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Austin (22TU549): Mississippian Emergence In the Northern Yazoo Basin

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University of Southern Mississippi

AUSTIN (22TU549):

MISSISSIPPIAN EMERGENCE IN THE NORTHERN YAZOO BASIN

by

Elizabeth Kay Hunt

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ABSTRACT

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The Austin Site (22TU549) is a known transitional Late Woodland to early Mississippian village located in Tunica County, Mississippi. Compared with the cultural phases that have been developed in other regions the northern Yazoo Basin lacks a clearly defined "Emergent Mississippian" phase. This study examined the ceramic assemblage (n=30,567) from a 25% random sample of pit features to measure transitional change as a way to define an early Mississippian phase. It also explored the ways in which this site experiences the Mississippian transition and how it fits into the larger trajectory of the Mississippian phenomenon in the Southeastern United States based on the comparison of three "transition theory" models. From the analysis, based on cultural material and radiocarbon dates from the Austin site, an early Mississippian "Austin" phase was identified with an approximate date of A. D. 1100 to 1300. Attributes employed to measure continuity and change include, identified type-varieties, decorative and vessel modes, vessel morphology and size. Findings from the Austin site ceramic assemblage and other cultural material, provides evidence that this is an indigenous Late Woodland population that was not initially displaced or assimilated by intrusive Mississippian populations. Rather, it would appear that the Austin population's relationship to neighboring Mississippian populations best conforms to the "independent co-existent" transition model, since they continued to retain elements of their Baytown

tradition, while choosing to incorporate selected Mississippian traits into their material culture. This interval of selective incorporation allows for the definition of the Austin phase.

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DEDICATION

I would like to dedicate this to my family and friends. Without the constant support of my mother, Pattie, I'm positive I would have never finished. My Mema, Sister, and other family members who always cheered me on, I am forever grateful. I would also like to dedicate this to my Father and Brother who I am sure would have been proud of this accomplishment. My cohort (Sarah, Stephanie, Matt, and Shyrle) who made this experience much more entertaining. Nic, Nadine, Zach, and all of my other friends thank you for listening to me constantly talk about my thesis and giving me valuable feedback. Last, but not least, I would like to acknowledge Brittney, without her my time in school would have not been the same.

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CHAPTER I - INTRODUCTION

Until recently, many researchers have ignored the Late Woodland period in eastern United States due to its apparent lack of development. However, many cultural attributes that are classified as Mississippian began to emerge during this period, which in some regions has been classified as "Emergent Mississippian" (Anderson and Mainfort 2002, 18). Smith (1990, 1) states that the Mississippian emergence occurred during A.D. 750 – 1050 and was an independent process of social transformation. The degree to which these processes of cultural change happened, whether due to interactions between Late Woodland and Mississippian peoples or to independent responses to similar pressures, is still unclear (Smith 1990, 1-2). The lack of attention to the Late Woodland-Mississippian transition is especially true of research in the Northern Yazoo Basin in Mississippi. Here it is apparent that this time period is poorly understood due to very few sites having been excavated. The transitional phase throughout the Southeast is generally characterized by the appearance of shell-tempered ceramics, maize agriculture, wall trench houses, new settlement patterns based on reorganization and sedentism, and bell-shaped pits (Brookes 1980, 25). In addition to these shared traits, cultural complexes display regional diversity which necessitates the continued study of specific examples of this transition for a more holistic understanding of how the Mississippian culture evolved in the Southeast.

One way that archaeologists have framed this difficult subject is through the "Transition Theory" debate, which until recently had two major contrasting concepts. However, now three models have been proposed. The "analogy approach" or the "in-situ development" model suggests that the widespread cultural similarities that developed into

the Mississippian period can be explained through independent responses or adaptations by societies to similar challenges (Smith 1990, 2). Second, the "homology approach" or "migration/assimilation" model advocates that newly emergent Mississippian groups, equipped with agriculture and innovative technology, expanded throughout the Southeast displacing and assimilating societies they encountered (Smith 1990, 2). Last, the third model, "independent co-existence" states that Mississippian groups migrated into spaces between Late Woodland populations where they interacted; then these groups adopted traits based on these interactions as well as responding to pressures from their environment (Fortier and McElrath 2002).

With these models in mind, it is important to determine how exactly the Upper Yazoo region people assimilated Mississippian traits into their own culture. One way of exploring this issue is through examining the cultural material excavated at the salvage project from the Austin Site in Tunica County, Mississippi. Because the Austin site straddles the Late Woodland-Mississippian transition in time, the collection's ceramic data was used to evaluate the appropriateness of the three models in relation to the Transition Theory debate. To this end, ceramics from pits were examined with the expectation that these subassemblages represent small intervals of time, which can be ordered to provide documentation of ceramic change over the course of the site's occupation. Additionally, since pottery is a vital tool in creating a relative chronology, this analysis will help establish a more detailed ceramic sample for the region's early Mississippian phase. Taking this into account, the seriations of the features would show a gradual transition or an abrupt replacement. This in turn will aid in the debate over which model better represents the transition of the Northern Yazoo Basin. Further, ArcGIS was

used to perform a spatial analysis to examine possible clusters of pits that may represent changes in settlement patterns at Austin. Pit shapes were classified to see if they also are representative of certain phases. By using ceramic decorative types and other ceramic attributes, as well as pit morphology and distribution as a way to measure transition, a better understanding lending support to one side of the argument in the debate and to understand how this specific region and site adopted Mississippian characteristics may be gained.

Austin Site (22TU549)

The Yazoo Basin is the area of the Mississippi River Valley that extends 200 miles from Memphis, Tennessee, to Vicksburg, Mississippi. It is 60 miles across at its widest point near the town of Scott, Mississippi. It is characterized by complex networks of basins and ridges resulting from multiple abandoned river channels and meander belts of the Yazoo, Mississippi, Ohio, Sunflower, Tallahatchie and Coldwater rivers, as well as Deer Creek and other numerous smaller creeks (Phillips et al. 1951, 16; Nelson 2016, 18). In the northern Yazoo Basin, the Sunflower meander-belt ridge bisects the Yazoo Basin and extends for 120 miles from the Mississippi River near Friars Point, Mississippi to its junction with the Yazoo meander belt near Yazoo City, Mississippi (Phillips et al. 1951, 16). This area lacks an established initial or emergent Mississippian phase, due to fewer archaeological investigations than other areas in the southeastern United States. Comparing the cultural phases that have been developed in other regions, the Austin site, which is located in this region, is one of the few sites excavated that was occupied during this important Late Woodland transitional Early Mississippian period, making it culturally significant and warranting further examination.

The Austin Site (22TU549) is located in the northern portion of the Yazoo Basin, in Tunica County, Mississippi (Figure 1). It is situated on an old natural levee: to the west of the site is Phillips Bayou and Willow Swamps, to the north is Bear Lake, and to the south is Muddy Bayou. It is adjacent to an old oxbow lake of the Mississippi River which likely existed during the site's occupation. Because it was situated on a natural levee, the soil type is river deposited Bosket, a very fine sandy loam. The site's surface area is approximately eight acres, elevation is 180 feet above sea level, and the cultural deposit depth is 1-2 meters. Connaway noted that the site had a heavy density of artifacts which consists of a majority of Mulberry Creek Cord Marked ceramics and a minority of Baytown Plain, Larto Red, Alligator Incised, *var. Oxbow*; Coles Creek Incised, *var. Barner* or *Keo*; Mississippi Plain, *var. Neeley's Ferry*; and Barton Incised, as well as Collins and Madison points.

Figure 1.1 Geographical Location of the Austin Site, Mississippi

Note: Geological Survey, Lula, Dundee, Moon Lake, Helena, Mississippi Quadrangles, 7.5 Minute Series.

The site was discovered when the railroad tracks parallel to the old Highway 61 were removed in 1988, at which time landowner, Chuck Austin, decided to have the land leveled for a rice field and uncovered a burial. As Austin had previously run into trouble for destroying burials, he contacted Mississippi State University, and in turn Mississippi Department of Archives and History employees were then sent to look at the site. Despite Austin's initial reluctance to preserve the site indefinitely, MDAH staff members

managed to reach an agreement through which they would conduct the salvage operations at the site and it would remain untouched by the landowner until the burials had been removed (Connaway, personal communication 2015).

Since the site was located on farm land, a large percentage of the village had been extensively plowed over for several decades. In addition, the construction of the north-south running railroad bed after the Civil War left the site badly damaged where fill had been borrowed for the bed. However, it preserved the site areas directly below the built-up railroad bed. The construction of old Highway 61 destroyed the eastern portion of the site, and as a result the original eastern boundaries are unknown. Additionally, land leveling and recontouring work that was undertaken prior to the recognition of the site left the southern portions of the village nearly destroyed. By the time excavations started, an estimated quarter of the site had been badly damaged, so that we will never know the exact original size and boundaries of the village. However, the surviving four acres contained a very large settlement. Starting in July 1988 and lasting until August 1991, excavations were conducted by John Connaway with no funding and occasional help from University of Mississippi crews and volunteers (Connaway, personal communication 2015).

The excavations began with the use of heavy equipment such as land leveling dirt buggies to shave the top layer of soil off, creating a base ground level and exposing a majority of the features. Since the land surface of the site during the prehistoric times had been removed, with the exception of the area directly below the railroad bed, the preserved features had been truncated by a few or several inches. When he excavated the site, Connaway set up the grid in 2x2 meter units. He and would bisect or completely

excavate features and would dry or water screen the feature fill. By the end of the excavation Connaway uncovered 3,367 features, two stockade post rows (one with a semi-circular bastion at the end), approximately 50 houses, and burials representing 145 individuals and nine dogs.

Because of the previous damage to the site, it is assumed that the stockade surrounded at least the western side of the village, if not the entire village at one time (Ross-Stallings 1991, 10). These stockades (n=2) were created using individual post holes, with one exhibiting a horse-shoe shaped wall-trench corner bastion (Figure 1.2). Also, the 50 house structures uncovered were built using wall trenches, and some had undergone multiple rebuilding episodes. There are numerous postholes, but there has yet to be any research conducted to discern if any of these belong to single-post structure houses typically seen during the Woodland period. Along with structural features, there are several fire pits (n=80), hearths (n=10), and numerous trash/storage pits (n=627). Additionally, the remnant of a low mound, approximately 3 feet high, was uncovered at the site which contained several construction episodes with structures on top of each. This mound was excavated and exposed 13 wall-trench house patterns. This site is fairly extensive, and the large number of features and amount of cultural material excavated are indicative of a good size population that occupied the area for a long period of time. Some radiocarbon and archaeomagnetic dating for the Austin site was published by Connaway and Sims (2000). Using archaeomagnetic dating, a hearth in House #20 ranged from A.D. 1260-1350 and the floor of House #36 ranged from A.D. 1190-1240. Radiocarbon dating (C-14 cal.) on the wood/cane mat from House #36 dated to A.D.

1402; the timber/cane mat from House #48 had dates of A.D. 1329, 1343, and 1395; and the Stockade Bastion trench posts dated to A.D. 1260 (Connaway and Sims 2000).

Figure 1.2 Excavation Image from the Austin Site

Note: House 41; semicircular wall-trench corner bastion of a stockade; stockade post molds in line at lower right, cornering in front of structure opening; square structure in background with two trenches (Connaway 2003, 120; Figure 8.)

There have been a few studies completed on parts of the Austin site collection. Brian E. Worthington included the nine dog burials in his master's thesis (2008). Also, Sam McGahey conducted a lithic analysis (unpublished manuscript, list only) and John Connaway wrote an article for the Mississippi Archaeological Association Newsletter (1989, 3). An analysis was conducted on the skeletal remains by Nancy A. Ross-Stallings (1991) on the Mississippi Burial Study for the Mississippi Department of Archives and History which identified disease patterns, genetic conditions, and trauma. Specific

disease patterns that she observed in the population included enamel hypoplasia and cavities, which are often a result of a population having a rise in corn consumption. Also, she noticed osteoporosis which is the result of iron deficiency anemia and is also reflective of their diet. In one primary burial pit there was evidence of high status with a male and female. The female was interred wearing a shell bead necklace; a turtle carapace had been placed between her lower legs, and a large celt was placed under her neck (Ross-Stalling 1991, 11). The male had wolf molar teeth placed on either side of his head and had a point made of brown novaculite in his chest (Ross-Stalling 1991, 11). Another point, an Alba Stemmed, *var. Scallorn*, point, made of black chert was recovered, but it could not be positively associated with either individual (Ross-Stalling 1991, 11). Five individuals were interred face down, which is unique because in many cultures this generally means the person was shamed or viewed somehow negatively (Ross-Stalling 1991, 12). However, it is not clear why they were placed this way at Austin. Several individuals excavated from Austin showed evidence of physical trauma. A mass grave of ten individuals were recovered, some with points imbedded in their chests and one having been decapitated (Ross-Stallings 2007, 345). Connaway (2003) also summarized the basic information about pottery, pits, wall-trench houses, the stockades, the mound, and burials that he had gathered so far from the excavation.

Building off the information we know so far about the Austin site assisted in this study's attempt to shed light on the Mississippian transition in the northern Yazoo Basin and also to evaluate the fit of competing models for that transition. This study focused on fine scale ceramic change which was accomplished by seriating sherd lots from features. The following chapter provides a review of previous archaeological investigations in the

Upper Yazoo Basin along with a comprehensive background on the culture history and phases for the study region and surrounding area as well as offer more insight into the current "transition debate". Chapter 3 outlines the research objectives and methods employed in the study. In Chapter 4, the findings from the ceramic analysis is shown along with a comparison between the Late Woodland and early Mississippian components. Chapter 5 includes the feature analysis along with the assignment of their temporal phases. The final chapter discusses the results and conclusions of the study, within this the early Mississippian phase, "Austin" is defined and a discussion of how this site fits in the trajectory of the Mississippian phenomenon is explored.

CHAPTER II – ARCHAEOLOGY BACKGROUND

Previous Archaeological Investigations

A review of previous investigations of the Upper Yazoo region provides a framework for understanding the subsequent discussion of pertinent archaeological systematics and their significance to this research on the Mississippian transition. The earliest report written on sites in the Upper Yazoo Region (specifically in Tunica, Coahoma, Bolivar, and Sunflower counties) was a survey by Efram G. Squire and Edwin H. Davis in 1848 (Weinstein 2004, 3:3). Later, in 1891 a group of archaeologists with the Mound Exploration Division of the Smithsonian Institution visited and reported on sites in the Clarksdale area, but it was not until 1894 that Cyrus Thomas published the data, which included site descriptions, maps, and photographs (Weinstein 2004, 3:3-4). The first large-scale excavation completed in the region was conducted by Charles Peabody of the Peabody Museum of Archaeology and Ethnology at Harvard University in 1901 at the Dorr and Oliver sites, with the report published in 1904 (Peabody, 1904). In 1911 C.B Moore visited the region and wrote descriptions of three additional sites, Noblett Landing (22Bo503), Johnson Place (22Tu514), and Commerce (22Tu504); he was primarily looking for burials and their potential grave goods (Morse and Morse 1998; Weinstein 2004, 3:9).

The next significant report on the Upper Yazoo Basin is Calvin Brown's (1926) *Archaeology of Mississippi*, in which he reiterated and/or modified descriptions of the sites previously mentioned by Squire and Davis (1848), Thomas (1984), Peabody (1904), and Moore (1911), while also reporting information on 16 other sites within the region that had not yet been mentioned. The Works Progress Administration compiled a brief

report in the 1930s that offered information on various road-side sites in Mississippi (Weinstein 2004, 3:20). In the 1940s, the WPA updated this list with more details on Native American mounds and sites. In Tunica County two site forms were given, one located at the junction of Moore's Bayou and the Coldwater River and the other for the Martin and West Place at Dundee (Weinstein 2004, 3:21-22)

An increase in archaeological work and a better understanding of this region began with the Archaeological Survey of the Lower Mississippi Alluvial Valley from 1940 to 1947 (Phillips et al. 1951). The Lower Mississippi Archaeological Survey (LMS) was a collaborative effort between James Ford, James Griffin, and Phillip Phillips that covered the area of "the present flood plain of the Mississippi River, also those tributaries, and certain dissected alluvial plains not covered by flood waters (Phillips et al. 1951, 7)." Much of the information gathered from these surveys, including surface collections and limited excavations, established an archaeological chronology that, with modification, remains in use today.

Later, building on the analysis that had been originally conducted by Charles Peabody (1904), John Belmont (1961) reexamined material from the Dorr and Oliver Site and proposed the first phases for the Upper Yazoo region. These phases were later incorporated and reworked in Phillips' (1970) *Archaeology Survey in Mississippi's Lower Yazoo Basin*. This publication was important for several reasons. Phillip refined our understanding of chronology and typology that spanned from the Poverty Point period to Historic contact in the Lower Yazoo Basin (Phillips 1970; Weinstein 2004, 3:45). He introduced the type-variety system and reclassified LMS collections as well as other published data that was identified based on geographical and temporal distribution. This

allowed him to introduce the phase concept for the region and assign components to sites based on similarities in ceramic assemblages. While some of these phases are relatively robust, others have weak formulations due to a lack of data. Nonetheless, these phases and type-varieties have served as a basis for many researchers to contribute to and use during their attempt to understand temporal and spatial differences in the Yazoo Basin.

Initiatives by the Mississippi Department of Archives and History led to more research conducted in the Upper Yazoo Basin beginning in the 1960s as an attempt to combat extensive agricultural activities that were destroying many sites. John Connaway and Sam McGahey (1970) wrote one of the first archaeological reports for the newly created Mississippi Archaeological Survey which identified and examined eight sites within the Northern Yazoo Basin. One site of interest in this report is the Bond site (22TU530), located only a few miles from the Austin site. The Bond site is a multicomponent site that was occupied between the mid-to-late Baytown period and early Mississippian period (Connaway and McGahey, 1970). In a subsequent report, John Connaway (1981) summarized several salvage projects that occurred from 1969 to 1977 which included Denton, Longstreet, Gates, Teoc Creek, Boyd, Acree, Maddox #2, Shady Grove, Barner, Bobo, Clover Hill, John Jones, and Flowers #3. Thomas Potts and Sam Brookes reported on a salvage excavation at the Bobo site which focused on the different cultural material found during it Peabody phase component (A.D. 850-1000) (Potts and Brookes 1981). Another important investigation is that by Stephen Williams and Jeffrey Brains (1983) at the Lake George Site in the Lower Yazoo Basin. This report revised type-varieties, introduced the concept of ceramic sets, and included cultural interpretations that are relevant to this study. In addition to some of the reports listed

above, numerous investigations have been undertaken in the region since the 1970s in affiliation with MDAH, all helping to contribute to our current understanding of the Upper Yazoo Basin. As stated in an earlier chapter, through research funded by MDAH in 1997, Nancy Ross-Stalling presented a paper on burials from the Barner and Austin sites in which she proposed to identify the first case of treponemal syndrome in Mississippi, although this was subsequently challenged as being tuberculosis by C. Brady Davis (2011). In addition, John Connaway and Douglas Sims (1997; 2000) published radiocarbon, oxidizable carbon ratio, archaeomagnetic, and thermoluminescence dates on sites throughout Bolivar, Sunflower, Coahoma, and Tunica counties, which as stated earlier, provided dates for the Austin site.

Investigations specifically pertinent to this study are several reports or theses published in the last 40 years. In 1980, Sam Brookes' master's thesis, "The Peabody Phase in the Upper Sunflower Region" on the Barner Site (22Co542), added new data and redefined the Peabody phase. Several large-scale data recovery projects have occurred in the Upper Yazoo Basin. The Austin site must be included in this list, and although a comprehensive report was never written, nonetheless, it has helped increase our knowledge about cultural phases and relationships between sites. The Rock Levee Site report (Weinstein et al. 1995) presents the investigation of a large village site located in the western portion of Bolivar County, ranging in age from the early Baytown period until the late Mississippian period. Interesting findings from this site include bell-shaped pits with corn and shell tempered ceramics; this coupled with radiocarbon dates from a wall trench structure that ranges from A.D. 897 to 1018 provides evidence of early "Mississippian" influence on these Baytown people (Weinstein et al. 1995, 235-241).

A report on a large-scale data recovery project at the McNight site in Coahoma County, Mississippi was completed by Walling and Chapman (1999). This particular report is of great significance for this study because it was the basis for some of the methods employed in this research. Their ceramic classification and analysis recognized the different decorative treatment between Mulberry Creek Cord Marked, *var. Edwards*, and Mulberry Creek Cord Marked, *var. Smoothed*, as well as established a new mode identified as "Hill Punctated" (Walling and Chapman 1999). Their analysis attempted to assign each pit to a possible phase or time period for the area, including the Prairie, Coahoma, and Peabody phases and the Mississippian period (since there are no established early Mississippian phases for this region). Walling and Chapman (1999) argue that one of their Mississippian components might be similar to the occupation at the Austin site which suggests a time period of A.D. 1100 to 1200.

Also of relevance to this study are the mitigation excavations of the new Welcome Center (22CO573/773 and 22CO778) in Coahoma County (Mooney et al. 2004). This project involved prehistoric sites located at the intersection of U.S Highways 49 and 61 near the community of Lula, Coahoma County, Mississippi (Mooney et al. 2004, 1). During this project, archaeologists identified sites that were occupied through the Marksville, Baytown, Coles Creek, and Mississippian periods. At least five Peabody phase features were included in the assemblage. Their ceramic decorative types consisted of 49.2% Mulberry Creek Cord Marked, 46.2% Baytown Plain, and 3% Coles Creek Incised (Mooney et al. 2004, 493). Additionally, one Mississippian period feature was recovered and due to the mix of temper types could be representative of an early phase. The types seen in the pit are Addis Plain, Barton Incised, Baytown Plain, Chicot Red,

French Fork Incised, Mississippi Plain, and Mulberry Creek Cord Marked (Mooney et al. 2004, 249-251).

Finally, a Phase 1 cultural resource survey was conducted by Coastal Environments, Inc. as part of the environmental process for Section 11 of Interstate Highway 69 (Ryan et al. 2004). This survey traversed Bolivar, Coahoma, Tunica, and Sunflower counties, Mississippi and recorded 217 archaeological sites, including 25 sites in Tunica County, Mississippi. In this survey, archaeologists identified Baytown period components (n=54) and Mississippi components (n=43) (Ryan et al. 2004, 8:15). Of interest is the Austin II (22TU634) site, located on the west bank of the Muddy Bayou. The pre-historic ceramics recovered at this site were Baytown Plain, Mississippi Plain, and Mazique Incised (Ryan et al. 2004, 7:623). Based on this information, this site was likely occupied during the Coles Creek and early Mississippian periods (Ryan et al. 2004, 7:623). However, because the artifacts came from a plow zone, it is thought that the subsurface deposits were not preserved and further work was not recommended. Nonetheless, the highway corridor was realigned and the site was avoided (Ryan et al. 2004, 7:624).

There have been a large number of archaeological investigations in the Upper Yazoo Basin over the last 170 years, and MDAH is largely responsible for the increase in professional excavations and published reports in this area during the last 50 years. Thanks to this archaeological work, our overall understanding of this region is growing. Also, some large-scale data recovery projects occurring in the area within the last 30 years have provided valuable data about the characteristics and traits of other Late Woodland and possible early Mississippian phases. Building on this knowledge base and

comparing the findings from the Austin site will no doubt result in the ability to establish an early Mississippian phase for the Upper Yazoo Basin. This will also contribute to the discussion of how the Austin site relates to the trajectory of Mississippian culture as it was being adopted throughout the Southeast.

Culture History

Cobb and Garrow (1996, 21) suggest that to better understand the Emergent Mississippian phenomenon, one must understand and focus on the regional history. To this end, this chapter examines local culture history of the Upper Yazoo Basin (Figure 2.1) by reviewing the archaeological phases and their associated ceramic assemblages from the Late Woodland to Middle Mississippian period. Culture history is the time-space organizational framework by which archaeologists make order of the past. Phase designations are aligned with archaeologists' long-term goal of figuring out what happened, when and where (Nelson 2016, 34). As Phillips states, "Until a certain amount of order has been achieved in respect to time-space relations on a regional scale, it may be questioned whether satisfactory cultural inferences can be drawn from any archaeological materials" (Phillips et al. 1951, 61). Because of this, phases are constantly being revised as a result of ongoing excavations and analyses which are then used by archaeologists for a better understanding of spatial and temporal variations in the pre-historic Southeast. Figure 2.2 provides the current understanding of the chronological sequence of the Upper Yazoo Basin and adjoining regions discussed below. Since one of the aims of this study is to establish an early Mississippian phase for the region, this warrants the inclusion of phases outside the northern Yazoo Basin to compare the parallels and differences when it is deemed necessary.

