

Artifact Analysis for the 1972-1975 North of Mound R Excavations at
the Moundville Site (1TU500), West-Central Alabama



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Chapter 1: Site History and Research Design

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Introduction

From 1972 to 1975, nine sessions of the University of Alabama's Field School, Ant 119, worked to investigate the ridge north of Mound R at Moundville, Alabama (1TU500) under the direction of David DeJarnette (Figure 1.1). Excavations on the eastern portion of the site were completed by 1973 following the first five sessions of the field school and produced units 120, 120 R5, 125 R5, 130 R5, 135 R5, 140 R5, and 145 R5. Subsequent years saw continued digging at the ridge but materials obtained past the fifth field school will not be factored into the site analysis. Artifacts recovered from the eastern portion of the project were subject to study by the 2015 Spring semester ANT 466 Lab Methods in Archaeology class taught by Dr. John Blitz and graduate teaching assistant Jessica Kowalski. The analysis team operated with the intent to process the artifacts and establish a chronology of occupation and activity at the ridge north of Mound R.

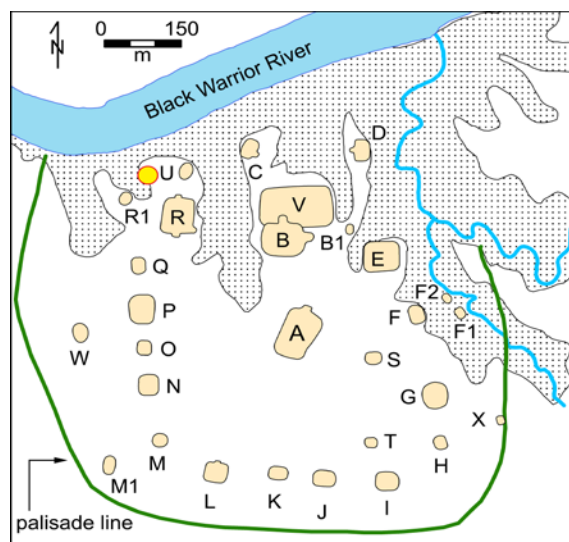


Figure 1.1 Map of Moundville with locus of interest highlighted.

The Moundville Site

The Moundville settlement, currently operating as an Archaeological Park under the jurisdiction of the University of Alabama (UA), is located within the alluvial valley of the Black Warrior River in west-central Alabama. The environmental processes at work in the river valley were vital to the establishment and continued growth of the site, providing regular floods to recharge the nutrients in the soil and an ideal habitat for wild game. While corn farming occupied the floodplains, the main body of Moundville was developed on a terrace that resisted the encroachment of the Black Warrior's waters (Blitz 2008; Knight 2010).

Though only 29 remain visible today, 32 mounds originally existed upon the 185 acres enclosed within the palisade line. Most are situated along the periphery of a central plaza and were constructed in precise alignment with the cardinal directions. Mound A deviates from this pattern with its central location on the plaza and lack of adherence to the orientation of the other mounds. The north edge of the plaza hosts the largest earthworks, such as Mound B, and the size of mounds noticeably decrease as one moves south (Knight 2010).

Phases of activity at the site are most often categorized by changes in pottery decoration and shape. The shifting styles found throughout Moundville's occupation allow for the demarcation of four distinct time phases: Moundville I (A.D. 1120-1260), Moundville II (A.D. 1260-1400), Moundville III (A.D. 1400-1520), and Moundville IV (A.D. 1520-1650) (Knight 2010). The sorting of ceramic artifacts into their respective time phases gives a clear indication of the activities occurring at a site and are integral to the analysis of any unit.

Outside of stylistic changes in the artifacts, Moundville history can also be divided by its phases of occupation beginning with its settlement around A.D. 1120. Transitioning out of the Woodland tradition and into the early Mississippian, Moundville had few people but ample resources. Mound X was a product of this settlement period but was left behind during the next

period of expansion that began around A.D. 1200. The major earthworks and the palisade wall (built right through the middle of Mound X) were constructed during this second phase and with a need for defense as a possible motivation, people quickly congregated at the site. A new social order of ranked groups and individuals rapidly developed as Woodland styles were abandoned and Mississippian culture dominated. This time period was Moundville's most active phase as it operated as the powerful capital town of the river valley. By A.D. 1300, Moundville had undergone another occupational shift. This change was accompanied by a large decline in population (the reason for which remains unknown), and the maintenance of many of the smaller mounds as well as the palisade was discontinued. The location persisted as a ceremonial center and acquired more graves than citizens, though most of the larger mounds remained in use. Moundville was truly in decline by A.D. 1450 with a decrease in burials and complete cessation of mound-building. Few earthworks remained in use and the site was completely abandoned by A.D. 1600 (Blitz 2008). Knowledge of Moundville's distinct phases of occupation and activity will be utilized in the analysis and interpretation of the artifacts found at the locus north of Mound R.

The Ridge North of Mound R

Though some theories exist, DeJarnette's true motives for designating the ridge north of Mound R for excavation are unknown. Charles Moorhead, a graduate student and assistant during the first field school of 1972, surmised that DeJarnette was influenced by the pleas of the graduate students who wished to dissuade him from digging within the park boundaries. This supposedly encouraged him to choose a location that had been previously disturbed. The ridge north of Mound R suited this requirement due to its appearance in the writings of Clarence B.

Moore, whose investigations of the area in 1906 had revealed a deep deposit of midden. If this history of artifact discoveries at the ridge was indeed the motivation behind DeJarnette's planning, it proved fruitful. His many field school sessions resulted in the recovery of a wealth of artifacts (Baggett 2000).

DeJarnette's work produced plentiful artifacts that remain available for study but much of the written data accumulated over the course of his excavations has not survived. Not a single profile drawing relevant to the units under analysis and only one student's field notebook is still in existence. Some documentation was salvaged (Figure 1.2), including contour maps and feature forms, but the loss of data was unfortunate and is an obvious setback in the interpretation of the site (Baggett 2000).

Documentation from Locus North of Mound R, 1972-1975 Field Schools	
Comments	
Maps	
1	Elevation of Mound R
2	Contour map for Locus North of Mound R
3	Contour map around pond North of Mound R
Profile Maps	
1	Profile of West wall, DeJarnette's field school pit, with notes (Michigan 1978)
2	Profile of North wall (2), DeJarnette's field school pit, with notes (Michigan 1978)
Photos	
April 1972	20 photographs, 3 1/2" X 3 1/2" black/white, site/excavation/lab work--0 negatives
Nov. 1973	23 photographs, 4 1/2" X 3 1/2" black/white, site/excavation/lab work--21 negatives
Fall 1973	11 photographs, 3 1/2" X 3 1/2" black/white, site/excavation/lab work--0 negatives
Fall 1973	4 photographs, 9 1/2" X 7 1/2" black/white, site/excavation--2 negatives
Slides	
July 1972	8 slides, color.....nice features, lab work
June 1973	9 slides, color.....people screening, excavating
Summer 1973	40 slides, color.....lab work, people setting up parachute for shade
October 1973	21 slides, color.....views of locus, lab work, features
Summer 1974	12 slides, color.....lab work, excavation
Field Notebooks	
only 1 survives	Steve Clark's Ant. 119 field school notebook (8" X 5") June 6-July 5 1973....maps,notes
Field Specimens	*each field specimen has a corresponding index card listing artifacts
Feature Forms	*each feature form has a corresponding map of feature excavated

Figure 1.2 Summary of Available Documentation

Methods of Excavation

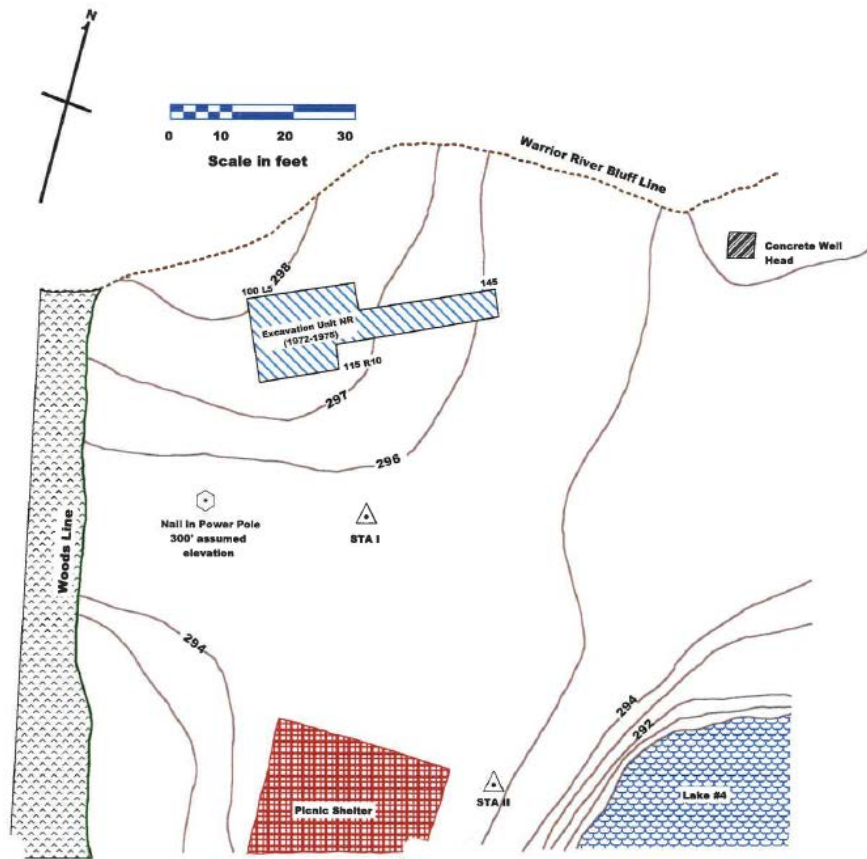


Figure 1.3 Contour Map for the Locus North of Mound R

Having chosen a location of interest (Figure 1.3), DeJarnette began the field school by having his students survey the area and take elevations using an alidade. Brush and debris were cleared and soon the site was staked out in five-foot intervals along a north/south axis. The east/west axis was staked out perpendicular to the initial line. Five-by-five foot units were originally developed from east to west and denoted according to their position in relation to the datum (Baggett 2000). As an example, the Unit 110 R5 exists 110 feet directly forward and 5 feet right from the datum.

The main trench, consisting of units 105 R5 to 145 R5, was the first portion of the location to be excavated (Figure 1.4). Three squares to the south on the western end were soon to

follow. By 1973, the units of interest on the eastern side of the site had been taken down to sterile soil at Level 11, or about 44” below the surface (Baggett 2000).

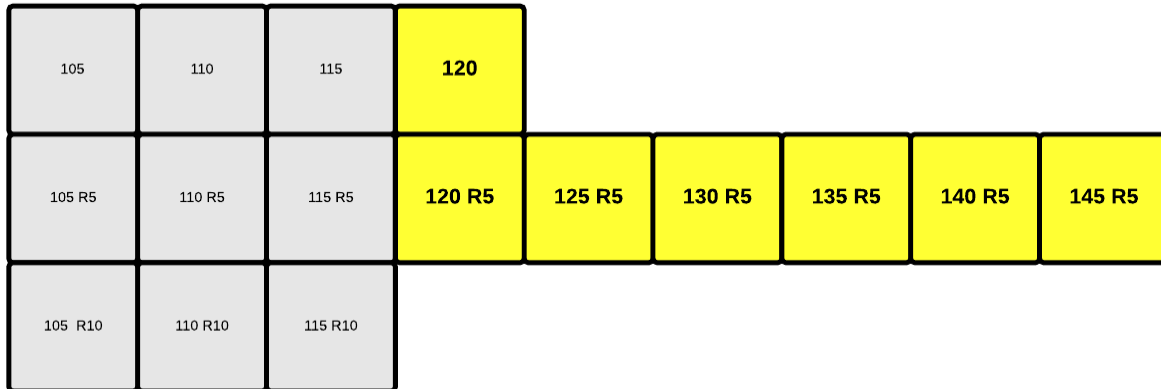


Figure 1.4 Excavation Unit Showing Squares of Focus in Yellow

DeJarnette’s spring and fall field schools consisted mostly of lecture and only one day of excavation each week. The summer field school would excavate units four days per week. . Though present regularly, DeJarnette often left the supervision of the site to his more seasoned students. Work on the units would begin with the removal and screening of the top layer of sterile soil, taken out by shovel. After reaching about a foot in depth, students would proceed in four-inch levels using only trowels. Levels were designated by placing a measuring stick into the unit and checking the distance to the surface. Many methods were used to screen the soil, though flotation screening was never implemented. Any artifacts discovered underwent rough sorting and were placed in paper bags on which provenience information was recorded (Baggett 2000). Feature forms (Figure 1.5) were recorded throughout the excavation with each unique instance of a feature being assigned an individual number (Bays 2000).

