RESEARCH PROPOSAL FOR THE ANALYSIS OF LITHIC DEBITAGE FROM

MOUND C AT THE WINTERVILLE MOUNDS SITE (22WS500)

by

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Chapter One

The Winterville Mounds, archaeological site number 22WS500, located near Greenville, MS, is one of the most impressive Native American pre-history sites in the Southeast. Currently owned by the Mississippi Department of Archives and History, the site has been used most recently as the location for the 2005, 2006, 2007, and 2009 summer archaeology field schools of the University of Southern Mississippi and, therefore, has been the focus of several pieces of student and professor work at this campus. The USM field school plans to return to the site in the summer of 2011 to conduct more research.

Winterville thrived in what is known as the Mississippian period or approximately 1000-1500 A.D. (Bense 1994: 183). The mounds originally consisted of 23 flat-topped structures arranged around a central plaza, with Mound A—the largest—standing fifty-five feet high in the center of this plaza. Unfortunately, many of the mounds have been damaged due to erosion and human effects on the environment; only approximately eleven can still be recognized today. These mounds, as was typical for the time period, were used for ceremonial purposes in addition to serving as the residences of select members of the elite. The political structure of Winterville culture has been classified as a chiefdom on the basis of “institutionalized social ranking and the presence of permanent political offices” (King 1965:4), as evidenced by the domestic structures built on the summit of many of the mounds which served as homes for the highest ranked citizens. We know from other chiefdom sites such as Moundville in Alabama that, generally, elites in the Mississippian era had the power to exact tribute goods or services from the lower class, orchestrate feasts, and organize manpower for building structures. However,
knowledge about these levels of authority and exactly what privileges members of the elite were allowed is sparse at Winterville. Therefore, the proposed project intends to advance understanding of the authority, privileges, and abilities possessed by elites at Winterville.

The earthwork central to this project is Mound C, a heavily eroded ridge shaped mound which was passed over by the first large-scale comprehensive excavation of the site, Jeffry P. Brain’s 1989 doctoral research. However, in the summer of 2009, Dr. H. Edwin Jackson and students and volunteers taking part in the University of Southern Mississippi’s archaeology field school undertook the excavation of this mound and uncovered an unusually large amount of lithic debris. Since this mound, like others throughout the Mississippian period, served as the residence of elites, we would not expect to find such a large assemblage of utilitarian tool making debitage. Elites would have had the resources to contract out such labor if the product of the labor was necessary to them (and there is even question that they would have needed domestic tools in the first place). Therefore, the mystery this large collection of lithic debris presents is a second area at Winterville which requires research. In order to shed some light on both of these areas—the elite life patterns at Winterville and the vast lithic materials—I intend to perform analysis of the stone artifacts from Mound C, including flakes, cores, broken, and finished products uncovered there. My analysis will include mass analysis, individual flake analysis, and comparative study in order to answer the question, “What can the nature of the lithic debris on Mound C at the Winterville Mounds site reveal about the lifestyle of the elites living there?”
Chapter Two

Mississippian Social Structure and Elites

According to Judith A. Bense, who has published a definitive work on Southeastern Archaeology, the main type of social organization during the period of Mississippian cultural tradition was the chiefdom. This particular model of society consisted of the ruling elite and the commoners which were subjected to this rule. Status was attributed by virtue of birth and often legitimized through religious ideology (King 1965: 4). The overall “chief” of the community resided atop the largest and often most central mound—for example, Mound A at Winterville—and the leaders of lesser ranked clans would inhabit the smaller mounds (Kidder 1998: 143). In general, elite members of society had special access to goods and authority denied to commoners (Bense 1994; Jackson and Scott 2010; Kidder 1998; King 1965). The elite were permitted to live on top of the mounds and were also the contractors for these structures; in other words, they possessed the power to organize and direct the labor of commoners and their kinspeople to quite an extensive degree in order to build such monuments—the largest of almost two dozen mounds at Winterville stands an impressive fifty-five feet tall.