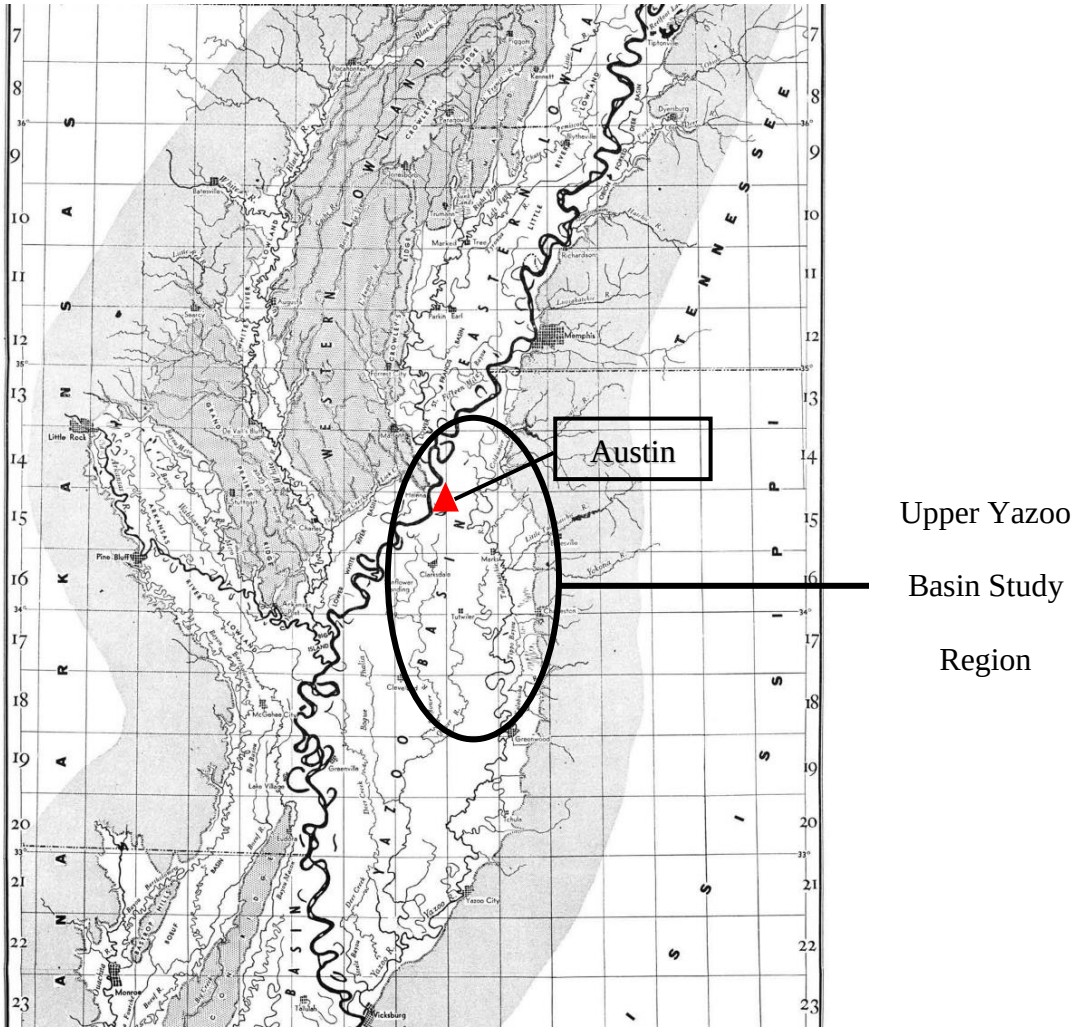

Figure 2.1 Map of Upper Yazoo Basin Study Region

Note: Physiographic subdivisons of the Alluvial Valley of the Lower Mississippi; the focus area of the following phase summary (Phillips et al. 1951, Figure 1).

<table>
<tr><td>Date (A.D)</td><td colspan="9">Regions/Phases</td><td>Period</td></tr>
<tr><td></td><td colspan="2">Upper Yazoo Basin</td><td>Toltec</td><td>Lower Yazoo Basin</td><td>Bayou Bartholomew</td><td>Lower St. Francis River Basin</td><td colspan="2">Zebree (Eastern Lowlands)</td><td></td></tr>
<tr><td>1500</td><td rowspan="3">Parchman</td><td></td><td rowspan="3"></td><td rowspan="2">Lake George</td><td rowspan="2">Wilmot</td><td>Kent</td><td colspan="2" rowspan="3"></td><td rowspan="4">Middle Mississippian</td></tr>
<tr><td>1450</td><td rowspan="3">Huskpuckena</td><td rowspan="4">Bartholomew</td><td rowspan="5"></td></tr>
<tr><td>1400</td><td rowspan="2">Winterville</td></tr>
<tr><td>1350</td><td></td></tr>
<tr><td>1300</td><td colspan="2" rowspan="4">Austin</td><td rowspan="5"></td><td colspan="2" rowspan="5"></td><td rowspan="5">Early Mississippian</td></tr>
<tr><td>1250</td><td></td></tr>
<tr><td>1200</td><td rowspan="2">Crippen Point</td><td rowspan="2">Barrett</td></tr>
<tr><td>1150</td><td></td></tr>
<tr><td>1100</td><td rowspan="3">Buford</td><td rowspan="2">King’s Crossing</td><td rowspan="2"></td><td></td><td rowspan="3">Big Lake</td></tr>
<tr><td>1050</td><td rowspan="4">Walnut Bend</td><td rowspan="3">Terminal Late Woodland</td></tr>
<tr><td>1000</td><td rowspan="3">Unnamed phase-Plum Bayou Culture</td><td rowspan="2">Aden</td><td rowspan="2">DeYampert</td></tr>
<tr><td>950</td><td rowspan="2">Dunklin</td></tr>
<tr><td>900</td><td colspan="2">Peabody</td><td></td></tr>
<tr><td>850-400</td><td colspan="2">Coahoma</td><td>Bayland</td><td>Dry Bayou</td><td></td><td></td><td></td><td>Late Woodland</td></tr>
</table>

Figure 2.2 Interpreted Phase Chronology for Central Mississippi Valley

Note: Revised regional chronology of cultural phases (Jackson and Kowalski 2015; Kowalski 2009; Morse and Morse 1990; Nelson 2016; Phillips 1970; Walling 2003, Table 1).

Late Woodland Phases

The Woodland period spans roughly between 1200 B.C. to A.D. 1000 and is typically divided into three periods; early, middle, and late. The Late Woodland period, which is of importance for this study, currently ranges from A.D. 400 to 1000 and is viewed as a period of cultural decline. Because of this, Southeastern Late Woodland societies have been described as "good gray cultures" (Williams 1963, 297), while others have argued that this period is in fact a time of population growth and increasing regional social interaction (Weinstein 2004, 4:22). Two cultures, Baytown and Troyville, were present in the Lower Mississippi Valley during the Late Woodland period. The Baytown culture, which is found in the northern portion of the region, is the focus of this study. It is defined by both subtle and dramatic changes in pottery styles; subtle changes include the continued use of Marksville ceramics and the continuation of the extensive use of cord-marked wares, while the more obvious changes consisted of the addition of elaborately painted wares (Weinstein 2004, 4:22-23).

The first Late Woodland phase in the Upper Yazoo Basin is the Coahoma phase (A.D. 400-850) (Brookes 1980). This phase was initially proposed by Belmont (1961, 88) who argued that this was the only phase during the Late Woodland period and it extended from the time when Marksville-type ceramics died out to the introduction of Mississippian ceramics. It was redefined by Phillips (1970) who stated that the Coahoma phase is simply the main representative of the Baytown culture in the Upper Sunflower Region. Its end was not with a sharp cultural break, but rather the introduction of new ceramic types which allowed for the definition of a later Baytown culture phase called Peabody (Phillips 1970, 905). Phillips' (1970, 906) ceramic assemblage consisted of

Withers Fabric Marked, Larto Red, Alligator Incised, and Indian Bay Stamped. The phase was once again redefined by Brookes (1980) who argued that the Coahoma phase contained no Marksville Incised or punctated decoration. The ceramic assemblage he proposed consists of Alligator Incised, *var. Oxbow*; Baytown Plain, *var. Reed*; Larto Red, *var. Larto*; Mulberry Creek Cord Marked, *var. Edwards*; Salomon Brushed, *var. Salomon*; and Yates Net Impressed, *var. Yates* (Brookes 1980; Brookes and Potts 1981).

Sometime between A.D. 700 and 1000, new cultural elements were introduced into the Baytown culture that indicate a transition to the terminal Late Woodland, or sometimes called the Emergent Mississippian period (Anderson and Mainfort 2002, 35). This time span is often referred to in the literature of the area as the Coles Creek Period (A.D. 800-1200) which some archaeologists (Anderson and Mainfort 2002) claim is inappropriate, as this refers to a block of time that can easily be confused with the Coles Creek culture which occurs around the same time and exists in the lower Yazoo Basin, outside the immediate scope of this study area. In the Central Mississippi Valley during this period, traits associated with the Mississippian culture begin to appear, including shell tempered ceramics, maize agriculture, and relatively large towns (Anderson and Mainfort 2002, 35).

The Peabody phase (A.D. 850-1100) (Walling 2003) (Figure 2.3) has been constructed for the terminal Late Woodland period in the Upper Yazoo Basin, which was originally proposed by Phillips (1970). Phillips (1970, 917) acknowledged that the phase was "particularly open to question" and wrote that the assemblage consisted of a preponderance of Baytown Plain over Mulberry Creek Cord Marked, a weak showing of Larto Red, and minorities of Coles Creek Incised, French Fork Incised, and Chevalier

Stamped. Later work done by Brookes (1980, 1988) made the Peabody phase one of the best-defined Woodland phases for the Upper Yazoo Basin (Walling 2003, 81). According to Brookes, the assemblage, which includes only grog-tempered ceramics, is dominated by Baytown Plain, *var. Reed*, and Mulberry Creek Cord Marked, *var. Edwards*. Minority varieties include Alligator Incised, *var. Oxbow* and *Alligator*; Coles Creek Incised, *var. Barner*, *Hunt*, and *Keo*; French Fork Incised, *var. Larkin*; Hollyknowe Pinched, *var unspecified*; Larto Red, *var. Larto*; Officer Punctated, *var. unspecified*; and Shellwood Cord Impressed, *vars. Shellwood* and *Big Creek* (Brookes 1980, 1988). After the investigations at the McNight site, Evansville Punctated, *var. Rhinehart*, certain varieties of Mazique Incised, additional varieties of Coles Creek Incised, and the Hill Punctate mode were added to the assemblage (Walling and Chapman 1999). Non-ceramic Peabody traits include settlements on old natural levees, wall trench housing, and bell-shaped pits (Brookes 1980, 25).

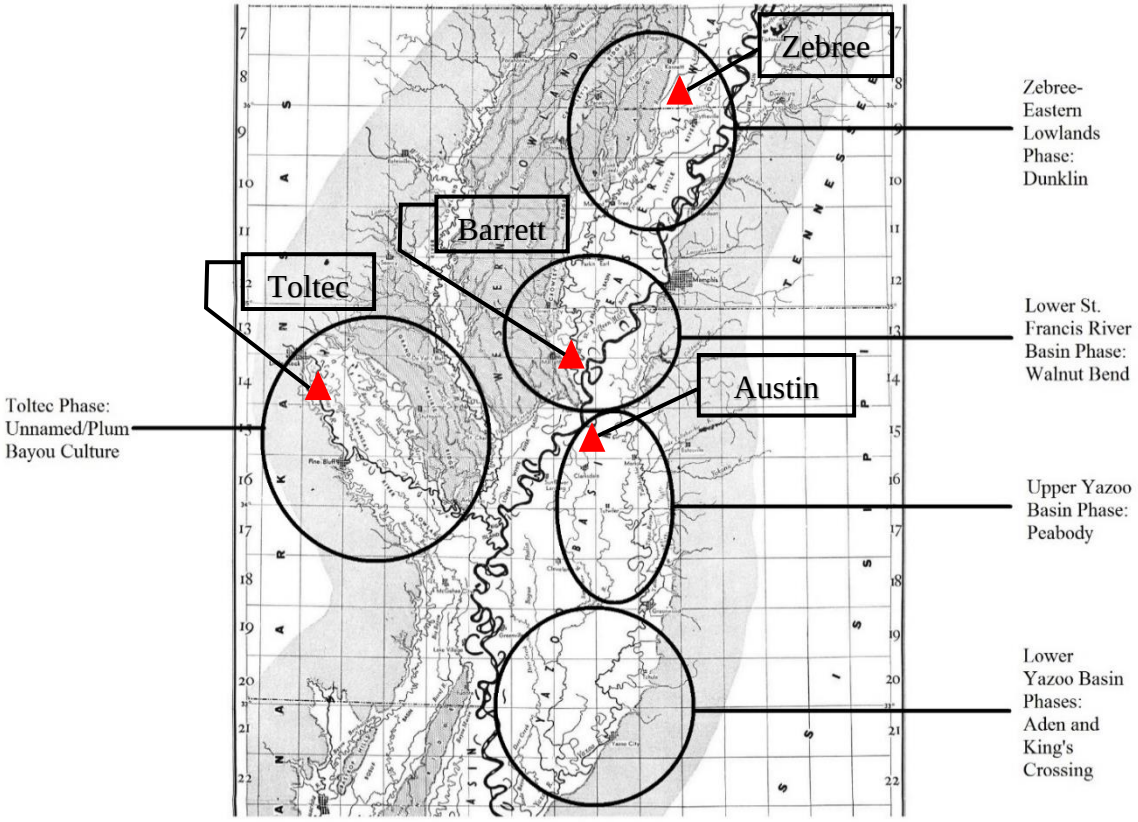

Figure 2.3 Map of Terminal Late Woodland Regions and Phases Disscused in Text

Note:(Phillips et al. 1951, Figure 1).

Extending from the northern portion of Tunica County, Mississippi, northward into the lower St. Francis Basin is another late Baytown culture manifestation (Weinstein 2004, 4:28). Phillips (1970) first proposed the Walnut Bend phase and stated that it "can be most easily described by comparison with the preceding Baytown phase" (Phillips 1970, 914-915), specifically a higher proportion of Baytown Plain to Mulberry Creek Cord Marked. House and House (1987, 129) reported on the Walnut Bend phase component at the Barrett site, characterizing the assemblage as Baytown Plain (45%), Mulberry Creek Cord Marked (25%), and Wheeler Checked Stamped, *var. Green River* (20%); with minority types including Evansville Punctated, Larto Red, Coles Creek

Incised, Shellwood Cord Impressed, and Morris Plain. The ceramic assemblage suggests a beginning date of approximately A.D. 800 (House and House 1987), but this phase covers a large temporal range and Weinstein (2004, 4:28) suggests that more archaeological work is needed before this phase can be useful in northwestern Mississippi.

The Zebree site in northeast Arkansas contains a late Baytown Period component called the Dunklin phase. A diagnostic maker of this phase is sand-tempered pottery, more specifically, Barnes Cord Marked and Barnes Plain (Morse and Morse 1990, 53; Williams 1954, 204). There are also very small amounts of fabric impressed sherds, check-stamped sherds, possibly resembling Wheeler Check Stamped (Morse and Morse 1990, 54; Phillips 1970), and other minority decorated types (Morse and Morse 1990, 53).

In the Arkansas River Valley near Little Rock is the Toltec site, the type site for the Plum Bayou culture. Although the Terminal Late Woodland period from A.D. 700 to 1000 lacks a defined phase, the ceramics from this timeframe are very similar to those of the Peabody phase. Rollingson (2012, 10) states that the ceramics from this Baytown period are predominantly Baytown Plain with minor amounts of types, including Coles Creek Incised, Evansville Punctated, Larto Red, Officer Punctated, and Wheeler Stamped. Also, according to Weinstein (2004, 3:73), Brookes, via personal communication to Weinstein, has suggested Peabody phase ceramics could be considered elements of the Plum Bayou culture. However, more research is needed before a relationship can be clearly established between the Peabody phase and Plum Bayou culture.

The last area to be included in this culture history summary is the southern portion of the study region known as the Lower Yazoo Basin. For the Coles Creek period this area has been broken down into three phases: Aden, King's Crossing, and Crippen Point. In this portion of the Lower Mississippi Valley, "Mississippian" traits do not tend to penetrate this far south as early as they appears further north. The Crippen Point phase description will be postponed until the discussion of early Mississippian phases because of recent refinement and archaeological research (Kowalski 2009). The Aden phase (A.D. 800-900) ceramic assemblage consists of Avoyelles Punctated, *var. Avoyelles*; Chevalier Stamped, *var. Chevalier*; Coles Creek Incised, *var. Coles Creek* and *Campbellsville*; French Fork Incised, *var. Larkin*; and Mazique Incised, *var. Mazique* (Williams and Brain 1983, 317). The next phase is the King Crossing phase (A.D. 900-1100) (Jackson and Kowalski 2015) and is characterized by the presence of more fineware, and while this ceramic assemblage is comprised of types seen in the previous phase the varieties are different (Williams and Brain 1983, 317). This assemblage contains Avoyelles Punctated, *var. Kearney*; Coles Creek Incised, *var. Blakey*, *Greenhouse*, and *Mott*; French Fork Incised, *var. McNutt*; and Mazique Incised, *var. Kings Point*; and the first documented findings of, Carter Engraved, and Evansville Punctated (Williams and Brain 1983, 317).

Mississippian Phases

The final prehistoric period in the Southeast is the Mississippian period, which is typically dated A.D. 1000-1550. It too is divided into early, middle, and late periods. It is known for the adoption of chiefdom-level societies that relied heavily on intensive agriculture (Weinstein 2004, 4:31). Their main subsistence strategy was based on growing maize, beans, and squash, although they still retained hunting, fishing, and

gathering. Common settlement patterns of this period included centers marked by one or more substructural mounds and village sites that were sometimes fortified. Wall-trench houses and shell-tempered pottery are also Mississippian traits (Weinstein 2004, 4:31). Mississippian culture has its origins in the St. Louis area with the construction of Cahokia. After around A.D. 1000, this "Mississippian" culture began to spread throughout the southeast, but exactly how this happened, whether through migration, transfer of ideas, or by responses to a changing environment, is still debated. Regardless, by A.D. 1200 this culture had spread to Georgia and even as far south as Florida (Weinstein 2004, 4:31). The developmental or early Mississippian period (A.D. 1000-1300) (Figure 2.4) in northwest Mississippi has been identified from the appearance of shell-tempered pottery. The phases proposed for this timeframe thus far are Buford, Austin, and Quitman, although the verification of each will require further archaeological research (Mooney et al. 2005, Walling 2003). A hybridized Mississippian/Baytown phase has yet to be established, though many researchers (McNutt et al. 2003; Walling and Chapman 1999; Weinstein 2004) have stated that the excavations by John Connaway at the Austin site and the eventual analysis will lead to a better understanding of the period and to a well-defined early Mississippian Austin phase. The Quitman phase, designated by Phillips (1970, 940), represents Mississippian culture in the Tallahatchie region but the lack of archaeological research in this area precludes a definition of what constitutes it.

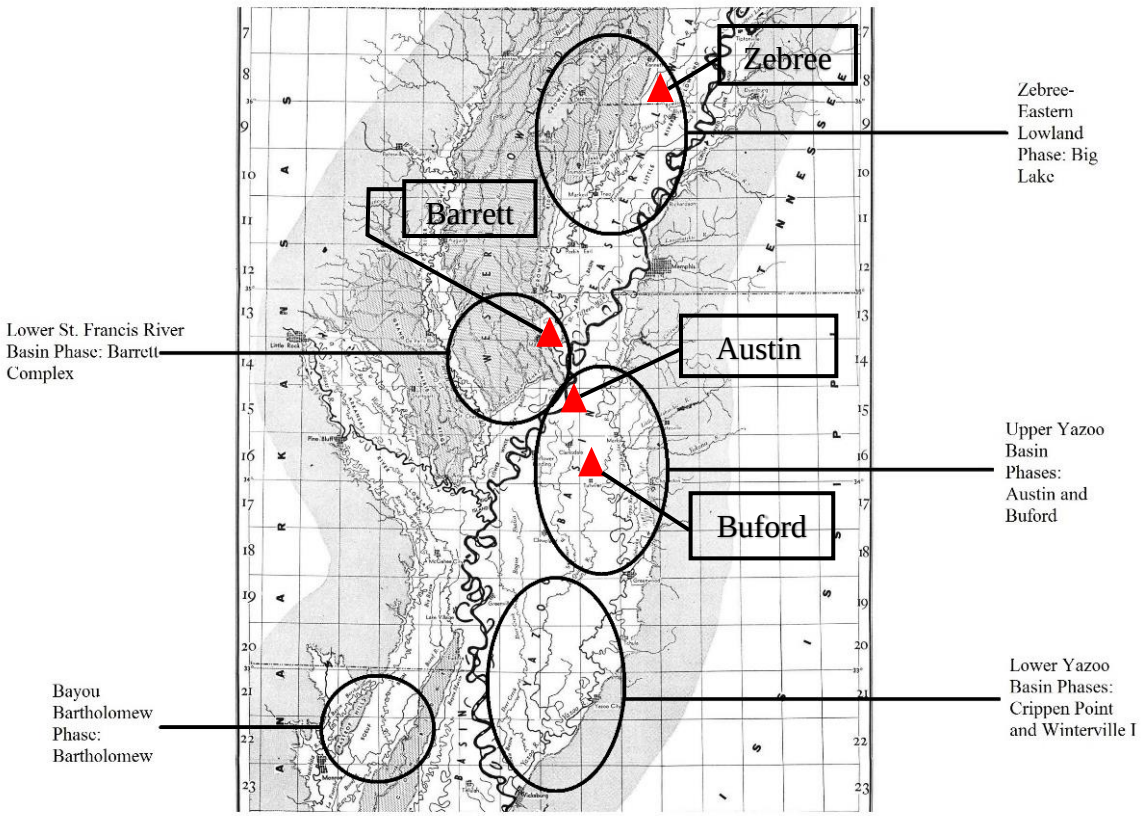

Figure 2.4 Map of Early Mississippian Regions and Phases Discussed in Text.

Note: (Phillips et al. 1951, Figure 1).

The other proposed phase in the study region of the northern Yazoo Basin is called the Buford phase (A.D. 900-1100). According to Richard Marshall (1988), the Buford site in Tallahatchie County, Mississippi suggests an "early Mississippian complex based on the early date and characteristics (Marshall 1988, 1)". This phase is mostly represented through shell tempered pottery that was mixed with a low frequency of Coles Creek/Late Baytown pottery (Marshall 1988, 50). This assemblage consists of Bardy Cord Marked, Barton Incised, *var. Barton*; Cahokia Cord Marked, Coleman Incised, Evansville Punctated, *var. Sharkey, Greenville Plain*; Harrison Bayou Incised, Kimmswick Fabric Impressed, L' Eau Noire Incised, Mazique Incised, Mississippi Plain,

Old Town Red, Varney Red, *var. Marley*; and Wickliffe Form, *var. Carmel* and *Cassidy*. The appearance of Varney Red and Wickliffe Form (Thick) pottery in ceramic assemblages seems to be a horizon maker for early intrusive Mississippian culture. Varney Red pottery was first identified by Williams (1954) in southeast Missouri; this type refers to pottery that has a red slip applied to the interior surface of pans, globular jars, bowls, and the exterior of hooded bottles (Morse and Morse 1990, 56). Wickliffe Form at the Buford site is essentially the same as the Wickliffe Thick pottery (Buford 1988, 177). This pottery is an unusual type; it is a "funnel" ware that has two orifices on opposite ends of the vessel, one large and one small, and can have various surface treatments, such as cord marked, incised, punctated, and red washed (Phillips 1970; Buford 1988; Morse and Morse 1990). Marshall (1988, 53) states at Buford that there was a noticeable change or possible migration of early Mississippian peoples to the site. This change seems to have happened relatively suddenly and was seemingly overwhelming, suggesting a possible site intrusion situation. It should be noted that the Buford traits appear to be nearly the same as the Big Lake phase of northeast Arkansas (Marshall 1988, 53). However, this phase lacks a full description and more data is needed to adequately define it.

Since Marshall (1988) relates the Buford phase to that of the Big Lake phase of northeast Arkansas, it is important to examine this phase as well. The Big Lake phase ranges from A.D. 810-1076 and is considered to be one of the earliest dates for the Mississippian period in the eastern United States (Morse and Morse 1990, 55). At the Zebree site this phase overlaps with the Dunklin phase (Terminal Late Woodland period). However, they are completely distinct from one another (Morse and Morse 1990, 55).

Contrary to other early Mississippian phases, Big Lake consists entirely of shell tempered pottery. The majority wares or types are Varney Red, Mississippian Plain, and Wickliffe Thick (Morse and Morse 1990, 56). Some of the common pit shapes for this phase include cylindrical pits, bell-shaped pits, and rectangular pits (Morse and Morse 1990, 63). The phase is seen as a fully emerged Mississippian expression and/or site intrusion situation, as it appears that the people of the Big Lake phase moved into the territory and built their village immediately over the Dunklin phase village (Morse and Morse 1990, 64).

The Bartholomew phase in southeastern Arkansas is another example of a possible early Mississippian phase, with a date range from A.D. 1100–1400 (Rollingson 1993). This ceramic complex includes Coles Creek Incised, *var. Big Bayou* and *Kimball*; Evansville Punctated, *var. Beech Creek*, *Sinner*, and *unspecified*; Harrison Bayou Incised, Hollyknowe Ridge Pinched, L'Eau Noire Incised, Mazique Incised, *var. Parkdale*; Mississippi Plain, Plaquemine Brushed, and Winterville Incised (Rollingson, 1993).

The Barrett Complex (A.D. 1100–1200) is based on an early Mississippian component of the Barrett site in the lower St. Francis River basin region to the west of the study area (House and House 1987). The ceramics for this phase are characterized as being predominantly plain course shell tempered ware; also present are coarse grog-and-shell tempered globular jars with recurved rims and no handles and large interior red-slipped jars that could be compared to Old Town Red, *var. St. Francis*. Other decorative types include Varney Red, and L'Eau Noire Incised, *var. L'Eau Noire* (House and House 1987).

To the south of the study area in the Lower Yazoo Basin are two early Mississippian phases. The Crippen Point phase (A.D. 1000-1200), generally considered to be a Late Woodland phase as proposed by Williams and Brian (1983), has more recently been suggested to actually represent the emergent Mississippian phase due to significant changes, including the presence of extra-regional contacts and the incorporation of shell tempering ceramics (Kowalski 2009, 120). The phase is broken down into two subphases, but the main types of the two combined ceramic assemblages are Avoyelles Punctated, Beldeau Incised, Cahokia Cord Marked, Chevalier Stamped, Coles Creek Incised, Evansville Punctated, Harrison Bayou Incised, Mazique Incised, Hollyknowe Pinched, Old Town Red, Plaquemine Brushed, Powell Plain, and Ramey Incised (Williams and Brain 1983, 318-319). Cahokia Cord Marked and Old Town Red represent the introduction of shell tempered ceramics to the area while Powell Plain and Ramey Incised, occurring in very small amounts, are non-local types from the Cahokian area. The next phase seen in this region, Winterville (A.D. 1200-1350) has also been broken down into two subphases. According to Williams and Brain (1983, 376) the Winterville phase's "most consistent theme … is a mixture of northern and southern elements; old traits and new traits were apparently accommodated." The ceramic assemblages have both grog and shell tempered types, and include varieties of types that were seen in previous phases alongside new varieties. Some new diagnostic types seen in this ceramic assemblage are Anna Incised, Avoyelles Punctated, Barton Incised, Carter Engraved, Grace Brushed, Hollyknowe Pinched, Larto Red, *var. Chicot*; Mound Place Incised, Parkin Punctated, Pouncey Pinched, Plaquemine Brushed, and Winterville Incised (Williams and Brain 1983, 319-323).

