An Archaeological Investigation of the Indian Hill Site, 1Wx15, a Middle Woodland Culture

by

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Abstract

The object of this study was to assess the variability in adaptive strategies for an extinct Middle Woodland population in the Alabama River valley. Previous archaeological investigations demonstrate a disputed cultural chronology and limited sample sizes for a clear representation of this cultural period. Ceramic and lithic materials from the Indian Hill site in Wilcox County, AL were the primary units of analysis. This study, relying heavily upon archaeological theoretical constructs, previous archaeological investigations into the Middle Woodland, and the analysis of ceramic and lithic material from 1Wx15, demonstrates that this area was occupied by a group of aboriginal people that created a unique container and lithic inventory. Ceramic analysis of the Indian Hill site represents limited interaction of these people with other ethnic groups. It is the purpose of the research to provide a narrative about the cultural identity of this Middle Woodland population in Wilcox County, AL.

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Having two healthy, beautiful, and precocious boys, John Taylor and Bennett Henry, as well as being presently pregnant, made it challenging to find enough time to dedicate myself to this project. This project was only possible with the help of grandparents and caregivers that loved and nurtured my children when I was away in the archaeology lab or writing in my office. Without my in-laws, Mr. John Torbit Henry, and Mrs. Nancy Henry, and friends, Mrs. Elizabeth Anton Martin, Mrs. Sarah Scott, and Mrs. Gwen Sistrunk, I could not have balanced both the roles of archaeologist and mother.

This thesis encapsulates the energy expenditure of many people over decades and in multiple settings. It is the combined sweat, cooperation, and hard work of others that make archaeology as a discipline even possible. Yet, for me to have been able to even take on such an arduous research project I first had to be loved to even start. I could not be an archaeologist,

wife, mother, and all the other parts that make me who I am without my husband, Mr. Steven Taylor Henry. Your love gives me strength and makes me whole.

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Chapter 1: Introduction

The Middle Woodland characterizes a period in prehistory that represents transition, new technology, and increased sedentism in the eastern portion of the United States. In the preceding Early Woodland people were cohabitating in small egalitarian bands loosely connected by ancestral burial rituals that sometimes involved the construction of small earthen mounds. These groups of people relied heavily on hunting and gathering as a means to subsist; however, the Middle Woodland as evidenced by excavations demonstrates an increase in population and sedentism based partly on the occurrence of permanent settlements, shellfish deposits, floral and faunal remains, modified lithics and ceramics.

Using information gathered from the analysis of cultural remains from 1Wx5, the Indian Hill site, in Wilcox County, Alabama, the present research demonstrates adaptive strategies and the set of relationships included in the internal structure of the site based on the recovered ceramic and lithic artifacts. This analysis will lend to a more thorough understanding of the aboriginal peoples who existed in a now extinct cultural system and how they procured, processed, and exploited this environmental niche in southwestern Alabama.

"Archaeological investigations were conducted at the Indian Hill site, Wilcox County, Alabama, during the summer of 1996 as a joint program between the Auburn University system and the Alabama Museum of Natural History" (Cottier and Hathorn-Davis 1998:1). Although preliminary studies were conducted following the excavations, analysis was not completed until 2012. As such this site and the data gathered provide a vista into "the complex nature of human usage over time" (Cottier and Hanthorn-Davis 1998:3). The current research provides a cultural historical understanding of adaptive practices and other facets at 1Wx15. The data accrued demonstrates culture change based on a shift in ceramic types, lithics and other factors. The

information extrapolated from this research begets an interpretation of human adaptation and the environmental activities of aboriginal populations that existed during the Middle Woodland within the Alabama River drainage.

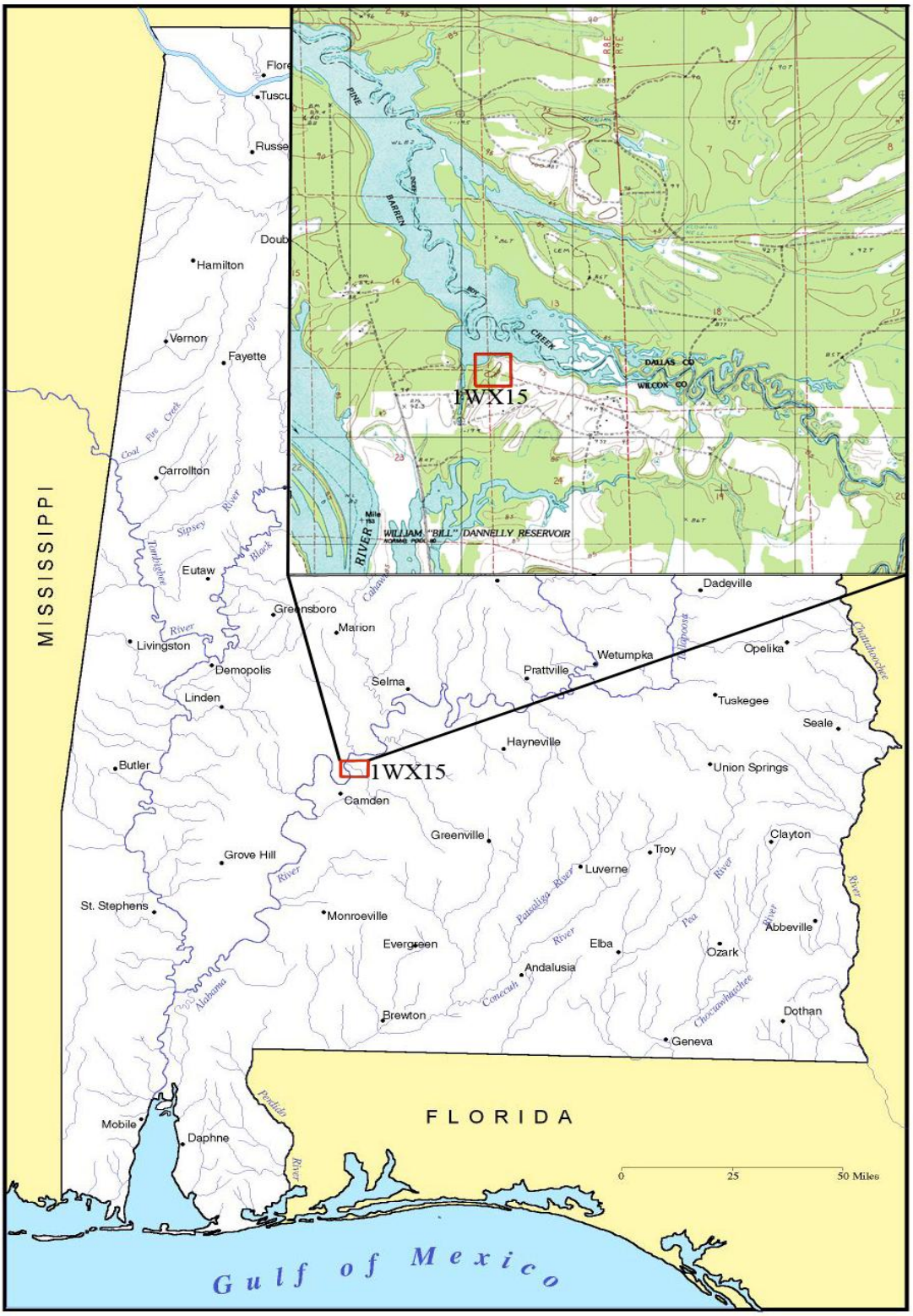

Figure 1: 1Wx15 project area map (Cartographic Research Lab University of Alabama).

Chapter 2: Theoretical Perspectives

This research relates an ideographic perspective to the analysis and interpretation of the Indian Hill site, 1Wx15, in Wilcox County, Alabama. This study applies an ecological framework to the project location in order to link the archaeological record from 1Wx15 to the environment and geography. Over the past century archaeology has established itself as a social science and shares many goals and similarities with the study of sociology. Processual archaeology has established methods and theories necessary, along multiple disciplines, to evaluate the long term social interactions and culture change within prehistoric populations. Thus, a sociological background is a useful tool when interpreting past societies. Using the work of theorists such as Herbert Spencer, Julian Steward, Leslie White, Lewis Binford, Michael Jochim, and Michael Schiffer, and others, this study will apply their theories of sociology, ecology, and geography to formulate a processual theoretical approach for interpreting the data gathered from the analysis of 1Wx15.

Considering the overall ecology of the research area, it is possible to operationalize, "ecology is the study of dynamic relationships between organisms and their total environments" (Jochim 1984:87). Ecological theories attempt to explain how organisms cope with their environmental problems such as the carrying capacity of a given mode of production. Herbert Spencer, a social theorist who used the biological analogy of the organism in relation to human societies, suggests that the forms of society are, in part, determined by the surrounding physical circumstances (Spencer 1896). "The structures and functions of the social organism are obviously far less specific, far more modifiable, far more dependent on conditions that are variable and never twice alike" (Spencer 1896: 52). He uses this general evolutionary concept for the influence of environment on selection in his distinction between the individual and society

(Spencer 1896). This concept as applied to human societies provided the groundwork for noted cultural ecologists, Julian Steward.

Julian Steward viewed cultures and how they adapted to their environment (Watson, et. al 1971). Steward's "ecological approach focuses on the adaptation of individual cultures to specific environmental circumstances" (McGee 2000:237). Steward proposed that cultures in analogous environments were apt to follow a similar developmental sequence and formulate similar related responses to their environment (McGee 2000). Ecological approaches assist the archaeologist not only as a "guide to data collection but also as an interpretive framework for viewing culture" (Watson, et. al 1971:91).

Culture is part of a broader system which has a mutually supporting relationship to the ecology of a region. Lewis Binford defines culture as "all those means whose forms are not under direct genetic control which serve to adjust individuals and groups within their ecological communities" (Binford 1968:323). Leslie A. White viewed culture as man's extra-somatic needs to adapt to the environment (White 1949: 145). In terms of archaeology, the artifacts recovered are not viewed as particular independent units but as they relate to other artifacts and to human behavior as it adapted to the environment. Artifact analysis remains an important factor for it highlights cultural process and concentrates on the interdependence of culture and the environment.

Using an ecological approach proves fruitful in the formulation of research designs and how data could be interpreted (Watson, et. al 1971). Concentrating on the internal structure of the ecological system, one could possibly isolate the variables which determine the directional change (Binford 1968). Binford states that it is important to "understand the conditions which favor the rearrangement of energy-matter components and their linked dependencies in a manner

which alters the effective environment of the unit under study" (Binford 1968:323). He also used the term "effective environment" to include all those aspects of the "total environment which are in regular or cyclical articulation" for the area being studied (Binford 1968:323).