The works of many archaeologists refer to the religion which thrived throughout Mississippian chiefdoms as the Southern Cult or the Southern Ceremonial Complex; this spiritual system emphasized ancestor worship, warfare, and fertility (Bense 1994; Knight 1986). The mounds were an important factor in this religion. In addition to serving as elite residences, select mounds often served as temples and places of
worship. Knight suggests that mounds are the physical representation of the communal
cult and that they represent the earth in Native American philosophy (1986:678). Elites
reigned over this belief system—they legitimized their rule through appealing to a kind
of divine right and served as intermediaries between the gods and man. According to
Jackson and Scott, “the chief’s close link with the supernatural enables and justifies
his/her role as decision maker” (2010: 326). Based on this religious and political power,
elites could demand tribute in the form of goods and food. Specifically, Jackson and
Scott argue that large quantities of choice cuts from large mammals that excavators
uncovered at the Moundville site indicate that elites had the power to demand these
tribute meats from the commoners who obtained them.

The religious aspect of mound life would seem to be of particular importance at
Winterville. Jeffrey P. Brain’s work at this site identified a “general lack of subsistence
tools,” “low population density,” and “choice cuts of meat” being brought in (1989:
110). He used this evidence to suggest that the site was not typical Mississippian in
which we might see a high population density and therefore more indications of daily
life. Winterville seemed to be a site which was primarily used as the religious center of
the chiefdom rather than serving mainly as the center of habitation in the region (Brain
1989: 110). However, since Brain’s study, recent excavations at this site have
uncovered off mound residential structures, in particular Area A, which might account
for at least a portion of the seemingly missing commoner population (Jackson 2007).
Lithic Analysis

The archaeological literature indicates that lithic analysis has been successfully used to understand cultural systems throughout the globe (Andrefsky 2005; Johnson 1996; Markin 1997; Yohe 2006; etc.). The debris and products that result from stone tool production can give information including but not limited to how that tool was used, what materials it came in contact with, what type of manufacturing model produced it, and what activities were being executed at the site where the tool was found.

The literature recognizes the traditional approach to lithic analysis as the classification of each flake as primary, secondary, or tertiary. Primary flakes are those removed during the first stage of reduction, secondary flakes are removed later than primary and have less dorsal cortex (weathered original stone surface), and tertiary flakes are generated during tool production (Bradbury and Carr 1995).

However, recent experimentation in the field of flintknapping (the process of making stone tools) has led to the conclusion that the traditional staged approach is not reliable (Bradbury 1998; Bradbury and Carr 1995). As a result of these studies, the “traditional” approach has become outdated and individual flake examination and mass analysis have largely filled its spot as the most dependable means of studying lithic debitage (H. Edwin Jackson, personal communication 2011).

Andrew P. Bradbury and Philip J. Carr’s experimental study tested several types of lithic analysis and found that studies which rely on dorsal cortex to define stages, such as the traditional method described above, are likely to produce erroneous information (106). They found that platform facet count was the best attribute for
identifying the sequence of the production process that produced the flakes. However, this method only achieved 70% correct classification of flakes in their study. Therefore, Bradbury and Carr advocate using several attributes together to identify flakes: platform facets, dorsal scars, weight, cortex, and platform configuration. This method, they suggest, will yield the most significant and reliable data about lithic assemblages.

Studies, such as Julie Markin’s 1997 research at Moundville in Alabama, show that other chiefdoms comparable to Winterville display lithic assemblages on mounds. Some researchers suggest that these assemblages indicate craft “workshops” possibly orchestrated or even undertaken by elites (Johnson 1996; Markin 1997). However, these archaeologists came to their conclusions by looking at the non-local raw materials present in the lithic assemblages. At Winterville, the vast lithic assemblage on the summit of mound C is mostly composed of local raw-material.