While the Austin site may not have been occupied after the early Mississippian period, it is still important to understand the phases that occur afterwards to see how they compare. One such phase is the Middle Mississippian phase, Huckpuckena I. This phase is estimated to range from A.D. 1350-1450 and occupies the Upper Sunflower region of the northern Yazoo Basin (Brain 1988, 266). The diagnostic ceramic markers for this phase includes Owens Punctated, *var, Owens*, *Poor Joe*, and *Widow Creek*; Winterville Incised, *var. Ranch*; Avenue Polychrome, and Nodena Red and White (Brain 1988, 266-268).

In addition to the Huckpuckena I phase in the northern Yazoo Basin, Parchman I is pertinent to examine because of recent findings. Brain's (1988) Tunica Archaeology places this phase in the protohistoric period that ranges from A.D. 1550-1650; however, this phase has been recently refined by Erin Nelson (2016). Based on pottery recovered from Parchman Place in Coahoma County, Mississippi, during survey and excavation work completed from 2002-2011; it has now been assigned a new timeframe of A.D. 1300-1400. This newly assigned middle Mississippian phase contains both shell and grog tempered pottery with shell tempered pottery representing the majority of her collection (Nelson 2016). The decorative types seen in her ceramic assemblage include Barton Incised, *var. Barton*,;Winterville Incised, *var. Winterville*; Larto Red, Mulberry Creek Cord Marked, Salomon Brushed, *var. Salomon*; L'Eau Noire Incised, *var. unspecified*; Leland Incised, Hollywood White, *var. Hollywood*; and Old Town Red, *var. Old Town* (Nelson 2016, 81-82). Plainwares for this phase include Mississippi Plain, Bell Plain, and Baytown Plain (Nelson 2016, 81-82).

Transition Theory

Since the emergent Mississippian phase for the northern Yazoo Basin is not very well understood, it is important to explore the manner in which the development of Mississippian traits could have happened. By increasing our knowledge about this time period, it has the potential to provide archaeologists throughout the Southeast more insights into the different possible factors that lead to the development of Mississippian societies (Cobb and Garrow 1996, 21). The term "Emergent Mississippian" was first defined in the American Bottom by John Kelly (1980) to designate a transitional period of development that predates the Mississippian culture but also postdates Late Woodland societies. However, Fortier and McElrath (2002, 176) state that this period has become a "moving target" in that few archaeologists agree on what defines it. The most likely reason for this is because of the complex nature of how the "Mississippian" culture spread throughout different regions in the Southeast and its uneven appearance in the archaeological record.

Into the 1950s many archaeologists argued that the Mississippian culture developed first in the American Bottom and spread throughout the Southeast by migration (Blitz and Lorenz 2002, 118). However, as more knowledge was gained about regional Mississippian culture in the 1970s and 1980s, this viewpoint was challenged, and researchers began to reject this earlier migration and diffusion theory and instead argued for an internal and gradual response to similar stresses, known as the isolationist population-resource stress model as an explanation. (Blitz and Lorenz 2002, 119). Over the last twenty years even more research has been conducted in the Southeast, but the argument still remains but with three distinct models as explanations. These three include

the two major theories stated above, “homology or historical” and “analogy or process”; however, recently independent coexistence has been suggested (Fortier and McElrath 2002, 175). This new concept states that interaction between intrusive Mississippian populations and Late Woodland peoples would have involved some acculturation, or interactions would occur where populations would adopt some traits but would largely retain their separate identities. While the exact nature of the initial emergence of Mississippian traits in the Upper Yazoo Basin is unknown, by considering different theoretical approaches and examining specific regional examples of transition, this study on the Austin site will be able to contribute to the overarching theory discussion and even suggest how the region was experiencing this shift.

As previously mentioned, scholars have considered three different theories on how the Southeast transitioned from Late Woodland to Mississippian. One major transition theory, the “homology or historical approach” argues that Mississippian people migrated throughout the major river valleys of the Southeast bringing their already developed Mississippian complex to regions occupied by Late Woodland societies (Cobb and Garrow 1996; Hawsey 2015; Smith 1990). In this scenario, there would have been a core or “heartland” from which these peoples traveled, and when settling in new locations they rapidly spread their technological innovations and culture. While archaeologists have speculated about where this might be, many have suggested Cahokia and the surrounding regions in the Central Mississippi Valley. On the other hand, there are doubts that a single center for this culture exists (Smith 1984, 17-19). According to Smith (1990, 2) Mississippian groups would have displaced and/or assimilated with indigenous groups where they would establish intrusive colonies. This suggests that the sudden

appearance and spread of shell tempering, extensive agriculture, wall-trench houses, complex mound building, and other cultural material traits throughout the region are signs of this migrational spread. These varied interactions also account for the uneven developments of social and technological change throughout the region (Hawsey, 2015).

The other major transition theory, the "analogy or process approach", argues that Mississippian societies developed locally and gradually out of the preceding Late Woodland society (Cobb and Garrow 1996; Hawsey 2015; Smith 1990). It is believed that there was an "evolution" that led to the Mississippian culture from diverse hunter and gatherer or gardener societies that proceeded it (Jenkins and Krause 2009, 202). This is argued because various areas displayed parallel trends which may be best explained by similar responses to climate changes and population growth that led to technological developments, subsistence changes, and new patterns of social organization (Cobb and Garrow 1996, 23). Since many Late Woodland populations were living in similar river valley settings, had equivalent economies, and were organized in comparable ways, when they began to encounter problems it would be natural for them to respond with the same behavior (Smith 1990, 2). Also, variations between emergent Mississippian groups can be attributed to environmental differences (Cobb and Garrow 1996, 23; Smith 1990).

Alternatively, like many two-sided debates, the Mississippian complex could have resulted both from migrations of "Mississippian" peoples and from responses to pressures that eventually led Late Woodland societies to adopt certain traits. With more archaeological excavations and analysis completed, our understanding of how different regions experienced this specific time period may show that it is actually as Smith (1990, 2) states, a "multidimensional array of distinct historical sequences arranged in, patterns

of similarity and exhibiting different mixtures of demographic expansion, social reproductive isolation, and interpolity developmental interaction." This "independent co-existent" theory argues that these different populations should not be viewed as mutually exclusive or unrelated but instead represent different developmental paths to Mississippian culture that are linked together in a sequential cause-and-effect relationship through contact and interaction across a common environment (Blitz and Lorenz 2002, 130-131). One side of this argument is represented in the archaeological record through sites that represent sudden changes in their ceramic styles, settlement patterns, architecture, and subsistence strategies, suggesting rapid replacement that would have happened through migration. On the other hand, sites that have a mixture of Mississippian traits included alongside their persisting indigenous Woodland patterns are suggestive of in situ development. In the Chattahootchie River case examined by Blitz and Lorenz (2002), these two distinctive classes of sites were found to be contemporaneous, suggesting that this transitional period is one of different developmental pathways (Blitz and Lorenz 2002, 119). Mississippian peoples would have migrated into areas alongside these Late Woodland populations and they interacted in various ways and degrees. Similarly, due to environmental pressures, such as access to resources and an increase in population growth, these neighboring groups would have had to adapt. This eventually developed into the "Mississippian" culture that we see during the middle Mississippian period. This evidence of co-existing and interacting Late Woodland and Mississippian peoples can explain both the uneven development in regional histories and cultural similarities throughout the Southeast.

One way of exploring the transition is to examine the theory of early Mississippian expansion through Cahokian peoples, ideas, and practices; it is thought that these rapidly spread and transformed the native lifeways of peoples throughout the Mississippi Valley. In the American Bottom, several trends characterize the emergent Mississippian culture (A.D. 900-1050). Communities increased in both complexity and size, there was a continuous growth in population, the importance of maize in their diet grew steadily, political, social, and ritual behavior became more complex, and technological aspects of material culture developed progressively (Fortier and McElrath 2002, 173-174). However, beyond the American Bottom, Cahokia style material culture and Mississippian practices begin to appear around A.D. 1050 in various regions (Bardolph 2014, 73). According to Bardolph (2014, 73), scholars propose a range of direct and indirect ways in which this could have occurred, including emulation of local groups, limited engagements with or small-scale movements of people, or whole group site-unit intrusions. It has been suggested that local groups in the Central Illinois River Valley employed the strategies of emulation rather than being an archaeological instance of the immigration of Cahokians; that peoples made pilgrimages to Cahokia and upon returning they replicated what they saw (Bardolph 2014, 74; Pauketat, 2004, 114). This would mean that this change was driven by movements of ideas rather than by migration. Nonetheless, in the Central Illinois River Valley, "the arrival of Cahokian groups, objects, and ideas resulted in rapid changes to the lifeways of local Late Woodland groups, which is evident by many sites with both distinctively Mississippian and hybridized Mississippian/Late Woodland archaeological assemblages" (Bardolph 2014, 75).

For the Central Mississippi Valley, there have been several articles written about how specific regions experienced the transition from the Late Woodland period to the Mississippian period through examining material culture. The Zebree Site located in Mississippi County, Arkansas has three separate components: Late Woodland, Early Mississippian and Middle Mississippian. Prior to the work at Zebree, the early Mississippian phase had not been identified in Arkansas, so its presence at the site was recognized as highly significant. This component was distinct from the Late Woodland and middle Mississippian components (Morse and Morse 1990, 51). This site is pertinent to the transition theory argument because it became evident that the early Mississippian phase, Big Lake, could not have developed from the Late Woodland phase, Dunklin, and that cultural processes including migration account for the development (Morse and Morse 1990, 51). These findings were based on the sudden stylistic change in the ceramic assemblage and settlement pattern from the Big Lake phase. It became apparent that Mississippian peoples moved into the previously occupied Late Woodland territory and built their village directly over it. While some of the early Mississippian dates at the Zebree site overlap with the Late Woodland occupation, it is believed that the Dunklin phase ceramics are secondary deposition and there is absolutely no evidence of cultural mixture; the two are totally distinctive (Morse and Morse 1990, 55).

Another area where the transition has been studied is in Alabama, specifically the lower Chattahoochee-Apalachicola region. Blitz and Lorenz (2002) explained how three regional populations, Averett, Rood, and Wakulla-Fort Walton Cayson, developed their Mississippian traits. In this region Averett and Wakulla-Fort Walton Cayson sites have beginning dates that start before Rood sites and have material cultures that suggest they

are indigenous Late Woodland populations. In contrast, the Rood phase is representative in the area as intrusive Mississippian populations that occupied areas between Averett and Wakulla-Fort Walton Cayson settlements (Blitz and Lorenz 2002, 122-130). Of interest are the different expressions and characteristics of early Mississippian phases that occupy the same region. The Wakulla-derived Early Fort Walton Cayson populations that occupied the southern portion of the region exhibited both change and continuity in their ceramic complex, which suggests some type of interaction and adoption of the Mississippian traits seen in the Rood phase populations (Blitz and Lorenz 2002). On the other hand, Averett sites showed no significant changes in their material culture or settlement patterns, and even though they co-existed with Rood populations it does not appear that they had many interactions (Blitz and Lorenz 2002, 130). Also, it is important to note that the Averett culture disappears after A.D. 1300 (Blitz and Lorenz 2002, 130).

An additional article on the Mississippian Emergence that is important to this study, even though it is based on sites in northern Georgia, was written by Charles R. Cobb and Patrick H. Garrow (1996). In this area, the emergent or early Mississippian phase is known as the Woodstock culture. Woodstock culture does not show many signs of "Mississippianization" like other places in the Southeast (Cobb and Garrow 1996, 21). According to Cobb and Garrow (1996, 29-30), vessels from this phase showed a mix of Woodland and Mississippian traits; temper was typical of Woodland but the vessel shapes were similar to Mississippian, though lacking the node and loop handle characteristics of the Mississippian culture. When attempting to use the Woodstock culture as an example to explain Mississippianization, Cobb and Garrow (1996) focused on interregional interactions. They argue that the continuation of interaction throughout

the Late Woodland period set the stage for the spread of "Mississippian" ideas and goods (Cobb and Garrow 1996, 31-32). Further, they focused on local developments including the gradual increased use of maize and how this influencing the appearance of new vessel forms. Eventually they stated that they view the Woodstock culture "as a phenomenon being intractably pulled into a Mississippian lifeway" (Cobb and Garrow 1996, 34).

With more attention being focused on the transitional period it has resulted in a greater understanding of the different possible influences that led to the development of Mississippian societies. During the last twenty years three distinct models have been suggested as explanations: homology, analogy, and independent coexistence. The homology approach states that "Mississippian" people brought their culture to regions occupied by Late Woodland societies and spread these traits through displacement and assimilation. In contrast, the analogy approach argues that Mississippian societies developed in situ, locally and gradually, out of the preceding Late Woodland society. The most recently added model, independent coexistence, contends that intrusive Mississippian peoples moved alongside Late Woodland populations and the two interacted in various degrees. It is important to note when comparing the models that each of these are potentially relevant to different archaeological cases. While the nature in which Mississippian traits emerge in the Upper Yazoo Basin is unknown, by using the different theoretical models it will allow this study to identify the best-case scenario and contribute to the overall discussion for the Southeast.

CHAPTER III – RESEARCH OBJECTIVES AND METHODS

Research Objectives

Using knowledge gained about the region's cultural history from previous archaeological investigations, research questions and a strategy to test the proposed models were developed. The primary goal of this study is to determine the ceramic chronology for the duration of occupancy at the Austin site to identify an early Mississippian phase. Also, to explore the ways in which the populations living in this area experienced the transition from the Late Woodland culture to the newly innovated practices of the "Mississippian" culture.

There are three proposed models that will be used to evaluate the Austin collection: homology, analogy, and independent co-existent models. It is thought that the homology model would be represented in the archaeological material through the sudden appearance of shell-tempered pottery, a change in settlement patterns, and other cultural materials. The percentage of shell-tempered pottery would greatly outnumber the amount of grog-tempered pottery in the pits by at least 75% or more. Also, there would be a sudden change in the decorative type-varieties and shapes such as, the appearance of the Varney Red Filmed pottery assemblage. And lastly, the location of these pits would be clustered in one area representing a change in settlement patterns. The second model, analogy, would be represented in the archaeological material through a mixture of contemporaneous Late Woodland and Mississippian traits, such as grog tempered ceramics and type-varieties on Mississippian vessel forms and/or vice-versa. Also, there would not be any distinguishing settlement pattern changes from Late Woodland to early Mississippian pits. The last model, independent co-existent, would be represented

through both change and continuity in the assemblage. One would expect to see the continued use of Late Woodland decorative type-varieties, grog temper, and vessel styles. However, new Mississippian decorative type-varieties, shell tempered pottery, and vessel shapes would appear. In addition, there would be the continued use of previously observed pit shapes with the inclusion of new pit shapes however, there would be no major distinguishable settlement patterns between the Late Woodland and early Mississippian pits.

The first research objective was to properly identify the ceramic assemblage; this includes classifying sherds into established type-varieties for the Upper Yazoo Basin or if relevant, typologies drawn from other areas, as well as identifying vessel forms and size classes for the Austin collection. It is important to examine vessel forms, such as the inclusion of bottles, handled jars, and elaborate vessel forms as well as size classes because these can be identifying markers of the Mississippian period. These changes in vessels could possibly be the result of a maize-based subsistence that would have new cooking, serving, and storage needs, and could possibly represent new functions in ceremonial, social, or political contexts (McNutt et al. 2003). The second research objective was to classify pit shape and establish each shape's corresponding time period and phase based on their ceramics. Since bell-shaped pits are characteristic of the Peabody phase (Brookes 1980) but have also occurred in other contexts (Walling and Chapman 1999), it is possible that the identification of pit shapes at the Austin site will result in more distinctive markers for these Late Woodland and early Mississippian phases. Also, pit shapes could represent functional changes because of an increasing reliance on agriculture. Pit shapes like bell shaped pits and flat-cylindrical pits are

thought to be used for food storage. The third research objective was to examine pit locations to establish if they suggest any settlement patterns, or lack thereof, based on the period and phase in which they were used. During this time period reorganization or clustering in particular areas can often be recognized. The fourth research objective was to establish and define an "early Mississippian" phase for the Upper Yazoo basin based on the ceramic and pit analysis findings. The fifth and final research objective was to determine the degree to which Mississippian people and/or ideas traveled to northwest Mississippi and influenced the people at the Austin site during their transition from the Late Woodland to Early Mississippian period. By comparing the findings from the Austin site to research conducted at sites in the surrounding areas it is expected that a clear resolution to the question of how the spread of Mississippianization occurred in the region will be evident.

Methods

For this study on the Austin site collection, permission was sought to examine the material from the principal investigator, John Connaway. Once this was granted, field notes were collected from the Mississippi Department of Archives and History's field office in Clarksdale, Mississippi. During examination of the field notes, it was determined that out of 3,367 features excavated at the site, only pits would be studied. It was also decided that due to the Native American Grave Protection and Repatriation Act (NAGPRA) any pits that were associated with a burial would not be used. After eliminating all other features and pits associated with burials, there were 468 possible pits that could be analyzed. To make the study sample more appropriate in scope for a thesis, a random sampling of 25% of those pits was used. Using a random number table that

includes the feature numbers of the possible 486 pits, 123 pits were selected. By looking at 123 random pits throughout the site it would ideally provide an accurate representation of the different periods and cultural phases during which Austin was occupied. Once these pits were selected, a Research and Loan Proposal was completed for MDAH to gain permission to bring part of the selected Austin collection to The University of Southern Mississippi Archaeological Laboratory. As the Austin collection has not been inventoried or accessioned, all of the pits included in the study were still in their original bags from the field. Once these features were brought to USM's lab, these bags were rough sorted; only the ceramics were pulled out and then placed through a ½" mesh screen. The sherds that did not pass through the screen were separately bagged, washed, and then eventually examined. The total number of ceramics came to 30,567, and these were sometimes further broken down into bags based on decoration and/or body portion.

The main method of determining chronology for this study was through the analysis of the ceramics excavated from the pits. By using decorations and the temper of ceramics the goal was to determine a more specific date for each pit and a timeframe of occupation at the Austin site. Additionally, ceramic rims were examined for their morphological features in order to see if there were any preferences for certain vessel shapes during different periods and cultural phases. Once the sherds were properly categorized these pit assemblages were assigned to the proper archaeological period and phase.

To determine chronology the type-variety system was employed using the proper reference sources (Brookes 1980; Brown 1998; Mooney et al. 2004; Phillips 1970; Rollingson 2012; Walling and Chapman 1999; William and Brain 1983) for the northern

Yazoo Basin. Sherds with identifiable designs were classified into an existing type description. However, if the sherd was too small, the design was eroded, or it did not fit into any type or varieties it was designated as unclassified decorated wares. When needed, a new type-variety was created for sherds with designs that did not fit an existing description but appeared repeatedly. Additionally, if sherds had designs that were similar but had a different intentional decoration, new variety categories were created for existing types. Because of the large sample size, plain ware sherds were roughly sorted by basic temper categories of undecorated grog ware or undecorated shell ware. This approach to undecorated wares was chosen because it was the most efficient way to gather the best data for this study within the thesis timeframe.

After all of the sherds had been identified as a Type-Variety or undecorated ware category, the rims and bases were separately bagged for the second aspect of the ceramic analysis. Characteristics of rim sherds were recorded which included lip attributes, rim modes, rim decorations, diameter, vessel wall thickness, and form. Only rim sherds that were larger than eight centimeters wide were used to determine vessel morphology. Information was collected about orifice diameter size, vessel wall thickness, and rim orientation. This sherd size was chosen because of the large data set and for accuracy because typically rims sherds smaller than this size make determining the correct vessel shape difficult. Rim orientation was used to group rim sherds into morphologically similar categories such as jars, bowls, subglobular bottles, restricted bowls, and plates. A more nuanced typology of vessel shapes was created to account for subtle changes in shapes, which were then listed as subcategories such as simple bowls, shallow bowls, flaring rim bowls, deep bowls, standard jars, flaring rim jars, straight-necked jars, salt

pan, and pinched pot. To accurately determine the sizes of the ceramics, a vessel diameter template was used. This diameter template was the standard issue format that measures in centimeters. Bases were examined to categorize the stylistic characteristics of how they were shaped. They were sorted into three main categories; flat, square, and rounded bases.

Once the ceramics had been identified using the type-variety system, the accompanying pits were assigned a cultural period and phase. These assignments relied heavily on the appearance of shell tempered pottery, or lack thereof. Approximately 64 out of 123 pits had their profiles drawn in the field notes. These 64 were then assigned to a pit shape type. Using the McKnight Report (Walling and Chapman 1999) and Coahoma Welcome Center Report (Mooney et al. 2004) five basic feature classes; basin-shaped, round-based, flat-based cylindrical, bell-shaped, and irregular pits, were used to categorize the pits at Austin. Additionally, three new feature classes, intrusive, compound, and flared-square pits, were created to represent other pit shapes seen exclusively at Austin. With the cultural period and phase assignment, the pit coordinates from the current available data were used to create an ArcGIS map and conduct a spatial analysis to determine if any clustering was observable and if there was a specific settlement pattern evident based on pit placement by time period.

Limitations of the Study

All archaeological studies based on ceramics are known to have limitations and biases concerning the data which is also the case for this study. As this study only includes 25% of the pits excavated at the site, there is a possibility that the phases and time periods are not fully representative of the activities that were occurring during the

sites duration. Also, excavation methods and deterioration of artifacts might have skewed the sample size.

Vessels represented in the archaeological record tend to exhibit a disproportionate number of sherds because of the way they break. Vessels that would break more frequently, such as cooking vessels, will appear at higher rates (Hawsey 2015, 28). This is because cooking vessels are constantly being used, so whether this results in the accidental breakage during the physical act of cooking or the eventual wear and tear of time, the rotation of these specific morphological features will be seen more often at sites. On the other hand, storage or ceremonial pots are less likely to appear because of the infrequent use and/or handling. Vessel shape and size can also affect breakage patterns. The larger and thicker a vessel is, the more likely it will break into larger sherds, while smaller and thinner pots are more likely break into smaller sherds (Hawsey 2015, 29). The amount of curvature a vessel has can also influence breaks; vessels are weaker around curves so there are often breaks along these inflection points. This can sometimes make it more difficult to correctly identify globular vessels, bottles, or determine between flared rim bowls or jars. Because of these factors, it is much more difficult to assume that the proportion of vessel classes and sizes seen in the collection are an accurate representation of the actual proportion during occupation (Hawsey 2015, 29).

There are several problems and limitations that can occur during an analysis. One of these main concerns deals with classification. When using the type-variety concept, there is a large risk of misidentifying sherds because of very loose and arbitrary descriptions. These hypothetical groupings are sometimes difficult to establish because of the small physical size of the sherds or the different parts of various shaped vessels that

are left (Shepard 1954, 307). Using these appearance-based grouped classifications can become problematic because one runs the risk of mistaking superficial resemblances for markers of a specific technique or decoration type (Shepard 1954, 306). In addition, there is a possibility of encountering different craftsmans' techniques, accidents that occurred during production, usage, and weathering that could skew one's interpretation (Shepard 1954, 307). These limitations of identification and classification can also apply to pit shapes, as one might interpret a shape differently from another researcher, or would have included it within one main type rather than establishing a new group.

It has been assumed that the examined sample of pits (123) is representative of the duration of the site's occupation and that the large sample size of ceramics (30,567) is enough to accurately represent the different decorative and morphological types that were created and used at the site. While using sherds that are larger than ½" and rim sherds that are eight cm or larger might represent a statistical bias, these methods were employed to cut down on some of the limitations that have been presented. The usage of numerous type-varieties and classification descriptions will hopefully result for more accurate identifications. Because this study is focused on gaining the basic knowledge of how the Upper Yazoo Basin transitioned from Late Woodland to early Mississippian and to develop ways of identifying an early Mississippian phase, the proper methods were taken to achieve this goal through the most efficient means.

CHAPTER IV – CERAMICS

Analysis

Ceramics from 123 pits were examined, totaling 30,567 pieces. Of these, 17,939 sherds exhibited some kind of decoration and were classified into the type-varieties listed below in Table 4.1. Undecorated sherds were also sorted by temper as a way to differentiate the possible period they come from. A rim analysis was conducted on all 2,509 rims sherds in the collection. This analysis included lip attributes, modes, rim decoration, and vessel morphology category. Lastly, bases (n=133) that could be identified and categorized were sorted into groups. Included in this ceramic summary are four non-pottery related items found in the pits.