Specifically viewing the analysis of 1Wx15, the Indian Hill site, one can employ an ecological approach to place this Middle Woodland culture within a broader grand system: the biophysical environment. Thus, various cultures such as the aboriginal occupations of the Alabama River Phase, participated in the same broad environmental system, though they might relate to any given system in various ways over different periods of time. Jochim (1984) further states that any particular aspect of behavior must be examined within its cultural and natural context though this context may vary in space and time. Since human behavior and subsistence activities can be explained in terms of environmental relations, many authors substantiate the value of the concept of the ecosystem.

As employed in archaeology the ecosystem is "the structure of dynamic interrelationships of population behavior and its context" (Jochim 1984:87). This perspective is a useful heuristic tool in the construction of methodologies, the formation of middle ranged theories and the testing of hypotheses and relationships in a prehistoric cultural system.

Not all archaeological studies have fully used the ecosystem approach for it is argued that it is difficult to demonstrate change over time. However, the ecosystem approach is effective in that it utilizes data from ecosystem traits and processes "such as the spatial distribution of environmental characteristics and the stability of their distribution through time" (Jochim 1984: 88). Futhermore, the ecosystem approach is successful at showing change for short term behavioral aspects.

Anthropologically, Geertz first argued that the ecosystem concept was a useful unit of analysis in his 1963 publication, *Agricultural Involution*. In this work Geertz criticized Steward's over simplistic use of subsistence and his use of "generally characterized habitat types" or regions to various ecosystems (Geertz 1963:6). Geertz viewed the ecosystem as being "functionally interrelated" to all aspects of culture rather than being defined as vague metaphors such as the organism in relation to its environment (Geertz 1963:6). Other theorists, such as Roy Rappaport (1979) on the other hand utilized the ecosystem approach as a unit of analysis which measured the "material exchanges of a local population" and was the synergy of the objective biological disciplines with all other subjective aspects of human adaptation to the environment (Moran 1984:270). Though there are contrasting uses of the ecosystem approach those mentioned were used as a framework to define methodologies for the research at the archaeological site of 1Wx15.

Viewing the numerous ecological approaches as applied to theoretical constructs and research, one would see that it is difficult to pinpoint general ecological approaches as they specifically apply to human behavior in the archaeological record. In his chapter on, *The Use of General Ecological Principles in Archaeology*, Donald L. Hardesty considers how these general ecological principles can be applied to archaeology. Hardesty uses the stability-time hypothesis to highlight one of the many general ecological principles that could be used in conjunction with archaeology from the natural sciences. This hypothesis attempts to explain and predict the behavior of hunter gatherers in the context of the dessert (Hardesty 1980). However, Hardesty notes that Michael Schiffer argues "that the use of general ecological principles in archaeology and anthropology is plagued with logical weakness" (Hardesty 1980: 159). This would be consistent with Schiffer's belief that the archaeological record is formed by both "cultural and

non cultural components" and these non cultural components incorporate the sciences of other disciplines (Schiffer 1972: 156). It is difficult to have general ecological principles since many of the theories have developed independently to human behavior (Hardesty 1980: 159). Though most of these general ecological principles have been tested it has been with "data on the ecology of species rather than Homo sapiens" (Hardesty 1980:161). Thus, it is pertinent to find a middle ranged theory that would work in accordance with archaeological data as it applies to human behavior.

One such theory that can be more readily applied to human behavior is the role of the ecological niche in terms of ecology perspectives. First it should be noted that "ecological niches must not be confused with environmental zones and the simple geographic location of settlements" (Watson, et. al 1971:94). Ecological niche is the ecological behavior of a given species, or in this study, a given culture as exemplified by the archaeological site, 1Wx15. Again, when a society participates in an ecological niche, it should not be confused with a geographic region. Rather the niche is the processes used in a complex situation of relationships. The niche is contained to the regions available resources that a given society chooses to utilize. Thus, niche boundaries are defined by how far a given culture will disperse themselves over a region for available resources used in subsistence (Watson, et. al 1971: 95). Viewing the means of food procurement and exploitation of resources, an ecological niche is most simply defined by the geography of resources chosen for consumption. This then allows the archaeologist to quantify niche differences. "Niche width, niche distance and niche overlap can then be measured by some characteristic of the utilization of function" (Hardesty 1980:165).

Lewis Binford, as a processual theorist, considered the environmental niche as it related to the post-Pleistocene period. He noted that there is a distinction in the treatment of the

ecological niche, that of functionalism versus structuralism (Binford 1968). "Functional differences are those which result from differences in the form of the elements of a system and which do not necessarily imply differences in the kind of articulation which exists between a cultural system and the ecological community of which it is a part" (Binford 1968:324). In the functional differences Binford stresses the form of the gross environment as opposed to the structural differences of the environmental system. Whereas the structural difference for the environmental niche "refers to the differences in the modes of integration between cultural and other components within the ecological communities" (Binford 1968:324). When two cultures share similar ecological systems each culture may articulate different variables within the system for adaptive means. Binford (1968) exemplifies this point by the occurrence of horticulturalists and hunter-gatherers cohabitating in the same environmental system. Though they share the same ecological niche, they manipulate the environment differently due in part to the structure of their social organization.

Patty Jo Watson's, *Archaeology and Anthropology: A Personal Overview of the Past Half-Century*, considers Lewis Binford's work as a transition point in anthropology and archaeology as a "shift from highly particularistic, historicist foci toward generalizing, explicitly social scientific anthropological ones" (Watson 2009: 6). She uses the term new archaeology and processual archaeology synonymously to demonstrate a trend in theoretical approaches for analyzing past and relatively unknown cultures. Processual archaeology links ecology and the archaeological record to understand human subsistence practices and how they relate to a given culture. According to Watson, Binford's work "focused on paleoenvironment, paleoecology, and subsistence economies of ancient societies" (Watson 2009:7).

Processual archaeology grew critics as post modernism gained popularity in sociological and anthropological theory during the 1980s. Post Modernists deemed such work as Binford's to be simplistic and over reaching in its generalizations concerning the sociocultural behaviors of past communities. These critics known as postprocessualists believed that though looking at the archaeological record and ecology to understand human subsistence practices is integral, it could not provide an absolute truth and lacked accountability for individual and natural agents affect on the archaeological record (Watson 2009). Ian Hodder's credited with using the term "postprocessual" in archaeology, suggested that multiple disciplines should be considered and largely integrated Marxian theoretical constructs when "studying the past though its material remains" (Hodder 2003:4). Postprocessualists, like their Post Modern counterparts, deny blanket statements of truth and seek to provide validity for the various interpretations linked to the archaeological record.

Geographical Considerations: Using a geographical perspective provides another dimension to the ecological approach and lends to a greater understanding of subsistence practices. Geography highlights and exhibits spatially how food resources are procured by a given culture; yet, it also defines cultural regions which aid in understanding variability.

> An archaeological culture may be defined as a geographically contiguous set of artefact types that may occur in differing combinations in different functional contexts and that together form the surviving material expression of a distinctive way of life sufficiently comprehensive to permit its bearers to perpetuate themselves and their behavioral patterns over successive generations (Trigger 1978:77).

Using a geographical perspective, "though often criticized for being deterministic," is a valuable tool in postprocessual archaeology for it is a spatial extension of human behavior and activities (Trigger 1978:135). Prehistoric people and their interaction within a given environment demonstrate that "human behavior tends to assume the structure of a nested hierarchy in space" (Jochim 1979: 88). This is exemplified by the spatial ordering within an archaeological site.

The structure of a site can be more fully understood by analyzing the material remains from a specific given culture. From these remains spatial relationships can be inferred. In terms of geographical explanatory models, one can consider the activity area as a specific locality in the structure of a site. The activity area can be defined as an "area of social distinction" in that it may be the locus for a specific activity such as cooking (Struever 1968:287). A cooking locality may be defined based on the cultural remains distributed in a given area. If an activity area demonstrates a clustering of artifacts such as grinding stones, rock hearths, charred floral and faunal remains, then this concentration of artifacts defines the area in space by providing a locus for human activity. However, not all activity areas are specific to the activity of cooking. Other activity areas may include for example, tool manufacturing and maintenance or residential units. "In addition, each activity area can be expected to have spatial extension, since activities tend to

be localized and to a degree spatially segregated within the area of a community" (Struever 1968:287). Once the spatial distribution of the activity areas has been defined it allows one to infer possible settlement patterns for the given site.

Considering spatial distribution in the context of the archaeological site one would note that there are no clear boundaries defined in prehistoric cultures. Jochim states that it is useful to group geographical approaches into three groups: "those focusing on the site and its catchment, the larger sustaining region for a group, and broader areas containing several groups or larger societal units" (Jochim 1979:88). For the purpose of the present investigation, the site catchment approach will be considered in applying a theoretical structure for the ordering of space for the Indian Hill site.

Site catchment is a locational approach to understanding a given group of people's relationships to their environment. However, before site catchment is defined it is important to differentiate between the terms territory and catchment. The territory is the area "immediately accessible to a site inhabitants, which was habitually exploited. "Whereas the catchment is "the total area from which the contents of a site were derived" (Roper 1979:124). Roper emphasizes aspects such as "availability, abundance, spacing and seasonality of plant, animal and mineral resources" as important determinates for site location (Roper 1979: 124). The site is considered a point in space where resources are exploited for economic activities. "The term catchment is drawn from the literature of geomorphology where it is synonymous with drainage basin or watershed and denotes the area from which a stream draws it water" (Roper 1979:120). Thus, for archaeological endeavors the site catchment is most simply the area from which a people secure resources.

When considering the site catchment approach it is necessary to view the cost/benefit ratio of a given site. The distance a group or individuals are willing to travel away from the locus to obtain resources determines the amount of energy expended. Thus, given the energy expended by a group to obtain theses resources allows site function and location to be correlated. "Inferences about site function can be derived from a resource analysis or catchment of a site and, vice versa, the artifact assemblage and floral and faunal remains at a site can be used to model its catchment"(Flannery 1976:103). In this vein, site content, location and function are interrelated variables when considering the study of a given settlement.

As site catchment is considered an aspect of an ecological approach, it is important to explore the "resources used in relation to those available, the constraints on the organization of procurement, the spatiotemporal variability of the environment, and the environmental effects of exploitation" when conducting research (Jochim 1979:88). Thus, prehistoric site catchment analysis considers not only the energy expended, but it views the available and potential resources sometimes facilitated by examining modern areas with like environments. However, this approach to site catchment analysis may be problematic, since "at different times or places the biophysical environment may offer very different possibilities for exploitation" (Roper 1979:121). Thus, to properly correlate site function and site location, one must consider the various ways to analyze site catchment.