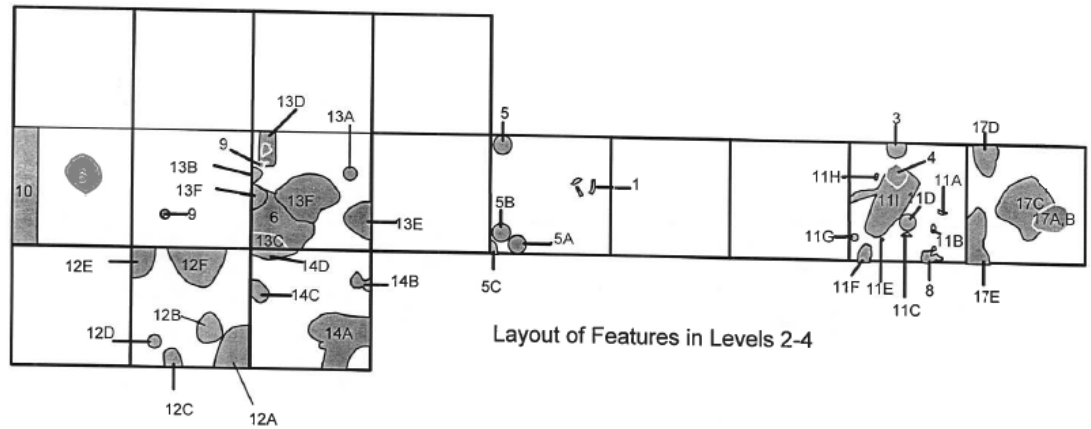


Figure 1.5 Example of Feature Form

The feature form analysis (Figure 1.6) has been edited to include only the units of interest: 120, 120 R5, 125 R5, 130 R5, 135 R5, 140 R5, and 145 R5. With the complete lack of profile drawings and only limited feature information, little can be determined about the stratigraphy of the site.

Feature Form Analysis

DeJarnette Field School (1972-1975)

Compiled by Ryan Bays

Feature	Square	Level	Depth	Definition	Description	Observer	Date
1	125 R5	2	6"	Large pot sherds.	Bright orange area; charcoal pot sherds; grey mottled clay.	Albright, Burleson, Unger	3/7/72
3	140 R5	3	10"	Oval pit	Mottled light yellow-dark brown sand; single incidence of soil discoloration.	Herrin, Hill, Huffstutler	3/14/72
4	140 R5	3	10"	Oval pit	Dark brown-black sand. Dug 2" below Feature 3, believe this feature to be a tree branching off.	Herrin, Hill, Huffstutler	3/14/72
5	125 R5	4	16"	6" Circular area	Dark area; shell tempered pottery; 50 grams sand.	Brian M. Powell	N/A
5A	125 R5	4	16"	10" Deep post mold	2 pieces pottery.	Brian M. Powell	N/A
5B	125 R5	4	16"	10" Deep post mold	3 pieces pottery.	Brian M. Powell	N/A
5C	125 R5	4	16"	9" Deep area	2 pieces shell tempered pottery; 1 piece flint.	Brian M. Powell	N/A
7	125 R5	6	24"	See Following	See Following.	N/A	N/A
7A	125 R5	6	24"	10" Deep pit; 5"x7"		N/A	N/A
7B	125 R5	6	24"	8" Deep pit; 1.1"x.8'		N/A	N/A
7C	125 R5	6	24"	11" Deep pit; 1"x.9'		N/A	N/A
7D	125 R5	6	24"	14" Deep pit; .9"x.6'	Concentration of Mville Black Film Pottery.	N/A	N/A
8	140 R5	3	10"-13"	Deer bone, 8"x5"	In possible pit which was not dug.	Charles L. Herrin	4/25/72
11	140 R5	4	0'-16"	Large pit w/possible post holes or small pits around	2 Post molds are yellowtan; others are black.	Charles Herrin	6/8/72
11	140 R5	5	16"-20"	3' 7.5" Post mold	Corn 1' 10.5"; 111 = larger than earlier thought.	Howell Davis	6/12/72
11A	140 R5	4	0'-16"	Bone		Charles Herrin	6/8/72
11B	140 R5	4	0'-16"	Post mold		Charles Herrin	6/8/72
11C	140 R5	4	0'-16"	Post mold		Charles Herrin	6/8/72
11D	140 R5	4	0'-16"	Post mold		Charles Herrin	6/8/72
11E	140 R5	4	0'-16"	Not sure		Charles Herrin	6/8/72
11F	140 R5	4	0'-16"	Post mold		Charles Herrin	6/8/72
11G	140 R5	4	0'-16"	Post mold		Charles Herrin	6/8/72
11H	140 R5	4	0'-16"	Not sure		Charles Herrin	6/8/72
11I	140 R5	4	0'-16"	6"x8" Pit	Concentration of corn.	Charles Herrin	6/8/72
16A	130 R5	7	24"-28"	Large area	Could be wall of house; sandy.	Glenda Allen & Eddie Halls	6/19/72
16B	130 R5	7	24"-28"	7"x7" Post hole	Dark colored earth.	Glenda Allen & Eddie Halls	6/19/72
16C	130 R5	7	24"-28"	7"x7" Post hole	Dark colored earth.	Glenda Allen & Eddie Halls	6/19/72
16D	130 R5	7	24"-28"	3"x3" Hole	Filled with pure sand.	Glenda Allen & Eddie Halls	6/19/72
16E	130 R5	7	24"-28"	1'x1'1" Possible pit	Maybe Post hole or fireplace; large conc. charcoal.	Glenda Allen & Eddie Halls	6/19/72
16F	130 R5	7	24"-28"	Large Pit	Small conc. Charcoal; dark colored earth.	Glenda Allen & Eddie Halls	6/19/72
16G	130 R5	7	24"-28"	5"x6" Post hole	Contains dark colored earth.	Glenda Allen & Eddie Halls	6/19/72
16H	130 R5	7	24"-28"	4"x4" Post hole	Contains dark colored earth.	Glenda Allen & Eddie Halls	6/19/72
16I	130 R5	7	24"-28"	3"x3" Post hole	Contains dark colored earth.	Glenda Allen & Eddie Halls	6/19/72
16J	130 R5	7	24"-28"	3"x3" Hole or pit/tree hole	Entire area is soft.	Glenda Allen & Eddie Halls	6/19/72
17A	145 R5	3	8"-12"	Area	Basket fragments.	Charles L. Hening	6/20/72
17B	145 R5	3	8"-12"	Area	Acorn concentration.	Bleine Ensor	6/20/72
17C	145 R5	3	8"-12"	Area	Charcoal concentration.	Bleine Ensor	6/20/72
17D	145 R5	3	8"-12"	Area	Charcoal concentration.	Bleine Ensor	6/20/72
17E	145 R5	3	8"-12"	Area	Charcoal concentration.	Bleine Ensor	6/20/72
19A	135 R5	6	20"-24"	Retangular pit	Large amounts of bone.	Karen Holton &	7/5/72
19A	135 R5	9,10	N/A	Possible slave burial	Nails, small fragments skull bone, black film pot sherds.	Ronnie Bedsole	7/7/72
19B	135 R5	6	20"-24"	Post mold	N/A	Harwell Davis	7/5/72
19C	135 R5	6	20"-24"	Post mold	N/A	Karen Holton &	7/5/72
19D	135 R5	6	20"-24"	"See Feature 11"	N/A	Harwell Davis	7/5/72
21A	120 R5	6	24"	8.5" Post mold	Small armts pottery; large armts charcoal; few animal bones, large pieces of daub.	Watson Sherman	2/6/73
21B	120 R5	6	24"	5.5" Post mold	See 21A	Watson Sherman	2/6/73
21C	120 R5	6	24"	7" Post mold	See 21A	Watson Sherman	2/6/73
21D	120 R5	6	24"	4" Post mold	See 21A	Watson Sherman	2/6/73
21F	120 R5	6	24"	Pit	See 21A	Watson Sherman	2/6/73
22A	135 R5	6	24"	14" deep Post mold	Small amounts pottery, charcoal & animal bones.	Watson Sherman	2/6/73
22B	135 R5	6	24"	20" deep Post mold	Small amounts pottery, charcoal & animal bones.	Watson Sherman	2/6/73
22C	135 R5	6	24"	Large irregular pit	N/A	Watson Sherman	2/6/73
23A	145 R5	6	20"-24"	13" deep Post mold	Small bone, pot sherds; shell tempered & fired clay with large concentration of charcoal.	Steven Sims	2/6/73
23B	145 R5	6	20"-24"	8" deep Post mold	Pot sherds, shell tempered; some charcoal, many bone fragments.	Steven Sims	2/6/73