Table 4.1

Total Counts of the Ceramics from the Austin (22TU549) Site

Decorated Ceramics from the Austin Site	
Type-Varieties	**Count**
Alligator Incised, *var. Alligator*	13
Alligator Incised, *var. Austin*	12
Alligator Incised, *var. Muddy Bayou*	47
Alligator Incised, *var. Oxbow*	226
Alligator Incised, *var. unspecified*	14
Austin Corn Impressed, *var. Etup*	7
Avoyelles Punctated, *var. Avoyelles*	1
Barton Incised, *var. Barton*	30
Barton Incised, *var. Estill*	8
Barton Incised, *var. unspecified*	30
Coles Creek Incised, *var. Barner*	12
Coles Creek Incised, *var. Clear Lake*	2
Coles Creek Incised, *var. Hunt*	1
Coles Creek Incised, *var. Phillips*	1
Coles Creek Incised, *var. unspecified*	1
Unclassified Painted Wares	4

Table 4.1 (Continued)

Unclassified Decorated Wares	424
Evansville Punctated, *var. Evansville*	22
Evansville Punctated, *var. Rhinehart*	21
Evansville Punctated, *var. unspecified*	14
Grace Brushed, *var. Grace*	1
Harrison Bayou Incised, *var. Harrison Bayou*	1
Hollyknowe Pinched, *var. Hollyknowe*	1
Hollyknowe Pinched, *var. unspecified*	1
Larto Red, *var. Chicot*	6
Larto Red, *var. Larto*	382
L'Eau Noire Incised, *var. unspecified*	1
Mulberry Creek Cord Marked, *var. Edwards*	13,875
Mulberry Creek Cord Marked, *var. Porter Bayou*	15
Mulberry Creek Cord Marked, *var. Smith Creek*	14
Mulberry Creek Cord Marked, *var. Smoothed*	2,603
Mulberry Creek Cord Marked, *var. unspecified*	103
Officer Punctated, *var. Bearskin*	14
Salomon Brushed, *var. Salomon*	27
Winterville Incised, *var. unspecified*	5
Grand Total	**17,939**

Ceramic Classification

Alligator Incised, *var. Alligator* (n=13)

The *Alligator* variety of Alligator Incised consists of shallow incising with a blunt implement on grog temper to create seemingly careless incisions with parallel lines in rectilinear designs on the exterior surface of the vessel (Williams and Brain 1983, 117) (Figure 4.1).

Figure 4.1 Alligator Incised, *var. Alligator*

Alligator Incised, *var*. *Austin* (n=12)

This new variety, the *Austin* variety of Alligator Incised consists of incising, varying between untidy and well-ordered, to make intentional crosshatching on the exterior surface of grog tempered pottery (Figure 4.2).

Figure 4.2 Alligator Incised, *var*. *Austin*

Alligator Incised, *var. Muddy Bayou* (n=49)

The *Muddy Bayou* variety of Alligator Incised, another new variety, consists of simple incising. This decorative variety occasionally has overhanging incisions and is arranged in rectilinear patterns. Sometimes these incisions are in zoned areas on the exterior surface of grog tempered pottery. This variety is similar to the type Mazique; however, it is not restricted to solely being placed around the rim. These sherds are placed in a separated variety from *Alligator* because the design is not created with a blunt incision and seems to be applied with a careful and specific design in mind. One sherd has red slipping applied (Figure 4.3).

Figure 4.3 Alligator Incised, *var. Muddy Bayou*

Alligator Incised, *var. Oxbow* (n=226)

The *Oxbow* variety of Alligator Incised consists of thin careless incising, usually randomly applied, with seemingly no or very limited pre-planned patterns, on grog tempered pottery (Williams and Brain 1983, 118) (Figure 4.4).

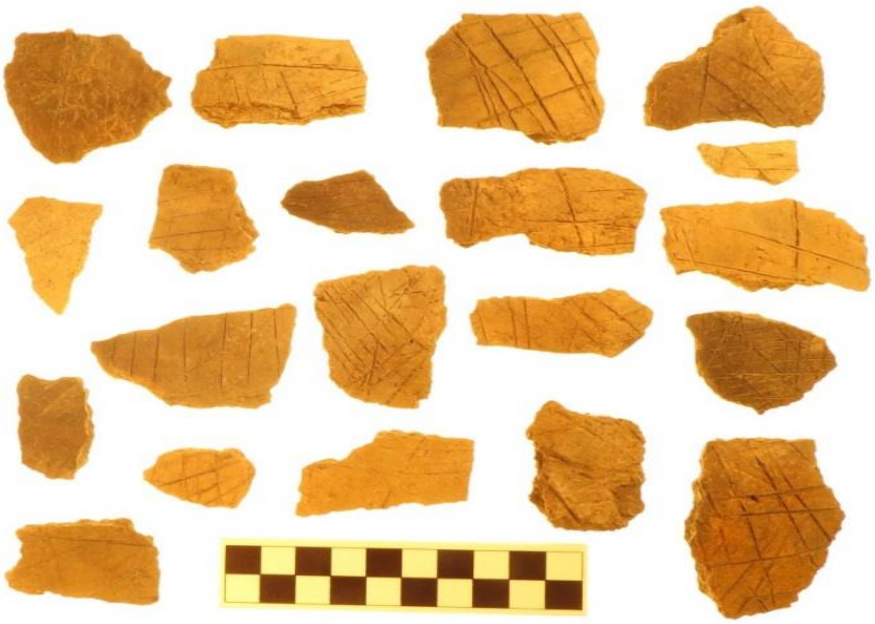

Figure 4.4 Alligator Incised, *var. Oxbow*

Alligator Incised, *var. unspecified* (n=14)

The *unspecified* variety of Alligator Incised consists of incising on the exterior surface of grog tempered pottery usually where too little was displayed to assign to a specific variety.

Austin Corn Impressed, *var. Etup* (n=7)

The Austin Corn Impressed type is a newly established decorative style. This name is derived from the Austin site where it appears that whole ears of corn (husks removed) were rolled across the wet vessel before firing. These rounded imprints can occasionally overlap on the exterior surface of grog tempered pottery. The name *Etup* variety of Austin Corn Impressed was suggested by John Connaway, the archaeologist who excavated Austin (Figure 4.5).

Figure 4.5 Austin Corn Impressed, *var. Etup*

Avoyelles Punctated, *var. Avoyelles* (n=1)

The *Avoyelles* variety of Avoyelles Punctated is described as zoned punctations created with the end of a cane or squared-tipped stick angled into plastic clay creating circles or triangular punctations, respectively, on the exterior of grog tempered pottery (Williams and Brain 1983, 120).

Barton Incised, *var. Barton* (n=32)

The *Barton* variety of Barton Incised is described as a careless crosshatching or hatching motif on shell tempered pottery (Williams and Brain 1983, 127) (Figure 4.6).

Figure 4.6 Barton Incised, *var. Barton*

Barton Incised, *var. Estill* (n=7)

The *Estill* variety of Barton Incised is closely related to the *Barton* variety; however, it is limited to hatching only and is slightly more carefully executed on shell-tempered pottery (William and Brains 1983, 127) (Figure 4.7).

Figure 4.7 Barton Incised, *var. Estill*

Barton Incised, *var. unspecified* (n=29)

The *unspecified* variety of Barton Incised consists of incising, usually where too little was displayed on the exterior surface of shell tempered pottery to assign to a specific variety (Figure 4.8).

Figure 4.8 Barton Incised, *var. unspecified*

Coles Creek Incised, *var. Barner* (n=12)

The *Barner* variety of Coles Creek Incised consists of one, two or three lines appearing on a broad flat lip on grog tempered pottery (Brookes, 1980). This same treatment is defined as Coles Creek Incised, *var. Keo* in the Toltec collections (Rollingson 2012, 80). The single incised line is the most commonly occurring treatment in the Austin collection (Figure 4.9: A-C).

Coles Creek Incised, *var. Clear Lake* (n=2)

The *Clear Lake* variety of Coles Creek Incised consists of one to three incised lines on both the rim and lip on grog tempered pottery (Rollingson 2012, 77-78). This specific example has one incised line on the rim and one incised line on the lip (Figure 4.9: G).

Coles Creek Incised, *var.* Hunt (n=1)

The *Hunt* variety of Coles Creek Incised consists of two or rarely three crude, parallel, horizontal and closely spaced incisions right below the lip on the exterior rim of grog tempered pottery (Williams and Brain 1983, 151) (Figure 4.9: F).

Coles Creek Incised, *var. Phillips* (n=1)

The *Phillips* variety of Coles Creek Incised consists of a single incised line on the rim exterior drawn horizontal to the lip on grog-tempered pottery (Williams and Brain 1983, 156) (Figure 4.9: E).

Coles Creek Incised, *var. unspecified* (n=1)

The *unspecified* variety of Coles Creek Incised consists of an incised line where too little was displayed on the exterior surface of a grog tempered sherd to assign to a specific variety (Figure 4.9: D).

Figure 4.9 Coles Creek Incised, *var. Barner (A-C), Clear Lake (G), Hunt (F), Phillips (E), and unspecified (D)*

Evansville Punctated, *var. Evansville* (n=22)

The *Evansville* variety of Evansville Punctated consists of various kinds of punctations on the exterior of grog tempered pottery (Williams and Brain 1983, 157) (Figure 4.10).

Figure 4.10 Evansville Punctated, *var. Evansville*

Evansville Punctated, *var. Rhinehart* (n=21)

The *Rhinehart* variety of Evansville Punctated consists of a range of punctated forms, but the circular reed form is more prevalent than the triangular form on the exterior rim of grog tempered pottery (Williams and Brian 1983, 158) (Figure 4.11).

Figure 4.11 Evansville, *var. Rhinehart*

Evansville Punctated, *var. unspecified* (n=14)

The u*nspecified* variety Evansville Punctated consists of punctations where too little was displayed on the exterior surface of grog tempered pottery to assign to a specific variety.

Grace Brushed, *var. Grace* (n=1)

The *Grace* variety of Grace Brushed consisted of brushing on the exterior surface on a shell tempered sherd for this particular example (Figure 4.12).

Figure 4.12 Grace Brushed, *var. Grace*

Harrison Bayou Incised, *var. Harrison Bayou* (n=1)

The *Harrison Bayou* variety of Harrison Bayou Incised for this sherd consisted of carelessly incised lines in a rectilinear crosshatched pattern on the exterior rim of a grog tempered sherd (Williams and Brains 1983, 165) (Figure 4.13).

Figure 4.13 Harrison Bayou Incised, *var. Harrison Bayou*

Hollyknowe Pinched, *var. Hollyknowe* (n=1)

The *Hollyknowe* variety of Hollyknowe Pinched for this sherd consisted of ridge pinching arranged in overall linear patterning on a grog tempered sherd (William and Brains 1983, 167) (Figure 4.14).

Figure 4.14 Hollyknowe Pinched, *var. Hollyknowe*

Hollyknowe Pinched, *var. unspecified* (n=1)

The u*nspecified* variety of Hollyknowe Pinched for this sherd consisted of tight ridge pinching in a linear patterning with an incised line across the top of the decoration on a grog tempered rim sherd (Figure 4.15).

Figure 4.15 Hollyknowe Pinched, *var. unspecified*

Larto Red, *var. Chicot* (n=6)

The *Chicot* variety of Larto Red consists of thin red slipping on the exterior and/or interior surfaces of shell tempered pottery (Williams and Brains 1983, 169) (Figure 4.16).

Figure 4.16 Larto Red, *var. Chicot*

Larto Red, *var. Larto* (n=382)

The *Larto* variety of Larto Red consists of thin red slipping on the exterior and/or interior surfaces of grog tempered pottery (William and Brains 1983, 169) (Figure 4.17).

Figure 4.17 Larto Red, *var. Larto*

L'Eau Noire Incised, *var. unspecified* (n=1)

The *unspecified* variety of L'Eau Noire Incised consists of interlocked linear patterns on the interior rim. This sherd was listed as unspecified because it does not match the rectilinear pattern instead it has an interlocked triangular pattern that is zoned exclusively to the rim (Figure 4.18).

Figure 4.18 L'Eau Noire Incised, *var. unspecified*

Mulberry Creek Cord Marked, *var. Edwards* (n=13,875)

The *Edwards* variety of Mulberry Creek Cord Marked consists of a variety of stylistic diversity when it comes to size in cords and spacing. This decoration is comprised of careless cord marking applied with a cord-wrapped paddle to the exterior surface of grog tempered pottery (Williams and Brain 1983, 189). Also, there are sherds with overlapping decoration where it seems as if the intent were to quickly cover the entire surface. It seems likely that this decorative intent was used to roughen or texture the surface (Williams and Brain 1983, 189). There are several sherds that have incising on top of the cord mark similar to the type-variety of Alligator Incised, *var. Oxbow* (Figure 4.19).

Figure 4.19 Mulberry Creek Cord Marked, *var. Edwards*

Mulberry Creek Cord Marked, *var. Porter Bayou* (n=15)

The *Porter Bayou* variety of Mulberry Creek Cord Marked consists of unusually large cord impressions widely spaced, they may occur crisscross or parallel on the exterior surface of grog tempered pottery (Philips 1970, 138) (Figure 4.20).

Figure 4.20 Mulberry Creek Cord Marked, *var. Porter Bayou*

Mulberry Creek Cord Marked, *var. Smith Creek* (n=14)

The *Smith Creek* variety of Mulberry Creek Cord Marked consists of fine cord marking applied in a crisscross on the exterior surface of grog tempered pottery (Williams and Brain 1983, 190) (Figure 4.21).

Figure 4.21 Mulberry Creek Cord Marked, *var. Smith Creek*

Mulberry Creek Cord Marked, *var. Smoothed* (n=2,603)

The *Smoothed* variety of Mulberry Creek Cord Marked is not necessarily a new variety and was separated into a new group in the McKnight site report (Walling and Chapman 1999). However, they themselves were unsure of the distinction. At the Austin site, there was an obvious change in the decorative style shown through cord markings that were smoothed over so that the original decoration was barely recognizable. Therefore, the variety *Smoothed* was officially established. This decorative treatment could be another attempt to roughen or texture the exterior surface of this grog tempered pottery. Occasionally there are additional decorative styles applied over the original cord marked smoothing in the fashion of Alligator Incised, *var. Oxbow*, and there is one sherd that also has a red slipped applied (Figure 4.22).

Figure 4.22 Mulberry Creek Cord Marked, *var. Smoothed*

Mulberry Creek Cord Marked, *var. unspecified* (n=103)

The u*nspecified* variety of Mulberry Creek Cord Marked consists of cord markings that have been applied with a cord-wrapped paddle on the exterior surface of grog tempered pottery however the sherds were too small to assign to a specific variety.

Officer Punctated, *var. Bearskin* (n=14)

The *Bearskin* variety of Officer Punctated consists of punctation on the edge of the rim and lip; these range from shallow nicks to deep vertical punctates on grog tempered pottery (Rollingson 2012, 87-88) (Figure 4.23).

Figure 4.23 Officer Punctated, *var. Bearskin*

Unclassified Decorated Wares (n=422)

The unclassified decorated wares consist of some type of decorations on the specimens, whether incised or punctated; however, they are too small to be able to correctly place them into any specific decoration type nor do they fit into any established Type-Varieties. Six specimens contained decoration that was easily identifiable but were unique and could not be placed into a known Type-Variety. Since there is only one example of each of these representations, no new categories were created for them; however, they will be described below for possible future identification.

Unclassified Decorated Ware 1 (Figure 4.24: A) - A grog tempered sherd with an incised line on the interior surface of a flaring rim bowl.

Unclassified Decorated Ware 2 (Figure 4.24: B) - A grog tempered sherd with multiple careless diagonal incised lines from the top of the rim to the shoulder where rows of punctations begin.

Unclassified Decorated Ware 3 (Figure 4.24: C) - A grog tempered sherd with multiple vertical incised lines that have been marked over with horizontal incised lines to create rectangular boxes.

Unclassified Decorated Ware 4 (Figure 4.24: D) - A grog tempered sherd with punctations, a incised line, and then careless engraved lines.

Unclassified Decorated Ware 5 (Figure 4.24: E) - A grog tempered sherd where the decoration looks like a tool was dragged across the pot to a point and then dragged in the opposite direction in multiple linear lines.

Unclassified Decorated Ware 6 (Figure 4.24: F) - A grog tempered sherd with stamping or impressing that is zoned on the body portion of the pot.

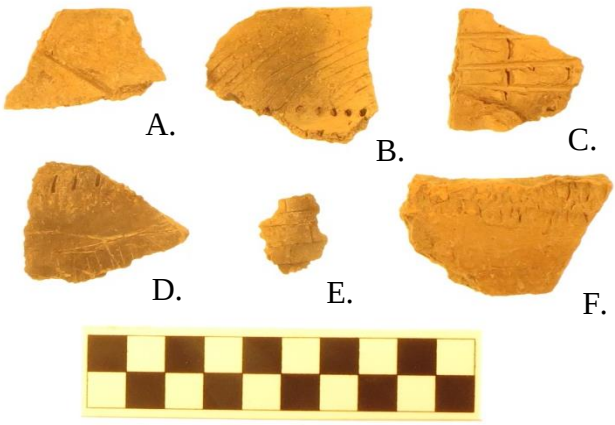

Figure 4.24 Unclassified Decorated Wares

Unclassified Painted Wares (n=4)

The Painted Wares consists of sherds that have both red and white paint on shell tempered pottery. On three of the sherds there are blank spaces between the red and white paint (Figure 4.25). It is possible that these could be early examples of Old Town Red, *var. Old Town*; Nodena Red and White, *var. Nodena*; Hollywood White, *var. Hollywood*; or Carson Red on Buff, *var. Carson*.

Figure 4.25 Unclassified Painted Wares (n=4)

Salomon Brushed, *var. Salomon* (n=27)

The *Salomon* variety of Salomon Brushed consists of careless brushing as an overall decorative treatment on the exterior surface of grog tempered pottery (Williams and Brain 1983, 204) (Figure 4.26).

Figure 4.26 Salomon Brushed, *var. Salomon*

Winterville Incised, *var. unspecified* (n=5)

The *unspecified* variety of Winterville Incised consists of curvilinear incisions on shell tempered pottery; however, the sherds were too small to assign to a specific variety (Figure 4.27).

Figure 4.27 Winterville Incised, *var. unspecified*

Temper

Due to the large data set this analysis only separates sherds into two basic temper categories, grog or shell. Pottery labeled grog for this thesis consists of a variety of textures that range from fine to coarse, which could also contain a mixture of any clay, grit, sand, or grog temper. Pottery labeled shell consists of a variety of textures that range from fine to coarse, which contains any amount of shell in the temper. Sherds were sorted this way because the introduction of shell into the process of making pottery is recognized as a Mississippian trait which pertains to the research questions looking to be solved. As seen in Table 4.2 below, grog tempered pottery dominates the Austin site at 95% while shell tempered pottery makes up the remaining 5%.

Table 4.2

Count of Grog and Shell Temper Ceramics Compared by Period

Period Assignment	**Grog**	**Shell**	**Total**
Early Mississippian	20306	1647	21953
Late Woodland	8470		8470
Undetermined	144		144
Grand Total	**28920**	**1647**	**30567**

Since early Mississippian pits contained both shell and grog temper ceramics a seriation test was performed. This is a relative dating technique in which artifacts are sequenced based on the appearance of certain attributes. It is a way to show change over time and to establish chronology. There are several variants of seriation tests. However, frequency seriation relies on measuring the proportional abundance of a style. This is based on the idea that certain artifact types or styles steadily grow in popularity and then

steadily decline over time. It is thought that once the introduction of shell-tempered pottery appeared during the early Mississippian period; this trait steadily became more popular throughout time. Because of this assumption the frequency seriation test was completed, below in Table 4.3 and it is apparent that shell-tempered pottery slowly and gradually grew in popularity over time however, never reaching over 50%.

Table 4.3

Frequency Seriation of Shell Temper Ceramics

Frequency Seriation of Shell Temper				
Feature Number	**Grog**	**Shell**	**Grand Total**	**Percentage of Shell**
1428	3525	4	3529	0.11
1909	868	2	870	0.23
2506	300	1	301	0.33
1177	567	2	569	0.35
216	733	3	736	0.41
798	545	3	548	0.55
2290	4945	41	4986	0.82
886	584	9	593	1.52
1667	249	5	254	1.97
2318	142	3	145	2.07
692	87	2	89	2.25
2718	42	1	43	2.33
1577	106	3	109	2.75
2659	358	11	369	2.98
1879	30	1	31	3.23
2029	27	1	28	3.57
5	180	7	187	3.74
813	562	22	584	3.77
513	50	2	52	3.85
328	214	11	225	4.89
1462	298	16	314	5.10
486	23	2	25	8.00
2000	67	7	74	9.46
1331	238	31	269	11.52
1518	722	122	844	14.45
1457	98	17	115	14.78
1442	732	132	864	15.28
1443	5	1	6	16.67

Table 4.3 (Continued)

1330	129	27	156	17.31
2598	9	2	11	18.18
1459	757	191	948	20.15
1444	1443	380	1823	20.84
933	58	16	74	21.62
629	25	7	32	21.88
45	7	2	9	22.22
1387	118	35	153	22.88
1333	643	192	835	22.99
1334	194	61	255	23.92
709	25	8	33	24.24
1645	15	5	20	25.00
1517	308	118	426	27.70
2044	45	21	66	31.82
1456	176	85	261	32.57
414	4	2	6	33.33
1445	8	5	13	38.46
34	27	18	45	40.00
663	10	10	20	50.00
Grand Total	**20298**	**1647**	**21945**	**7.51**

Lip Attributes

Lip attributes were categorized using Hunter Johnson's (2003) vessel analysis from Bottle Creek. The curvature of the lip can be grouped into six basis shapes: externally beveled, flattened, internally beveled, pointed, rounded, and round-flattened (Figure 4.28). Some rims exhibited what William and Brains (1983) called a "rolled rim" and were placed in an extra seventh category (Figure 4.29). In some cases, the rim was thickened; this was sorted into another subgroup of "folded or thickened" (Figure 4.28). When looking at Table 4.4 below, the numbers stay relatively the same between the Early Mississippian and Late Woodland period. This could be representative of the same pottery techniques being passed down through generations. The "rolled rims" are only seen during the Early Mississippian period, but because Williams and Brain (1983) state

that they reflect Cahokia influence, this could be representative of techniques being spread through migration and/or contact with “Mississippian peoples”.

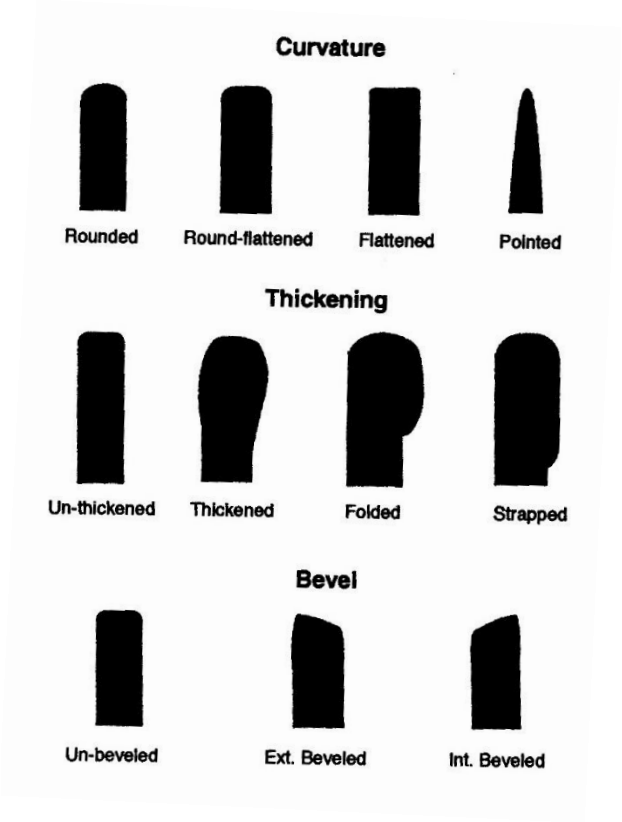

Figure 4.28 Attributes of Lip Cross-Section

Note: (Johnson 2003, Figure 8.4, 164)

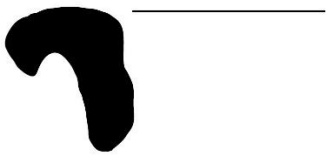

Figure 4.29 Rolled Rim, Example from F-2290

Table 4.4

Count of Lip Attributes at the Austin Site Compared by Period

Lip Attributes			
Row Labels	**Early Mississippian**	**Late Woodland**	**Total**
Ext. Beveled	57	47	104
Flattened	181	95	276
Ext. Beveled-Folded	4	2	6
Flattened-Folded	27	13	40
Int. Beveled-Folded	4	1	5
Rounded-Folded	165	148	315
Round-flattened-Folded	6	5	11
Int. Beveled	4	8	12
Pointed	6	8	14
Rolled	13		13
Rounded	939	387	1332
Round-flattened	278	99	378
Ext. Beveled-Thickened	1		1
Rounded-Thickened	1		1
Grand Total	**1686**	**813**	**2499**

(Undetermined Pits not listed)

Modes

Hill Punctated Mode (n=57)

Modes are attributes that are significant in their own right. They often crosscut type-varieties and can be used as a way to trace relationships or used as another descriptive form (Williams and Brain 1983). According to the McNight report (Walling and Chapman 1999) the name Hill Punctated was assigned to the decorated treatment that consists of single or multiple rows of punctations encircling the shoulder or neck of a vessel. At the McNight site, the sample consisted of a tooled rectangular or crescent shaped punctation. At the Austin site these punctations are much more diverse with

circular, triangular, and rectangular tools being used. This decorative mode has not been established as a Type-Variety because at the Austin site it can be seen to crosscut different types such as Alligator Incised, Evansville Punctated, Mulberry Creek Cord Marked, and Plain Grog Ware (Table 4.5/Figure 4.30). As seen below in Table 4.5, this mode cannot be a defining marker for a specific phase since it appears on sherds in Late Woodland pits and early Mississippian pits. The mode has been identified on eight jars and one subglobular bottle where vessel wall thickness ranges between 3 to 10mm and diameters range from 11 to 28cm.