Various models have been used to approximate site catchment. From the use of Thiessen polygons, to circular territories and time contours (Roper 1979), many applications have been used to formulate the range of economic activities. Though many will use contemporary analogies to form an estimate for the area used, it is not as useful when analyzing prehistoric sites. Kent Flannery forwent all analytic devices and merely concentrated on those resources

from the site studied. In order to determine site catchment. Flannery started with “empirical data on plant, animal, and mineral resources and asking from how far away they must have come” (Roper 1979:125). For the purpose of this study, Flannery’s model for site catchment formulation will be considered.

Culture Change: Understanding adaptive strategies as they relate to the environment cannot be discussed without regard to culture change. As previously stated the Middle Woodland development shows an increase in sedentism, technology and population increase. Though this can be concisely stated it leaves out those conditions which affected this transition from the Early Woodland to the Middle Woodland.

> Cultural systems relate man to habitat, and equilibrium can be established in this relationship as in others. When equilibrium has been established culturally between man and habitat, it may be continued indefinitely until it is upset by the intrusion of a new factor (White 1949:284).

This investigation considered the conditions and various agencies which may have impacted the Middle Woodland culture in the southwestern area of the Alabama River drainage. Based on the excavated material analyzed, it appears that this site was relatively isolated from the various cultural identities that existed within the same geophysical environment based on the lack of decorated ceramic wares.

Struever (1968) offers culture change as an explanatory model to economically explain the differences between the Early Woodland and the Middle Woodland developments. He suggested the hypothesis that a shift in subsistence-settlement occurred between the Early and Middle Woodland. This is evidenced by the "higher population densities, larger local aggregates and changes in the manner of segmenting and partitioning the population required for performing the new subsistence task" (Stuever 1968:305). Based primarily on ecological adaptive models Struever's hypothesis borrows from Caldwell's primary forest efficiency model.

Joseph Caldwell (1958) suggested that after the Holocene began hunter gatherers groups in the eastern United States continued to forage, although crop plants had been introduced. This reliance on foraging continued for it was more cost effective, in terms of energy, to rely on the seasonally reliable and abundant resources that were available, than to attempt crop cultivation.

Concisely stated, Caldwell's adaptive strategies thus were coined primary forest efficiency. Struever calls the adaptive process of exploiting highly reliable food resources in specific biomes as intensive harvest collecting. This subsistence base involves two factors:

> (1) Natural food products must occur in large, concentrated populations and lend themselves to harvesting (that is, they can be collected in quality with relatively small labor output)
> (2) The plant and animal population from which these food products are derived must be regularly renewed (Struever 1968:305).

This subsistence base change allowed for a change in settlement. This transition from the early hunter gatherers of the Early Woodland to the more sedentary groups of the Middle Woodland is exemplified by the identified archaeological site of 1Wx15, in Wilcox County, Alabama. The presence of shell middens and flora and faunal remains demonstrates intensive harvest collecting was a method of subsistence for this Middle Woodland population. This mode of subsistence can then account for the transition from the Early Woodland economies to the Middle Woodland, though it has long been used as means of "systematic human exploitation" as early as 70,000 to 60,000 years ago as demonstrated by Middle Stone Age material remains from shell middens in South Africa (Volman 1978: 911).

Chapter 3: Background

Shellfish assemblages are an important aspect in archaeology since shells, when found in large concentrations, are often in excellent condition compared with individual artifacts that "had been deposited in organically rich acidic soils in terrestrial site" and these specimens often times can be "weak and friable"(Storch 1987: 267). The matrix of many invertebrates in the phylum Moullusca is composed of calcium carbonate which is covered with a "non calcareous membrane called the periostracum" (Storch 1987: 267). As the periostracum dries and flakes it creates a thin layer of calcium carbonate which neutralizes the acidic soils and lends to create a better preservation of materials in the archaeological record. Thus, shellfish when included in the archaeological record provide a unique advantage for analysis due to better preservation. The high occurrence of shell in the middens at archaeological site of 1Wx15, allowed for better preservation of artifacts, especially faunal remains.

Woodland subsistence practices did not develop independently; rather it was the continuation of the limited economy of the preceding cultural horizon, the Archaic. The Archaic economy comprised of hunting and gathering with shellfish contributing to a proportion of the diet due in part to the "mid-Holocence Hypsithermal climactic optimum" (Peacock 2002:444). This climatic change had environmental factors which included "warmer and drier conditions that led to stabilized aquatic systems with shallower stream and rivers providing optimum habitats for, and easier accessibility to, mussels" (Peacock 2002:444). Viewing archaeological evidence of paleosubsistence remains, freshwater mollusks have been used as a food source since the mid-Holocene (Christenson 1985: 232). The Late Archaic cultural horizon is defined as the period in which shell mounds or middens began to accumulate amongst littoral and riverine environments of the southeast; thus, lending to the classification "Shell Mound Archaic"

(Marquardt and Watson 1983: 232). “Shellfish played a major role in the diet of the Shell Mound Archaic people, the shell middens themselves being formed by the shell which was discarded meal by meal”(DeJarnette 1952:274). However, the zenith for freshwater mollusk exploitation in prehistoric economies reached its peak during the Middle Woodland cultural horizon and was considered a major shift in subsistence activities from previous practices. Whereas previous populations had seen more seasonal migrations, the Middle Woodland saw a change in subsistence patterns. Shellfish have been viewed as just one of the resources that lead to the development of more permanent settlements whose inhabitants exploited floodplain resources (Peacock 2002: 445).

Though shellfish was a major proportion of the Woodland diet this was not the only food source used by the prehistoric people of Alabama. Other animal proteins included fresh-water fish, turtle, wild turkey, deer, and various fowl available in the region (DeJarnette 1952:274). During the Early Woodland to Middle Woodland the “rudiments of agriculture began to emerge as a supplement to the old hunting and gathering ways of life” (Hudson 1976:56). Complexes of various plants were used in addition to the animal proteins to provide nutrients especially in the learner winter months. Some of the plants used were domesticates such as squash, beans and other indigenous annuals (Walthall 1980: 108). Other cultigens used for their hardiness and adaptability to disturbed soils included “pigweed (Armaranthus), lamb’s quarter (Chenopodium), knotweed (Polygonum), marsh elder (Iva), giant ragweed (Ambrosia trifida), may grass (Phalaris carolinieana), and sunflower (Helianthus annua)” (Walthall 1980:108). In order to be preserved, floral remains must generally have undergone prior carbonization. Carbonized plant remains may also be used to test for radio carbon dates based on stable carbon isotope analysis (Anderson and Mainfort 2002: 2). Due to the increase of animal and plant material in the diet of the Middle

Woodland populations, storage technology coincided with the variability of resources, as well as increased sedentism.

Ceramics are a highly significant unit of analysis within the archaeological record. They not only provide an indication of subsistence practices, but they demonstrate various processes with intra and inter site implications. Aboriginal pottery, be it the artifact in its whole or a sherd, can demonstrate various behavioral processes.

Pottery analysis is integral in the creation of the archaeological narrative. Pottery sherds demonstrate culture contact situations as well as culture change. Sherds may hold the impressions of fabrics that did not survive the archaeological record. The advent of pottery manufacturing is a technological advancement that specifically affects the social behavior of a given group of people.

Specific pottery can be used as an "index fossil" to relatively date sites and cultures within a regional context. The ceramics at 1Wx15 must be considered in relation to the whole container inventory and economics that existed within this biophysical environment. Technologically speaking, increased ceramic production in the Middle Woodland became widespread in the Southeast. "Regional variations in form and decoration arose, but there were also some pottery traits that were shared by different regions" (Hudson 1976:63). The pottery of the Woodland tradition is often tempered with fiber, limestone, sand or grit as opposed to early manifestations which were tempered with other material. Based on the ceramic analysis for the Indian Hill site, a majority of the pottery recovered is sand tempered and moderately micaceous which is generally indicative of the Woodland period in the Alabama River region. Understanding the regional, as well as local differences in pottery styles, temper and surface decoration allows archeologists to date sites based on the presence of specific pottery types.

The present thesis places a significant importance on the ceramic analysis of recovered artifacts. Using cultural periods which have been established by previous archaeological investigations for the Gulf Coast, it is possible to assign the pottery from 1Wx15 to specific periods though the use of typological correlations with other pottery of corresponding periods (Wimberly 1961). Distinctions between pottery sherds will be based on tempering material. For instance, if there is a presence of vegetable fiber tempered pottery sherds, then this relatively increases the age of the feature or lens of the archaeological site. Pottery is also a key factor in understanding the subsistence patterns of prehistoric populations for it provides data on food preparation, storage, and ceramic technology.

Mississippian Component

The Alabama River drainage region was recognized by being culturally significant thanks to earlier archaeological investigations by Clarence B. Moore in 1899 on the Mobile and Alabama Rivers (Sheldon 2001). With an agenda for Mississippian artifacts from Late Mississippian and Protohistoric periods, Moore noted three Mississippian mound sites on the Alabama River though to date only two of those sites have been identified by modern investigations (Sheldon 2001). Prior to the construction of the Miller's Ferry Lock and Dam an archeological survey was conducted by personal associated with the University of Alabama. Numerous sites were identified including 1Wx15. A Mississippian component was established based on the presence of secondary bundle burials in association with a shell tempered water bottle found within a Middle Woodland shell midden (Cottier and Hathorn-Davis 1996). Previous excavations defined two separate bundle burials representing the remains of an adolescent and a child of undetermined sex without any known associations (Cottier 1968). A bundle group consisting of five burials was excavated in association with a small plain shell tempered bottle. This bundle burial of comprised of four adults and one adolescent. The water bottle in association with the group burial is indicative of the Mississippian cultures of the Alabama River region (Cottier 1968).

In an effort to further understand the Mississippian component the Alabama Museum of Natural History supported an archaeological excavation with Auburn University and the Museum Expedition program in the summer of 1996 in Wilcox County (Cottier and Hathon-Davis 1996).

After the 1996 excavation of the Indian Hill site it was determined that the only Mississippian component was the series of secondary bundle burials noted by the previous

investigation for the Millers Ferry Lock and Dam in the 1960s. The current analysis of ceramics from 1Wx15 demonstrates that there were no Mississippian ceramics in the archaeological record. The majority of all ceramics were fine sand tempered plain with little decorative types. "The emergence of the Mississippian stage is marked by the appearance of distinctive forms of pottery, commonly shell tempered" and none of the material remains excavated demonstrated evidence for a Mississippian ceramic technology (Walthall 1980: 185). The ceramic inventory of 1Wx15 designates the last occupation to have been the Late Woodland with the possibility of limited interaction in the Late Woodland Henderson Phase.