Jay Johnson of the University of Mississippi has identified several characteristics which could indicate craft specialization at ancient sites even in the absence of exotic stone. Johnson argues that sites of pre-historic craft workshops will have large piles of debitage and few, if any, completed tools. Another indication of workshop production is when the quantity of tools produced—estimated based on the amount of lithic debitage—is deemed to be more than what the local population can use (Johnson 1996). The preceding studies can be applied to the lithic assemblage found at the Winterville Mounds site in order to derive information pertaining to the large amount of chert debris found there.

While the lithic material from Mound C has been relatively untouched by researchers, Jennifer Winter, a graduate student under Dr. Ed Jackson did perform lithic
analysis on material from other locations at Winterville. Of particular interest is her
work at Area A. This section of the site has been identified as a residential area,
perhaps serving the non-elite population. Based on the large amount of shatter (non-
flake debitage), cores and cobbles, Winter found that the lithic production here
consisted largely of early-stage reduction and that 99.7% of the material used for
manufacturing was local Citronelle gravel (2009: 1, 15). This “commoner” debitage
will prove interesting and useful as a comparison with the lithics associated with
Mound C.

Winterville Background and Excavation

The Winterville Mounds site served as the political and ceremonial center of a
late prehistoric chiefdom which thrived in the Mississippi Delta. As evidenced by
potsherds found on the southeastern side of the site, this settlement was first
permanently occupied during the late Coles Creek culture of the Crippen Point phase,
which is found throughout the lower Yazoo Basin region (Brain 1989: 93). The mounds
of Winterville, of which there were originally 23, began to be constructed
approximately AD 1200 in the Winterville stage of the Plaquemine culture (Jackson
and Kowalski 2010: 1). The Plaquemine culture was characterized by Brain as resulting
from Mississippian culture contacting the Coles Creek culture and resulted in this
system which shows influences from both cultures. However, Tristram R. Kidder
rejects this view; he does not believe that contact from Mississippian culture was
necessary for the Plaquemine to develop, it simply was the “logical outgrowth of Coles
Creek cultural evolution” (Kidder 1998:131). But regardless of how they evolved, these
three culture systems consecutively existed at Winterville and are represented in the artifact assemblage.

Winterville continued to be occupied into the Lake George phase of the Mississippian culture thriving until it was abandoned after 1500 AD (Jackson and Kowalski 2010: 1). The mounds form a shape that is unusual for the typical Mississippian chiefdom. Generally mounds are constructed in a rough circle or rectangle enclosing a central plaza from which all the mounds are accessed. However, at Winterville, the mounds were arranged in an oval, but Mound A, the largest and most prominent, was placed in the middle consequently cutting the area in half and forming two plazas.

Mound C, the location focused on in this study, is on the southwest corner of the site and helps form part of the southern plaza. This mound has received little attention from archaeologists throughout the modern age. Clarence B. Moore, who was the first archaeologist to professionally excavate the site, did place some test holes in the mound when he conducted research there in late 1907 (Jackson and Kowalski 2010: 1). However, Moore was disappointed in the lack of artifacts from Winterville and his opinion of the site must have given it somewhat of a bad reputation, because there were no further excavations until Jeffrey P. Brain’s research. In 1989, Brain published an Archaeological Report on Winterville which stemmed from his Yale dissertation work. Although Brain’s study gives us a comprehensive view on the changes in the artifact assembly and, therefore, culture of Winterville over time, he did not excavate Mound C. The artifacts he did catalogue from other mounds at the site presented an unusual pattern. The non-pottery material represents less than one percent of the total artifact
collection (only 200 artifacts). Brain describes the amount of tools found at Winterville “surprisingly low for a site of this magnitude” (1989: 89). He interpreted this to mean that Winterville served essentially as a ceremonial center instead of living area for anyone besides the elites. However, at Mound C, we seem to have found some of the missing tools, as discussed below.