Table 4.5

Count of Hill Punctated Mode seen on Ceramics at the Austin Site

Modes			
Decorative Style	**Early Mississippian**	**Late Woodland**	**Total**
Alligator Incised	**4**	**1**	**5**
Unclassified Decorated Wares	**9**	**2**	**11**
Evansville Punctated, *var.* **Evansville**	**1**		**1**
Mulberry Creek Cord Marked	**8**	**27**	**35**
Plain-Grog	**1**	**4**	**5**
Grand Total	**23**	**34**	**57**

Figure 4.30 Hill Punctated Mode

Rim Decorations

Rim decorations (sometimes referred to as lip modifications) are another identifying stylistic marker. These decorations typically crosscut type-varieties but that is not always the case. The forms of decoration that can be seen at the Austin site include incised and punctation marks, cord marked impressions, incised lines, notches, and punctations that range from fingernails, to circular or rectangular tool marks (Table 4.6). Another practice of rim décor or lip modification includes shaping the rim to form a different profile; this was expressed at the Austin site through edges that form a point (Figure 4.31) and scalloping rims (Figure 4.32). These rim decorations can be seen on unclassified decorated wares; Evansville Puncated, *var. unspecified*; Larto Red, *var. Larto*; Mulberry Creek Cord Marked, and Salomon Brushed, *var. Salomon* as well as

undecorated wares. While a majority of these rim decorations are exhibited on a variety of types, cord marked impressions are seen only on Mulberry Cord Marked, *var. Edwards*, *Porter Bayou*, and *Smoothed*. Also, there is one example where two Larto Red, *var. Larto* rim sherds fit together to form a type of funnel spout, but was not included in the table 4.6 below. When comparing the rim decorations based on period in Table 4.6 below, there appears to be continuity, however, more elaborate treatments such as incised and punctated and scalloping rims only appear in the early Mississippian pits.

Table 4.6

Counts of Rim Decoration Styles

Rim Decorations			
Treatment Style	**Early Mississippian**	**Late Woodland**	**Total**
Incised & Punctated	1		1
Pointed Edge Rim	1	4	5
Cord Marked	112	52	164
Incised Line	12	3	15
Notched	4	1	5
Punctated	15	8	23
Scalloping Rim	4		4
Grand Total	**149**	**68**	**217**

(Undetermined Pits not listed)

Figure 4.31 Pointed Edge Rims

Figure 4.32 Scalloping Rim

Note: View looking down

Vessels

A total of 516 vessels were identified since only rim sherds that were eight cm or wider were used for this analysis. Rim orientation was employed as a way to separate rim sherds into groups of similar morphological vessels. Using Hunter Johnson's (2003) Bottle Creek vessel comparison of rim angles and curvatures, a slightly modified system was employed to categorize sherds (Figure 4.33). This system includes angles that define the sherd's rim orientation, such as strongly outslanted, outslanted, vertical, inslanted, and strong inslanted. The curvature of a rim or the observable shape of the rim section was also used when available. These categories include; strongly incurvate, incurvate, straight, excurvate, and strongly excurvate. Six major vessel type groups were identified at the Austin site: Bowls, Jars, Plates, Restricted Bowls, Subglobular Bottles, and a Salt Pan (Figure 4.34). Within these main vessel forms some were further subdivided into more specific morphological shapes which allowed for a comparison between the Late Woodland and early Mississippian period (Table 4.7). It is to be noted that not all pottery and sherds are created perfectly so some diameters and/or vessel wall thickness were not able to be taken.

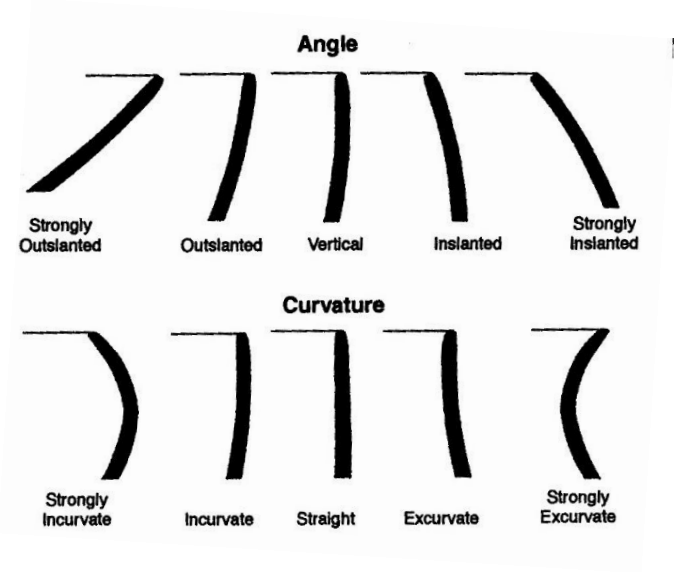

Figure 4.33 Attributes of Rim Cross-Sections

Note: (Johnson 2003, Figure 8.3, 163)

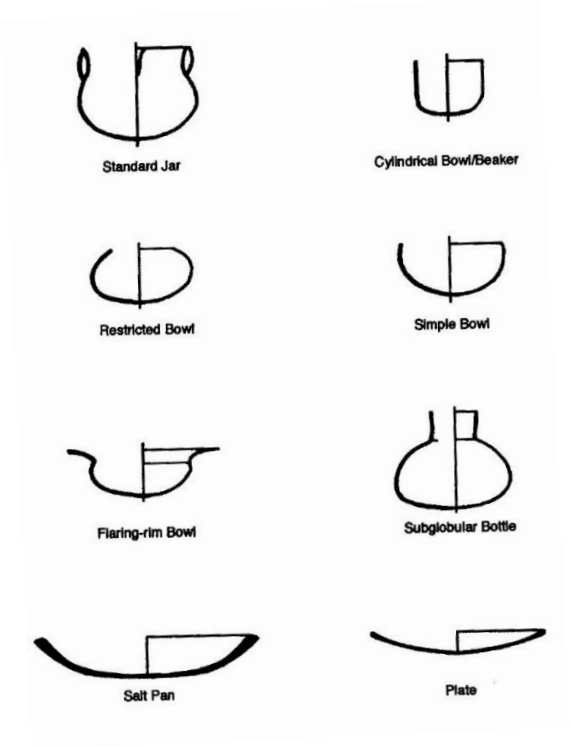

Figure 4.34 Typical Vessel Shapes

Note: (Johnson 2003, Figure 8.1, 160)

Table 4.7

Count of All Vessel Shapes by Period Assignment

Vessel Shape	Early Mississippian	Late Woodland	Grand Total
Bowl	193	129	322
Deep Bowl	2		2
Flaring Rim Bowl	3	7	10
Flaring Rim Jar	33	9	42
Pinched Pot		1	1
Plate	6	6	12
Restricted Bowl	4	10	14
Salt pan	1		1
Shallow Bowl	10	15	25
Standard Jar	44	12	56
Straight-Necked Jar	10	6	16
Subglobular Bottle	12		12
Grand Total	**318**	**195**	**513**

(Undetermined Pits not listed)

Bowls

Bowls make up the largest represented vessel form at the Austin site with 362 identifiable sherds. These bowls were classified into three basic sizes; small, medium, and large as seen in Figure 4.35 below for the ability to compare between Late Woodland and the early Mississippian period. The bowls were subcategorized into more descriptive shapes such as deep bowls, flaring rim bowls, shallow bowls, and simple bowls; this was done based on the angle and curvature of the rim.

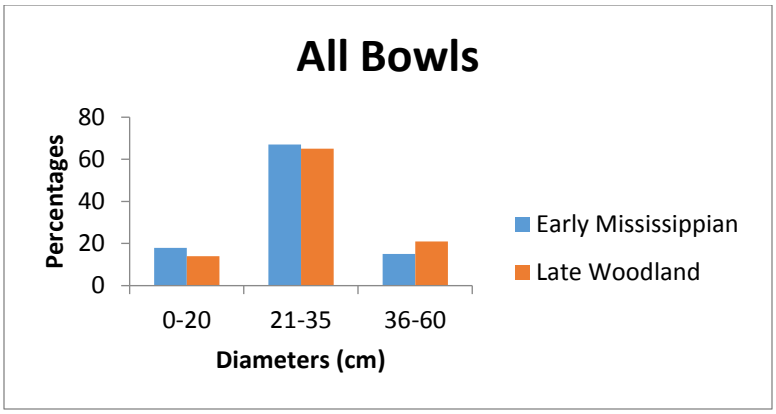

Figure 4.35 Comparison of Bowl Sizes Based on Period

Simple bowls (n=325) have outslanted, vertical, or inslanted angles and strongly incurvate, incurvate, or straight curvature. This category served as a catch all category for different shapes of bowls. Simple bowls are seen with a range of type-varieties, including Alligator Incised, *var. Oxbow* (n=1) with a vessel wall thickness of 5mm and a diameter of 18cm; Barton Incised, *var. Barton* (n=1) with a vessel wall thickness of 2mm with a diameter of 15cm; Evansville Punctated, *var. Evansville* (n=2) with a vessel wall thickness of 4 and 5mm with diameters of 19 and 33cm; Larto Red, *var. Larto* (n=14) with a vessel wall thickness that ranges between 3-7mm and diameters that range from 13 to 32cm; Mulberry Creek Cord Marked, *var. Edwards* (n=180) with a vessel wall thickness that ranges between 3 to 11mm with diameters that range from 14 to 47cm; Mulberry Creek Cord Marked, *var. Smoothed* (n=14) with a vessel wall thickness that ranges from 5-10mm with diameters that range from 13 to 44cm; Mulberry Creek Cord Marked, *var. unspecified* (n=2) with a vessel wall thickness of 9 and 10mm and diameters of 29 and 35cm; Officers Punctated, *var.* Bearskin (n=2) with a vessel wall thickness of 5mm and diameters of 29 and 27cm; Plain Grog Ware (n=98) with a vessel wall

thickness that ranges from 2-10mm and diameters that range from 5 to 48cm; and Plain Shell Ware (n=10) with a vessel wall thickness that ranges from 2 to 6mm and diameters that range from 6 to 37cm.

Shallow bowls (n=25) have strongly outslanted or outslanted angles and/or strongly incurvate, incurvate, or straight curvature. The shallow bowls are seen within the following type-varieties: Larto Red, *var. Larto* (n=3) with a vessel wall thickness of 6 and 9mm and diameter of 24 and 25cm; Mulberry Creek Cord Marked, *var. Edwards* (n=15) with a vessel wall thickness that ranges between 6 to 10 and the diameter ranges from 20 to 43cm; Mulberry Creek Cord Marked, *var. Smoothed* (n=1) with a vessel wall thickness of 9mm and a diameter of 22cm; and undecorated grog ware (n=6) with a vessel wall thickness that ranges from 4 to 7mm and diameters that ranges from 25 to 37cm.

Flaring rim bowls (n=10) have vertical, outslanted, or strongly outslanted angles and have strongly excurvate or excurvate curvature. The flaring rim bowls are only seen in a few varieties such as, Larto Red, *var. Larto* (n=1) with a vessel wall thickness of 8mm and a diameter of 25cm; L'Eau Noire Incised, *var. unspecified* (n=1) the vessel wall and diameter could not be determined; Mulberry Creek Cord Marked, *var. Edwards* (n=7) with a vessel wall thickness that ranges from 5 to 9mm and diameters that range from 25 to 37cm; and Mulberry Creek Cord Marked, *var. Smoothed* (n=1) with a vessel wall thickness of 6mm and a diameter of 30cm.

Deep bowls (n=2) have vertical angles and have straight or incurvate curvature. The deep bowls were identified on Mulberry Creek Cord Marked, *var. Edwards* (n=2) with a vessel wall thickness of 6 and 7mm and diameters of 41 and 45cm.

Jars

The jar classification at the Austin site consists of 115 identifiable sherds. These jars were classified into three basic sizes; small, medium, and large as seen in Figure 4.36 below for the ability to compare between Late Woodland and the early Mississippian period. The jars were subcategorized into more descriptive shapes such as standard jars, flaring rim jars, and straight-neck jars; this was done based on the angle and curvature of the rim.

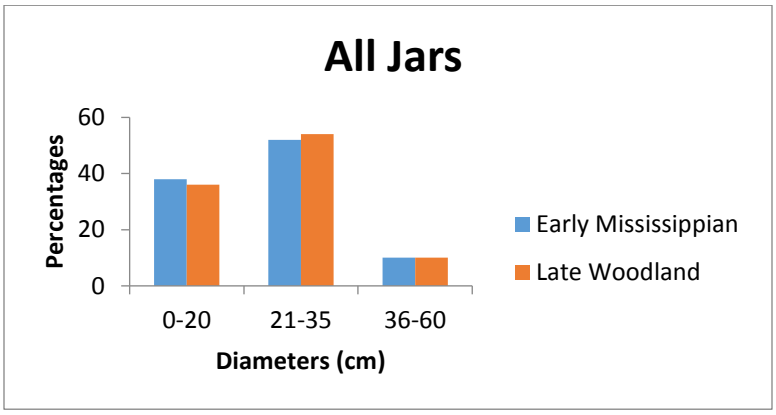

Figure 4.36 Comparison of Jar Sizes Based on Period

Standard jars (n=57) have vertical angles and excurvate curvature. Standard jars are found in a variety of type-varieties such as Barton Incised, *var. Barton* (n=2) with a vessel wall thickness of 3 and 5mm and a diameter of 10 and 22cm; unclassified decorated wares (n=3) with a vessel wall thickness of 3 and 4mm and diameters that ranges from 11 to 21cm; Evansville Punctated, *var. Rhinehart* (n=1) with a vessel wall thickness of 8mm and a diameter of 30cm; Evansville Punctated, *var. unspecified* (n=1) with a vessel wall thickness of 8mm and a diameter of 16cm; Mulberry Creek Cord Marked, *var. Edwards* (n=37) with a vessel wall thickness that ranges between 3 to 9mm

and diameters that range from 9 to 46cm; Mulberry Creek Cord Marked, *var. Smoothed* (n=1) with a vessel wall thickness of 6mm and a diameter of 17cm; undecorated grog ware (n=8) with a vessel wall thickness that ranges between 2 to 7mm and diameters that range from 11 to 40cm; and undecorated shell ware (n=3) with a vessel wall thickness that ranges between 2 to 7mm and diameters that range from 10 to 39cm.

Flaring rim jars (n=42) have straight or outslanted angles and excurate or strongly excurvate curvature. The flaring rim jar is found within these type-varieties; Barton Incised, *var. Barton* (n=4) with a vessel wall thickness of 8mm and a diameter of 19cm; Barton Incised, *var. Estill* (n=3) with a vessel wall thickness of 6 and 9 mm and a diameter of 31 and 36cm; unclassified decorated wares (n=2) with a vessel wall thickness of 5mm and a diameter of 13cm; Evansville Punctated, *var. Evansville* (n=1) with a vessel wall thickness of 4mm and a diameter of 28cm; Evansville Punctated, *var. unspecified* (n=2) with a vessel wall thickness of 4mm and a diameter of 11 and 19cm; Harrison Bayou Incised, *var. Harrison Bayou* (n=1) with a vessel wall thickness of 6mm and a diameter of 20cm; Mulberry Creek Cord Marked, *var. Edwards* (n=18) with a vessel wall thickness that ranges between 4 to 9mm and diameters that range from 14 to 56cm; undecorated grog ware (n=4) with a vessel wall thickness that ranges between 4 to 7mm and diameters that range from 13 to 21cm; and undecorated shell ware (n=7) with a vessel wall thickness that ranges between 3 to 6mm and diameters that range from 33 to 43cm.

Straight-necked jars (n=16) have a vertical angle and straight curvature. The straight-necked jars can be seen in the following type-varieties: Evansville Punctated, *var. Evansville* (n=1) with a vessel wall thickness of 4mm and a diameter of 13cm;

Evansville Punctated, *var. Rhinehart* (n=2) with a vessel wall thickness of 5mm and a diameter of 19cm; Mulberry Creek Cord Marked, *var. Edwards* (n=7) with a vessel wall thickness that ranges between 5 and 10mm and diameters that range from 15 to 38cm; Mulberry Creek Cord Marked, *var. Smoothed* (n=2) with a vessel wall thickness of 5 and 9mm and diameters of 21 and 23cm; and undecorated grog ware (n=4) with vessel wall thickness that range between 3 to 10mm and diameters that range from 13 to 39cm.

Plates

The plate classification is represented at the Austin site by 12 identifiable sherds and was identified based on the angle and curvature of the rim. These plates were classified into three basic sizes; small, medium, and large as seen in Figure 4.37 below for the ability to compare between Late Woodland and the early Mississippian period. Plates have strongly outslanted angles and have straight or incurvate curvature. Plates can be seen on many type-varieties including; Larto Red, *var. Larto* (n=1) with a vessel wall thickness of 8mm and a diameter of 32cm; Mulberry Creek Cord Marked, *var. Edwards* (n=7) with a vessel wall thickness that ranges between 5 to 9mm and diameters that range from 22 to 49cm; Mulberry Creek Cord Marked, *var. Smoothed* (n=2) with a vessel wall thickness of 8 and 9mm and diameters of 20 and 34cm; and undecorated grog ware (n=2) with a vessel wall thickness of 4 and 5mm and a diameter of 17cm. One plate has the pointed edge rim decoration.

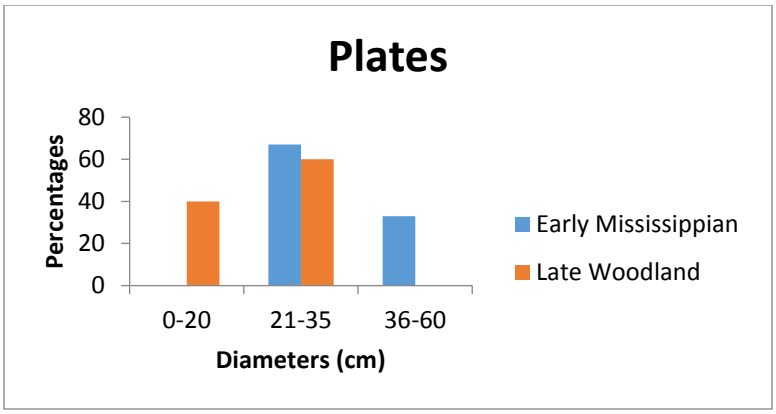

Figure 4.37 Comparison of Plate Sizes Based on Period

Restricted Bowl

The restricted bowls classification is represented at the Austin site by 14 identifiable sherds and was designated by the angle and curvature of the rim. These restricted bowls were classified into three basic sizes; small, medium, and large as seen in Figure 4.38 below for the ability to compare between Late Woodland and the early Mississippian period Restricted Bowls (n=14) have inslanted or strongly inslanted angles with strongly incurvate, incurvate, or straight curvature. Some of the type-varieties represented in the restricted bowls are, Mulberry Creek Cord Marked, *var. Edwards* (n=7) with a vessel wall thickness that ranges between 4 and 8mm and a diameter that ranges from 10 to 34cm; Mulberry Creek Cord Marked, *var. Smoothed* (n=2) with a vessel wall thickness of 8mm and a diameter of 28cm; undecorated grog ware (n=4) with a vessel wall thickness that ranges between 3 and 4mm and diameters that ranges from 10 to 22cm; and undecorated shell ware (n=1) with a vessel wall thickness of 4mm and a diameter of 13cm.

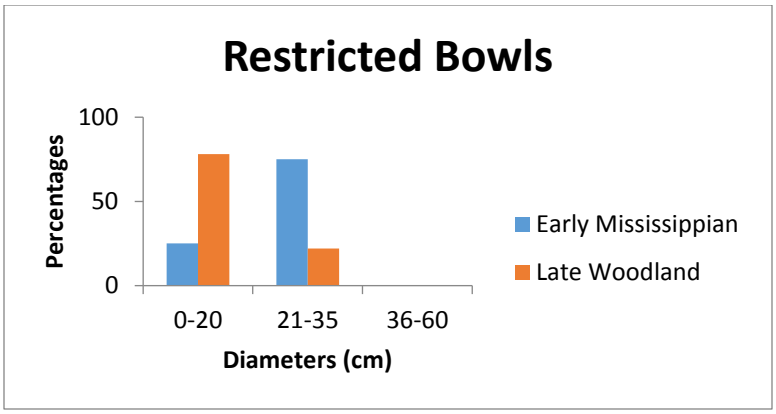

Figure 4.38 Comparison of Restricted Bowl Sizes Based on Period

Subglobular Bottles

The subglobular bottle classification is represented at the Austin site by 12 identifiable sherds that are only found in early Mississippian pits. The subglobular bottles were identified based on the angle and curvature of the rim, which consists of vertical angles and straight or excurvate curvature. Some type-varieties consist of Mulberry Creek Cord Marked, *var. Edwards* (n=1) with a vessel wall thickness of 9mm and a diameter of 15cm; Mulberry Creek Cord Marked, *var. Smoothed* (=1) with a vessel wall thickness of 7mm and a diameter of 16cm; undecorated grog ware (n=3) with a vessel wall thickness that ranges between 3 and 5mm and a diameter that ranges from 5 to 19cm; and undecorated shell ware (n=7) with a vessel wall thickness that ranges between 3 and 5mm and a diameter that ranges from 10 to 12cm.

Other Vessel Forms

Within the rims examined there were only two vessels that were placed in the "other" category. This includes a salt pan (n=1) with the type-variety, Mulberry Creek Cord Marked, *var. Edwards* and a vessel wall thickness of 7mm and a diameter of 46cm.

The other vessel, a pinched pot (n=1), was an undecorated grog ware, and neither the vessel wall thickeness nor diameter could be determined due to the small size and uneven surface.

Other Vessel Parts

When describing other aspects of vessels, another diagnostic marker can be the decorative and functional aspects of the ceramics. In this case at the Austin site there is one adorno, one strap handle and 11 loop handles, lugs, and nodes. The animal effigy or adorno appears to be a bear-like figurine that is part of the shell-tempered rim (Figure 4.39). The handles, lugs, and nodes either appear on Barton Incised, *var. Barton*, unclassified decorated wares, or undecorated shell ware pottery (Figure 4.40, 4.41, 4.42). It is important to note that all of these markers are only present on shell tempered pottery which is viewed as a Mississippian trait (Table 4.8). When discussing Mississippian vessel shapes, Williams (2003) states that some widespread and easily identified forms are rim effigy bowls and handles. Therefore, the appearance of these characteristics solely on ceramics from pits dated to the early Mississippian period reaffirms the idea of a cultural break between the two periods. Also, these decorative characteristics suddenly appearing only in the early Mississippian phase at the Austin site suggests that these new styles were adopted through some form of contact with Mississippian peoples.

Table 4.8

Counts of Other Vessel Parts by Period

Other Vessel Parts	Early Mississippian	Late Woodland	Grand Total
Animal effigy/adorno	1		1
Handle	12		11
Lug	7		7
Node	3		2
Grand Total	**23**	**0**	**23**

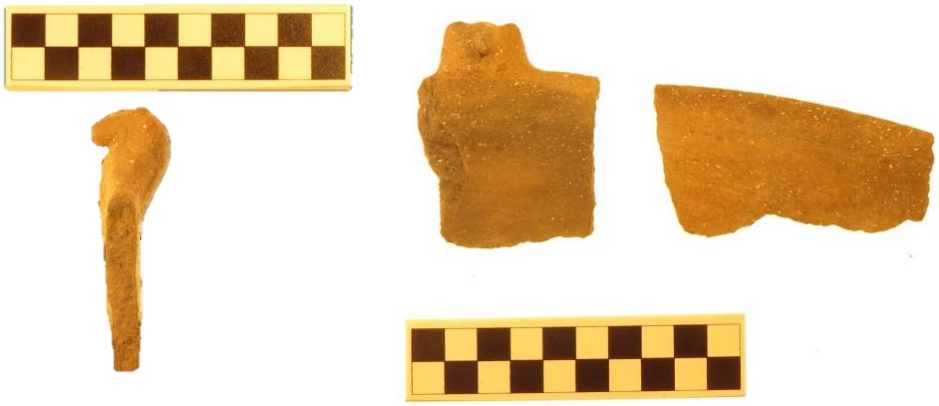

Figure 4.39 Bear Effigy/Adorno

Figure 4.40 Handles

Figure 4.41 Node

Figure 4.42 Lugs

Bases

Another method of examining vessel manufacturing involves focusing on the base. In some regions, base shapes are telling of a group's foodways and can be informative of passed down traditions or newly introduced pottery manufacturing techniques. Flat bases are classified as having no visible distinction between the flattened portions of the base and the side of the vessel (Figure 4.43). Square bases are classified as having corners and straight lines that form a flat square base (Figure 4.44). Rounded bases are classified where the vessel comes down to a circular shaped base (Figure 4.45). There has been a subcategory included in the rounded classification listed as platform which means that instead of the vessel forming a plain circular base there is an intentional raised platform at the base. At the Austin site, square bases are the most commonly used form throughout time (Table 4.9). However, the increase in round and rounded-platform bases from Late Woodland to the Early Mississippian period might represent the introduction and gradual acceptance of this pottery making style. This new pottery style

could be reflective of the changing foodways and/or the migration of new ideas into the area. There is also one podal support from an early Mississippian pit (F-1330), perhaps belonging to animal effigy bowl (Figure 4.46).

Table 4.9

Counts of Base Shapes by Period

Base Shape	Early Mississippian	Late Woodland	Grand Total
Flat	17	16	33
Square	41	12	53
Rounded	26	4	30
Platform	14	3	17
Grand Total	**98**	**35**	**133**

(Undetermined Pits not listed)

Figure 4.43 Flat Bases

Figure 4.44 Square Bases

Figure 4.45 Rounded Bases

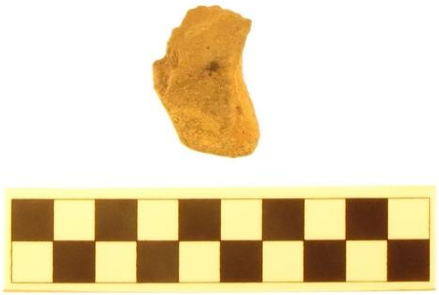

Figure 4.46 Podal Support

Other Ceramic Artifacts

There are several other ceramic artifacts in the collection that are not specifically part of vessels. These include pendants/disks, ceramic tools, pipe fragments, and clay coils. The pendants (n=2), sometimes referred to as sherd disks, from the Austin site come from the early Mississippian pits of 1428 and 2290 and are represented on Larto Red, *var*. *Larto* and Plain Grog ware. (Figure 4.47). These are pieces of broken pottery that have been ground down to a rounded shape and then a circular hole was drilled through the middle and smoothed. These pendants would have been used as wearable adornment. The ceramic tool (n=1) comes from an early Mississippian pit, 1177, and has a flat rounded shape end that was more than likely attached to a handle. This may have been used to help flatten and even out the inside of a pot (Figure 4.48). The pipe fragment (n=1) comes from an early Mississippian pit, 2290, and consists of a broken portion of the elongated shaft (Figure 4.49). The clay coils (n=4) come from an early Mississippian pit, 1428, and consist of fired rolled clay that more than likely represents a process in pottery making where potters tested the clay to make sure it was fit to use before creating a pot (Figure 4.50).