The Mississippian component at 1Wx15 may never be fully understood. Given the minority of Late Woodland ceramic types as well as the lack of evidence for shell tempered Mississippian pottery, 1Wx15 may demonstrate "population movement and replacement" (Walthall 1980:197), though not a secondary occupation of the site. The Middle Woodland ethnic population that existed at the Indian Hill site would have experienced drier climatic conditions. Historically, Pine Barren Creek and much of the area surrounding 1Wx15 may have been unsuitable to Mississippian agricultural practices due to subsequent flooding.

Associate Reformed Presbyterian settlers first came to Wilcox County from Abbeyville, in South Carolina in the 1820s and established a congregation known as Pine Barren Church on Pine Barren Creek in Wilcox County, Alabama (Bethel ARP). A yellow fever epidemic in 1856 and years of flooding in the lowland area forced the residents to relocate within the county to higher land in Oak Hill. The experiences of the first American settlers in and around Pine Barren Creek in Wilcox County may provide an historical approach and plausible explanation for why the Indian hill site was largely unoccupied after the Woodland Period until historic times (Bethel ARP).

Chapter 4: Definitions of Concepts

The concepts used in this study describe a suite of behaviors that humans use to feed themselves during the Middle Woodland period. Subsistence is a means by which a group obtains the food and shelter necessary to support life. Subsistence practices are when human groups extract and utilize energy from the environment. These activities for Middle Woodland populations in Alabama include the production of pottery.

Pottery is unique in that when excavated it is most often found as broken fragments of a pottery vessel known as "sherds". These sherds represent parts to a whole ceramic inventory used in maintaining a subsistence economy of hunter gatherers on the precipice of agriculture. These vessels were used in all levels of domestic application, as well as in ceremonial aspects though to what degree is uncertain. The most common form of pottery vessel, known as the focal form (Mann and Krause 2009), for the Woodland Period is a "wide mouth concoidal base jar (Wathall 1980:112).

Pottery sherds provide very useful data for archaeologists and are important for they allow for seriation. Seriation is "a method of determining a relative chronology commonly utilizing variations in ceramic decorative or stylistic variables through time" (Walthall 1980:277). Thus, pottery sherds act as an index fossil which allows for a relative date based on specific variables.

The study of prehistoric ceramics provides a much needed chronology for understanding how these now extinct cultures and people existed in the Alabama River region. Considering the sherd as a mere fragment of a once whole vessel, archaeologists must apply these remnants of cultural material to the whole of a cultural tradition for a distinct group of peoples. When applying specific nomenclature to pottery types, it must be noted that "the grouping or

categorizing of phenomena reflects the attitude of the classifier toward his data" (Willey 1949:4). For the purpose of this study, all decorative ceramic types were analyzed against known established types. All sherds in this archaeological analysis that were not discernable to previously established modes were typed as unclassified and noted by their temper and decorative application.

Archaeologists use ceramic and lithic artifact inventories to measure and study variation so as to place them in the framework of a culture period, or synonymously a culture complex (Willey 1949). Culture periods are defined under the "assumption that culture changes over time" and that we can view this change by studying the material and non material remains (Willey 1949:4). Under that assumption cultural periods may then be understood by the degrees of difference between artifacts from a similar spatial and temporal context as providing evidence for a shift in culture. Willey (1949) notes that the disappearance of a pottery type or a burial procedure in the archaeological record may be viewed conjecturably as culture change. Ceramic artifacts were more "formally analyzed" than all other forms of material cultural for the Indian Hill site based on the ability for ceramics to provide chronologies and help define cultural periods. The lack of archaeological data for inland Middle Woodland sites in the Alabama River drainage makes using a formal analysis of lithics difficult based on unknown provenience and how they entered the archaeological record. Thus, ceramics are important as index fossils, and their seriation, may provide a culture history approach to understanding the Indian Hill site.

Viewing culture periods within the Middle Woodland demonstrates various cultures or distinct ethnic groups were participating in similar ceramic traditions such as the Circum-East Tradition (Fuller 1998). Examining ceramic traditions within various cultural complexes allows archaeologists to assign similar cultural groups within those defined periods using ceramic

analysis to various phases. These phases are merely "grouping together types which bears a very obvious resemblances" (Willey 1949:6). Within each phase may be a set of ceramic series that share similarities in tempering, form, and decoration. According to Willey (1949), the ceramic type is the smallest classificatory unit at a site and therefore most suitable for in-depth analysis.

Though ceramic study is integral to understanding subsistence within a distinct cultural group it only relatively reveals the complexity of these prehistoric peoples. The analysis of other material remains such as lithics, shell middens, and faunal remains, demonstrate how past populations captured animal and plant calories. Specifically modified lithics, modified by humans, were often ground or flaked to remove the cortex and reduced to functional tools. Examples of a modified lithics used in the production and consumption of food would be a "p.p.k" or projectile point knife, nutting stone, and scraper, to name but a few. Middle Woodland modified lithics included a wide range of tools used to exploit the available protein from indigenous flora and fauna suitable for ingestion.

Subsistence for many Middle Woodland populations also included the harvesting of freshwater shellfish. A concept often used and associated with shellfish exploitation is midden. Midden essentially is the "accumulated organic refuse near a habitation site" (Walthall 1980: 277). According to Gregory Waselkov the most general definition is "a cultural deposit of which the principal visible constituent is shell" (Waselkov 1984: 93). Therefore, shell midden is most often associated with habitation sites located near littoral and coastal geographic features. When examining subsistence practices, it is often important to consider how the environment impacts the culture. Archaeologically, a culture is defined as "a single group of technologies or assemblages reflecting a similar economic adjustment shared by multiple social groups" (Walthall 1980: 277). Thus, it is important to consider culture when assessing the subsistence

practices of a past population. This is due to the fact that subsistence, environment, and culture are closely connected as conceptualized by such theorists as Julian Steward.

Chapter 5: Literature Review

Shell Assemblages. Understanding the variability in subsistence practices for Middle Woodland populations requires careful investigations of the exploitation of shellfish. David H. Dye (1996) believes that the increase in an aquatic resource base can be linked to an increase in sedentism. According to Dye this increase in the aquatic resource was the result of Holocene climatic changes that resulted in increasing cultural complexity, which has key features such as adaptation, multiseasonal base camps, semipermanent to permanent habitations, and specialized plant gathering (Dye 1996: 141). Dye's research base was 45 sites in the Midsouth region and stylized animal remain and shell midden analysis (Dye 1996). Dye states that shoal areas "created or enhanced conditions favorable for increases in populations of riverine species" (Dye 1996:153). As a result, the higher biomass provided local populations a variety of abundant and easily obtainable riverine-dependent resources. "Increased utilization of riverine habitats, especially the shoal areas, resulted in widespread availability and eventual accumulation of aquatic mussels in middens and is seen as a response to the emergence of a suite of dependable aquatic species that became seasonally abundant and easily collected" (Smith 1986:24). Dye's work covers the trends towards increased sedentism and territoriality. The location of the Indian Hill site, located near the junction at Pine Barren Creek and the Alabama River, would have presented an ideal location based on the available freshwater mollusk assemblages as well as other aquatic resources.

The present study considers the fresh water bivalves and gastropods excavated at the Indian Hill site and how they were exploited as fresh water food resources. This site is situated on the bank of Pine Barren Creek just upstream from the junction of the creek with the Alabama River. This littoral feature would have been a shallower creek during the Middle Woodland as a

result of the warmer climates. Modern engineering of the Alabama River, such as the Miller's Lock and Ferry Dam, in the later part of the 20th century has widened Pine Barren Creek from its original form. The implementation of reservoirs and dams has "changed the landscape of this portion of Alabama and have altered the environment from that which was present throughout history" (Cottier 1996: 2). Changes in habitat would affect the variability within the shellfish assemblages, and thus comparison to Pine Barren creek in a modern context would not facilitate the data for this research project.

A large portion of the examined shell middens from the Indian Hill site exhibited a number of now extinct mollusks. Environmental, climatological, and human stresses on freshwater shellfish assemblages make them sensitive time indicators when considering human settlement and subsistence practices. For example, bi-valves and gastropods from the Indian Hill site demonstrate evidence of now extinct mollusks.

> Factors such as the impoundment of rivers, channelization, pollution, modern industrialization and urban development, erosion, and siltation have significantly affected mussel populations. Almost one half of Alabama's mussels are considered extinct, threatened, endangered, troubled, or of special concern (Alabama Department of Conservation and Natural Resources 2013).

As a species, shellfish are very sensitive to climatological changes and environmental stress. "The decline of these species is probably due to habitat alteration and changes in water quality" (McGregor and Dumas 2010: 114). Shellfish mortality, without human intervention, is significant as they are susceptible to changes in their biotic environment. "Recent ecological studies have demonstrated that even relatively small-scale human foraging might have significant effects both on target species of shellfish and on the structure of biological communities"(Mannino and Thomas 2002:454). Some extinct species of shellfish were present at the Indian Hill site and may have been affected by foraging subsistence practices. Foraging

behavior demonstrates that individuals are going to procure the maximum amount of protein with the least amount of energy expenditure. This may result in a certain species being favored over others due to size and various qualities. "For many species the rejection size by human foragers is larger than size at first reproduction" resulting in a perpetual and declining population of juvenile shellfish (Mannino and Thomas 2002:457).

Understanding the biodiversity of species in the shell middens present during the Gulf Formational and Woodland Periods demonstrates the rich and abundant nature of the Upper Alabama River Drainage basin and supports an optimal foraging model. Though not a significant source of calories, shellfish were harvested in abundance for their protein nonetheless. Often considered a "starvation food" source exploited during environmental stresses endured by a population, the large number of shell middens analyzed to date demonstrates that the Middle Woodland underwent climatological and environmental changes that forced these egalitarian bands of hunter gathers to rely heavily on freshwater mollusk as a protein food source (Parmalee and Klippel 1974). The size and variation of freshwater mollusk species found in middens were often chosen for their processing costs since "gathers naturally attempt to minimize energy expenditure by preferentially selecting large individuals" (Waselkov 1987:134).

Shellfish middens often also produce ceramics that allow for the identification of a cultural period or phase, which gives a specific temporal dimension to the site. Both Deptford and Weeden Island cultures exhibit small settlements that exploited littoral and coastal regions and their resources as evidenced by the shell refuse in the archaeological record (Willey 1949). Investigations into shell middens are an important component to understanding subsistence practices, since Middle Woodland sites were located to provide access to the occurrence of shellfish beds, an easily exploited resource.