The only other work done on this mound besides Moore’s test holes was conducted in 2009 during a field school directed by H. Edwin Jackson, professor of anthropology at the University of Southern Mississippi. This field season performed excavations on the northern and eastern flanks of the mound and on the summit. The units dug revealed a great amount of slopewash (85-100 cm in the north units and 40 cm in the east trench) which explains how the formerly rectangular mound developed its current elliptical shape. Jackson and Kowalski, in their 2010 report, describe the excavation at the summit of the mound, saying that it “produced a very large number of cobble cores and debitage, significantly more than we have found in other contexts” (17). Their initial assessment is that some form of crafting took place on Mound C.
Chapter Three

During the 2009 summer field school held by The University of Southern Mississippi and directed by Dr. H. E. Jackson, professor of anthropology at USM, supervised students excavated at Mound C of the Winterville Mounds site in Greenville, MS. These participants put a 1m x 1m unit in at the summit of the mound, a trench on the east flank, and two units on the north flank (Jackson and Kowalski 2010: 6). Among the artifacts they uncovered was an unusually large collection of lithic debris, including cores and debitage (Jackson and Kowalski 2010: 17). At the conclusion of the field school session, these artifacts were taken back to the archaeology laboratory at USM where they were cleaned and catalogued; this laboratory is where I will begin their analysis.

Dr. Jackson plans to return to the Winterville Mounds in the summer of 2011 to continue excavation as part of USM’s field school. In those six-weeks, his team will again focus on Mound C, specifically by putting units into the summit of the structure. At the conclusion of the field school I will have access to the lithics which will be uncovered. These lithics, in combination with the 2009 field season artifacts, will compose the total sample for my study.

As noted in the review of the literature, the methods of stone tool analysis have been fairly well established. Although in the past a single attribute was used for classification (e.g. dorsal cortex), through experimentation, archaeologists have observed that recording multiple attributes of flakes provides the most extensive and useful results for interpretation (Bradbury 1998; Bradbury and Carr 1995). As a guide to attribute
selection, based on the recommendation from my thesis advisor Dr. H. E. Jackson, I will primarily be adopting the methods utilized by Andrew P. Bradbury and Philip J. Carr, which they described in their 1995 experimental research. These methods include recording platform configuration, platform facet count, dorsal scar count, cortex, and weight (Bradbury and Carr 1995: 106). Platform facet count, the most useful single attribute for identification is measured by counting the number of faces on the striking platform of a lithic flake. In general, the higher the number of facets, the later in the production process the flake was chipped off its core (Bradbury and Carr 1995:108).

Dorsal scar count allows archaeologists to estimate how many flakes were knocked off the core prior to the flake being analyzed. Cortex is the natural weathered exterior of a stone and is usually measured using a percentage. Bradbury and Carr used four categories to describe platform configuration: “crushed, lipped, cortical, and non-lipped/non-cortical” (1995: 115).

If present, heat treatment—which according to Robert M. Yohe, II, can be identified by noting a flake’s “waxy or glossy appearance,” color changes, pot lidding, and crazing—will also be listed among the modifications I record for each artifact (2006: 43). I will also record the raw material for each flake in order to derive information about how far the inhabitants of Winterville travelled or traded to obtain their stone.

Bradbury and Carr also found mass analysis to be useful especially in conjunction with individual flake attribute recording. Therefore, I will also perform mass analysis on the lithic assemblage. This entails size grading the debitage by passing the pieces through mess screens of different sizes. Once I have separated the sample by size, I shall count
the number of flakes in each size grade, record the number of cortical flakes, and weigh each category (Bradbury and Carr 1995: 111).

After the attributes listed above are recorded, I will proceed to chart the data and attempt to find patterns in the information which will allow for interpretation. For example, from the information I will derive what method was used to chip off the flakes, whether they were broken and, therefore, discarded, and approximately at what stage of production they were removed.

As a contrast to data on the lithic activity of Mound C, I will compare my results with Jennifer R. Winter’s study on the lithic material found at a residential area at the Winterville Mounds site. After this comparison, I expect to be able to draw some conclusions on the difference between the activities being performed at commoner residences and those executed on mounds. After individual flake analysis, mass analysis, and comparison with Winter’s work, I hope to be able to describe the nature of the lithic production on Mound C and provide insight pertaining to the activities of the elites which inhabited it.
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