23C	145 R5	6	20"-24"	8" deep Post mold	Charcoal & clay; one shell tempered pot sherd.	Steven Sims	2/6/73
23D	145 R5	6	20"-24"	Large pelvic bone	Large concentration of animal bone in pit.	Steven Sims	2/6/73
24A	135 R5	7	28"	5.25" deep Post mold	Small amounts of charcoal & pottery.	Carol Watson	2/27/73
24B	135 R5	7	28"	11.5" deep Post mold	Small amounts of charcoal & pottery.	Carol Watson	2/27/73
24C	135 R5	7	28"	11.5" deep Post mold	Small amounts of charcoal & pottery.	Carol Watson	2/27/73
24D	135 R5	7	28"	16.25" deep Post mold	Small amounts of charcoal & pottery.	Carol Watson	2/27/73
24E	135 R5	7	28"	11.5" deep Post mold	Small amounts of charcoal & pottery.	Carol Watson	2/27/73
24F	135 R5	7	28"	Animal Bones	Probably not a pit due to lack of discoloration of soil.	Carol Watson	2/27/73
25A	130 R5	8	32"	7.5" Post mold	Few pot sherds & charcoal.	Nick Sherman	3/13/73
25B	130 R5	8	32"	7.25" Post mold	Few pot sherds & charcoal.	Nick Sherman	3/13/73
25C	130 R5	8	32"	10" Post mold	Few pot sherds & charcoal.	Nick Sherman	3/13/73
25D	130 R5	8	32"	10.75" Post mold	Few pot sherds & charcoal.	Nick Sherman	3/13/73
25E	130 R5	8	32"	5" Post mold	Few pot sherds & charcoal.	Nick Sherman	3/13/73
25F	130 R5	8	32"	5.5" Post mold	Large hinge joint of bone found.	Nick Sherman	3/13/73
25G	130 R5	8	32"	8.75" Post mold	N/A	Nick Sherman	3/13/73
25H	130 R5	8	32"	8.5" Post mold	N/A	Nick Sherman	3/13/73
25H	130 R5	8	32"	Area	Large area of discolored soil.	Nick Sherman	3/13/73
28A	125 R5	9	32"-36"	9"x4" Post mold	Almost black color.	Steve Clark	6/20/73
28B	125 R5	9	32"-36"	7" diam Post mold	N/A	Steve Clark	6/20/73
28C	125 R5	9	32"-36"	8"x6" Post mold	Dark color.	Steve Clark	6/20/73
28D	125 R5	9	32"-36"	Large pit, maybe two.	Almost black color; 1'11" long x 11" wide.	Steve Clark	6/20/73
28E	125 R5	9	32"-36"	5"x6" Post mold	Mushroom shaped.	Steve Clark	6/20/73
30A	145 R5	8	28"-32"	Wall	Deep mottled red color & dark colored daub.	Larry Barnett	6/26/73
30B	145 R5	8	28"-32"	Wall	Deep mottled red color & dark colored daub; contains several post molds & pot sherds.	Larry Barnett	6/26/73
30C	145 R5	8	28"-32"	3.5"x3.5" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30D	145 R5	8	28"-32"	3.3"x2.7" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30E	145 R5	8	28"-32"	3.5"x2.5" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30F	145 R5	8	28"-32"	5.5"x5" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30G	145 R5	8	28"-32"	3.75"x2.5" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30H	145 R5	8	28"-32"	5.5"x5.5" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30I	145 R5	8	28"-32"	5.5"x4" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30J	145 R5	8	28"-32"	4.5"x2.75" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30K	145 R5	8	28"-32"	3.5"x3" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30L	145 R5	8	28"-32"	3"x2.75" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30M	145 R5	8	28"-32"	5"x4.5" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30N	145 R5	8	28"-32"	5"x2" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
30O	145 R5	8	28"-32"	3.5"x3" Post mold	Yellow/red sand.	Larry Barnett	6/26/73
32A	130 R5	11	40"-44"	Pit	Dark brown soil; light yellow clay; charcoal & bone fragments.	Charles Collins	6/28/73
32B	130 R5	11	40"-44"	Pit	Dark brown soil; heavier charcoal deposits.	Charles Collins	6/28/73
32C	130 R5	11	40"-44"	3"x3" Post mold	Brown clay with small charcoal deposits.	Charles Collins	6/28/73
32D	130 R5	11	40"-44"	7"x7" Post hole	Brown clay with small amounts red & yellow clay.	Charles Collins	6/28/73
34A	125 R5	11	40"-44"	5"x5.5" Post mold	High charcoal concentration.	Connie Adams,	6/29/73
34B	125 R5	11	40"-44"	6"x6.5" Post mold	Dark brown clay; traces of pale yellow clay; charcoal deposits.	Jeannie Bear,	6/29/73
34C	125 R5	11	40"-44"	7.25"x7" Post mold	Dark brown clay; charcoal deposits.	Jim Finley,	6/29/73
34D	125 R5	11	40"-44"	6.75"x3" Post mold	Charcoal deposits.	Connie Adams,	6/29/73
34E	125 R5	11	40"-44"	Area	Grey clay area; charcoal deposits.	Jeannie Bear,	6/29/73
34E	125 R5	11	40"-44"	Area	Grey clay area; charcoal deposits.	Jim Finley,	6/29/73
35A	120 R5	11	40"-45"	Pit	Dark brown clay/sandy soil; small concentration gravel; charcoal fragments.	Nana Cherry, C. Collins,	7/2/73
35B	120 R5	11	40"-45"	6"x6" Post mold	Red/brown clay; pottery fragments; pieces of charcoal, bone and gravel.	Larry Barnett	7/2/73
35B	120 R5	11	40"-45"	6"x6" Post mold	Red/brown clay; pottery fragments; pieces of charcoal, bone and gravel.	Nana Cherry, C. Collins,	7/2/73
35B	120 R5	11	40"-45"	6"x6" Post mold	Red/brown clay; pottery fragments; pieces of charcoal, bone and gravel.	Larry Barnett	7/2/73
40	120	9	38"	28"x16" oblong Pit	Depth undetermined; bone, pottery.	L.B. Herring& WW Adams	Summer 74
47A	120	11	42"	4" wide; 3" deep Post hole	N/A	Lyle B. Herring	Summer 74
47B	120	11	42"	4" wide; 5" deep Post hole	N/A	Lyle B. Herring	Summer 74
52A	120	11	41"	4" diam; 2" deep Post hole	1 Warrior Plain.	J.D. McCarry &	Summer 74
52B	120	11	41"	3"x2"; 2" deep Post hole	N/A	J. Howard	Summer 74
52C	120	11	41"	2.5"x4"; 2" deep Post hole	N/A	J.D. McCarry &	Summer 74
52D	120	11	41"	7"x4.5"; 5" deep Pit	3 Warrior Plain.	J. Howard	Summer 74
56A	120	12	46"	5.5"x6" Pit	N/A	Joe Howard	Summer 74
56B	120	12	46"	1"x1.5" Pit	N/A	Joe Howard	Summer 74
56C	120	12	46"	7"x8" Pit	N/A	Joe Howard	Summer 74
56D	120	12	46"	6.5"x6.5" Pit	N/A	Joe Howard	Summer 74
67	120	14	56"	3" diam; 4" deep Post mold	Circular; No associations.	Janice Hutchinson	Summer 74

Figure 1.6 Feature Form Analysis

Research Design and Methods

Materials obtained in the excavation were divided according to major artifact classes and then assigned to students for analysis. Students were instructed and monitored throughout the process by the graduate teaching assistant Jessica Kowalski and Dr. John Blitz. Ceramic analysis, constituting the second chapter, was undertaken by Nathan Brown and AnnaKate Faulk. Vessel forms were examined and recorded in the third chapter by Emily Canada and Shannon Sproston. Following this is the ground stone analysis, produced by Chandler Burchfield, and lithic analysis, reported by Alex Jones. The sixth chapter, written by Rob Barlow and Samantha Sutton, covers the analysis of faunal remains. The individual reports have research questions particular to the artifact class but the concerns of the cumulative analysis are: 1) the chronology of occupation at the site, 2) the activities that occurred on the ridge north of Mound R, and 3) the way in which the results correspond with existing knowledge of Moundville history.

Chapter 2: Pottery Types

Nathan Brown and Annakate Faulk

Introduction

The pottery assemblage being analyzed during the 2015 Laboratory Methods course originated from excavations conducted under the supervision of DeJarnette in the early 1970s. The excavation units were located at Moundville Archaeological Park, Moundville, Alabama north West of Mound R. Out of the original sixteen units from the 1970s excavations only six test units were examined for this analysis. The six test units which were analyzed are: 120 R5, 125 R5, 130 R5, 135 R5, 140 R5, and 145 R5.

In this analysis we placed our focus on any diagnostic types of pottery found within this assemblage. Focusing on these pottery types helped us determine if there was a relationship between their placement within specific levels and an overall chronological sequence. Using these observations, an approximate date of occupation could be determined for the area north of mound R. Therefore, some of the questions this analysis will help to answer are: occupant's status, elite or non-elite, form and function of pottery, and an approximate date of occupation north of mound R.

Methods

First, all bags pertaining to the selected test units: 120 R5, 125 R5, 130 R5, 135 R5, 140 R5, and 145 R5 were separated from the rest of the assemblage. There were two hundred and fifty-nine total lots observed for this analysis. These lots represent the fifteen levels which were dug arbitrarily at four-inch intervals across all six units. Due to the extremely limited amounts of observable diagnostic pottery within this assemblage, the primary focus is on levels as a whole in

order to create a chronological sequence. After the ceramic lots were separated from the rest of the assemblage, all sherds were screened through a half-inch screen to eliminate any sherdlets that were too small for any in depth identification to be done in a timely manner. The remaining sherds were then rough sorted into the following categories: 1) decorated pottery, 2) plain ware including utilitarian pottery (also known as Mississippi Plain or course shell-tempered pottery), and service ware (otherwise known as Bell Plain or fine-shell tempered pottery with a burnished surface). Via further observation and analysis, both types and varieties were determined for the decorated as well as undecorated sherds. There were 4,744 total sherds analyzed with only 23 sherds providing diagnostic decoration. The largest portions of the collection were the 1,163 Bell Plain sherds and 2,838 Mississippi Plain sherds, these amounts are indicated in Table 2.1. The greatest concentration of decorated pottery was found between levels 3-11.

Pottery Type	Number of specimens	Percentage
Bell Plain	1163	24%
MS Plain	2838	60%
Decorated	21	0.40%
Decorated UID	718	15%
TOTAL	4744	

Table 2.1 Number of Classified Pottery Types.

Once the pottery from each lot was rough sorted, all Mississippi Plain, Bell Plain, and decorated pottery were further identified, counted, and weighed. The identification process was conducted using criteria outlined in Dr. Knight's 2010 book as well as the lab's sorting guide.

This data was input into a Microsoft Excel spreadsheet to create graphs and spreadsheets in order to better organize the data and re-create a stratified sequence.

Analysis and Results

Once inputting the data into the Excel document we were able to create tables and graphs in order to find the answers we sought. Overall, we examined 4,744 total sherds. When considering the function of the location north of Mound R, we entered the data into a simple ratio formula to examine the results and create an idea of the activities being carried out north of Mound R. Of our entire assemblage the percent of Mississippi plain (71 %) was much greater than the percentage of Bell plain (29 %).

Count	Baytown Plain	Bell Plain	Ear spool	Incised	Mdville Eng. Hemphill	Mdville Eng. Var Elliotts Creek	Mdville Eng. Var Maxwell Crossing	Mdville Inc. Carrollton	Mdville Inc. Mdville	Mdville Inc. var Mdville	Mississippi Plain	Negative Painted	Red on white paint	Red Painted	Red Painted	Red/Black Painted	Red/Buff Painted	Red/Orange Painted	Risidual	UID Barton Inc.	UID Carthage Inc.	UID Incised	UID Interior Incised	UID Mdville Inc.	UID Mdville Eng.	UID Mdville Eng.	UID Mdville Inc.	UID Mdville Inc.	White painted	White slip (blank)	Grand Total
1		8									9		5		1	1	1	3	1			1	2	3		1				35	
2		14	1	1							15		12						1	3	1			6	1	8	3	2		68	
3		16		1			1				16		8				1		5				1	5	7	1	1			63	
4	1	7			1			1			7		4							4				1	3	2	2			33	
5		12		1							10	1	7		1							3				2				37	
6		15		1					1		16		7					1	6						2	1	1			51	
7		16		1							16	1	9	1				1	1	1	2			3	2	3			57		
8		17			1			1			19		8									2		1	5	3		1		58	
9		10		1				1			10		6					1		3				2		1	1			36	
10		9			1	1					9		6								2			2	1	2	1			34	
11		7						1			7		4							3				1	3					26	
12		4									4		1												1					10	
13		1									1		1							1					1					5	
14		1									1										1				1					2	
15		1									1																			2	
SURFACE (blank)		1																												1	
Grand Total	1	139	1	6	3	1	1	1	3	1	141	1	1	78	1	1	1	4	4	1	37	1	1	1	23	1	38	16	9	1	518

Table 2.2 Counts of Pottery Types by Excavation Level.

Chronology

Only six distinguishable types of decorated pottery could be clearly identified among the twenty-three diagnostic sherds. These sherds are found in greatest quantity between levels 3-14. The sherds found in these levels were helpful in creating a chronology of the excavated area north of Mound R. The six distinguishable types are as follows: Moundville Incised *var. Moundville*, Moundville Incised *var. Carrollton*, Moundville Engraved *var. Elliot's Creek*, Moundville Engraved *var. Maxwell's Crossing*, Moundville Engraved *var. Havana*, and Moundville Engraved *var. Hemphill*. Of the twenty-three identifiable diagnostic sherds only nine belonged to clearly assigned types, these examples are shown in Figure 2.1. The remaining fourteen of those twenty three which weren't particularly diagnostic were still seen as interesting or important based on the interior incised decoration sherds, the beaded rim, and the final interesting factor being the inclusion of a non-local type called Barton Incised.



Figure 2.1. A sample of decorated pottery from the north of Mound R Excavations.

A. B. C. D. E. F. G. H.

Figure 2.2 shows three pottery types and a unique handle with knob decoration. Both A and B are Moundville Incised var. *Moundville*. This decoration displays short horizontal lines radiating upward from an arch and is associated with the beginning of Early Moundville I to the end of Late Moundville II (Knight 2010). C is Moundville Engraved var. *Havana*. Its characteristics are found below the rim line consisting of parallel lines that dip down with swirls and festoons. E and F are examples of Moundville var. *Elliot's Creek*. In this design rectilinear or curvilinear designs fill the design field with arrangements of intersecting lines. This type only occurs during Late Moundville I phase (Knight 2010). The last sherd has an applied handled with knob decoration on a vessel that is Mississippian plain. This decoration is consistent with Moundville II phase. In summary, this analysis of decorative types shows clear diagnostic indicators that point toward an early Moundville II phase association for the midden.



Figure 2.2 Diagnostic Pottery in the north of R excavation Sample.

There are two clear problems when trying to assign a strict chronological sequence to this midden located just north-west of Mound R. First, aboriginal disturbances such as post holes and construction practices have disturbed the stratified levels. Second, the small amount of distinguishable and diagnostic pottery types made the chronology process difficult. These two problems only further complicated any attempts of dating this particular midden with absolute confidence. With the samples that are provided, a stratified sequence can be created despite the complications.

Levels 1-3

Within these levels we find a sherd that is Mississippi Plain with a beaded rim. These characteristics began to appear in Late Moundville II stage. This sherd represents the *terminus post quem* for these three levels. The second identifiable variety is a Moundville engraved var. *Maxwell's Crossing* that began in Early Moundville II but spans to Early Moundville III. These two sherds are found in relation to 34 other sherds that are unidentifiably decorated in regards to their variety. They consist of Carthage Incised, Moundville engraved and Moundville incised. All of these types span from Late Moundville II to Late Moundville III. Therefore, these levels cannot date prior to the construction of the beaded rim which began in Late Moundville II. In addition, this having been the plow zone during the historical period can help to explain the possible and likely mixing of earlier sherds that are found within these levels.