One of the defining components of the Woodland Period is the exploitation of shellfish, which in succeeding cultural periods has not demonstrated to the same level of exploitation. Stresses on the local ecology may further demonstrate why shellfish became less available in the Later Woodland. Climate change and over-exploitation may represent some clues as to why shellfish assemblages are less prevalent after the Middle Woodland. "Climatic change, producing increased rainfall, and flooding of shallow shellfish beds, has been offered as one plausible explanation for the decrease in shellfish consumption" in later cultural periods (Walthall 1980:129). Whether increased amounts of rainfall made shellfish less available or strain from over-exploitation from foragers, shell middens continue to be distinct archaeological manifestation during the Woodland Period.

Pottery: Ceramics, as a unit of analysis, are significant indicators of various human processes. "Pottery is related to and reflects the subsistence economy, which is an important cultural analytical unit. In addition, it is usually well preserved and is assumed to be time sensitive" (Fuller 1990: 72). These vessels are often analyzed in the form of sherds, since pottery vessels by nature, are friable and are often studied as a collection of broken sherds.

Ceramic analysis of the Indian Hill site necessitates the review of various cultural complexes and their associated wares to demonstrate levels of interaction and participation within various populations during the Woodland occupation of the Indian Hill site. This research demonstrates that though 1Wx15 was occupied by humans from as early as the Late Archaic and Early Gulf Formational, it was more prominently occupied during the Middle Woodland Period based on the homogeneity of the ceramic assemblage (Eubanks 2010). Some ascertain that "changes in ceramic stylistic diversity are indicative of similar changes in domestic inter-regional interaction" (Eubanks 2010: 48). Cultural interaction, measured by the stylistic diversity of ceramics assemblages, makes it necessary to review the many cultures associated with the Woodland Period. Thus, considerations to various ceramic traditions within the biophysical and temporal range of 1Wx15 during the Middle Woodland period will be reviewed to demonstrate that this distinct group of aboriginals did participate with other cultural traditions but only in a limited capacity.

John A. Walthall's, *Prehistoric Indians of the Southeast*, provides a detailed summary of the Woodland Period (1980). Walthall discusses the different prehistoric cultural phases exhibited along the Alabama River region which was pertinent to investigations for 1Wx15. "The site is located on the north end of a sandy ridge lying tangential to the south bank of Pine Barren Creek, approximately 1 ¼ mile of the Alabama River" and is an earlier cultural sequence

that predates many of the known Proto-historic and Mississippian ethnic groups in the Alabama River region (Cottier 1968:59).

According to Walthall the Alabama River region, during the Woodland period, has six distinct phases for ceramic production which include the Cobb's Swamp Phase, The Calloway Phase, the Dead River Phase, the Hope Hull Phase, the Henderson Phase, and the Autauga Phase being the latest (Walthall 1980). Each phase is associated with a specific period of time and each has identifiable tempers, decorative styles and vessel shapes.

David Chase looked at pottery types in Central Alabama during the Middle Woodland and he concluded that some ceramic series preceded previously defined phases (Chase 1969: 17). Chase defined the Whiteoak series as having existed during the Middle Woodland Period in Wilcox County and as an ancestor to the Autauga Phase (Chase 1969: 18). Chase further stated that much of the sand tempered unidentified plain, simple stamp and check stamped pottery from the Woodland Period in central Alabama could be associated with the Cobb's Swamp Phase (Chase 1998: 52). However, clearly defined cultural phases in the Alabama River region seem to be met with some "disagreement regarding the chronological placement of these assemblages and the validity of this phase altogether" (Eubanks 2010: 42). Defining cultural phases as chronologies create a "false illusion" that one phase has an ancestral lineage to another and can be linked together in space and time (Jenkins and Krause 2009: 203). Difficulties have been met for amalgamating cultural chronologies for the Woodland Period in southwestern Alabama when archaeological investigations lie "at the fringe of other areas influenced by better understood and more clearly delineated cultural phases" (Shorter 1999: 11). Though several of these Woodland Period phases existed within a relatively close geophysical range to the Indian Hill site, the

cultural material from 1Wx15 demonstrates that this group of people did not participate in all or even some of these phases.

> Middle Woodland groups occupied large areas of the coastal plain, delta and alluvial river valleys. Late in the Middle Woodland Period, these groups appear to have coalesced into a few areas leaving large sections of the lower Alabama and Tombigbee river valley essentially unoccupied (Shorter 1999: 175).

The ceramic assemblage of 1Wx15 suggests that this group of people interacted less with other groups given the vast majority of recovered sand tempered plain ceramic sherds. "It is suggested that as populations in the study area became more sedentary, they tend to interact less, as evidenced by their relatively homogenous ceramic assemblages" (Eubanks 2010: 48).

<table>
<tr><th>Approximate Dates</th><th>Period</th><th>Eastern Upper Alabama River</th><th>Western Upper Alabama River</th><th>Lower Alabama River</th></tr>
<tr><td>A.D. 1100

A.D. 1000

A.D. 900
A.D. 800
A.D. 700

A.D. 600
A.D. 500

A.D. 400
A.D. 300
A.D. 200

A.D. 100
0
100 B.C.
200 B.C.</td><td rowspan="2">Late Woodland</td><td>Autauga</td><td rowspan="2">Autauga</td><td>Whiteoak and possibly Claiborne and Deptford</td></tr>
<tr><td rowspan="2">Hope Hull

Dead River</td><td rowspan="3">Henderson</td><td>Whiteoak and possible Claiborne</td></tr>
<tr><td rowspan="2">Calloway</td><td>Unknown</td></tr>
<tr><td rowspan="2">Middle Woodland</td><td rowspan="2">Cobb's Swamp</td><td rowspan="2">Cobb's Swamp</td><td rowspan="2">Mixed Miller, Porter</td></tr>
</table>

Figure 2: Middle and Late Middle Woodland cultural phases in the Alabama River drainage (Lovett 2010).

The Indian Hill site provides a wealth of ceramics to be used for determining chronological placement and how this aboriginal population interacted with various cultures and their ceramic traditions. Eubanks notes that "changes in ceramic stylistic diversity are indicative of similar changes in domestic inter-regional interactions" (Eubanks 2010: 48). The analysis of the ceramics at the Indian Hill site evidenced the majority of decorated wares, though decorated surface treatments were a minority within the ceramic assemblage, as Wakulla Check stamped and Basin Bayou Incised, both sand tempered pottery, and indicators for participation within the Middle Woodland cultural periods Porter Marksville and Weeden Island-Coles creek (Wimberly 1960). It is mentioned in preliminary reports conducted for the Indian Hill site by John W. Cottier (1968), as well as from the analysis of the excavated ceramics, that there was an earlier occupation of the site from the occurrence of vegetable fiber tempered pottery. "The Gulf Formational Stage or the early Woodland is also represented by only limited evidence; however, several sherds from large plain fiber tempered vessels were recovered both near the base of a shell midden, as well as in mixed context" (Cottier and Hathorn-Davis 1998:3). The presence of fiber tempered pottery, a minority type at 1Wx15, relatively dates this site to an earlier cultural sequence and represents some of the earliest forms of pottery in prehistory.

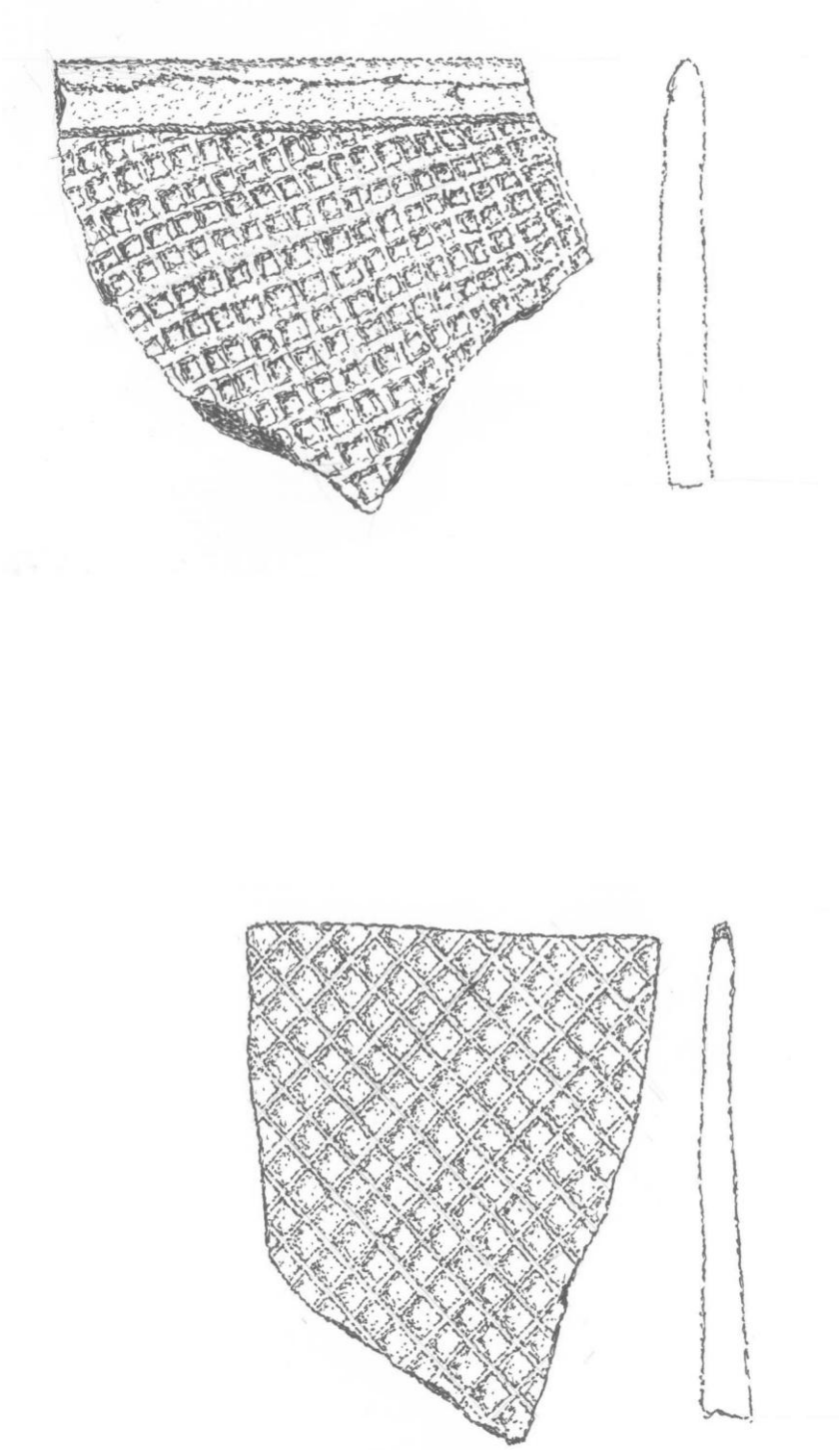

Figure 3: 1Wx15 Wakulla Check Stamped rim sherds.