Figure 4.47 Sherd Pendants/Disks

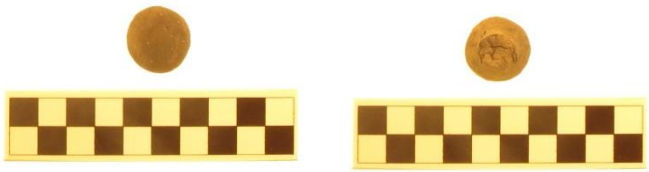

Figure 4.48 Ceramic Tool

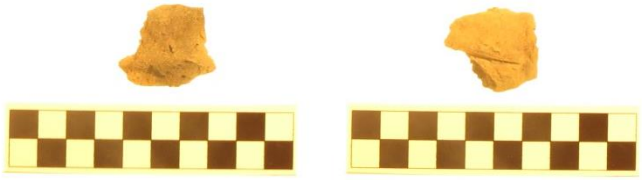

Figure 4.49 Pipe Fragment

Figure 4.50 Clay Coils

CHAPTER V – PIT FEATURES

Analysis

A total of 3,367 pits and post molds were recorded at Austin. For this analysis, the only features used were pits not associated with burials. This left 468 possible pits from which a 25% sample was randomly selected, resulting in 123 pits. Written descriptions or drawn profiles based on the field notes of John Connaway are available for 64 pits out of the 123 pits chosen for this analysis.

Feature Classes

According to the McKnight Report (Walling and Chapman 1999) and Coahoma Welcome Center Report (Mooney et al. 2004), there are five major pit feature classes: basin-shaped pits, round-based pits, flat-based cylindrical pit, bell-shaped pits, and irregular pits. These are based on profile shapes that have been recognized at sites including Austin. Three additional feature classes pertain to shapes specifically recognized at the Austin site. These feature classes are defined as flared-squared shaped pits, intrusive pits, and compound pits. Characteristics of each pit class are defined as follows:

Basin-shaped pits: relatively shallow features that exhibit a single and gentle curve from the surface to the base (Figure 5.1).

Round-based pits: features that exhibit a rounded or conical-like appearance often deeper than they are wide (Figure 5.1).

Flat-based cylindrical pits: features that exhibit a relatively flat base with sides that are fairly vertical. Curvature may occur in the transition zone between the base and the walls but the angle is relatively dramatic (Figure 5.1).

Bell-shaped pits: features that similar to the vertical-sided pits but with pronounced expansion at the base which results in the profile looking similar to that of a bell (Figure 5.1).

Irregular pits: features that usually have one side that is classifiable as a basin-shaped pit, while the other side could be classified as a flat-based cylindrical pit. These features might also have a variable base depth (Figure 5.1).

Flared-squared shaped pits: features that are similar to flat-based cylindrical pits except towards the surface; the pit widens then narrows to form a square shape at the bottom of the pit (Figure 5.2).

Compound pits: these features could represent multiple separate pits but appear to be an attempt to enlarge one already created pit (Figure 5.3).

Intrusive pits: features that represent pits that have been dug on top of an earlier created pit.

Undetermined-shaped pits: features whose profiles were unable to be classified due to disturbances (i.e., rodent burrows, tree roots, etc.).

Not Available or N/A: features that do not have a profile drawn so a designation is not possible.

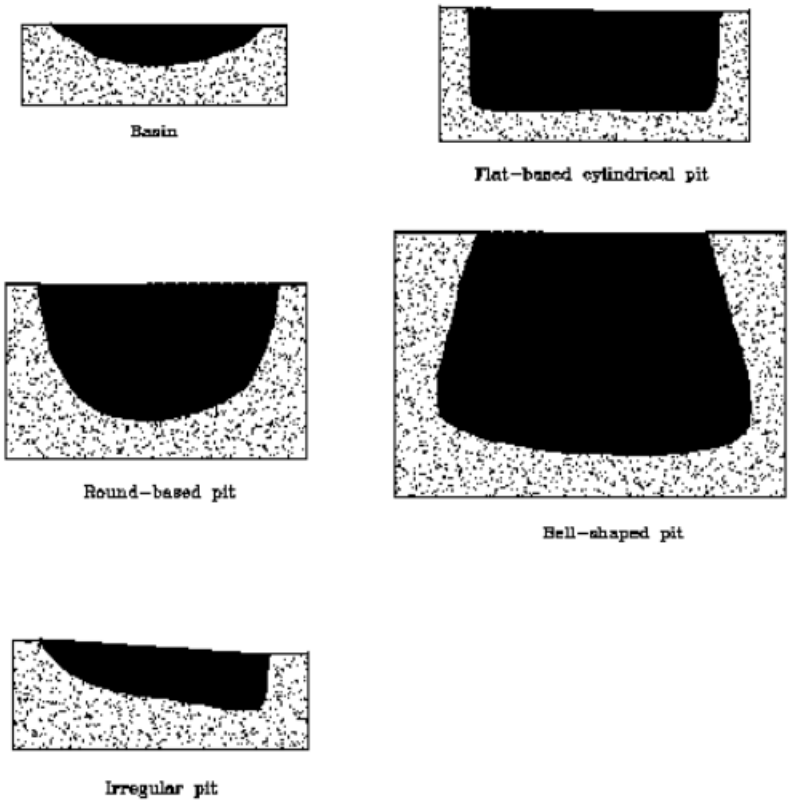

Figure 5.1 Representation of Pit Features Seen at the McKnight Site

Note: (Walling and Chapman 1999, Figure 7.1)

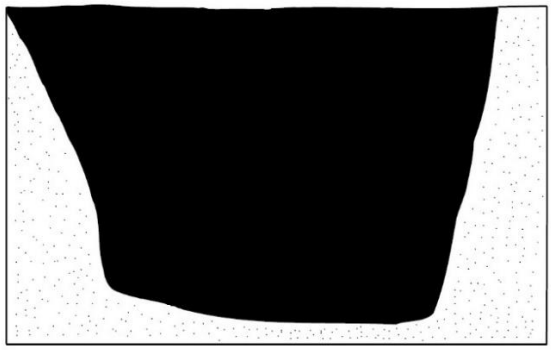

Figure 5.2 Flared-Square Shaped Pit, Example F-1904

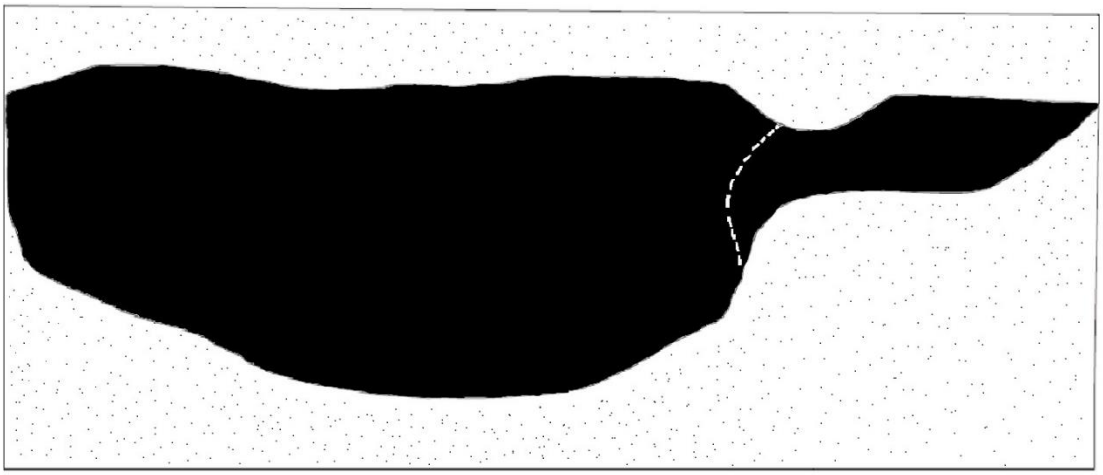

Figure 5.3 Compound Shaped Pit, Example F-1517

Feature Descriptions

Of the 123 features, 108 were assigned to a specific prehistoric component and the remaining 15 were unable to be assigned to a specific prehistoric period. Initial component assignments were based entirely on the presence or absences of diagnostic ceramics. A minimum requirement of 15 sherds was established in order to assign a component to a feature unless shell tempered sherds were present. In those cases, a Mississippian assignment was made.

Feature 5 (Table 5.1)

Component: Early Mississippian, Austin phase

Class: Irregular pit

Table 5.1

Ceramics from Feature 5

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	66

Table 5.1 (Continued)

Mulberry Creek Cord Marked, *var. Smoothed*	22
Mulberry Creek Cord Marked, *var. unspecified*	7
Undecorated Grog	82
Undecorated Shell	7
Grand Total	**187**

Feature 18 (5.2)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.2

Ceramics from Feature 18

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Avoyelles Punctated, *var. Avoyelles*	1
Evansville Punctated, *var. Rhinehart*	1
Mulberry Creek Cord Marked, *var. Edwards*	21
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	24
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	11
Grand Total	**62**

Feature 34 (Table 5.3)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.3

Ceramics from Feature 34

Ceramic Types	**Count**
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	9
Mulberry Creek Cord Marked, *var. Smoothed*	5
Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	10
Undecorated Shell	18
Grand Total	**45**

Feature 45 (Table 5.4)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.4

Ceramics from Feature 45

Ceramic Types	**Sum**
Mulberry Creek Cord Marked, *var. Edwards*	2
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Undecorated Grog	4
Undecorated Shell	2
Grand Total	**9**

Feature 46 (Table 5.5)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.5

Ceramics from Feature 46

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	3
Unclassified Decorated Wares	2
Mulberry Creek Cord Marked, *var. Edwards*	38
Mulberry Creek Cord Marked, *var. Smith Creek*	1
Mulberry Creek Cord Marked, *var. Smoothed*	11
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	67
Grand Total	**124**

Feature 166 (Table 5.6)

Component: Undetermined

Class: N/A

Table 5.6 Ceramics from Feature 166

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	12
Grand Total	**14**

Feature 198 (Table 5.7)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.7

Ceramics from Feature 198

Ceramic Types	**Count**
Evansville Punctated, *var. Evansville*	1
Mulberry Creek Cord Marked, *var. Edwards*	31
Mulberry Creek Cord Marked, *var. Smoothed*	8
Mulberry Creek Cord Marked, *var. unspecified*	3
Undecorated Grog	33
Grand Total	**76**

Feature 215 (Table 5.8)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.8

Ceramics from Feature 215

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	1
Mulberry Creek Cord Marked, *var. Edwards*	1
Mulberry Creek Cord Marked, *var. Smoothed*	2
Mulberry Creek Cord Marked, *var. unspecified*	5
Undecorated Grog	10
Grand Total	**19**

Feature 216 (Table 5.9)

Component: Early Mississippian, Austin phase

Class: Undetermined pit

Table 5.9

Ceramics from Feature 216

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	2
Alligator Incised, *var. Austin*	1
Alligator Incised, *var. Muddy Bayou*	2
Alligator Incised, *var. Oxbow*	4
Coles Creek Incised, *var. Hunt*	1
Unclassified Decorated Wares	13
Evansville Punctated, *var. Evansville*	2
Evansville Punctated, *var. Rhinehart*	3
Larto Red, *var. Larto*	8
Mulberry Creek Cord Marked, *var. Edwards*	283
Mulberry Creek Cord Marked, *var. Smith Creek*	6
Mulberry Creek Cord Marked, *var. Smoothed*	53
Mulberry Creek Cord Marked, *var. unspecified*	12
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	342
Undecorated Shell	3
Grand Total	**736**

Feature 219 (Table 5.10)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.10

Ceramics from Feature 219

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	16
Mulberry Creek Cord Marked, *var. Smoothed*	4
Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	23
Grand Total	**44**

Feature 231 (Table 5.11)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.11

Ceramics from Feature 231

Ceramic Types	**Count**
Alligator Incised, *var. Austin*	1
Alligator Incised, *var. Oxbow*	5
Coles Creek Incised, *var. Barner*	1
Unclassified Decorated Wares	8
Evansville Punctated, *var. Rhinehart*	4
Larto Red, *var. Larto*	5
Mulberry Creek Cord Marked, *var. Edwards*	187
Mulberry Creek Cord Marked, *var. Smoothed*	39
Mulberry Creek Cord Marked, *var. unspecified*	3
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	148
Salomon Brushed, *var. Salomon*	1
Grand Total	**403**

Feature 320 (Table 5.12)

Component: Late Woodland

Class: N/A

Table 5.12

Ceramics from Feature 320

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	16
Undecorated Grog	1
Grand Total	**19**

Feature 328 (Table 5.13)

Component: Early Mississippian, Austin phase

Class: Flat-based cylindrical pit

Table 5.13

Ceramics from Feature 328

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	110
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	22
Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	77
Undecorated Shell	11
Grand Total	**225**

Feature 332 (Table 5.14)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.14

Ceramics from Feature 332

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	111
Mulberry Creek Cord Marked, *var. Smoothed*	30
Mulberry Creek Cord Marked, *var. unspecified*	3
Undecorated Grog	74
Grand Total	**221**

Feature 412 (Table 5.16)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.15

Ceramics from Feature 412

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	8
Mulberry Creek Cord Marked, *var. Smoothed*	1
Undecorated Grog	16
Grand Total	**25**

Feature 414 (Table 5.16)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.16

Ceramics from Feature 414

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	1
Undecorated Grog	3
Undecorated Shell	2
Grand Total	**6**

Feature 423 (Table 5.17)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.17

Ceramics from Feature 423

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	4
Alligator Incised, *var. unspecified*	1
Coles Creek Incised, *var. Barner*	1
Unclassified Decorated Wares	16
Evansville Punctated, *var. Evansville*	1
Larto Red, *var. Larto*	5
Mulberry Creek Cord Marked, *var. Edwards*	473
Mulberry Creek Cord Marked, *var. Porter Bayou*	2
Mulberry Creek Cord Marked, *var. Smoothed*	47
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	318
Salomon Brushed, *var. Salomon*	3
Grand Total	**873**

Feature 433 (Table 5.18)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.18

Ceramics from Feature 433

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Alligator Incised, *var. Oxbow*	6
Coles Creek Incised, *var. Barner*	1
Unclassified Decorated Wares	5
Evansville Punctated, *var. Evansville*	3
Larto Red, *var. Larto*	4
Mulberry Creek Cord Marked, *var. Edwards*	189
Mulberry Creek Cord Marked, *var. Smoothed*	13
Mulberry Creek Cord Marked, *var. unspecified*	3
Undecorated Grog	215
Grand Total	**440**

Feature 477 (5.19)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.19

Ceramics from Feature 477

Ceramic Types	**Count**
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	31
Mulberry Creek Cord Marked, *var. Smoothed*	4
Undecorated Grog	17
Grand Total	**53**

Feature 486 (Table 5.20)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.20

Ceramics from Feature 486

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Barton Incised, *var. unspecified*	1
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	20
Mulberry Creek Cord Marked, *var. Smoothed*	2
Grand Total	**25**

Feature 513 (Table 5.21)

Component: Early Mississippian, Austin phase

Class: Bell-shaped pit

Table 5.21

Ceramics from Feature 513

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	21
Mulberry Creek Cord Marked, *var. Smoothed*	2
Mulberry Creek Cord Marked, *var. unspecified*	2
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	22
Undecorated Shell	2
Grand Total	**52**

Feature 629 (Table 5.22)

Component: Early Mississippian, Austin phase

Class: Round-base pit

Table 5.22

Ceramics from Feature 629

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	8
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	14
Undecorated Shell	7
Grand Total	**32**

Feature 663 (Table 5.23)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.23

Ceramics from Feature 663

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	2
Undecorated Grog	8
Undecorated Shell	10
Grand Total	**20**

Feature 692 (Table 5.24)

Component: Early Mississippian, Austin phase

Class: Flat-base cylindrical pit

Table 5.24

Ceramics from Feature 692

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	68
Undecorated Grog	19
Undecorated Shell	2
Grand Total	**89**

Feature 705 (Table 5.25)

Component: Undetermined

Class: Basin-shaped pit

Table 5.25

Ceramics from Feature 705

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	5
Grand Total	**5**

Feature 709 (Table 5.26)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.26

Ceramics from Feature 709

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Mulberry Creek Cord Marked, *var. Edwards*	16

Table 5.26 (Continued)

Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	6
Undecorated Shell	8
Grand Total	**33**

Feature 798 (Table 5.27)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.27

Ceramics from Feature 798

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Alligator Incised, *var.* Oxbow	9
Unclassified Decorated Wares	3
Evansville Punctated, *var. Rhinehart*	1
Larto Red, *var. Chicot*	2
Larto Red, *var. Larto*	7
Mulberry Creek Cord Marked, *var. Edwards*	278
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smith Creek*	1
Mulberry Creek Cord Marked, *var. Smoothed*	17
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	225
Undecorated Shell	1
Grand Total	**548**

Feature 810 (Table 5.28)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.28

Ceramics from Feature 810

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Mulberry Creek Cord Marked, *var. Edwards*	38
Mulberry Creek Cord Marked, *var. Smoothed*	4
Undecorated Grog	80
Grand Total	**123**

Feature 813 (Table 5.29)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.29

Ceramics from Feature 813

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	5
Unclassified Decorated Wares	7
Evansville Punctated, *var. unspecified*	2
Larto Red, *var. Larto*	6
Mulberry Creek Cord Marked, *var. Edwards*	259
Mulberry Creek Cord Marked, *var. Smith Creek*	2
Mulberry Creek Cord Marked, *var. Smoothed*	49
Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	230
Undecorated Shell	22
Salomon Brushed, *var.* Salomon	1
Grand Total	**584**

Feature 815 (Table 5.30)

Component: Late Woodland, Peabody phase

Class: Undetermined pit

Table 5.30

Ceramics from Feature 815

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	60
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	24
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	51
Grand Total	**141**

Feature 886 (Table 5.31)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.31

Ceramics from Feature 886

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Alligator Incised, *var. Oxbow*	5
Unclassified Decorated Wares	7
Evansville Punctated, *var. unspecified*	1
Larto Red, *var. Larto*	7
Mulberry Creek Cord Marked, *var. Edwards*	270
Mulberry Creek Cord Marked, *var. Smith Creek*	1
Mulberry Creek Cord Marked, *var. Smoothed*	45

Table 5.31 (Continued)

Mulberry Creek Cord Marked, *var. unspecified*	4
Undecorated Grog	243
Undecorated Shell	9
Grand Total	**593**

Feature 890 (Table 5.32)

Component: Undetermined

Class: N/A

Table 5.32

Ceramics from Feature 890

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	4
Plain-Grog	3
Grand Total	**7**

Feature 933 (Table 5.33)

Component: Early Mississippian, Austin phase

Class: Irregular pit

Table 5.33

Ceramics from Feature 933

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	28
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	2
Plain-Grog	24
Plain-Shell	16
Grand Total	**74**

Feature 944 (Table 5.34)

Component: Late Woodland, Peabody phase

Class: Round-based pit

Table 5.34

Ceramics from Feature 944

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	17
Alligator Incised, *var. unspecified*	2
Coles Creek Incised, *var. Phillips*	1
Unclassified Decorated Wares	8
Evansville Punctated, *var. unspecified*	3
Larto Red, *var. Larto*	13
Mulberry Creek Cord Marked, *var. Edwards*	479
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smith Creek*	1
Mulberry Creek Cord Marked, *var. Smoothed*	92
Mulberry Creek Cord Marked, *var. unspecified*	5
Undecorated Grog	465
Salomon Brushed, *var. Salomon*	2
Grand Total	**1089**

Feature 1132 (Table 5.35)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.35

Ceramics from Feature 1132

Ceramic Types	**Count**
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	46
Mulberry Creek Cord Marked, *var. Smoothed*	5
Undecorated Grog	47
Grand Total	**99**

Feature 1177 (Table 5.36)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.36

Ceramics from Feature 1177

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	2
Unclassified Decorated Wares	8
Evansville Punctated, *var. Evansville*	4
Larto Red, *var. Larto*	10
Mulberry Creek Cord Marked, *var. Edwards*	277
Mulberry Creek Cord Marked, *var. Smoothed*	48
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	215
Undecorated Shell	2
Grand Total	**568**

Feature 1178 (Table 5.37)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.37

Ceramics from Feature 1178

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	6
Mulberry Creek Cord Marked, *var. Smoothed*	4
Undecorated Grog	5
Grand Total	**16**

Feature 1330 (Table 5.38)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.38

Ceramics from Feature 1330

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	71
Mulberry Creek Cord Marked, *var. Smith Creek*	1
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	53
Undecorated Shell	27
Grand Total	**156**

Feature 1331 (Table 5.39)

Component: Early Mississippian, Austin phase

Class: Round-based pit

Table 5.39

Ceramics from Feature 1331

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Alligator Incised, *var. unspecified*	1
Barton Incised, *var. Estill*	2
Barton Incised, *var. unspecified*	1
Unclassified Decorated Wares	2
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	116
Undecorated Grog	116
Undecorated Shell	28
Grand Total	**269**

Feature 1332 (Table 5.40)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.40

Ceramics from Feature 1332

Ceramic Types	**Count**
Alligator Incised, *var. unspecified*	1
Mulberry Creek Cord Marked, *var. Edwards*	22
Undecorated Grog	11
Grand Total	**34**

Feature 1333 (Table 5.41)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.41

Ceramics from Feature 1333

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	4
Barton Incised, *var. Barton*	3
Barton Incised, *var. unspecified*	3
Coles Creek Incised, *var. Barner*	1
Unclassifed Painted Wares	2
Unclassified Decorated Wares	9
Evansville Punctated, *var. unspecified*	1
Larto Red, *var. Chicot*	3
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	321
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	24
Undecorated Grog	277
Undecorated Shell	180
Salomon Brushed, *var. Salomon*	3
Grand Total	**835**

Feature 1334 (Table 5.42)

Component: Early Mississippi, Austin phase

Class: Round-based pit

Table 5.42

Ceramics from Feature 1334

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	3
Barton Incised, *var. unspecified*	1

Table 5.42 (Continued)

Unclassified Decorated Wares	3
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	95
Mulberry Creek Cord Marked, *var. Smoothed*	19
Undecorated Grog	72
Undecorated Shell	60
Grand Total	**255**

Feature 1387 (Table 5.43)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.43

Ceramics from Feature 1387

Ceramic Types	**Count**
Barton Incised, *var. Barton*	1
Barton Incised, *var. Estill*	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	74
Undecorated Grog	43
Undecorated Shell	33
Grand Total	**153**

Feature 1428

Component: Early Mississippian, Austin phase

Component: Intrusive pits

Table 5.44 below represents the total of all the bags labeled as feature 1428. Some of the bags were labeled in such a way to distinguish between the three pits; those are listed below. Field notes indicate that these pits "overlap at the edge of meeting and have no distinct line of separation"; however, through ceramic classification it is believed that

F-1428 (A) and F-1428 (C) are intrusive into an earlier Late Woodland, Peabody pit F-1428 (B). It is also interesting to note that both A and C puts contain dog remains/burials.