Levels 4-14

In these levels we find the greatest intrusions due to aboriginal disturbances of post holes. There are approximately seven post holes that span throughout the units. All six varieties of decorated sherds are found within these layers and provide more evidence of mixing within these

strata. Both Moundville Incised *var. Carrollton* and *var. Moundville* begin appearance in the sequence in Early Moundville I but cannot be used as a TPQ due to their long existence into Late Moundville II. In addition, they were found in levels 4 and 8 above other sherds that do not come into existence until much later. The only Moundville Engraved *var. Elliot's Creek* sherd was found in level 10. This sherd has the shortest occurrence being found only in Moundville I. Therefore, this midden cannot be older than this sherd, but there is clear mixing from earlier levels.

Levels 15

In this level there are not any diagnostic indicators that can precisely point to a particular time when these strata originated. Due to sherds from Late Moundville I stage found within the five layers above these it is possible that this layer began during Late Moundville I stage. This can be further confirmed due to the Moundville Engraved *Elliot's Creek* and the lack of decorated pottery within these strata. Due to aboriginal disturbances that have caused mixing, these levels begin within Late Moundville I stage.

Functional Analysis: Utilitarian and Service Pottery

Types	Percentage
Bell Plain	29%
Mississippi Plain	71%

Table 2.3 Ratio of Bell Plain to Mississippi Plain sherds.

When considering the function of this site, we looked at the frequencies of Mississippi Plain sherds (the utility ware) versus the levels of Bell Plain sherds, the burnished serving ware, which is generally associated with more elite peoples and service activity (Scarry and Welch

2010). At first glance it seems that the presence of more Mississippi Plain than Bell Plain sherds means that this area was likely a “regular” (non-elite) or domestic living area where there was a greater presence of cooking ware, as opposed to service ware indicative of feasting activities that we would expect to see at the more elite areas of the site. But when this area north of Mound R was compared to the excavations and analyses done with Mound P and Q, which are both believed to have been elite sites the figures and ratios are all very similar. It seems possible that all across ancient Moundville there was simply more cooking than serving and feasting at non-elite and elite locations alike.

Conclusion

Despite the difficulties of aboriginal disturbances, historic plowing, and limited diagnostic varieties of sherds, an approximate chronological sequence can still be determined. In levels 1-3 this stratified sequence begins in the Late Moundville II stage. Levels 4-14, which have the greatest disturbances represent an Early Moundville II stage. In the earliest strata, levels 14-15, an approximate origin date of Late Moundville I can only be suggested due to limited diagnostic materials being found here.

As far as determining the function of the area north of Mound R, after examining the utility versus service nature of the ceramics at this site and comparing our results to the findings at other locations such as mounds P and Q, it is a justifiable conclusion to believe that all across the Moundville site both elite and non-elite groups were both cooking and serving.

Chapter 3: Pottery Vessel Form

Emily Canada and Shannon Sproston

Introduction

In this chapter, a sample of pottery sherds from the North of R excavation was analyzed to identify pottery vessel forms (shapes). We sampled pottery from squares 120 and 120R5. The depth levels of excavation range from 1 to 12. Because the potsherds were very small in size, we examined rims and embellishments to distinguish vessel forms. A substantial variety of vessel forms have been found, but many are rare. We identified mostly jars and bowls. There are varying types of each of these vessel forms, and those have been appropriately distinguished.

Methods

We referenced the existing artifact catalog to find which bags to examine. Any bag containing ceramics was pulled and investigated. After locating the correct bags, they would be emptied one at a time onto a tray along with a notecard detailing the provenience information. The sherds were sorted through to find the rims. After the rims were sorted out from the rest of the sherds, each rim was oriented to determine what vessel the rim belonged to. To orient the rim, the rim was placed on the table and moved back and forth until no light could be seen. The rim was then flipped back up, and Knight (2010) was consulted to identify vessel form. If the rim was too small or too degraded to place into any particular category, it was labeled unidentified. All of the data was recorded on a data sheet that listed type of bowl, jar, and bottle, and several different types of embellishments such as effigy features and beaded and folded rims. Once it was determined what type of vessel each rim belonged to, all of the sherds were returned to the bag.

Analysis and Results

At Moundville, there are three categories of vessel forms: jars, bowls, and bottles. According to Hally (1986), jars are vessels that were used for cooking; bowls are vessels that were used for eating, and bottles were small vessels used for storing food temporarily. To determine what activities were taking place in the area of the excavation, the quantity of each vessel form is taken into account.

The analysis of the rims showed that there were 84 jar rims, 12 bottle necks, 3 plate rims, 112 bowl rims, and 49 unidentified rims. Out of the 112 bowls, 39 of the rims were classified as “other bowls” because the sherds were too small to accurately classify as any specific type of bowl, but were substantial enough to merit the classification of bowl.

In addition, there were only nine rims that had embellishments. The embellishments included beaded rims, other effigy features, and folded rims. The rims with embellishments were spread fairly evenly throughout the layers, so it does not appear that there is any chronological significance revealed by how deep these rims were found.

There were a large number of rims that could not be identified due to small size. This is significant because there was much activity in this area in the past that resulted in fragmentation of pottery. Most of these rims were too small or too degraded to be accurately categorized.

	Levels													
Form	1	2	3	4	5	6	7	8	9	10	11	12	13	Grand Total
Collar, Jar	4	11	4	5	6	12	11	9	4		4	1		71
Handle, Jar	6		3	2	1			1						13
Neck, Bottle	1	2	1		1		1	5	1					12
Rim, Cup Shaped Bowl		3				2	1	3					1	10
Rim, Flared-Rim Bowl	2	8	2	2	1		6	7	1	1				30
Rim, Hemispheric bowl	3		4	4	3	2	2			1	1	1		21
Rim, Other Bowl	3	6	2	5	9	5		7	2					39
Rim, Plate			1				1	1						3
Rim, Short-neck Bowl	1		5					4	1			1		12
Rim, Unidentified	2	13	6	3	2	2	4	9	6	2				49
Grand Total	22	43	28	21	23	23	26	46	15	4	5	3	1	260

Table 3.1 Number of Identified Vessel Forms by Excavation Level.

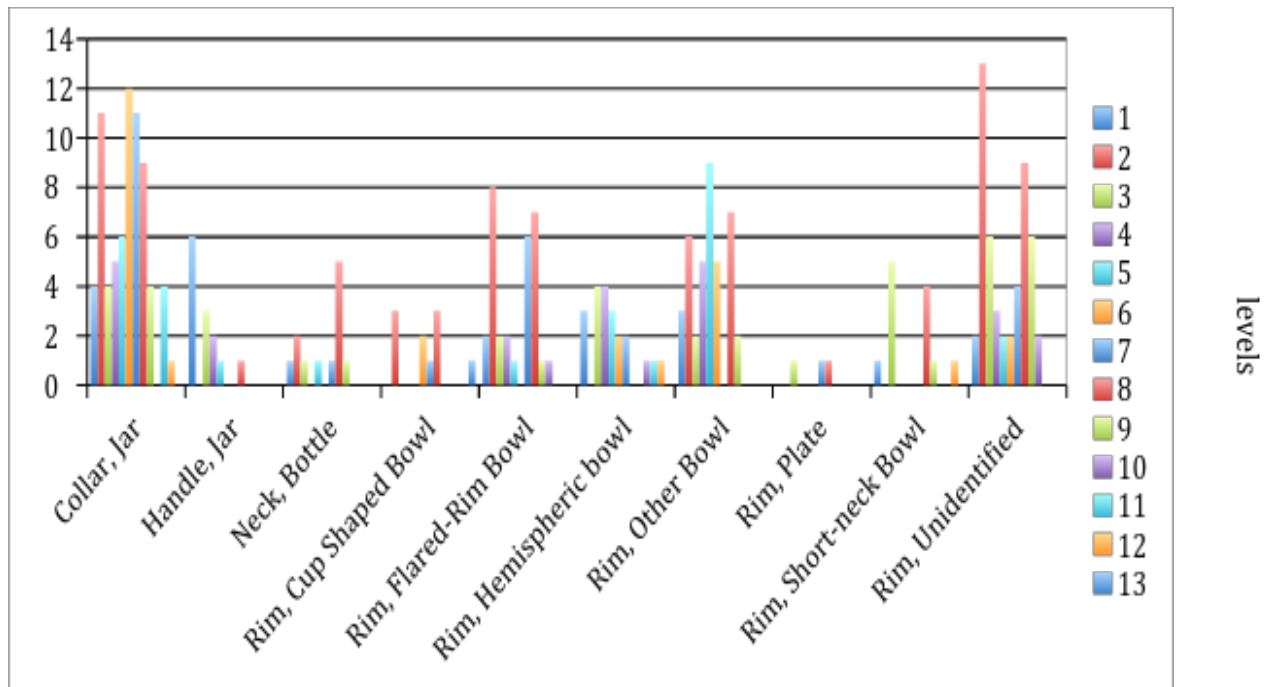


Figure 3.1 Bar Chart of Identified Vessel Forms By Excavation Level.

This table and graph show the distribution of artifacts through the levels in the test units. Levels two and eight have the highest concentration of artifacts, numbering at 43 and 46 respectively. The chart and graph also show how many of each type of vessel were found in the units. As seen in Table 3.1, 260 rims were found overall.



Figure 3.2 (top row from left) A beaded rim, jar collar (middle row from left) other effigy feature, handle jar, hemispheric bowl rim, and (bottom row) a flaring-rim bowl.

Conclusions

Firstly, the amount of unidentified sherds should be noted as significant. Perhaps due to weathering or manipulation, intentional or otherwise, the vast majority of vessel fragments were very small potsherds. This led to a marked lack of discernible vessel forms, which can skew the results. Even among the sherds we classified, they were not easily distinguished. For this reason, there is not much we can say with a large amount of certainty about the implications of the vessel forms.

We do have some information in the form of ratios that leads to a few educated guesses about the site and its usage. Of those identified, we found an overwhelming majority of jars and

bowls. Very few plates, bottles, or embellished vessels were found. This likely means that the site was not often host to the upper class. Jars being for serving, and bowls for dining, points to the self-contained atmosphere of the commoners. It is interesting to note that the site is close to one of the larger mounds, but it is quite separated from the largest mounds and areas we know to be utilized by the upper class.

Unfortunately, the data we have comparing the excavation levels does not indicate much of anything. The amount of forms located within each level bear no discernible pattern, and thus we cannot conclude anything about the difference in usage over periods of time. Given our proposed nature of the site, it seems plausible the site maintained one type of lifestyle over the course of its habitation.

While there is little we can say with much certainty, a few things are clear. The overwhelming amount of jars and bowls speaks to the nature of the site, and the lack of variation among levels leads us to believe there was little change over the course of its existence. Further investigation is needed for any definitive claims.

Chapter 4: Analysis of Modified Ground Stone

Chandler Burchfield

Introduction

The term ground defines stone tools or objects shaped by grinding or pecking that do not fit into the flaked stone tool category. Ground stone artifacts were used for special purposes, such as personal adornment, ceremonial occasions, tools such as celts (axes), and in the manufacture of other items such as shell beads, ornaments, and pottery (Arkush and Sutton 2009). The type of stone used to create such items depended on the location of a site and if trade occurred. For Moundville, the most important distinction is non-local greenstone and local sandstone. This report encompasses detailed ground stone artifact analysis from the 1972 excavations that took place at Moundville in units located north of mound R. Originally, test units 105, 105R5, 110, 110R5, 115, 115R5, 120, 120R5, 125, and 125R5 north of mound R were the desired units to analyze. Unfortunately, after researching the catalog from the excavation, most of the ground stone artifacts from the north of mound R had little to no provenience. Some were from various features and square test units that were not from the desired 105-125R5 test units.