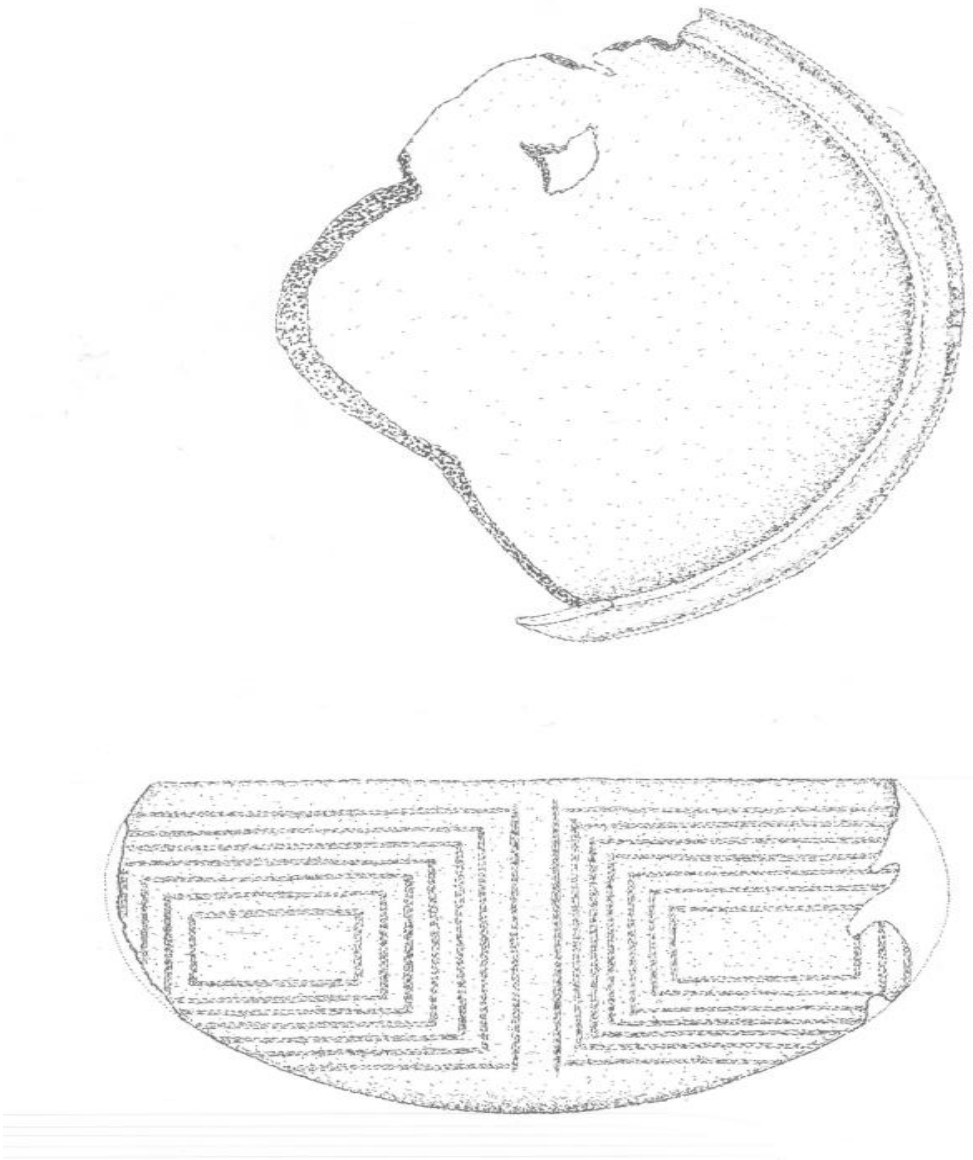

Figure 4: Feature 19 F.S. 7. Basin Bayou vessel.

Cultural Complexes: The perspective from, "Indian Pottery and Cultural Chronology of the Mobile-Tensaw Basin and Alabama Coast", considers the importance of the development of fiber tempered wares and their origination along the Gulf coast (Fuller 1998:4). Viewing the Early and Middle Gulf Formational Periods in Alabama demonstrates how pottery technology changes over space and time as various cultures interact. Particularly it demonstrates a change in the technology of pottery manufacturing in the Gulf Coast and Basin region of Alabama. These early ceramics have been identified in the ceramic analysis of 1Wx15, though parsimoniously. The majority of ceramics from the Indian Hill site are sand tempered plain sherds which is consistent with what is known about the Middle Woodland Period.

Fuller (1998) uses a working cultural historical model to assign the aboriginal ceramics to specific complexes within the Mobile-Tensaw Basin and the Gulf coast of Alabama. These observations were considered during analysis and are reflected in the ceramic assemblages recovered from 1Wx15. Based on the research for this study, the pottery analyzed demonstrates a limited participation in regional complexes that existed within similar biophysical and temporal environments. This would be consistent with the various cultures that existed in the Mobile-Tensaw Basin, "in terms of ceramic technologies and styles, the pottery complexes of the region reflect intermittent or continual participation in these various traditions through time" (Fuller 1998: 1). Though the majority of the ceramics recovered at the Indian Hill site are plain sand tempered wares, the presence of decorated ceramics demonstrates that this site did not exist in a Middle Woodland vacuum.

Plain fiber tempered pottery wares at 1Wx15 dates the occupation of this site to around 1100 B.C. which is continuous with the Early and Middle Gulf Formational Periods (Walthall 1980:83). At this time, possible cultural interactions may be linked to the View Point Site in

Norwood, northern Florida and the Coon Neck Site in Wheeler of northern Alabama (Fuller 1998). Both the View Point and Coon Neck complexes demonstrate unadorned fiber tempered wares; however, View Point ceramics are better made and have attributes that "may foreshadow refinement in pottery manufacture and ware which are characteristic of later Alexander, Bayou La Batre and Deptford variants" (Fuller 1998 :4).

The stratigraphic position of Bayou La Batre Stamped and Dunlap Fabric Marked ceramic sherds within the features excavated at the Indian Hill site demonstrates the transition from fiber tempered pottery to these early variants of the Bayou La Batre Tchefuncte pottery series that occurred in the Late Gulf Formational and Early Woodland Periods. The wares assigned to Bayou La Batre Tchefuncte pottery series show a link to the western cultural influence of the Louisiana Tchefuncte ceramic complex and demonstrates the earliest forms of sand tempered pottery for the Indian Hill site (Wimberly 1960). It is considered that the Deptford and Tchefuncte cultures, though geographically distinct were coeval in time.

According to Brown (2004), various cultures in the southeast are included in the Late Gulf Formational Period and exhibit transition into the Early Woodland Period. Brown further refers to some of these early Gulf coastal cultures like Deptford and Bayou la Batre to only marginally represent a small percentage of the ceramic inventory in similar inland sites (Brown 2004: 575). Present Research demonstrates a correlation between the decreased amounts of Deptford ceramics found at smaller inland sites within the region to their use as hunting camps (Brown 2004: 576). With limited archaeological investigations into inland sites during the Early Woodland Period the most prevalent cultures known at this time are often found along the Gulf coast and are often Deptford cultures. These early Deptford cultures archaeologically

demonstrate larger and quantitatively more sites with a higher density of Deptford ceramics on the Gulf coast than those exhibited inland (Brown 2004).

A higher propensity of sand tempered utilitarian wares coupled with the lack of known human Woodland burials, the Indian Hill site illustrates a Woodland Period associated with the Deptford culture. Such a relationship would be highly improbable to infer for this study since there is little data available to do an inter site comparison, and the small sample size of Deptford Period ceramics excavated from 1Wx15 would not be suitable for testing. Further, the lack of evidence for Woodland burials at the Indian Hill site does not demonstrate that they did not exist; rather, they may very well exist and may not have been within the excavated project area for 1Wx15. Further, more investigations would be necessary to make conclusions.

According to Willey (1960), the Deptford Period would have been limited to coastal environments as settlement patterns demonstrate villages with access to water areas and a dependence on associated shellfish as evident by extensive shell middens. Limited investigations into Deptford Period cultures inland, make defining this culture's geographical range difficult. Ceramic wares included in the Deptford Period are evidenced in limited amounts at the Indian Hill site, but included Deptford Linear Check Stamped and Deptford Bold Check Stamp (Willey 1960). Willey also states there is a "Deptford Simple Stamp" ware, but with only limited amounts of Deptford pottery at 1Wx15, all simple stamped ceramics were defined as Sand Tempered Simple Stamped. Archaeologically, the Indian Hill site demonstrates a limited interaction with the Deptford culture, a chronological predecessor to the Santa Rosa-Swift Creek Period (Willey 1960).

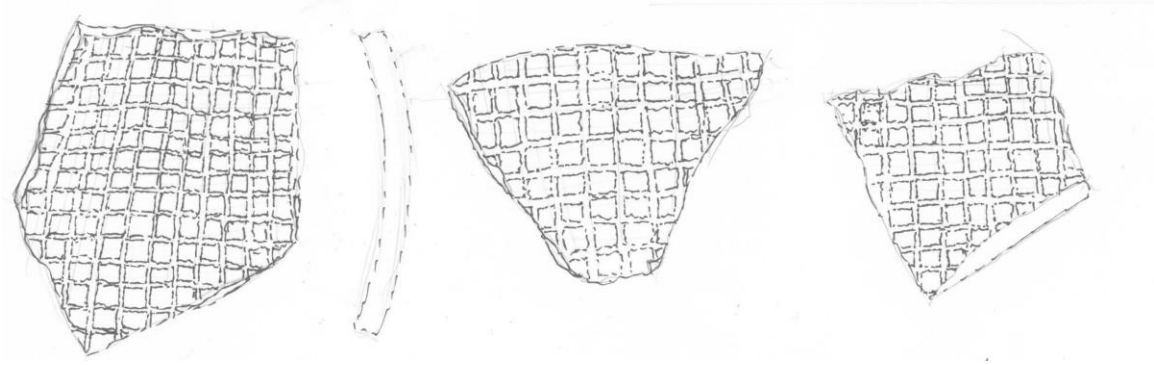

Figure 5: Deptford Bold Check Stamped recovered from the Indian Hill site.