Table 5.44

Ceramics from Feature 1428

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	3
Alligator Incised, *var. Austin*	2
Alligator Incised, *var. Oxbow*	40
Alligator Incised, *var. Muddy Bayou*	14
Alligator Incised, *var. unspecified*	4
Austin Corn Impressed, *var. Etup*	2
Unclassified Painted Wares	2
Unclassified Decorated Wares	61
Evansville Punctated, *var. Evansville*	2
Evansville Punctated, *var. Rhinehart*	1
Evansville Punctated, *var. unspecified*	3
Hollyknowe Pinched, *var. unspecified*	1
Larto Red, *var. Larto*	59
Mulberry Creek Cord Marked, *var. Edwards*	1729
Mulberry Creek Cord Marked, *var. Smoothed*	350
Mulberry Creek Cord Marked, *var. unspecified*	11
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	1238
Undecorated Shell	2
Salomon Brushed, *var. Salomon*	4
Grand Total	**3529**

Feature 1428 section (A) (5.45)

Component: Early Mississippian, Austin phase

Class: Intrusive pit

Table 5.45

Ceramics from Feature 1428 section (A)

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	3
Alligator Incised, *var. unspecified*	3
Unclassified Decorated Wares	10
Evansville Punctated, *var. Evansville*	1
Evansville Punctated, *var. unspecified*	1
Larto Red, *var. Larto*	5
Mulberry Creek Cord Marked, *var. Edwards*	274
Mulberry Creek Cord Marked, *var. unspecified*	1
Mulberry Creek Cord Marked, *var. Smoothed*	31
Undecorated Grog	128
Undecorated Shell	1
Grand Total	**458**

Feature 1428 section (B) (5.46)

Component: Late Woodland, Peabody phase

Class: Basin pit

Table 5.46

Ceramics from Feature 1428 section (B)

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	8
Unclassified Decorated Wares	6
Larto Red, *var. Larto*	15
Mulberry Creek Cord Marked, *var. Edwards*	210
Mulberry Creek Cord Marked, *var. unspecified*	5
Mulberry Creek Cord Marked, *var. Smoothed*	29
Undecorated Grog	153
Grand Total	**426**

Feature 1428 section (C) (Table 5.47)

Component: Early Mississippian, Austin phase

Class: Intrusive pit

Table 5.47

Ceramics from Feature 1428 section (C)

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	7
Unclassified Painted Wares	2
Unclassified Decorated Wares	11
Larto Red, *var. Larto*	7
Mulberry Creek Cord Marked, *var. Edwards*	382
Mulberry Creek Cord Marked, *var. unspecified*	6
Mulberry Creek Cord Marked, *var. Smoothed*	100
Undecorated Grog	249
Salomon Brushed, *var. Salomon*	1
Grand Total	**765**

Feature 1436 (Table 5.48)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.48

Ceramics from Feature 1436

Ceramic Types	**Count**
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	27
Mulberry Creek Cord Marked, *var. Smoothed*	4
Undecorated Grog	28
Grand Total	**60**

Feature 1442 (Table 5.49)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.49

Ceramics from Feature 1442

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	3
Alligator Incised, *var. Oxbow*	13
Barton Incised, *var. Barton*	1
Barton Incised, *var. Estill*	1
Barton Incised, *var.* unspecified	4
Unclassified Decorated Wares	3
Evansville Punctated, *var.* unspecified	1
Larto Red, *var. Larto*	8
Mulberry Creek Cord Marked, *var. Edwards*	356
Mulberry Creek Cord Marked, *var. Smoothed*	89
Mulberry Creek Cord Marked, *var. unspecified*	8
Undecorated Grog	253
Undecorated Shell	124
Grand Total	**864**

Feature 1443 (Table 5.50)

Component: Early Mississippian, Austin phase

Class: Flat-based cylindrical pit

Table 5.50

Ceramics from Feature 1443

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	2
Undecorated Grog	3
Undecorated Shell	1
Grand Total	**6**

Feature 1444 (Table 5.51)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.51

Ceramics from Feature 1444

Ceramic Types	**Count**
Alligator Incised, *var. Austin*	1
Alligator Incised, *var. Oxbow*	3
Barton Incised, *var. Barton*	10
Barton Incised, *var. unspecified*	6
Coles Creek Incised, *var. Barner*	1
Unclassified Decorated Wares	32
Evansville Punctated, *var. Evansville*	3
Evansville Punctated, *var. Rhinehart*	1
Larto Red, *var. Chicot*	1
Larto Red, *var. Larto*	20
L'Eau Noire Incised, *var. unspecified*	1
Mulberry Creek Cord Marked, *var. Edwards*	787
Mulberry Creek Cord Marked, *var. Smoothed*	162
Undecorated Grog	443
Undecorated Shell	346
Salomon Brushed, *var. Salomon*	2
Winterville Incised, *var. unspecified*	4
Grand Total	**1823**

Feature 1445 (Table 5.52)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.52

Ceramics from Feature 1445

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	1
Plain-Grog	7
Plain-Shell	5
Grand Total	**13**

Feature 1448 (Table 5.53)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.53

Ceramics from Feature 1448

Ceramic Types	**Count**
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	12
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	5
Grand Total	**20**

Feature 1456 (Table 5.54)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.54

Ceramics from Feature 1456

Ceramic Types	**Count**
Barton Incised, *var. Barton*	4
Barton Incised, *var. unspecified*	2
Unclassified Decorated Wares	3
Mulberry Creek Cord Marked, *var. Edwards*	88
Mulberry Creek Cord Marked, *var. Smoothed*	17
Mulberry Creek Cord Marked, *var. unspecified*	4
Undecorated Grog	64
Undecorated Shell	78
Salomon Brushed, *var. Salomon*	1
Grand Total	**261**

Feature 1457 (Table 5.55)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.55

Ceramics from Feature 1457

Ceramic Types	**Count**
Barton Incised, *var. Barton*	2
Barton Incised, *var. unspecified*	1
Unclassified Decorated Wares	3
Grace Brushed, *var. Grace*	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	48
Mulberry Creek Cord Marked, *var. Smoothed*	12
Undecorated Grog	35
Undecorated Shell	11
Salomon Brushed, *var. Salomon*	1
Grand Total	**115**

Feature 1459 (Table 5.56)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.56

Ceramics from Feature 1459

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	3
Alligator Incised, *var. Oxbow*	15
Barton Incised, *var. Barton*	7
Barton Incised, *var. Estill*	3
Barton Incised, *var. unspecified*	3
Coles Creek Incised, *var. unspecified*	1
Unclassified Decorated Wares	15
Larto Red, *var. Larto*	8

Table 5.56 (Continued)

Mulberry Creek Cord Marked, *var. Edwards*	359
Mulberry Creek Cord Marked, *var. Smoothed*	71
Undecorated Grog	290
Undecorated Shell	173
Grand Total	**948**

Feature 1462 (Table 5.57)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.57

Ceramics from Feature 1462

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	3
Unclassified Decorated Wares	9
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	136
Mulberry Creek Cord Marked, *var. Smoothed*	32
Undecorated Grog	117
Undecorated Shell	16
Grand Total	**314**

Feature 1465 (Table. 5.58)

Component: Undetermined

Class: N/A

Table 5.58

Ceramics from Feature 1465

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	4
Mulberry Creek Cord Marked, *var. unspecified*	3
Undecorated Grog	1
Grand Total	**8**

Feature 1466 (Table 5.59)

Component: Undetermined

Class: N/A

Table 5.59

Ceramics from Feature 1466

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	7
Undecorated Grog	6
Grand Total	**13**

Feature 1468 (Table 5.60)

Component: Late Woodland, Peabody phase

Class: Flat- based cylindrical pit

Table 5.60

Ceramics from Feature 1468

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	39
Mulberry Creek Cord Marked, *var. Smoothed*	3
Undecorated Grog	39
Grand Total	**81**

Feature 1469 (Table 5.61)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.61

Ceramics from Feature 1469

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	16
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	4
Grand Total	**22**

Feature 1473 (Table 5.62)

Component: Undetermined

Class: N/A

Table 5.62

Ceramics from Feature 1473

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	6
Undecorated Grog	4
Grand Total	**10**

Feature 1474 (Table 5.63)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.63 Ceramics from Feature 1474

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	54
Mulberry Creek Cord Marked, *var. Smoothed*	3
Mulberry Creek Cord Marked, *var. unspecified*	1
Undecorated Grog	18
Grand Total	**78**

Feature 1476 (Table 5.64)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.64 Ceramics from Feature 1476

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	58
Mulberry Creek Cord Marked, *var. Smoothed*	5
Undecorated Grog	27
Grand Total	**90**

Feature 1492 (Table 5.65)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.65

Ceramics from Feature 1492

Ceramic Types	**Count**
Coles Creek Incised, *var. Barner*	2
Larto Red, *var. Larto*	3
Mulberry Creek Cord Marked, *var. Edwards*	2
Undecorated Grog	17
Grand Total	**24**

Feature 1510 (Table 5.66)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.66

Ceramics from Feature 1510

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	11
Mulberry Creek Cord Marked, *var. Smoothed*	3
Undecorated Grog	12
Grand Total	**26**

Feature 1517 (Table 5.67)

Component: Early Mississippian, Austin phase

Class: Compound pit

Table 5.67 below represents the total of all the bags labeled from feature 1517. Some of the bags were labeled in such a way to distinguished the second possible "compound pit" from the main one; Table 5.68 shown below. Field notes indicate that though the south end or section (B) was shallower and could have been a separate pit, based on ceramic classification it is likely that this was just an attempt to make the pit larger for longer use.

Table 5.67

Ceramics from Feature 1517

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	4
Barton Incised, *var. Barton*	1
Barton Incised, *var. unspecified*	5
Unclassified Decorated Wares	8

Table 5.67 (Continued)

Larto Red, *var. Larto*	4
Mulberry Creek Cord Marked, *var. Edwards*	150
Mulberry Creek Cord Marked, *var. Smoothed*	26
Undecorated Grog	121
Undecorated Shell	107
Grand Total	**426**

Feature 1517 section (B) (Table 5.68)

Component: Early Mississippian, Austin phase

Class: Compound pit

Table 5.68

Ceramics from Feature 1517 section (B)

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Mulberry Creek Cord Marked, *var. Edwards*	12
Mulberry Creek Cord Marked, *var. Smoothed*	4
Undecorated Grog	9
Undecorated Shell	23
Grand Total	**49**

Feature 1518 (Table 5.69)

Component: Early Mississippian, Austin phase

Class: Undetermined pit

Table 5.69

Ceramics from Feature 1518

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Barton Incised, *var. Barton*	2
Barton Incised, *var. unspecified*	1
Unclassified Decorated Wares	14

Table 5.69 (Continued)

Larto Red, *var. Larto*	3
Mulberry Creek Cord Marked, *var. Edwards*	338
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smith Creek*	1
Mulberry Creek Cord Marked, *var. Smoothed*	81
Mulberry Creek Cord Marked, *var. unspecified*	5
Undecorated Grog	282
Undecorated Shell	113
Salomon Brushed, *var. Salomon*	1
Winterville Incised, *var. unspecified*	1
Grand Total	**844**

Feature 1539 (Table 5.70)

Component: Undetermined

Class: N/A

Table 5.70

Ceramics from Feature 1539

Ceramic Types	**Count**
Undecorated Grog	1
Grand Total	**1**

Feature 1560 (Table 5.71)

Component: Undetermined

Class: Flat-based cylindrical pit

Table 5.71

Ceramics from Feature 1560

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	6
Undecorated Grog	5
Grand Total	**11**

Feature 1577 (Table 5.72)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.72

Ceramics from Feature 1577

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	46
Mulberry Creek Cord Marked, *var. Smoothed*	8
Undecorated Grog	48
Undecorated Shell	3
Grand Total	**109**

Feature 1583 (Table 5.73)

Component: Undetermined

Class: Basin-shaped pit

Table 5.73

Ceramics from Feature 1583

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	9
Mulberry Creek Cord Marked, *var. Smoothed*	3
Grand Total	**12**

Feature 1593 (Table 5.74)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.74

Ceramics from Feature 1593

Ceramic Types	**Count**
Alligator Incised, *var. Austin*	1
Unclassified Decorated Wares	2
Evansville Punctated, *var. Rhinehart*	1
Larto Red, *var. Larto*	4
Mulberry Creek Cord Marked, *var. Edwards*	40
Mulberry Creek Cord Marked, *var. Smoothed*	11
Undecorated Grog	26
Grand Total	**85**

Feature 1618 (5.75)

Component: Late Woodland, Peabody phase

Class: Round-based pit

Table 5.75

Ceramics from Feature 1618

Ceramic Types	**Count**
Larto Red, *var. Larto*	5
Mulberry Creek Cord Marked, *var. Edwards*	195
Mulberry Creek Cord Marked, *var. Smoothed*	34
Undecorated Grog	113
Grand Total	**347**

Feature 1645 (Table 5.76)

Component: Early Mississippian, Austin phase

Class: Irregular pit

Table 5.76

Ceramics from Feature 1645

Ceramic Types	**Count**
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	10
Undecorated Grog	4
Undecorated Shell	5
Grand Total	**20**

Feature 1649 (Table 5.77)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.77

Ceramics from Feature 1649

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	20
Mulberry Creek Cord Marked, *var. Smoothed*	3
Undecorated Grog	18
Grand Total	**41**

Feature 1667 (Table 5.78)

Component: Early Mississippian, Austin phase

Class: Flat-based cylindrical pit

Table 5.78

Ceramics from Feature 1667

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	5
Austin Corn Impressed, *var. Etup*	1
Unclassified Decorated Wares	9
Mulberry Creek Cord Marked, *var. Edwards*	102
Mulberry Creek Cord Marked, *var. Smoothed*	38
Undecorated Grog	93
Undecorated Shell	5
Grand Total	**254**

Feature 1668 (Table 5.79)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.79

Ceramics from Feature 1668

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Evansville Punctated, *var. Rhinehart*	4
Mulberry Creek Cord Marked, *var. Edwards*	37
Mulberry Creek Cord Marked, *var. Smoothed*	12
Undecorated Grog	15
Grand Total	**70**

Feature 1677 (Table 5.80)

Component: Undetermined

Class: Round-based pit

Table 5.80

Ceramics from Feature 1677

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	6
Mulberry Creek Cord Marked, *var. Smoothed*	1
Undecorated Grog	5
Grand Total	**12**

Feature 1729 (Table 5.81)

Component: Undetermined

Class: Basin-shaped pit

Table 5.81

Ceramics from Feature 1729

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Mulberry Creek Cord Marked, *var. Edwards*	7
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	3
Grand Total	**14**

Feature 1769 (Table 5.82)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.82

Ceramics from Feature 1769

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	3
Mulberry Creek Cord Marked, *var. Smoothed*	6
Undecorated Grog	12
Grand Total	**21**

Feature 1797 (Table 5.83)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.83

Ceramics from Feature 1797

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	2
Unclassified Decorated Wares	1
Evansville Punctated, *var. Evansville*	1
Mulberry Creek Cord Marked, *var. Edwards*	66
Mulberry Creek Cord Marked, *var. Smoothed*	14
Undecorated Grog	35
Grand Total	**119**

Feature 1879 (Table 5.84)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.84

Ceramics from Feature 1879

Ceramic Types	**Count**
Coles Creek Incised, *var. Clear Lake*	1
Mulberry Creek Cord Marked, *var. Edwards*	15
Mulberry Creek Cord Marked, *var. Smoothed*	6
Undecorated Grog	8
Undecorated Shell	1
Grand Total	**31**

Feature 1893 (Table 5.85)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.85

Ceramics from Feature 1893

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	82
Mulberry Creek Cord Marked, *var. Smoothed*	36
Undecorated Grog	55
Salomon Brushed, *var. Salomon*	1

Feature 1893 (Table 5.86)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.86

Ceramics from Feature 1893

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	82
Mulberry Creek Cord Marked, *var. Smoothed*	36
Undecorated Grog	55
Salomon Brushed, *var. Salomon*	1
Grand Total	**177**

Feature 1904 (Table 5.87)

Component: Late Woodland, Peabody phase

Class: Flared-squared shaped pit

Table 5.87

Ceramics from Feature 1904

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	3
Unclassified Decorated Wares	3
Larto Red, *var. Larto*	17
Mulberry Creek Cord Marked, *var. Edwards*	138
Mulberry Creek Cord Marked, *var. Smoothed*	35
Undecorated Grog	171
Salomon Brushed, *var. Salomon*	1
Grand Total	**369**

Feature 1909 (Table 5.88)

Component: Early Mississippian, Austin phase

Class: Bell-shaped pit

Table 5.88

Ceramics from Feature 1909

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Alligator Incised, *var. Austin*	3
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	1
Austin Corn Impressed, *var. Etup*	3
Unclassified Decorated Wares	7
Evansville Punctated, *var. Evansville*	1
Hollyknowe Pinched, *var. Hollyknowe*	1
Larto Red, *var. Larto*	17
Mulberry Creek Cord Marked, *var. Edwards*	367

Table 5.88 (Continued)

Mulberry Creek Cord Marked, *var. Smoothed*	116
Undecorated Grog	347
Undecorated Shell	2
Salomon Brushed, *var. Salomon*	3
Grand Total	**870**

Feature 2000 (Table 5.89)

Component: Early Mississippian, Austin phase

Class: Flat-based cylindrical pit

Table 5.89

Ceramics from Feature 2000

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Coles Creek Incised, *var. Barner*	1
Mulberry Creek Cord Marked, *var. Edwards*	29
Mulberry Creek Cord Marked, *var. Smoothed*	15
Undecorated Grog	21
Undecorated Shell	7
Grand Total	**74**

Feature 2029 (Table 5.90)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.90

Ceramics from Feature 2029

Ceramic Types	**Count**
Austin Corn Impressed, *var. Etup*	1
Mulberry Creek Cord Marked, *var. Edwards*	16
Mulberry Creek Cord Marked, *var. Smoothed*	3

Table 5.90 (Continued)

Undecorated Grog	7
Undecorated Shell	1
Grand Total	**28**

Feature 2044 (Table 5.91)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.91

Ceramics from Feature 2044

Ceramic Types	**Count**
Barton Incised, *var. unspecified*	1
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	3
Mulberry Creek Cord Marked, *var. Edwards*	20
Mulberry Creek Cord Marked, *var. Smoothed*	6
Undecorated Grog	16
Undecorated Shell	19
Grand Total	**66**

Feature 2099 (Table 5.92)

Component: Undetermined

Class: N/A

Table 5.92

Ceramics from Feature 2099

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	3
Undecorated Grog	4
Grand Total	**7**

Feature 2114 (Table 5.93)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.93

Ceramics from Feature 2114

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	17
Undecorated Grog	12
Grand Total	**32**

Feature 2132 (Table 5.94)

Component: Undetermined

Class: Flat-based cylindrical pit

Table 5.94

Ceramics from Feature 2132

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	5
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	5
Grand Total	**12**

Feature 2185 (Table 5.95)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.95

Ceramics from Feature 2185

Ceramic Types	**Count**
Larto Red, *var. Larto*	2
Mulberry Creek Cord Marked, *var. Edwards*	39
Mulberry Creek Cord Marked, *var. Smoothed*	9
Mulberry Creek Cord Marked, *var. unspecified*	3
Undecorated Grog	20
Grand Total	**73**

Feature 2228 (Table 5.96)

Component: Late Woodland, Peabody phase

Class: Flared-squared shaped pit

Table 5.96

Ceramics from Feature 2228

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	136
Mulberry Creek Cord Marked, *var. Smoothed*	50
Mulberry Creek Cord Marked, *var. unspecified*	1
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	30
Grand Total	**221**

Feature 2290 (Table 5.97)

Component: Early Mississippian, Austin phase

Class: Round-based pit

Table 5.97

Ceramics from Feature 2290

Ceramic Types	**Count**
Alligator Incised, *var. Austin*	1
Alligator Incised, *var. Muddy Bayou*	16
Alligator Incised, *var. Oxbow*	42
Alligator Incised, *var. unspecified*	3
Coles Creek Incised, *var. Barner*	2
Coles Creek Incised, *var. Hunt*	1
Unclassified Decorated Wares	101
Evansville Punctated, *var. Evansville*	2
Evansville Punctated, *var. Rhinehart*	5
Evansville Punctated, *var. unspecified*	3
Larto Red, *var. Larto*	70
Mulberry Creek Cord Marked, *var. Edwards*	2087
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	558
Officer Punctated, *var. Bearskin*	8
Undecorated Grog	2042
Undecorated Shell	41
Salomon Brushed, *var. Salomon*	3
Grand Total	**4987**

Feature 2310 (Table 5.98)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.98

Ceramics from Feature 2310

Ceramic Types	**Count**
Larto Red, *var. Larto*	3
Mulberry Creek Cord Marked, *var. Edwards*	80
Mulberry Creek Cord Marked, *var. Smoothed*	5
Undecorated Grog	37
Grand Total	**125**

Feature 2318 (Table 5.99)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.99

Ceramics from Feature 2318

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Barton Incised, *var. unspecified*	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	68
Mulberry Creek Cord Marked, *var. Smoothed*	8
Undecorated Grog	64
Undecorated Shell	2
Grand Total	**145**

Feature 2321 (Table 5.100)

Component: Late Woodland, Peabody phase

Class: Round-based pit

Table 5.100

Ceramics from Feature 2321

Ceramic Types	**Count**
Alligator Incised, *var. Austin*	1
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	2
Unclassified Decorated Wares	10
Larto Red, *var. Larto*	8
Mulberry Creek Cord Marked, *var. Edwards*	339
Mulberry Creek Cord Marked, *var. Smoothed*	37
Undecorated Grog	256
Grand Total	**655**

Feature 2330 (Table 5.101)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.101

Ceramics from Feature 2330

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	1
Mulberry Creek Cord Marked, *var. Smoothed*	7
Undecorated Grog	18
Grand Total	**26**

Feature 2332 (Table 5.102)

Component: Undetermined

Class: N/A

Table 5.102

Ceramics from Feature 2332

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	1
Undecorated Grog	4
Grand Total	**5**

Feature 2337 (Table 5.103)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.103

Ceramics from Feature 2337

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	5
Alligator Incised, *var. unspecified*	3
Coles Creek Incised, *var. Barner*	3
Unclassified Decorated Wares	14
Evansville Punctated, *var. Evansville*	1
Harrison Bayou Incised, *var. Harrison Bayou*	1
Larto Red, *var. Larto*	39
Mulberry Creek Cord Marked, *var. Edwards*	437
Mulberry Creek Cord Marked, *var. Smoothed*	36
Undecorated Grog	309
Grand Total	**847**

Feature 2456 (Table 5.104)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.104

Ceramics from Feature 2456

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	24
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	5
Grand Total	**31**

Feature 2469 (Table 5.105)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.105

Ceramics from Feature 2469

Ceramic Types	**Count**
Alligator Incised, *var. Oxbow*	1
Mulberry Creek Cord Marked, *var. Edwards*	10
Undecorated Grog	11
Grand Total	**22**

Feature 2489 (Table 5.106)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.106

Ceramics from Feature 2489

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	46
Mulberry Creek Cord Marked, *var. Smoothed*	3
Undecorated Grog	31
Grand Total	**81**

Feature 2501 (Table 5.107)

Component: Late Woodland, Peabody

Class: N/A

Table 5.107 Ceramics from Feature 2501

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	12
Undecorated Grog	3
Grand Total	**15**

Feature 2506 (Table 5.108)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.108 Ceramics from Feature 2506

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	3
Mulberry Creek Cord Marked, *var. Edwards*	185

Table 5.108 (Continued)

Mulberry Creek Cord Marked, *var. Smoothed*	29
Undecorated Grog	82
Undecorated Shell	1
Grand Total	**301**

Feature 2507 (Table 5.109)

Component: Undetermined

Class: N/A

Table 5.109

Ceramics from Feature 2507

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	7
Undecorated Grog	6
Grand Total	**13**

Feature 2598 (Table 5.110)

Component: Early Mississippian, Austin phase

Class: N/A

Table 5.110

Ceramics from Feature 2598

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. unspecified*	2
Undecorated Grog	7
Undecorated Shell	2
Grand Total	**11**

Feature 2609 (Table 5.111)

Component: Late Woodland, Peabody phase

Class: Round-based pit

Table 5.111

Ceramics from Feature 2609

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	11
Undecorated Grog	21
Grand Total	**32**

Feature 2659 (Table 5.112)

Component: Early Mississippian, Austin phase

Class: Round-based pit

Table 5.112

Ceramics from Feature 2659

Ceramic Types	**Count**
Alligator Incised, *var. Muddy Bayou*	1
Alligator Incised, *var. Oxbow*	3
Alligator Incised, *var. unspecified*	1
Unclassified Decorated Wares	5
Evansville Punctated, *var. Evansville*	1
Larto Red, *var. Larto*	5
Mulberry Creek Cord Marked, *var. Edwards*	199
Undecorated Grog	143
Undecorated Shell	11
Grand Total	**369**

Feature 2681 (Table 5.113)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.113

Ceramics from Feature 2681

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	12
Undecorated Grog	10
Grand Total	**22**

Feature 2718 (Table 5.114)

Component: Early Mississippian, Austin phase

Class: Basin-shaped pit

Table 5.114

Ceramics from Feature 2718

Ceramic Types	**Count**
Larto Red, *var. Larto*	3
Mulberry Creek Cord Marked, *var. Edwards*	32
Mulberry Creek Cord Marked, *var. Smoothed*	1
Undecorated Grog	6
Undecorated Shell	1
Grand Total	**43**

Feature 2721 (Table 5.115)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.115

Ceramics from Feature 2721

Ceramic Types	**Count**
Unclassified Decorated Wares	2
Mulberry Creek Cord Marked, *var. Edwards*	59
Undecorated Grog	30
Grand Total	**91**

Feature 2828 (Table 5.116)

Component: Late Woodland, Peabody phase

Class: Round-based pit

Table 5.116

Ceramics from Feature 2828

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	26
Undecorated Grog	10
Grand Total	**37**

Feature 2938

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.117

Ceramics from Feature 2938

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	43
Undecorated Grog	24
Grand Total	**67**

Feature 2977 (Table 5.118)

Component: Late Woodland, Peabody phase

Class: Basin-shaped pit

Table 5.118

Ceramics from Feature 2977

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	10
Undecorated Grog	6
Grand Total	**16**

Feature 2999 (Table 5.119)

Component: Late Woodland, Peabody phase

Class: N/A

Table 5.119

Ceramics from Feature 2999

Ceramic Types	**Count**
Alligator Incised, *var. Austin*	1
Alligator Incised, *var. Oxbow*	2
Unclassified Decorated Wares	2
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	36
Mulberry Creek Cord Marked, *var. Porter Bayou*	2
Mulberry Creek Cord Marked, *var. Smoothed*	10
Undecorated Grog	58
Grand Total	**112**

Feature 3013 (Table 5.120)

Component: Late Woodland, Peabody phase

Class: Undetermined pit

Table 5.120

Ceramics from Feature 3013

Ceramic Types	**Count**
Alligator Incised, *var. Alligator*	1
Alligator Incised, *var. Oxbow*	1
Mulberry Creek Cord Marked, *var. Edwards*	32
Mulberry Creek Cord Marked, *var. Smoothed*	2
Undecorated Grog	16
Grand Total	**52**

Feature 3033 (Table 5.121)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.121

Ceramics from Feature 3033

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Mulberry Creek Cord Marked, *var. Edwards*	18
Mulberry Creek Cord Marked, *var. Smoothed*	2
Officer Punctated, *var. Bearskin*	1
Undecorated Grog	20
Grand Total	**42**

Feature 3312 (Table 5.122)

Component: Late Woodland, Peabody phase

Class: Flared-square shaped pit

Table 5.122

Ceramics from Feature 3312

Ceramic Types	**Count**
Unclassified Decorated Wares	1
Larto Red, *var. Larto*	1
Mulberry Creek Cord Marked, *var. Edwards*	193
Mulberry Creek Cord Marked, *var. Porter Bayou*	1
Mulberry Creek Cord Marked, *var. Smoothed*	3
Undecorated Grog	71
Grand Total	**270**

Feature 3313 (Table 5.123)

Component: Late Woodland, Peabody phase

Class: Flat-based cylindrical pit

Table 5.123

Ceramics from Feature 3313

Ceramic Types	**Count**
Mulberry Creek Cord Marked, *var. Edwards*	86
Mulberry Creek Cord Marked, *var. Smoothed*	4
Undecorated Grog	29
Grand Total	**119**

Feature Summary

Table 5.124 below presents features assigned to a Late Woodland or early Mississippian period by feature class and the frequency in which they occur. Basin-shaped pits and flat-cylindrical pits are the two most commonly occurring pit shapes during both the Late Woodland and early Mississippian phases. The only shape that can be seen exclusively during the Late Woodland phase is the newly created flared-squared shape. Shapes seen solely during the early Mississippian phase are bell-shaped pits, a compound pit, and irregular pits. Also, a feature that is important to note is the two intrusive early Mississippian pits that overlay a portion of a Late Woodland pit. The trends that are typically seen in feature classes associated with specific time periods are not necessarily represented with this sample. However, it is important to keep in mind that this is a very small sample size, representing only 14% of the total number of excavated pits at the Austin site.