Methods

After realizing an unconventional method would have to be taken, cataloging and analyzing ground stone artifacts from excavations north of mound R could properly begin. The procedure to find a bag with modified ground stone artifacts began first by searching through the catalog from the 1972 north of mound R excavation for listings that contained appropriate artifacts. Once these were discovered, all of the material from the bag was analyzed on a tray and if any of it was a ground stone type, then it was recorded. A modified ground stone analysis sheet

was filled out accordingly along with relevant provenience information. The individual fragments were counted and weighed with a scale. This was repeated for each bag that contained modified ground stone artifacts. The total number and weight of each ground stone artifact found in the excavation north of mound R could help shed light on what materials were used and how these artifacts were used at Moundville. Ultimately, the goal of the analysis was to compare the polished versus unpolished artifacts and non-local versus local use of materials.

Ground Stone Classification and Analysis

Ground stone artifacts fall into two general categories: (1) tools that were used to process various substances by grinding, pulverizing, crushing, smoothing, and scraping and thus became ground and/or polished through *use*; and (2) objects that were purposely ground or polished to produce a smooth finish, as one stage of *manufacture* (Arkush and Sutton 2009). For this report, the modified ground stone artifact types analyzed were: worked greenstone fragments, celt fragments of greenstone, polished chip fragments of greenstone, chisel fragments of greenstone, hammerstones, grooved abraders of sandstone, mullers (metates) of sandstone, mortars of sandstone, and ground surface fragments of sandstone.

At Moundville, stone tools of both greenstone and sandstone commonly occur in low frequency in excavations throughout the site. To identify greenstone tools, special attention was given to evidence of polishing, grinding, and other unnatural qualities of the artifacts (Belanich et al. 2012). Polished greenstone artifacts can be simply worked fragments, celts, polished chips, and chisels. Worked greenstone fragments were pieces of greenstone that did not quite fit into other artifact categories, similar to ground surface but still modified. Celt fragments are typically identified by their “petaloid tapering shape, straight sides, and a flattened oval cross section”

(Knight 2010), see Figure 4.1. Polished chips made of greenstone are small fragments that have a seemingly flat and polished aspect. It is difficult to determine their use but at the minimum, it is modified ground stone. Chisels of greenstone are described as having “one flat side and one slightly convex side” (Knight 2010), see Figure 4.1. Most of these pieces are chips broken off a complete tool such as a celt.

Sandstone artifacts can include: grooved abraders, mortars, metates, and fragments of ground surface sandstone. Grooved abraders are “small sandstone tablets showing one or more grooves running across the use surface” (Knight 2010), see Figure 4.1. A mortar is a manufactured concavity (usually circular) of varying depth and diameter in a rock, materials are pounded within the concavity (Arkush and Sutton 2009), see Figure 4.1. Mullers (metates) form the stationary base for which the handstone is used to process materials and can be non-portable or portable (Figure 4.1). Ground surface sandstone is identified as a portion of sandstone that has at least one unnaturally created ground edge and whose use is unknown. The last type of modified ground stone analyzed in this report is hammerstones. Hammerstones are classified by large cobbles showing significant wear one edge from use in smashing and hammering against other objects (Belanich et al. 2012).

Results

After recording all relevant information from each bag containing modified ground stone on data sheets, all data was transferred electronically to an Excel table of both count and weight for each ground stone artifact type (Table 4.1). Two separate graphs (count and weight) were then created to visually show the distribution of each type, Figure 4.2 and Figure 4.3 respectively. Although weight is an important aspect, it does not seem to be as important for the

collection as it can be a bit skewed. For example, Figure 4.3 might lead people to believe that mortar fragments of sandstone were recovered in large quantities when in reality, there was only one artifact found.

In total, there were 102 ground stone artifacts analyzed and recorded from the area north of mound R from the 1972 excavations. Of the 102, 41 or 40.2% were celt greenstone fragments, the largest proportion of the ground stone artifact types. The second most frequent type found throughout the analysis is ground surface sandstone fragments, making up approximately 29.4% of the total data. About 17.6% of the artifacts examined were polished chips of greenstone, broken from larger finished tools, probably celts; and 6.8% of the total artifacts were fragments of worked greenstone. The remaining types of ground stone artifacts were few and far between, making up a small percentage. This does not mean that these types are not significant.. There were three hammerstones analyzed and recorded. As only one mortar, muller, grooved abrader, and chisel were found in the collection. Of the 102 artifacts, 65.6% of these were made of greenstone, much more than sandstone artifacts. This is significant as it is well known that greenstone is not local and was imported, whereas sandstone was a more local material.



Figure 4.1 Ground Stone Artifacts: (top row-from left to right) hammerstone, chisel of greenstone, celt of greenstone; (bottom row-left to right) mortar of sandstone, metate of sandstone, grooved abrader of sandstone.

The remaining types of ground stone artifacts were few and far between, making up a small percentage, this does not mean that these types are not significant however. There were three hammerstones recorded and only one mortar, muller, grooved abrader, and chisel were found in the collection. Of the 102 artifacts, 65.6% of these were made of greenstone, much more than sandstone artifacts. This is significant as it is well known that greenstone is not local and was imported, whereas sandstone was a more local material.

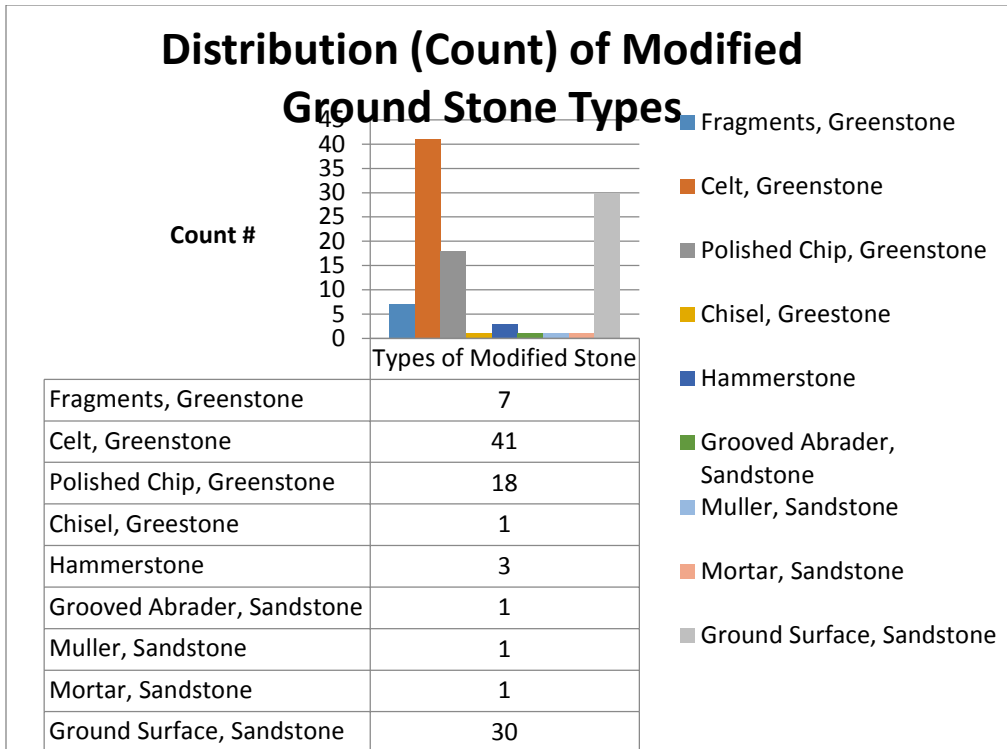


Figure 4.2 Chart showing the total number of each modified ground stone type as cataloged.

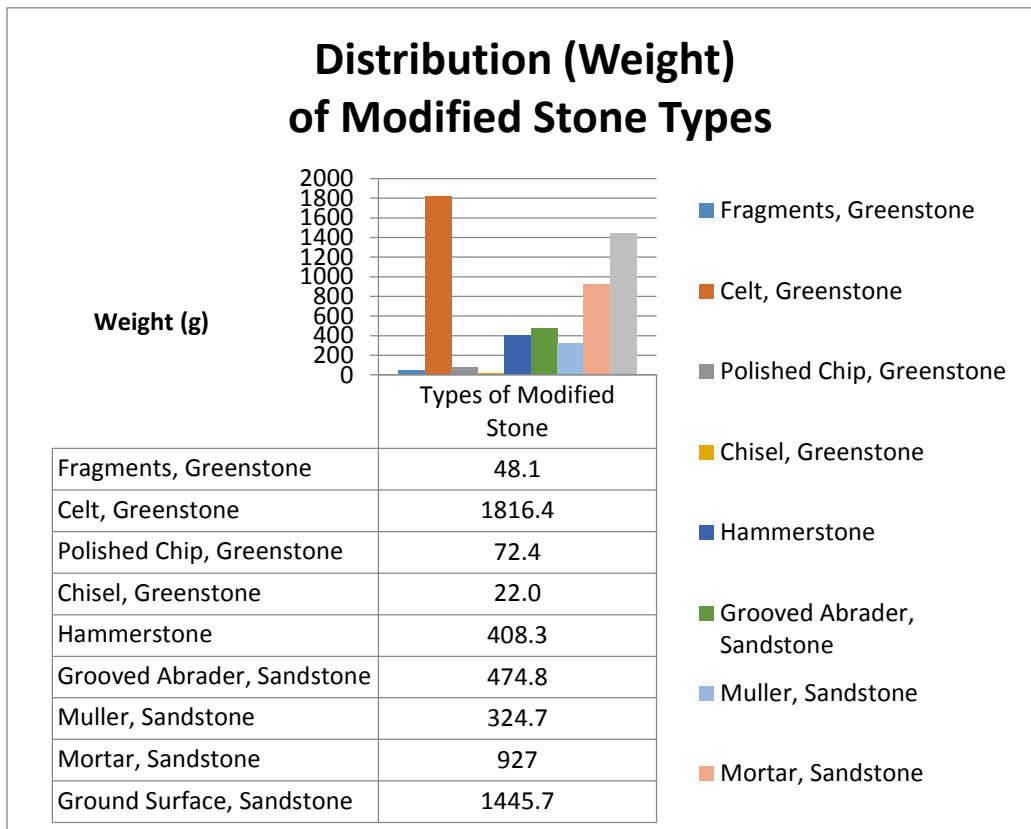


Figure 4.3. Chart showing the total weight of each ground stone type found in analysis

Discussion and Conclusion

Overall, the analysis rendered significant results. From the 1972 excavations north of Mound R, sufficient modified ground stone artifacts were recovered. Of the artifacts analyzed and cataloged, a greater proportion was created from greenstone. This material was imported from different areas around Moundville, from several different quarries. According to Gall and Steponaitis (2001), “The greenstone belts of the Southeast typically occur as isolated, long, narrow outcrops in the Piedmont province.” Although a good amount of artifacts made of the local sandstone were recovered, it appears that in this area of Moundville that non-local economic transaction occurred prominently. This was most likely due to the relative location of the Black Warrior River and also because of possible elite status craft production.

Most, if not all, of the greenstone artifacts were polished whereas a large quantity of the sandstone artifacts recovered were unpolished (ground surface fragments). For greenstone, it seems that it was easier to manipulate the material into finer results such as celts and polished chips. Perhaps these were polished more often in this location due to their ceremonial or elite significance. Sandstone artifacts seemed to be used more with the manufacturing process of tools, appearing a bit rougher and heavier to withstand wear. “It has been stated by Scarry that residents of the locus had access to non-local materials that were not attainable by the common population” (Baggett et al. 2000); this observation would seem directly attributable to the increase of polished and greenstone artifacts found in the 1972 excavations north of mound R.