The ceramic inventory within the Santa Rosa-Swift Creek Period includes various types all represented, though parsimoniously, within the excavation area of 1Wx15. Early varieties of this period include Swift Creek Complicated Stamped, "the related early complicated stamped types, the Santa Rosa Series incised and rocker stamped potteries, Franklin Plain" and other key ceramic type indicators for this period such as Alligator Bayou Stamped and Basin Bayou Incised (Willey 1949: 366). There was not sufficient data to assign any of the early varieties of complicated stamped pottery to either the Early or Late Swift Creek Periods. Basin Bayou Incised occurred in higher frequency at the Indian Hill site than did other decorated types within this same cultural period. Basin Bayou's chronological position would be "Middle Woodland, with its presence in the McQuorquodale Mound suggesting its extension back into the latter part of the Early Woodland" (Wimberley 1960:98).

Ceramic analysis for 1Wx15 also indicates identified ceramics associated with Weeden Island. "While some areas of the Southeast experienced cultural decline during the Late Woodland Period, a new and vigorous cultural manifestation emerged" and was identified as the Weeden Island Culture (Shorter 1999: 9). Though not fully participating in this culture some of the vessel modes for this site demonstrate Weeden Island resemblances in decorations and

treatments though they seem more like replications than formal typologies. Dumas states that "from the Mississippi Sound to central Florida, the Weeden Island variant was the most influential culture from the Middle to Late Woodland and as late as A.D. 1200 in some places" (Dumas 2010: 147). Weeden Island ceramic forms were minimally represented at the Indian Hill site and demonstrate that this ethnic population did not fully participate in the Weeden Island culture.

> It is not unusual for early Late Woodland sites in southwest Alabama to have a relatively minimal amount of pottery decorated in a classic Weeden Island or Weeden Island-like style (Dumas 2007: 148).

Originally many authors suggested the Weeden Island Period is divided into two parts: Weeden Island I and Weeden Island II. Weeden Island I is designated by the occurrence of later Swift Creek Complicated Stamped modes and high amounts of Weeden Island Plain ceramics whereas Weeden Island II demonstrates little to no Swift Creek ceramics and incorporates Wakulla Check Stamp, Weeden Island Punctated, Weeden Island Incised, Carabelle Punctated and Carabelle Incised (Willey 1949: 404). The Weeden Island culture exhibits more stabilization in pottery manufacturing, as demonstrated by Swift Creek ceramics during Weeden Island I, and with the introduction of more exotic forms during Weeden Island II (Willey 1949: 407). The ceramic analysis of the Indian Hill site did not demonstrate interaction between all the archaeological cultures represented in the Alabama River region during the Woodland Period.

Regional Ceramic Phases: Within these larger cultural complexes and periods, the Indian Hill site exhibits occupation based on the intra site ceramic chronology beginning with the Late Gulf Formational Period. According to Fuller (1998) the first true pottery phase in the Mobile-Tensaw Basin and Alabama coast was the Bryant's Landing Phase. Several of the sherds indicative to this phase were recovered from 1Wx15. Though not in great numbers, components of Wimberly's Bayou La Batre ceramic series, as well as sherds of plain fiber tempered pottery were excavated and analyzed to demonstrate interactions of this specific phase (Wimberly 1960). The Bryant's Landing Phase limited presently at the site but does provide a chronological date for around 100 B.C (Fuller 1998:4). Evidence of thick heavy wedge-shaped podal supports, grit tempering, stamped and cord wrapped dowell impressed ceramic sherds are present in the archaeological record at the Indian Hill site and are also associated with the phase (Wimberly 1960).

Bayou La Batre, as an index fossil within the Bryant Landing Phase, places this site within the Circum-East Tradition (Fuller 1990). Though this ceramic form was not dominant within the ceramic inventory for the Indian Hill site, it does demonstrate a limited participation within this early tradition. Fuller states that Bayou La Batre is included in the Circum-East Tradition which is the "progenitor of later Gulf tradition pottery styles as well as some Hopewellian styles" (Fuller 1990:5). Within the Circum-East tradition Fuller incorporates both ceramic forms and distinct cultures within the biophysical region during the Early Woodland Period.

Preceding the Circum-East Tradition is the concept of the Gulf Tradition, which includes various archaeological cultures with distinctive ceramic forms during the Middle to Late Woodland. Important to this present study, the Gulf Tradition, which includes such cultures as

Santa Rosa and Weeden Island, were represented in limited numbers of ceramic sherds at the Indian Hill site. Santa Rosa and Weeden Island cultures "evidenced rapid and sometimes rather thorough exchanges of pottery modes and styles for more than a millennium" (Fuller 1998:5). This is apparent from the distinct forms of pottery that emerged during the Middle to Late Woodland.

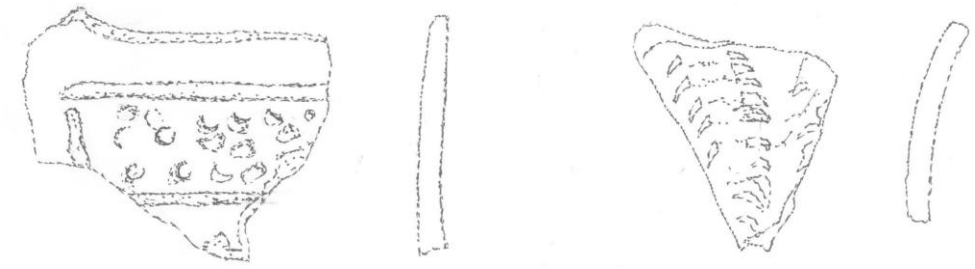

Figure 6: Santa Rosa Punctated and Santa Rosa Rocker Stamped sherds from the Indian Hill site, 1Wx15.

The present study uses the Bryant's Landing Phase as a component of the Cirum-East Tradition within the Later Gulf Formational Period as the starting point for ceramic chronology at the Indian Hill site. The ceramics from the Bryant's Landing Phase were not as well defined as the ceramics from those of the succeeding Blakely Phase. "The Blakeley phase of the Santa Rosa variant partially was an indigenous development out of the Bryant's Landing phase (Fuller 1998:8). The ceramic analysis for 1Wx15 demonstrates minimal numbers of grit and fiber tempering in ceramic inventory where sand tempered plain is the majority. Limited evidence of podal supports at the Indian Hill site demonstrates change in technology and manufacturing of pottery forms and is a distinction between the Bryant's Landing Phase and the Blakely Phase though this does not demonstrate occupation but rather interaction (Fuller 1998).

The Blakely Phase, considered an outgrowth of the Bryant's Landing Phase, transitions from the Later Gulf Formational to the Early and Middle Woodland Periods. The pottery in this ceramic phase includes zoned decorated ceramics from medium to large vessels (Wimberly 1960). Santa-Rosa Swift Creek cultures are evidenced in the analysis, though only in limited amounts, and these wares include various simple stamped ceramics and Swift Creek complicated stamping. This decorative style, achieved through the use of paddles, "represent incursion into the region by elements of the Southern Appalachian tradition" (Fuller 1998:8). However, most wares associated with this phase, including Alligator Bayou Stamped, Santa Rosa Punctuated and early variants of Basin Bayou Incised are zoned and punctuated with a variety of tools which produce a degree of variation in decorative styles (Wimberly 1960: 87). These zoned wares demonstrate a great technical precision that was not present in earlier forms, and incised lines are often broad, "shallow U-shaped in cross section," and only differ by surface color (Wimberly 1960:91). The plausible relationships between the Blakely Phase and its predecessor, Bryant's Landing Phase, and the succeeding Porter Phase indicate that some of the wares persisted over time demonstrating interregional cultural diffusion (Walthall 1980: 160). Though stylistically different, the aboriginal wares from the Blakely Phase all share similarities that include sand tempering, flattened bases, either circular or rectangular, slightly curved to flat rims, and the occurrence of medium to large concodial pottery.

Considering the ceramic chronology for the Indian Hill site during the transitional Early to Middle Woodland Period is the subsequent Porter Phase. The ceramics during this phase were more refined sand tempered wares that demonstrate a significant technological improvement. Ceramic analysis for this investigation indicates moderate participation with the Porter phase. Some of the minority ceramic types, such as cord marking and punctation motifs are evidenced

from the ceramic analysis of the Indian Hill site. Additionally, the distinctive Franklin Plain rim treatment was present in several vessels at 1Wx15. Similar to the Alligator Bayou Stamped in that "both surfaces are well smoothed but not to a polish," Franklin Plain, was only distinguishable by its rim treatment and was stylistically different but similar in vessel size and form to other ceramic wares during the Santa-Rosa Swift Creek Period (Wimberly 1960: 101). Dominant jar forms during this period are the open mouthed jars and globular bowls with flattened bases. Minority forms, such as semi-hemispherical bowls, were evidenced at the Indian Hill site, and are consistent with the Porter Phase (Wimberly 1960: 102).

Investigations into the later Porter Phases indicate that there may have been less cultural interactions between distinct aboriginal groups during the Middle Woodland Period, as decorative wares decreased drastically in frequency and were "characterized by assemblages of mostly undecorated pottery" (Fuller 1998:11). The analysis of the ceramic inventory excavated from the Indian Hill site indicates a primarily Middle Woodland occupation based on the high percentage of plain sand tempered wares. However, the intra site data suggests that check stamped wares were present during the Deptford Period and continued without disruption into later Woodland times. When plain sand tempered pottery became the dominant ceramic mode, check stamped pottery persisted, but it was merely an impersonation or the waning knowledge base of Deptford Period check stamped ceramics. Archaeological investigations into the regional phenomenon of the persistence of a check stamped tradition in the southeast suggested that it continued into the Mississippian period (Dumas 2010: 148). There is a moderate frequency of residual unclassified sand tempered check stamp sherds which cannot be assigned by typology from the excavation of 1Wx15. These unclassified check stamped wares may represent the continuation of the check stamped tradition in the Middle Woodland Period.

To date, this cultural complex during the Middle Woodland has yet to be "assigned a separate phase name; it has been included as a complex which is transitional between the Porter Phase" and reflects the later interaction between Weeden Island cultures and their subsequent phases (Fuller 2013:11). The increase in frequency and distribution of plain fine sand tempered pottery and unclassified sand tempered check stamped pottery within the site indicates a decrease in the cultural interactions and influences of earlier established pottery traditions. Though interactions between cultures may have been limited as demonstrated by the ceramic inventory of the Indian Hill site, it does not necessarily mean interaction ever occurred. "Although they did not interact on a daily basis, people living within the same region would have known of each other in general" (Dumas 2010: 143). This research specifically considers this unnamed, though very distinct, transitional phase as evidence of environmental and climatological variables that were impacting the subsistence practices and ceremonialism for this group of indigenous peoples.