Table 5.124

Count of Pit Shapes by Period

Pit Shapes	Early Mississippian	Late Woodland	Total
Basin-shaped pit	10	14	24
Bell-Shaped Pit	2		2
Compound pit	1		1
Flared-square shaped pit		3	3
Flat-based cylindrical pit	5	12	17
Intrusive Pit	2		2
Irregular Pit	3		3
Round-based pit	5	5	10
Undetermined pit	2	2	4
Total	**29**	**36**	**66**

Feature Clustering

Figure 5.4 below is a map that was created through ArcGIS using known points for features such as stockades, hearths, fire pits, houses, burials, trash/storage pits, and post molds. It is important to note that not all of the features excavated are included in the map. Spatial patterning of the analyzed pits was examined to determine if any clustering was observable. However, both Late Woodland (Peabody phase) and early Mississippian (Austin phase) pits appear to be somewhat equally spread across the entire site area. However, upon closer examination one seeming variance in the distribution is that Late Woodland pits are spread more widely over the site, while early Mississippian pits are more confined, presumably by the stockade boundaries So overall, there appears to be no major differences of feature distribution, which can be interpreted as the continuation of the same indigenous people occupying the area and employing similar settlement patterns for the duration of site.

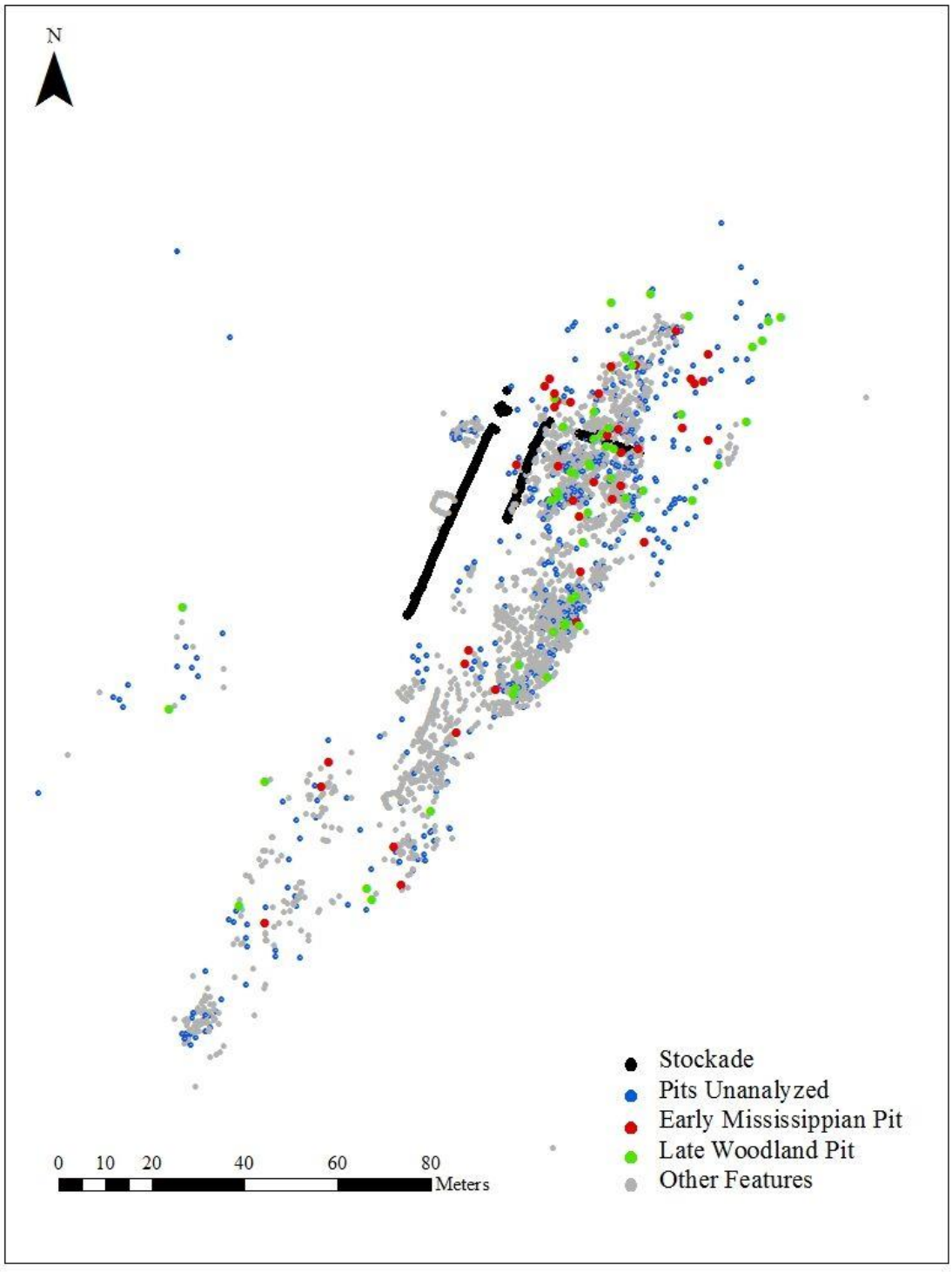

Figure 5.4 Austin Site (22TU549) Map of Select Feature Locations by Time Period

CHAPTER VI – DISCUSSION AND CONCLUSIONS

Within the last twenty years, more research has been focused on attempting to understand the transitional Late Woodland to early Mississippian period in the Southeastern United States. While this may be the case, there has been a lack of attention in the Northern Yazoo Basin because of the shortage of excavated sites. The Austin site, a known transitional period site, was used in this study to further our understanding of this critical time period. Since the purpose of this study was to determine chronology for the duration of occupancy at the Austin site, an analysis of the ceramics from a sample of pits was performed, and the resulting phase assignments permitted a comparison of pit morphology for both Late Woodland and early Mississippian pits. Until this study, a hybridized Baytown/Mississippian site had yet to be examined; this analysis allowed the definition of an "Austin" early Mississippian phase for the Upper Yazoo Basin.

Decorated ceramics were identified using the type-variety classification system. A vessel morphology analysis identified 12 vessel shapes and their associated size classes, 14 lip attributes, and four base shapes. Other attributes identified were one mode and seven rim decorations. In addition, analysis of pit morphology allowed definition of eight basic shapes, which in combination with associated ceramics provided a means to evaluate changes in the village settlement pattern through time. The data also allowed a comparison of Peabody and Austin phase pit characteristics to see if any morphological traits were discernable. Another goal of this research has been to determine how the Austin site fits into the trajectory of the Mississippian transition via comparison of documented changes in ceramics and other traits to the expectations of three proposed models: homology, analogy, and independent co-existent. Based on analysis coupled with

published data on other sites in this region, it is believed that of the three models proposed for this transition, the Austin site fits within the independent co-existent model.

Austin Phase

Based on pre-existing chronology two distinct cultural phases: Peabody and Parchman I, have been defined for the area; this analysis shows that the two appear to temporally bracket the Austin site assemblage. Based on cultural material and radiocarbon dates from the Austin site, the emergent Mississippian "Austin" phase defined here appears to date to roughly A. D. 1100 to 1300. Of the 123 pits examined at the Austin site, a total of 49 (40%) contained shell-tempered ceramics. In his typological analysis from the Barner site, Brookes (1980) completely excludes shell-tempered ceramics in the Peabody phase. Using this technological break for the Upper Yazoo Basin to distinguish between Late Woodland and "early Mississippian" components, it was possible to identify "Austin" phase pits and the correlating ceramic samples. Although the Austin site had not yet been analyzed, in 2003 Richard Walling, suggested the Austin site probably would provide a transitional early Mississippian assemblage and suggested it should be labeled the "Austin" phase.

The Austin site ceramic assemblage (21,953 sherds) has a mixture of both Late Woodland grog-tempered ceramics and lesser frequencies of Mississippian shell-tempered ceramics (Table 6.1). There is stability through time in the type-varieties seen in both Peabody and Austin phase features. They include Alligator Incised, *var. Alligator*, *Austin*, *Muddy Bayou*, *Oxbow*, and *unspecified*; Coles Creek Incised, *vars. Barner*, *Clear Lake*, *Hunt*, *Keo*, *Phillips*, and u*nspecified*; Evansville Punctated, *vars. Evansville*, *Rhinehart*, and u*nspecified*; Larto Red, *var. Larto*; Mulberry Creek Cord Marked, *vars.*

Edwards, *Porter Bayou*, *Smith Creek*, *Smoothed*, and *unspecified*; Officer Punctated, *var. Bearskin*; and Salmon Brushed, *var. Salomon*. Undecorated grog tempered ware is also present in large amounts in Austin phase deposits. Previously unencountered ceramic types that first show up in the Austin phase are the type-varieties Austin Corn Impressed, *var. Etup*; Barton Incised, *vars. Barton*, *Estill*, and *unspecified*; Grace Brushed, *var. Grace*; Hollyknowe Pinched, *vars. Hollyknowe* and *unspecified*; L'Eau Noire Incised, *var. unspecified*; Larto Red, *var. Chico*; and Winterville Incised, *var. unspecified*. Other ceramic types to first appear in Austin phase pits are unclassified shell tempered red and white painted sherds and undecorated shell tempered ware. Newly established type-varieties, based on the Austin ceramic analysis, include Austin Corn Impressed, *var. Etup*, exclusively in the early Mississippian "Austin" phase. The use of ears of corn as decorative embellishment suggests full incorporation of maize in daily activities.

Table 6.1

Count of Ceramics for the Newly Defined "Austin" Phase

"Austin" phase ceramics	**Count**
Alligator Incised, *var. Alligator*	10
Alligator Incised, *var. Austin*	8
Alligator Incised, *var. Muddy Bayou*	42
Alligator Incised, *var. Oxbow*	170
Alligator Incised, *var. unspecified*	7
Austin Corn Impressed, *var. Etup*	7
Barton Incised, *var. Barton*	32
Barton Incised, *var. Estill*	7
Barton Incised, *var. unspecified*	29
Coles Creek Incised, *var. Barner*	4
Coles Creek Incised, *var. Hunt*	1
Coles Creek Incised, *var. Clear Lake*	2
Coles Creek Incised, *var. unspecified*	1

Table 6.1 (Continued)

Unclassified Painted Wares	4
Unclassified Decorated Wares	335
Evansville Punctated, *var. Evansville*	15
Evansville Punctated, *var. Rhinehart*	11
Evansville Punctated, *var. unspecified*	11
Grace Brushed, *var. Grace*	1
Hollyknowe Pinched, *var.* Hollyknowe	1
Hollyknowe Pinched, *var. Unspecified*	1
Larto Red, *var. Chicot*	6
Larto Red, *var. Larto*	261
L'Eau Noire Incised, *var. unspecified*	1
Mulberry Creek Cord Marked, *var. Edwards*	9573
Mulberry Creek Cord Marked, *var. Porter Bayou*	7
Mulberry Creek Cord Marked, *var. Smith Creek*	12
Mulberry Creek Cord Marked, *var. Smoothed*	1942
Mulberry Creek Cord Marked, *var. unspecified*	63
Officers Puncated, *var. Bearskin*	9
Undecorated-Grog	7829
Undecorated-Shell	1527
Salomon Brushed, *var. Salomon*	19
Winterville Incised, *var. Unspecified*	5
Grand Total	**21953**

Based on a frequency seriation of Austin phase pits, it is evident that there is a very slow and gradual increase in shell tempered pottery through time but it never exceeds 50% of the Austin phase assemblage. Because of this relatively low frequency, it can be inferred that Austin potters did not quickly abandon their indigenous ceramic traditions when they began incorporating shell-tempering technology. Given that shell-tempered ceramics are the locally predominant types by the Middle Mississippian period in the Lower Mississippi Valley, it seems probable that the Austin site was not occupied after the early Mississippian period. Erin Nelson's (2016) analysis of ceramics associated with the subsequent Parchman I phase shows a considerable increase in shell tempered

ceramics; undecorated shell tempered wares contribute about 83% of her sample and 40% of decorated wares. In comparison Austin produced 16% undecorated shell tempered ware and 9.5% decorated shell tempered ceramics.

Comparing lip attributes and rim decorations seen in the Peabody and Austin pits, there also appears to be continuity through time, with the respective proportions in the samples being similar. Lip attributes include external beveled, flattened, external beveled-folded, flattened-folded, internal beveled-folded, rounded-folded, round-flattened-folded, internal beveled, pointed, rounded, and round-flattened. It's interesting to note that in the McKnight site report, Walling and Chapman (1999) state that the Hill Punctated mode appears to be strictly a Peabody trait. However, Hill Punctated Mode was identified in Austin phase contexts, although the mode is expressed only on grog-tempered ceramics. Rim decorations that show continuity include pointed edge rims, cord marking, incised lines, notches, and punctations.

At the McKnight site, bowls and jars are the dominant vessel form during the Peabody phase (Walling and Chapman, 1999) which is also true at the Austin site. There are no major distinguishable changes from the Peabody to Austin phase in proportions of bowls, jars, plates, and restricted bowls. Furthermore, bowls and jars continue to be roughly the same size, with the exception that Mississippian plates and restricted bowls are slightly larger than their Late Woodland counterparts. Ceramic bases during the two phases are also consistent with the use of flat, square, and rounded shapes.

Although the introduction of shell tempering can be viewed as a horizon marker for the Mississippian period, the inclusion of other "Mississippian" ceramic traits help to support and define the "Austin" phase. These additional traits include early Mississippian

vessel forms and elaborate decorations such as rim effigy bowls, bottles, handled jars, and salt pans (McNutt et al. 2003, 200). These changes in the ceramic assemblage might represent functions in ceremonial contexts, burial programs, or validation of social and political status (McNutt et al. 2003). New forms are represented solely in Austin phase pits and include one rim effigy bowl, 12 subglobular bottles, 12 handled jars, and one salt pan. Another defining characteristic of early Mississippian assemblages is the appearance of "thin wares". Several archaeologists (Phillips, 1970; Williams, 2003; Williams and Brain, 1983) have suggested that this could be a horizon marker specific to the Lower Mississippi Valley. In the Austin phase pits, "thin wares" are present, mainly undecorated but also occurring as decorated types such as Barton Incised. Also, the unclassified shell tempered red and white painted sherds appear to be an attempt to emulate decorative styles on Mississippian, *var. Coker* ware. However, the vessel wall thickness on these painted sherds is slightly thicker compared to examples from the Lower Yazoo Basin. Likewise, red painted sherds on shell tempered pottery could be an attempt to emulate Varney Red Filmed pottery. At the Austin site, there is also the inclusion of more elaborate rim treatments such as scalloped rims. One rim had both incising and punctation. At the Barrett site, the early Mississippian component had "Mississippian modes" that include a "funnel spout" sherd (House and House 1985, 131). This form was documented in Austin phase pits. While bases remain relatively constant throughout the Peabody and Austin phase, there is one shell-tempered podal support and a gradual increase in the use of platform bases. Other ceramic artifacts that mark a change in the cultural material during the Austin phase, but are not specifically part of vessels, are ceramic pendants/disks, tools, pipe fragments, and clay coils.

In addition to defining the Austin phase ceramic assemblage, a second goal was to sort pit morphology by phase, to permit a recognition of possible changes in pit use through time. In addition, the spatial distribution of pits was examined as a means of evaluating possible changes in village settlement layout. Comparing pit morphology from the Peabody to Austin phases shows the continuous use of basin-shaped, flat-based cylindrical, and round-base pits. This continuity suggests Austin phase occupants are the same indigenous Late Woodland population *in situ*. Bell-shaped pits are seen solely during the Austin phase, and although they could be viewed as an adopted "Mississippian" trait, they have been observed elsewhere as a Peabody phase (Brookes 1980) trait also. The absence of Peabody phase bell-shaped pits at Austin could be the result of a small sample size. When examining the pit locations at the Austin site, it is apparent that there are no major distinguishable changes in village settlement patterns between the Peabody phase and Austin phase based on the distribution of pits. In addition, the analysis documented two intrusive Austin phase pits into a Peabody phase pit, providing evidence of the continued use of the same village space. One apparent difference in the distribution is that Late Woodland pits are spread more widely over the site, while Early Mississippian pits are more confined, presumably influenced by the stockade boundaries built during the Austin phase.

Overall, the ceramic analysis establishes that the Austin site is indeed a transitional Late Woodland to early Mississippian site. This study has continued to confirm the previously identified traits of the Late Woodland Peabody phase as well as documenting and defining a newly established emergent Mississippian "Austin" phase

for the northern Yazoo Basin. This Austin phase is best characterized by continuity from the prior phase and the gradual introduction into the ceramic assemblage of Mississippian types, new vessel forms, and new decorative modes. This continuity suggests that the people of Austin deliberately chose to retain their indigenous Baytown culture reflected by pottery making as well as continuity in pit form and community patterns in the face of exposure to Mississippian traits. However, the introduction (although at a small and gradual pace) of Mississippian traits suggests some form of cultural influence from contemporaneous Mississippian populations.

Transition in the Northern Yazoo Basin

Because the Austin site was occupied during both the Late Woodland and early Mississippian "transition" period, it can contribute to a general understanding of how Mississippian culture became a part of life for the people in the Upper Yazoo Basin. For this study, three models were proposed, homology, analogy, and co-independent existence, along with their respective models about what could be expected in the analysis of cultural material. Based on this analysis for each model it is believed that the Austin site best fits the independent co-existent theory. This model argues that different populations should not be viewed as mutually exclusive or unrelated because they are linked together through contact and interaction (Blitz and Lorenz 2002). The model suggests that some sites might exhibit sudden and dominating changes in their material culture and settlement patterns, which would be suggestive of rapid replacement of one population with another. However, contemporaneous sites might have a mixture of indigenous Late Woodland traditions and Mississippian characteristics that suggest *in situ* development. The comparison of Peabody and Austin phase pits demonstrates that the

population occupying the Austin site were indigenous Late Woodland people who slowly incorporated Mississippian traits into their culture. The stimulus for this change may have been interactions with intrusive Mississippian peoples from the surrounding area, a situation that appears to be represented at the Buford site. This interaction and the resulting gradual change is best accounted for by the co-independent existence model.

Juxtaposing the Buford and Austin site assemblages, however, strongly suggests variability in the rate of incorporation of Mississippian material culture in Upper Yazoo Basin. It is possible that the two are at least partially contemporaneous. For now, the data suggest the possibility of two early Mississippian phases: Austin and Buford. When examining the material culture, it is evident that these two sites appear to be experiencing the "Mississippian" phenomenon in fundamentally different ways. The Austin phase suggests an indigenous Late Woodland population gradually adopting Mississippian technology (shell tempering) and stylistic attributes. At Austin, there is a continuity in the ceramic assemblage of Baytown type-varieties plus uniformity in bowl and jar shapes. Lip attributes, rim decorations, and bases also remain unchanged. Likewise, pit shapes remain constant. However, although the Late Woodland ceramic assemblages remain largely consistent there is a gradual adoption of Mississippian styles. The ceramic assemblage shifts to include shell-tempered pottery, new type-varieties, elaborate decoration, and new vessel forms. In addition, a stockade was built along with wall-trench houses. Increasing reliance on maize agriculture is indicated by the Corn Impressed ceramic decorative treatment, maize found in pits, and the disease patterns from the human remains. The Buford phase, which lacks persistent Late Woodland traits and shares traits with other Mississippian populations living in the Central Mississippi

Valley, is suggestive of an intrusive Mississippian population that date between A.D. 900 and 1100. This Buford phase more than likely overlaps with both the Peabody date and Austin date phases and could be seen as a catalyst for Mississippian trait introduction at the Austin site.

But how exactly did the Austin site population have contact with Mississippians introducing new styles and technology? Perhaps via both indirect and direct contact with Mississippian peoples. In the Upper Yazoo Basin, Late Woodland peoples were co-existing with Mississippian peoples who migrated into their area. It is believed that these intrusive Mississippian peoples began to travel down river from southeastern Missouri and/or northeast Arkansas to occupy a few open spaces in the Upper Yazoo Basin. To the south of the Austin site, the Buford site in Tallahatchie County, Mississippi and the French site in Holmes County, Mississippi have been suggested to represent early Mississippian intrusion sites based on the sudden change in their ceramic assemblages (Marshall 1988; McNutt 2015). In the ceramic assemblage, Marshall (1988) identified a red-filmed pottery complex from the Buford site. This Varney Red filmed pottery can be seen in the Upper St. Francis Basin beginning about A.D. 800. Between A.D. 900 and 1100 the type is well established at sites in the lower St. Francis Basin (Barrett site) and in northeast Arkansas (Zebree site) (House and House, 1987; McNutt 2015, 145; Morse and Morse, 1990). This red-filmed horizon marker can also be tied to a roughly contemporaneous Shelby Forest site in southwest Tennessee dating from A.D. 1075-1125 (McNutt 2015, 145-146). It is evident that a wide distribution of sites belonging to early Mississippian “intrusive” complexes in the Central Mississippi Valley are marked by an abundance of Varney Red Filmed pottery. Because the appearance of Varney Red

filmed pottery is suggestive of intrusive Mississippian groups and is absent in the Austin site ceramic assemblage, it is likely the indigenous population at the Austin site were not initially displaced nor did they whole-heartedly assimilate these Mississippian traits. Instead, it would appear that the Austin site lived "independent but co-existent" lives with neighboring Mississippian populations.

While the Austin site began to incorporate more Mississippian traits into their culture, the way in which the transfer of these new cultural ideas spread to the people of Austin could have happened in a variety of different ways such as the peaceful trade of items and ideas, intermarriage between the groups, or violence and warfare. Evidence of trade items would be represented through non-utilitarian and/or prestige goods (Buchner 2003, 167). Archaeologists (Kowalski 2009; Weinstein 2004, 4:27; Williams and Brain, 1983) have also argued for direct contact between sites in the Yazoo Basin and Cahokia and/or neighboring villages through the appearance of Cahokian and Cahokia-like pottery. One indication of this at Austin are "rolled rims" (William and Brian, 1983:97), considered to reflect Cahokian influence, which are seen exclusively in Austin phase pits. In fact, the Austin site provides insight into how indigenous Late Woodland groups in the Upper Yazoo Basin participated in multiregional interactions. In addition to the type-varieties that reflect Baytown continuity there are type-varieties that suggest the Austin site occupants had contact with the Plum Bayou culture in east central Arkansas and the Coles Creek culture in the Lower Yazoo Basin. This would not be unexpectable that indigenous populations incorporated migrant Mississippian groups into existing regional spheres of interaction.

The Austin site appears to have been abandoned by the indigenous population at the end of the Austin phase (A.D. 1300). Some evidence suggestive of possible warfare is the stockade construction, possibly a reaction to territorial disputes with Mississippian peoples settling their area. A mass grave of ten individuals including a decapitation at the Austin site is indicative of possible conflict between two populations. Post abandonment Austin site occupants might have merged with bigger groups at large mound complexes, such as the Parchman Place site, for protection. This possibility is supported by similarities between the Austin and Parchman I phase ceramic assemblages. The two share type-varieties, such as Barton Incised, Winterville Incised, Larto Red, Mulberry Creek Cordmarked, Salomon Brushed, *var. Salomon*; and L'Eau Noire Incised. Also, the two phases share undecorated shell tempered ware, undecorated grog tempered ware, and red and white painted wares. Parchman I, being later has a higher proportion of shell tempered ware.

The apparent immigration of Central Mississippi Valley populations into the Lower Mississippi Valley no doubt occurred due to a number of different factors, however, assessment of which is complicated by both time and geography. It is difficult to imagine that the initial local reactions between the two populations were overtly hostile or indigenous populations would have moved immediately. It is likely that during some initial peaceful period, an attempt was made to mesh harmoniously. The Austin phase material culture suggest this was the case. The fact that a stockade was eventually built and the site abandoned may be an example of the adage that "familiarity breeds contempt." In any case, it appears that the indigenous population eventually left or were

driven out of their traditional homeland by the intruders. The Austin phase provides an unusual example of blended material culture during this tumultuous time.

Future Research

It is hoped that this thesis will assist in future archaeological work attempting to recognize the complex transition from Late Woodland to early Mississippian period in the northern Yazoo Basin. This study provides one example of this transition in the Upper Yazoo Basin. However, it does not completely solve the debate and more excavations and research will be needed before a holistic explanation of the Mississippian phenomenon can take place. Future archaeologists will need to continue examining other transitional sites in the Lower Mississippi Valley. It appears when examining available data from further south, Lower Mississippi Valley populations adoption of Mississippian traits were either significantly later or absent altogether. Another piece of the puzzle is why Mississippian populations were deciding to migrate and move in alongside Late Woodland peoples, especially if there was hostility between the groups.

Additionally, there are several avenues of research that can be explored in regard to the Austin site. First, the other 75% of pits and their corresponding ceramic assemblages still need to be examined so a completed typology sample can be established for both the Peabody and Austin phase pits. Furthermore, the ceramics examined for this study still need to have the undecorated wares categorized into type-varieties so that they can be compared to other assemblages. Ideally, the rest of the Austin sites cultural material will be analyzed including faunal, daub, lithics, and botanical remains for a well-rounded understanding of activities taking place at the site. In addition to, further examination of the wall trench houses, post molds, stockades, hearths, and pits need to be

completed. Overall, there is still a vast amount of knowledge that can be gained from the Austin site that will help contribute to the understanding of the important transitional period in the northern Yazoo Basin as well as the overarching Mississippian phenomenon in the Southeast.

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