Level		Fragments, Greenstone		Celt, Greenstone		Polished Chip, Greenstone		Chisel, Greenstone		Hammerstone		Grooved Abrader, Sandstone		Muller, Sandstone		Mortar, Sandstone	
		Ct.	Wt(g)	Ct.	Wt(g)	Ct.	Wt(g)	Ct.	Wt(g)	Ct.	Wt(g)	Ct.	Wt(g)	Ct.	Wt(g)	Ct.	Wt(g)
No Province	n/a	3	5.6	2	51.4	3	9.8										
	NR 3-20			1	13.9												
	NR 6-5																
	NR 8-1																
	NR 12-21,22,32,61,107											1	474.8				
	NR 16-59			1	2.2												
	NR 20-70							1	22.0								
	NR 24-61,69,70					1	1.0							1	324.7		
	NR 100-28,29,34					1	5.1										
	NR 129-19,41			2	54.4												
	NR 131-4																
	NR 133-17	1	2.4														
	NR 143-9			1	3.9												
	NR 153-4,20									1	169.2						
	NR 157-1			1	22.4												
	NR 184																
	NR 194-32,37																
	NR 198-2,3,6	1	31.0			1	15.2										
	NR 203-17,47			1	5.4												
	NR 205-35,61,62			1	15.7												
	NR 207-1															1	927.0
	NR 216-68,78					1	3.1										
	NR 226-45,54			1	14.9												
	NR 232-50					1	5.2										
	NR 239-96			1	4.7												
	NR 265-1			1	52.9												
	NR 285-11,24,25			1	25.5												
	NR 313-32,45																
	NR 462-87																
	NR 495-15,16			1	34.8												

	NR 503-1			1	28.0												
	NR 525-1			1	31.8												
	NR 527-95,111			1	5.6	1	2.3										
	NR 538-4			1	13.6												
	NR 539-54			1	245.9												
	NR 564-4			1	38.0												
	NR 580-114,115			1	86.0	1	1.3										
	NR 588-1			1	13.2												
	NR 598-29,30			2	88.4												
	NR 605-1			1	39.0												
	NR 606-137					1	0.8										
	NR 612-58			1	17.0												
	NR 618-7			1	25.8												
	NR 621-84,85			2	28.0												
	NR 622-94			1	105.1												
	NR 623-11			1	2.9												
	NR 628-5			1	7.5												
	NR 634-35					1	1.0										
	NR 636-21			1	32.7												
	NR 639-107			1	266.8												
	NR 645-21			1	102.8												
	NR 653-5,6	1	2.0			1	0.5										
	NR 654-35					1	1.1										
	NR 655-12			1	81.6												
	NR 656-4			1	7.5												
	NR 659-1			1	78.3												
Feature 1		1	7.1	1	49.7	1	3.3										
Feature 2				1	119.1	2	14.0			1	51.3						
Feature 4										1	187.8						
Feature 5						1	8.7										
Square 10/R2																	
Square 10/R6																	
Subtotals		7	48.1	41	1816.4	18	72.4	1	22.0	3	408.3	1	474.8	1	324.7	1	927

Table 4.1. Excel Spreadsheet displaying all data from analysis

Chapter 5: Flaked Stone Lithic and Debitage Analysis

Alex Jones

Introduction

Flaked stone artifacts are items created from stone “by removal of flakes rather than by grinding or polishing” (Arkush 2009). Artifacts were sorted into biface, projectile point, flake, shatter, core, tested pebble, expedite tool and microdrill. Biface, projectile point, and micro drill are the intended finished products; no microdrills were found. The artifacts were also weighed and classified by lithic source. The examples found were heated and unheated local Tuscaloosa gravel, and non-local blue-gray Fort Payne chert, Dover chert, Flint Creek flint, Knoxville chert, quartz, and quartzite.

In addition to this primary analysis, a debitage analysis was also conducted. It involved sorting only flakes, shatter, and expedient tools by cortex and platform scars. The cortex is the rough and weathered outer layer of a natural rock surface. There was almost no provenance information on the flaked lithic artifacts, so there was no way to tell about change over time or from which unit the artifacts came. Only generalizations about flaked stone use in the area of the excavation as a whole can be produced from the data collected.

Methods

The first step in analysis looked at four things: count, weight, type, and raw material code. The artifacts from the same bags were grouped by type and raw material code, then counted and weighed together so that there is one recording for a group of materials that are the same type and from the same source material. The types of artifacts found were biface, projectile point, flake, shatter, core, tested pebble, and expedient tool. The most abundant raw material source codes found were blue-gray Fort Payne chert, Tuscaloosa gravel, and Dover chert. Other

source materials were found, but these three materials dominated the sample. Figure 5.1 shows the data from this analysis. The blue-gray Fort Payne chert flake bar is unreasonably high, but after double checking, this it is a correct number.

A debitage analysis was then performed on the lithic flakes, loosely following methods proposed by Carr and Bradburry (1995). The debitage analysis consisted of looking for differences in the cortex stage and the scar stage of the flake fragments to determine the stage in tool production during which the flake was knocked off. The goal was to find data that does not agree so that you can interpret whether or not the cortex or the scar stages approach is the best one to judge. However as Figure 5.2 shows, the data lines up so that any differences are not statistically significant. The stage of removal estimations by cortex stage and the estimation by dorsal and platform scar count are relatively similar, meaning that the methods were of about equal validity to this sample.

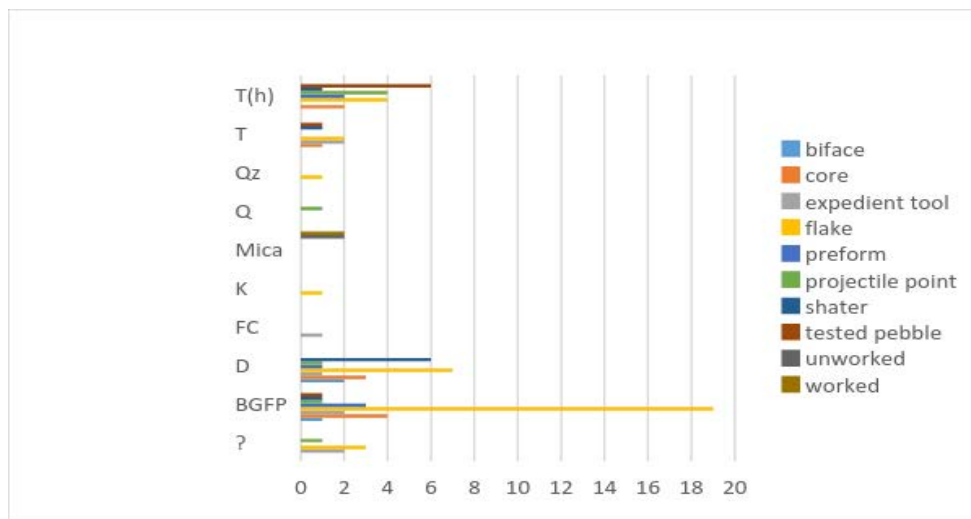


Figure 5.1 Key: ?=unidentified, BGFP= blue-gray Fort Payne Chert, D=Dover Chert,FC=Flint Creek, K=Knoxville chert, Mica= Mica, Q=Quartz, Qz=Quartzite, T= unheated tuscaloosa gravel, T(h)= heated tuscaloos gravel

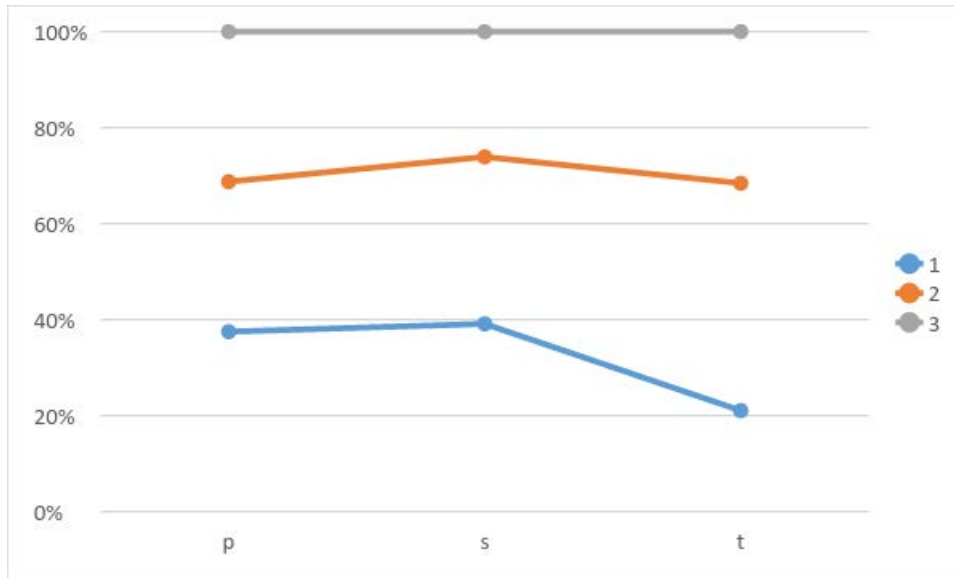


Figure 5.2 Key: p= primary stage cortex, s= Secondary stage cortex, T= tertiary stage or no cortex.
 1=first stage scarring, 2= second stage scarring, 3= third stage scarring.

Analysis and Results

The debitage analysis revealed that fewer third stage flakes were recorded than first or second stage flakes. The third stage would most likely be associated with pressure flaking, offering two possible explanations for the change in amount found between stages. One possibility is that the screen used in the original excavation was too coarse to catch the fine flakes. This is supported by the fact that only flakes larger than quarter-inch were found in the sample. Another explanation is that expedient tools produced by stage two flakes were the main use of lithics in the area, making the fine pressure flaking unnecessary.

The raw material analysis showed that there was a large amount of foreign blue-gray flakes that had to be imported to be worked at the site. The preference for this particular lithic type might indicate a symbolic significance or the existence of an influential trade partner. The range of projectile point types, or more accurately the lack of variation in types, is also

interesting. With very few exceptions, the only projectile point found throughout the north of Mound R area and through the periods covered by these artifacts, was the Madison point. The artifacts displayed a simple straight distal end and the whole point is a simple triangle. As seen in Figure 5.3, most of the finished points that were found were of heated Tuscaloosa gravel or blue-gray Fort Payne chert (Cambron and Hulse 1969).

The exceptions include a quartzite point that is so thick it is almost a cone in cross-section. While it could be used, it would be very difficult to haft such a point, and the gem-like crystalline appearance of the material was more likely decorative than useful. Another exception is a large Dover chert biface that is too large to be usable as an actual projectile point. In comparison to points that were in the same bag and therefore of the same relative time period, the point has a very jagged edge instead of the generally straight edges of the Madison points. If it had been meant for use, then the point would more likely have a cleaner edge like the points found alongside it. In addition to the jagged edge and large size of the point, this biface was also not clearly in any of Cambron and Hulse's classifications of points. This indicated that the point was ceremonially or religiously significant in some way as it was too large to be solely decorative like the quartzite point. (Cambron and Hulse 1969). [Editor's note: this maybe an example of the over-sized bifaces sometimes referred to as "swords" in the old literature].

Some mica was found in addition to the flaked cutting implements. Some of the pieces showed evidence of being cut into straight edges. Mica (muscovite) is a shiny, flaky material that was almost certainly used in some form of decoration. This sample did not give much insight into whether that it was used in pigments or some other fashion, but the cut edges suggest it was shaped, perhaps for mounting on a backing of some sort (Marrazzo 2011). It is also worth mentioning that the Dover chert, the third most abundant source rock in this sample, is also a

variant of Fort Payne chert and could have been derived from the same area. This suggests that the material could have been from a specific group with access to the material monopolizing the import of a section of Moundville's lithics trade.

The lack of provenience information hinders the ability to say anything about the specific spatial distribution of flaked stone in the excavation area or how it changed over time, but with the information available it can be determined that this area of Moundville saw the production of a large number of Fort Payne lithics. The local source rock of Tuscaloosa gravel, including both heated and unheated examples, also appeared in abundance, but despite the local availability of this gravel, it was not the preferred stone. This preference might have been due to the firing process used to make the material more useful. The extra effort required to heat the local gravels could have developed the market for the simpler ready-to-use Fort Payne chert.



Figure 5.3 Far left: the Dover point. From left to right top row: a blue gray fort Payne expedient tool, two unheated Tuscaloosa gravel tested pebbles, three heated Tuscaloosa gravel Madison points. From left to right bottom row: a blue gray fort Payne point that could be a Madison but the tabs on the end make it questionable, a unheated Tuscaloosa gravel flake, a heated Tuscaloosa gravel shatter, a blue gray fort Payne core that is biface, the quartzite point, two dover flakes.

Chapter 6: Faunal Analysis

Rob Barlow and Samantha Sutton

Introduction

Faunal remains can tell us much about Southeastern Mississippian chiefdoms. The animals were not only for consumption; they had social, economic, and ideological roles in the lives of the ancient Moundville people (Jackson and Scott 1995:103). Analyzing faunal remains can offer insight to subsistence and procurement of food, as well as the hierarchal structure of the Moundville polity. As with other types of material remains; faunal remains were not uniformly distributed among Moundville's socially stratified population, which is typical of chiefdoms and is something that distinguishes them from less hierarchal societies (Knight 2004:304-305). An analysis of faunal remains from these excavations can demonstrate if this area of Moundville (North of Mound R) was the location of domestic activity, or is more strongly associated with elite provisioning or feasting events.

