle	5	18.8
3	PZ/1	stone, unmodified	sandstone	1	18.3
3	PZ/1	stone, unmodified	Tuscaloosa Gravel	1	46.3
3	PZ/2	daub			42.1
3	PZ/2	historic	glass, clear bottle	15	21.9
3	PZ/2	historic	whiteware, burned	1	1.7
3	PZ/2	stone, flaked	Tallahatta quartzite	1	3.0
3	PZ/2	stone, ground	sandstone, micaceous	1	39.8
3	PZ/2	stone, unmodified	sandstone	4	19.4
3	PZ/2	stone, unmodified	sandstone, hematitic	2	3.4
3	PZ/2	stone, unmodified	Tuscaloosa Gravel	3	3.4
3	PZ/3	daub			17.6
3	PZ/3	historic	glass, clear bottle	1	0.7
3	PZ/3	historic	whiteware	2	1.9
3	PZ/3	stone, unmodified	sandstone	1	13.2
3	PZ/3	stone, unmodified	sandstone, hematitic	2	19.6
3	PZ/3	stone, unmodified	sandstone, micaceous	3	15.3
3	PZ/3	stone, unmodified	Tuscaloosa Gravel	1	26.3
3	4	daub			43.0
3	4	stone, flaked	Dover chert	1	0.3
3	4	stone, flaked	Tallahatta quartzite	2	21.9
3	4	stone, flaked	Tuscaloosa Gravel chert	1	0.7
3	4	stone, flaked	TGC, heat-treated	5	4.8
3	4	stone, unmodified	sandstone	5	33.2
3	4	stone, unmodified	sandstone, micaceous	2	11.5
3	5	daub			41.9
3	5	historic	whiteware, annular	1	1.7
3	5	stone, flaked	quartz	1	1.6
3	5	stone, flaked	quartzite	2	6.3
3	5	stone, flaked	Tallahatta quartzite	2	6.1

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
3	5	stone, flaked	TGC, heat-treated	1	0.5
3	5	stone, ground	sandstone, micaceous	1	8.9
3	5	stone, unmodified	sandstone	8	81.8
3	5	stone, unmodified	sandstone, micaceous	1	2.3
3	5	stone, unmodified	Tuscaloosa Gravel	12	33.9
3	6	daub			40.8
3	6	stone, flaked	Tallahatta quartzite	2	2.0
3	6	stone, flaked	TGC, heat-treated	1	0.1
6	PZ/1	daub			53.0
6	PZ/1	historic	glass, amber bottle	1	0.4
6	PZ/1	stone, flaked	coastal plain agate	1	0.4
6	PZ/1	stone, flaked	chalcedony	1	0.1
6	PZ/1	stone, flaked	Dover chert	2	0.6
6	PZ/1	stone, flaked	Fort Payne/Bangor chert	1	0.2
6	PZ/1	stone, flaked	quartz	2	2.0
6	PZ/1	stone, flaked	Tuscaloosa Gravel chert	2	5.1
6	PZ/1	stone, flaked	TGC, heat-treated	19	11.2
6	PZ/1	stone, unmodified	petrified wood	1	1.6
6	PZ/1	stone, unmodified	sandstone	3	37.4
6	PZ/2	daub			33.3
6	PZ/2	historic	glass, clear bottle	1	15.1
6	PZ/2	stone, flaked	quartz	3	1.2
6	PZ/2	stone, flaked	quartz	1	1.8
6	PZ/2	stone, flaked	Tuscaloosa Gravel chert	1	4.2
6	PZ/2	stone, flaked	TGC, heat-treated	22	8.6
6	PZ/2	stone, unmodified	sandstone	1	0.8
6	PZ/2	stone, unmodified	sandstone, micaceous	1	3.3
6	PZ/3	daub			34.2
6	PZ/3	stone, flaked	Fort Payne/Bangor chert	1	0.2
6	PZ/3	stone, flaked	Tallahatta quartzite	1	0.4
6	PZ/3	stone, flaked	TGC, heat-treated	11	5.6
6	PZ/3	stone, unmodified	sandstone	1	7.0
6	4	daub			45.8
6	4	historic	glass, amber bottle	1	2.5
6	4	stone, flaked	Fort Payne/Bangor chert	2	0.2
6	4	stone, flaked	quartz	1	0.8
6	4	stone, flaked	TGC, heat-treated	6	3.1
6	4	stone, unmodified	sandstone, micaceous	1	10.0
6	4	stone, unmodified	Tuscaloosa Gravel	1	76.7
6	5	stone, flaked	TGC, heat-treated	1	1.3
6	6	stone, flaked	Tuscaloosa Gravel chert	1	0.2

Appendix 8. Stone and Other Artifacts from Excavation Units at Fosters Landing, Summer 1998.

EU	S/L/Fea.	Class	Type/Material/Description	n	g
6	7	stone, flaked	Tuscaloosa Gravel chert	1	0.4