A characteristic associated with chiefdoms is tribute flow. Tribute manifested in two ways: mobilization of food for feasts and elite provisioning. The feasting model describes a chief that was involved in food production or accumulation that was shared with others and the provisioning model supports a surplus of subsistence providing an allowance for the chief to attend to more important matters and not have to be involved in his or her own food production (Jackson and Scott 1995:104). Welch states that the act of provisioning should be apparent in archaeology by the furnishing of choice cut meats and preferred fauna to the elites by the nonelites (Welch 1995:89). Remains that have been associated with provisioning elites include, but are not limited to, certain cuts of venison, turkey, turtle, raptor, and shellfish (e.g., freshwater mussels).

Shell differs from other faunal remains because it has decorative and utilitarian purposes. According to Trubitt, “with value added from the labor that transforms hard raw material into shaped ornaments, shells have served as prestige goods for adornment and display, money and wealth, status markers, and ritual use”(Trubitt 2003:244). This is not to say it was not consumed, but the occurrence of marine shell at Moundville is most likely a product of trade. Considering the labor and movement costs associated with it, the shell was presumably brought into Moundville with other purposes in mind, likely reserved for elites or craftsmen. Knight states that the importance of dress and body decoration at Mound Q is apparent because of the use of certain materials for adornments; one of those materials is marine shell (Knight 2004:313). One cannot mention shell without talking about tempering of ceramics in the Southeast. Freshwater mussel shell tempered pottery is diagnostic of the Mississippian Period. The field school excavations from the 1970s produced remains to be analyzed for this project. An analysis of faunal remains from these excavations can demonstrate if this area of Moundville (North of Mound R) was the location of domestic activity or is more strongly associated with elite provisioning or feasting events.

Methods

For this project we examined a collection from excavations in the 1970s focused on the north side of Mound R. The North of Mound R excavations encountered extensive and presumably residential midden and the faunal deposits were typical of the Mississippian Period at Moundville. Table 6.1 shows common classes that can be found at Moundville. Because of a lack of experience in identifying and analyzing faunal remains, initial assistance was provided by PhD candidate Lynn Funkhouser. Additional resources in identification were provided by B.M.

Gilbert's *Mammalian Osteology* and *Avian Osteology*, as well as E.S. Wing's and E.J. Reitz's *Zooarchaeology*. A comparative collection was also brought into the lab as an aid. It included fauna that are common to Moundville such as whitetail deer, turkey, and fish. The units covered in this report include: 120, 120R5, 125R5, 130R5, 135R5, 140R5, and 145R5. However, due to inexperience and time constraints we were forced to only examine data from units 120R5 and 145R5 for the fauna, but were able to examine shell from all these units.

For the faunal remains, we examined units 120R5 and 140R5, with excavated levels from 3 to 56 inches. Quarter-inch screen was used in the field, so the sample is skewed to larger, recoverable remains. However, the vast majority of fragments were unidentifiable. For a total sample of 706 NISP, we identified 8 major classes that included: whitetail deer, turkey, fish, turtle, unidentified *avis*, unidentified small mammal, unidentified large mammal, and unidentified mammal. The unidentified mammal and large mammal was presumably whitetail deer, while the other unidentified classes provide no clues. The mammal bones (including whitetail deer) were identified by the size and density, as well as the presence of thick, compact bone and an interior filled with spongy cancellous bone (Gilbert 1980; Wing and Reitz 1999). The avian bone (including turkey) was identified as being hollow, light weight, with struts along the inside for added support, as well as a distinctive patina on the exterior of the bones (Gilbert 1981). The only sample of turtle shell was very easy to identify because of the sutured nature of the edges and the incised appearance on the exterior shell (carapace). Last, the few fish bones were fairly easy to recognize as well due to their small size and easily identifiable vertebrae (Jackson and Scott 2012; Wing and Reitz 1999). These data are used to determine what the ancient people of Moundville consumed and whether the midden in these units is a result of common everyday activity or something more specialized, such as a feast or elite provisioning.

Shell was included as part of this analysis and included units 120, 120R5, 125R5, 130R5, and 140R5. The units included 12 excavated levels from 3 to 48 inches. Quarter-inch screen was also used for shell, but because the recoverable shell was fairly large compared to the quarter-inch screen. It is doubtful that much, if any, shell was lost. For a total sample of 218 NISP, we identified only shell. We used these data to determine how much shell may have been in the diet and to discern if the shell was brought to Moundville with a specialized purpose in mind.

Classes	Category	Common Name	Description of bone
Mammals	Sylvilagus aquaticus, Rodentia, Sciurus, Didelphis virginianus, Castor Canadensis, Pocyon lotor, Lynx rufus, Urocyon cinereoargenteus, Canis familiaris, Odocoillus, bos, bison	Swamp rabbit, rodent, squirrel, opossum, beaver, raccoon, bobcat, gray fox, domestic dog, deer, cattle, bison	Mammal bone is identified by the presence of typical mammalian features or sites for muscle attachment or by elimination of other categories (mainly avian)
Avian	Ectopistes migratorius, Passerine, Eudocimis alba, Aix sponsa, Grus Canadensis, Raptor, Melegris gallopavo	Passenger pidgeon, songbirds, white ibis, wood duck, sandhill crane,	Avian bone is identified by the greater volume of the empty space in the trabeculae or by the patina on the
Fish	Amia calva, Lepisotereidae, Ictiobus bubulus, Pylodictus olivaris, Ictalarus furcatus/punctatus, Ictulurus melas, Micropterus, Aplodinotus grunniens, Carcharhinidae	Bowfin, gar, small mouth buffalo fish, flathead catfish, blue/channel catfish, black bullhead, bass, freshwater drum, shark	Most fish remains were in the form of scales, identified by shape and texture, the vertebral spines of a catfish or vertebra with double convex body.
Reptile (UI)	Viperidae, Coluber, Masticophus	Viper, coachwhip,	Only reptile vertebrae were
Turtle Shell	Chelydra serpentine, Chrysemys picta, Pseudemys floridana, Terrapene Carolina, Kinosternidae	Painted, cooter, box turtle, mud/musk turtles	the reptile category due to its ease of identification using the characteristic "sutural" quality of its edges and an incised appearance on the exterior
Unidentified	n/a	n/a	Includes all bone for which identification was not absolute.

Table 6.1. Superclass Descriptions Found at 1TU500*

*All information in the genus/species and common names column is derived from Jackson and Scott 2012.

Analysis and Results

The faunal analysis resulted in most of the weight coming from units 120 and 140. Most of the faunal analysis is white-tailed deer and turkey. White-tailed deer and the unidentified large mammal class made up 74 percent of the entire collection. Even though there was quite a bit of avian in the collection, most was unidentifiable due to the pieces being small or even broken from other bags. With this collection there was a small one-percent of fish, turtle, and unidentified small mammal. The reason we included small mammal in this category is because the bone analysis was too small or was unidentifiable from all categories. Figure 6.1 shows the weight of the collection in grams by taxon and level.

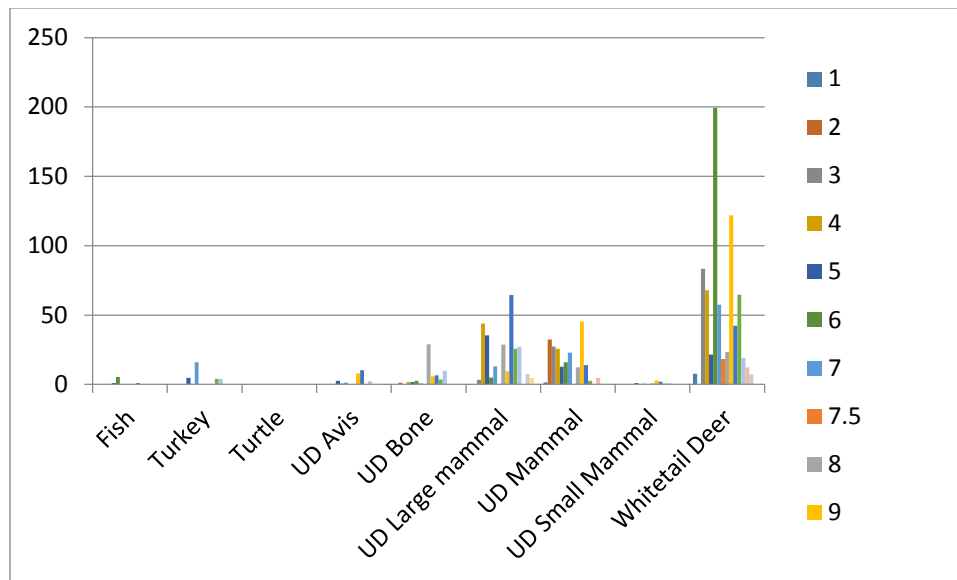


Figure 6.1. Bone weight in grams by taxon and level.

Another aspect of the faunal analysis is the NISP and the taxon. The NISP is the number of identified specimens. Figure 6.2 shows the percentage of MNI which is the minimum number of individuals in the collection as well as the most popular parts of the animals. Figure 6.2 shows a grand total of 706 possible individual animals.

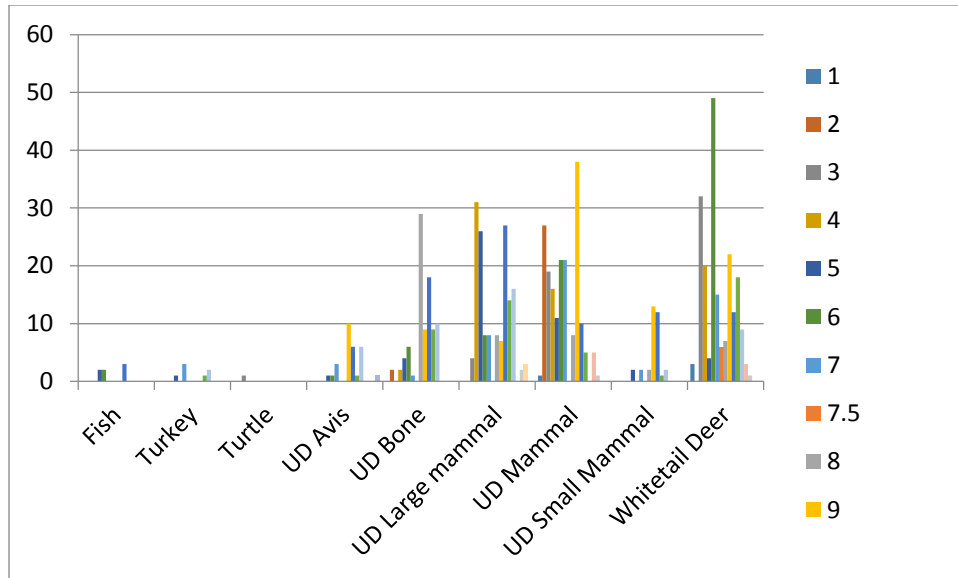


Figure 6.2. Faunal bone NISP by taxon and level.



Figure 6.3. Top row: long bone fragments of turkey; middle row: deer pelvis fragment; bottom two rows: burned deer thoracic and cervical vertebrae.

The shell analysis resulted in most of the weight coming out of units 120, 120R5, and 130R5. Between the three units a total of 121.5 ounces of shell were recovered out of the total 313.4 ounces, accounting for approximately 39 percent. It is important to note that a large quantity of shell was represented in Feature A and a decent amount was also labeled as debris. This was likely a product of shell falling from the wall of the unit into the floor. Units 135R5 and 145R5 had no shell, while 140R5 had very little.

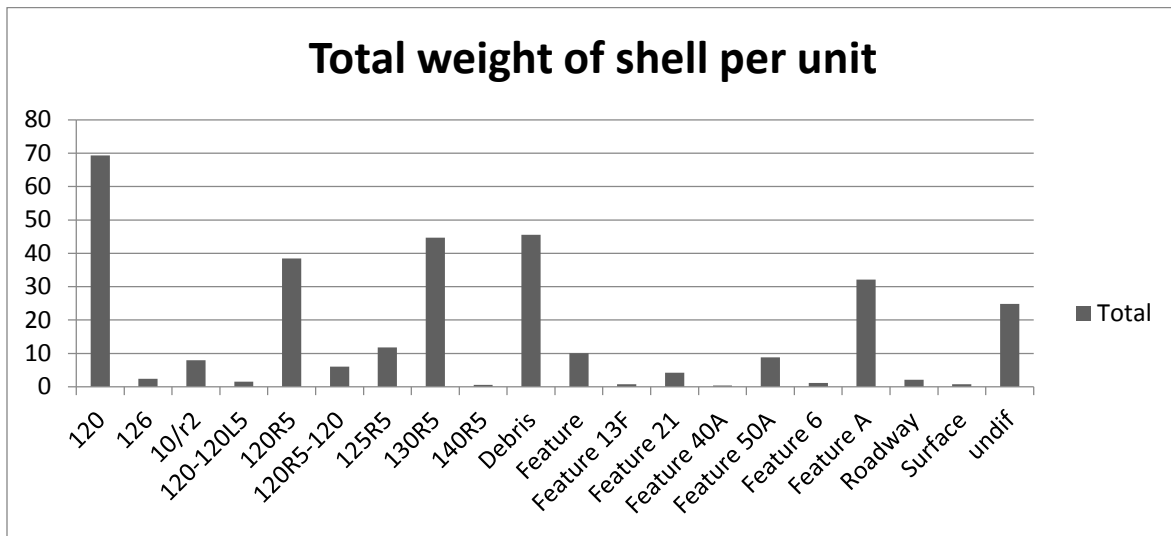


Figure 6.5. Total weight in grams of shell per unit.

Another aspect that was examined was the total weight of shell per level (Figure 6.5). This measure is important because if a chronology is determined, it can tell us not only how much, but approximately when the shell was most utilized. Levels 3 through 7 yielded the most weight and included depths from 3 to 28 inches. The four levels together had a total weight of 174.9 grams representing 59 percent of the total weight of shell. However, after level 7 a sharp decline was seen. This can be interpreted to mean that the use of shell was at its height at the time level 7 was deposited and before level 7 it was not utilized as much. Likewise, the use of shell declined as it got closer to level 1.

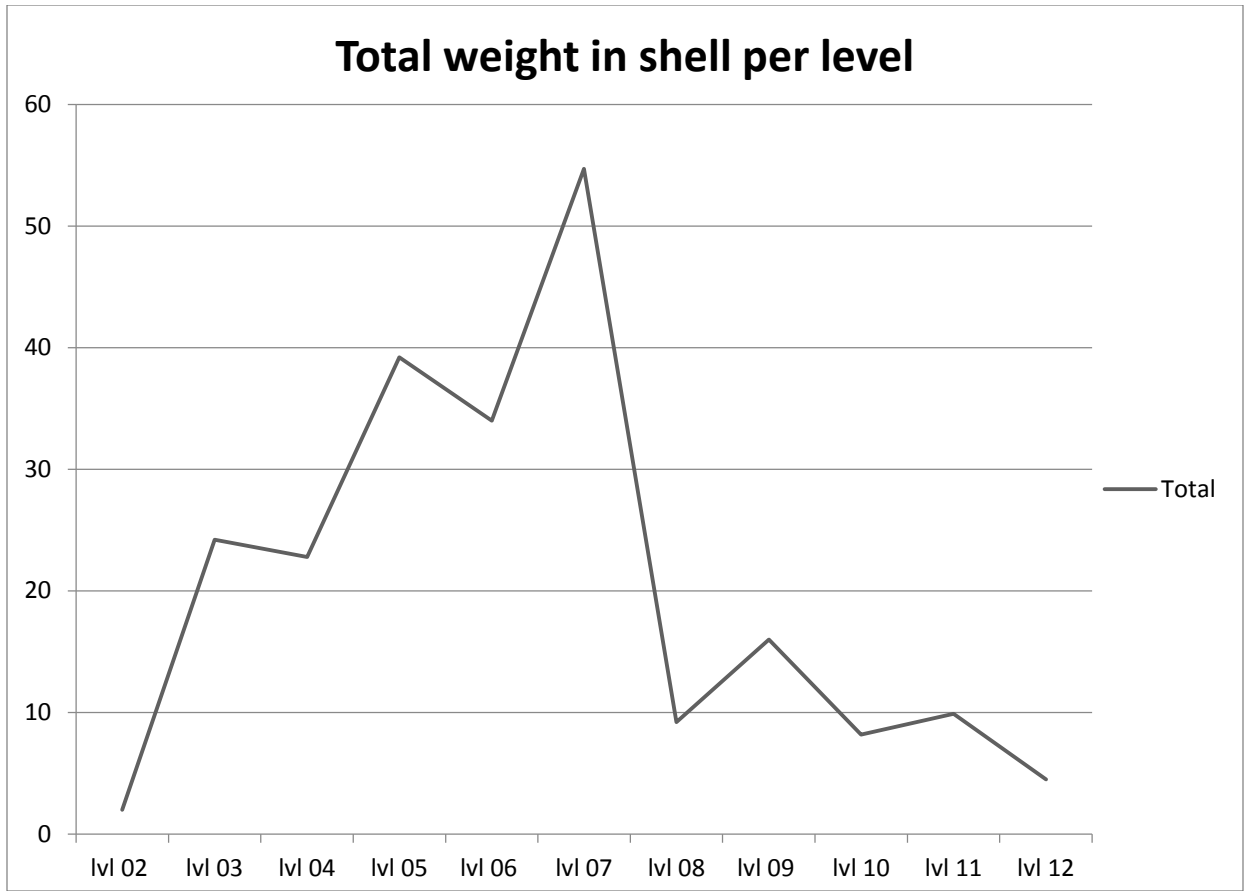


Figure 6.5 Total weight in grams of shell by level.

The two graphs in Figures 6.4 and 6.5 coincide with each other as seen in Figure 6.6. The levels that yielded weight are from the units that yielded most of the weight.

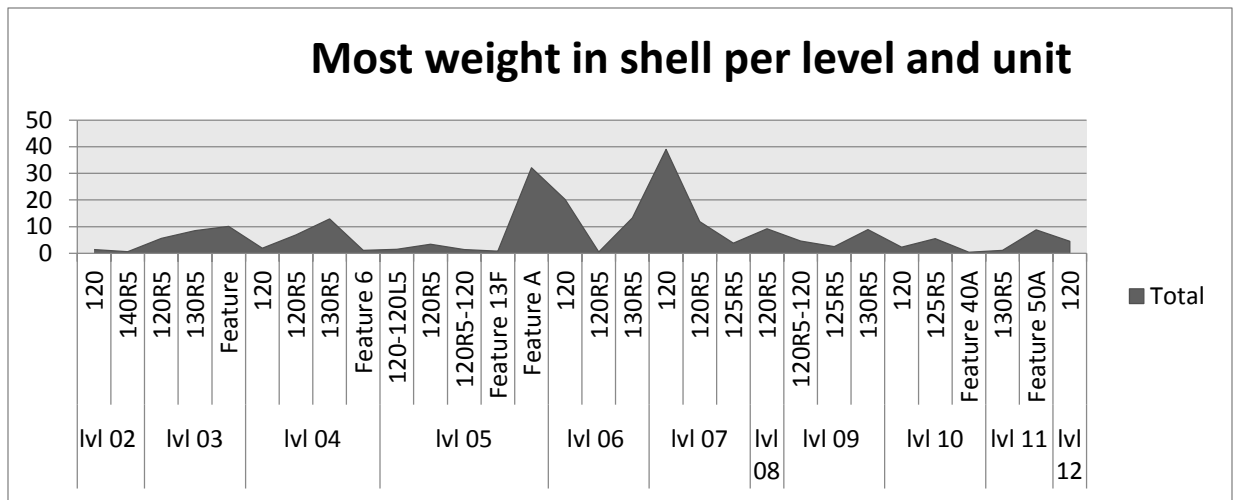


Figure 6.6 Shell weight in grams by level and unit.

Discussion and Conclusion

The faunal remains were quite extensive and dominated by whitetail deer, unidentified large and small mammals, and shell. Also present were unidentified avian, turkey, and a small amount of fish and turtle remains. The unidentified avian specimens were too small to identify the species, as were the unidentified mammal and unidentified small animal. The unidentified large mammal was all presumably deer, but we did not make this presumption in our weight and count analysis. The goal for this research was to determine the distribution of the faunal subsistence and present evidence for the area being either domestic or specialized. In the data collected, the assemblage had a higher count for deer than any other species. Out of the entire assemblage there existed 74 percent deer, 4 percent turkey, 1 percent small mammal, and 21 percent that remained unidentifiable.

The shell was unidentified freshwater mussel and unworked; no marine shell was identified. This suggests that the area was not used for crafting adornments out of shell; however, it is certain it was brought to Moundville for a reason, presumably for food. Our data also shows a sharp incline and decline of the presence of shell throughout the levels and when compared to the other remains suggest a broad use of fauna.

In conclusion, we determined that a careful comparison of the north of mound R faunal bone sample to faunal bone samples in other locations at Moundville is necessary before we can conclude if the assemblage is common residential debris or a more special-purpose consumption.

Chapter 7: Conclusions

Katherine Teeter

The analysis of units 120, 120 R5, 125 R5, 130 R5, 135 R5, 140 R5, and 145 R5 at the ridge north of Mound R revealed a multitude of artifacts over years of excavation, though much of the recorded data, such as profile drawings and student notebooks, failed to survive to the present day. The materials available were used to establish a chronology of occupation and determine the activities that transpired at the site while being compared to the existing history of Moundville.

Typological pottery analysis was employed to determine a working chronological sequence for the site. Despite complications arising from soil disturbances and a limited sample of diagnostic sherds, the site was successfully determined to span through three phases of Moundville occupation. The uppermost levels of 1 to 3 were identified as belonging to Late Moundville II with the use of a beaded rim as the *terminus post quem*. Levels 4 to 14 showed the most evidence of disturbance due to post holes. Sherds from earlier phases of occupation, such as Moundville Incised *var. Carrollton* and *var. Moundville*, were unable to be used as a TPQ due to the levels of mixing and the segment was attributed to Late Moundville II. Despite limited diagnostic sherds appearing in the lowest levels, the presence of Moundville Engraved *Elliot's Creek* allowed for the designation of Late Moundville I as the earliest phase of occupation at the ridge. A rough estimate places the full time-span of site occupation from about A.D. 1230 - 1400 (Knight 2010).

Typological pottery analysis also allowed for a comparison of the amount of serving ware to utility ware found at the ridge. At 79 percent, the utilitarian ceramic known as Mississippi Plain was found in greater amounts than the elite burnished serving ware known as Bell Plain

(Scarry and Welch 2010). Though this suggests that common activities were more prominent at the ridge, comparisons to the pottery analyses of supposed elite mounds Q and P showed that the ratio of utility to serving ware was similar at each location. It is possible that common activities were simply more prevalent as a across all Moundville locations. Vessel form analysis, having identified a large majority of jars and bowls, was able to give some insight into site usage. With jars utilized for serving and bowls for dining, the data lends itself to the idea that the site was more often host to commoners' activities than elite events. It was discovered that there was little variation in the amount of jars and bowls found in each level so it is presumed that the nature of activity at the site did not change greatly over the course of time.

The lithic analysis of the ridge north of mound R produced some contradicting results about the nature of the site. Analysis of the modified groundstone compared the amount of non-local greenstone to the amount of local sandstone and found that polished greenstone was most abundant. With foreign materials being more commonly available to the elite classes, this data corresponded with existing history of Moundville as a community open to trade but increased the level of elite activity as previously suggested by pottery analysis (Baggett et al. 2000). Flaked stone analysis revealed a similar pattern. The amount of foreign stone, most notably Fort Payne chert, was compared to the amount of locally-found Tuscaloosa gravel. The Fort Payne chert and its variants greatly outnumbered the amount of local stone found at the ridge, once again corroborating the existence of Moundville's trade network. Rather than necessitated by an elite preference, it is possible that the foreign stone was considered superior to the Tuscaloosa gravel as a raw material. The gravel would have taken more time and effort to prepare due to the firing process required to strengthen it, thus providing a market for the ready-to-use chert.

Faunal analysis of the site revealed a majority of whitetail deer remains, though a significant portion of the assemblage remained unidentified. Small amounts of turkey and small mammal remains were also identified. Unworked freshwater mussel shell was discovered at the site, denoting that it was used largely as a food source rather than a crafting material. The findings showed a broad use of fauna as a food resource and heavy dependence on whitetail deer. This is likely skewed to some extent by the loss of small faunal remains through the quarter-inch screen. In keeping with Moundville's location along the Black Warrior River, a greater portion of could be expected.

The analysis of the ridge north of mound R was an important step in the ongoing study of the ancient Moundville people. It corresponded with previously existing evidence and produced new data for future research. The information recorded represents an important effort to increase our understanding of the past.

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