Some Late Woodland Period phases, such as the Tate's Hammock Phase, the McCleod Phase, and the Henderson Phase, all existed within a similar time starting 400-500 A.D. and are regionally and culturally significant to this research project (Walthall 1980: 178). Pottery index types that are indicative of these phases such as Wakulla Check Stamping, Keith Incised, Carrabelle Punctuated, and West Florida Cord Marked were all identified in limited degrees in ceramic analysis. These Late Woodland Period phases were all manifestations of the Weeden Island cultural complex.

Considering the ceramic material from the Indian Hill site makes it is difficult to ascertain to what degree the inhabitants of the site participated in the various cultural phases in and around the Alabama River region. It is noted by some that ceramic analysis for McCleod

Check Stamped and Wakulla Check Stamped is nearly indistinguishable save for the scalloped rim treatment of Wakulla Check Stamped wares (Walthall 1980). For the purpose of this study McCleod Check Stamped was not used as an analytical tool for determining check stamped pottery types. Analyzed check stamped pottery that was consistent with the Wakulla Check Stamp typology was defined as Wakulla Check Stamped. The McCleod Phase and the Henderson Phase share a localized variety of Wakulla Check Stamped (Fuller 1998).

The Tate's Hammock phase is not clearly defined at the Indian Hill site. There are similarities in that it shares the Wakulla check stamped type. However, the Tate's Hammock Phase is most clearly defined by the presence of such ceramic types as Weeden Island Incised and Weeden Island Punctated. These wares were present in limited frequency at the Indian Hill site. Some of the ceramic sherds analyzed are apparently localized varieties of Weeden Island Incised and Weeden Island Punctated. These sherds seem to attempt to replicate the forms and decorations using similar tools of the Weeden Island culture. Further, the most instrumental type for defining the Tate's Hammock Phase, Weeden Island Zoned Red, was conspicuously absent from the archaeological record for the Indian Hill site (Fuller 1998:15). This ceramic type is however present at nearby 1Wx25x1 (Cottier 1968).

The Indian Hill site demonstrates only limited participation in both the McCleod and Henderson Phase. These two phases represented "a local Weeden Island manifestation that developed over a period of several centuries as diffusion from eastern Weeden Island settlements intensified" (Walthall 1980: 168). However, both the McCleod Phase and ceramic analysis from the Indian Hill site demonstrate "the presence of minor numbers of cord marked and Weeden Island decorative types" (Fuller 2013:16).

Certain types of the Weeden Island ceramic series are present in the Henderson Phase. The Henderson phase location is located within the Alabama River Valley, but well upstream from Wilcox County (Cottier 1968). Henderson Phase ceramics include check stamped ceramics similar to Wakulla Check Stamped ceramic; therefore, the unclassified sand tempered check stamped sherds from the Indian Hill site could possibly be related to the Henderson Phase. Considering the unclassified check stamped pottery from the Indian Hill site "it is conceivable that some of the check stamped pottery is Henderson Check Stamped;" however, there is not enough evidence to definitively call this type Henderson Check Stamped (Dumas 1999: 121). Further studies on the unclassified sand tempered check stamped ceramics from 1Wx15 may determine possible interactions with 1Wx15 Henderson Phase.

Based on the analysis of the ceramic wares from the 1Wx15 site in Wilcox County, Alabama was occupied limitedly during the Gulf Formational Periods and into the Later Woodland based on the occurrence of key ceramic types distinctive to specific phases within the given cultural periods. The Indian Hill site represents a unique archaeological site in that it demonstrates a very strong Middle Woodland Period occupation.

Ceramic Types Associated with Features	**Count**	**Weight Grams**
Sand Tempered Plain	4,861.8	18,418.9
Wakulla Check-Stamped	93	1,222.6
Sand Tempered Brushed	40.8	244.1
Dunlap Fabric Marked	27	212.3
Franklin Plain	58	712
Sand Tempered Incised	14	113.9

Deptford Bold Linear Stamped	40	442.1
Deptford Bold Check Stamped	1	30
Santa Rosa Rocker Stamped	2	36
Fiber Tempered Plain	35	170.7
Sand Temp Fabric Marked	1	8.7
Sand Tempered Fabric Marked Dowell Impressed	175	739.2
Sand Temp Complex Stamp	1	0.9
West Florida Cord Marked	2	19.8
Santa Rosa Punctated	1	2.4
Bayou Basin Incised	21	62.8
Sand Tempered Simple Stamp	4	38.5
Sand Tempered Cord Marked	1	1.6
Sand Tempered Check Stamp	9	43.8
Carabelle Incised	1	4.1
Bayou La Batre Stamped	2	12.4
Weeden Island Plain	1	13.8
Weeden Island Like	1	18
Weeden Island Incised	6	50

Table 1: 1Wx15 ceramic count and weight by features.

***Clay Pipe and other Ceramics*:** Pottery is often the most abundant ceramic artifact in the archaeological record. However, other objects made of clay were also produced. Fired clay squeezed objects were found in association with some of the features excavated at 1Wx15, specifically hearths and pits. These fired clay objects were not crafted with the same precision and attention as pottery or effigies and came in a variety of shapes and sizes of squeezed fired clay. These fired clay objects are not the same as clay balls which, "have been recovered, some in association with hearths or roasting pits" and are significant indicators of subsistence activities during the Woodland Period (Walthall 1980: 86). Other fired clay objects were also present in the ceramic analysis. Several diminutive semi-hemispherical bowl shaped objects were recovered that often would reveal a single fingernail punctuation inside the bottom of the base. Based on the size and shape it appears that a fingertip could have been used as a form to mold the clay. These ceramic curiosities were consistent in size and weight and provided a humanistic depth to the research.

Other fired clay artifacts were recovered from the Indian Hill site that could very well represent effigies of birds due in part to their zoomorphic attributes. Using their fingernails to make incised designs, the small roughly 2.5 cm long baked rectangular object, upon analysis resembles an owl. The other small fired clay object, a possible effigy, similar in size to the owl could represent a bird in flight, an insect or something more phallic; however, these idealized forms may be contrived and their function is unknown.

A single clay pipe was also excavated from the Indian Hill site. Though broken and fragmented, it was possible to reconstruct this sand tempered elbow pipe. "Pipes first appeared in the East during Late Archaic Times. Some suggest "during the Woodland stage that pipes and a smoking ritual became an integral part of ceremonial life" (Walthall 1980: 108). The occurrence

of the elbow pipe demonstrates possible ceremonial aspects for the Indian Hill site and denotes an intangible aspect to this Middle Woodland complex. It is noted that historic Southern tribes typically preferred the elbow variety of pipes and were known to smoke a concoction of tobacco, barks, leaves and other floral material known as "kinnikkinnik" (Walthall 1980: 108). Most pipes in the southeast are found in the context of a burial and "rarely if ever found in habitation refuse" (Walthall 1980: 108). The pipe recovered from the Indian Hill site was not associated with a known burial or feature and was recovered during the general excavation.

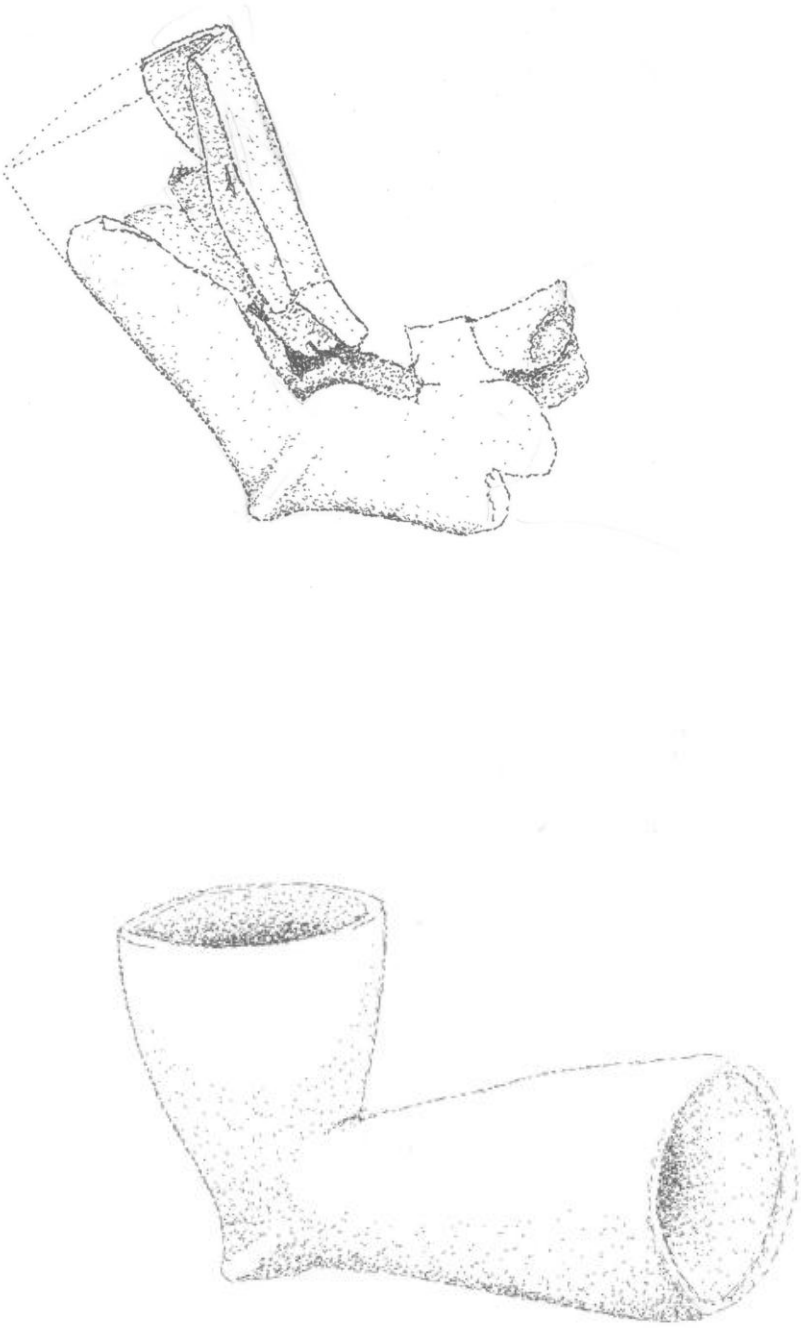

Figure 6: Sand tempered plain ceramic elbow pipe and a reconstruction of the pipe.

Lithics: It has long been recognized that lithics analysis is an important component in demonstrating subsistence practices as, "settlement subsistence factors do influence assemblage composition" (Daniel 2001:250). Understanding the settlement patterns of hunter gatherer groups one can distinguish between two types of sites based on the overall lithic assemblage: winter base camps and those that were occupied around water sheds (Daniels 2001). These sites differentiate based on the degree of mobility determined by whether lithics were readily available for procurement and collection. (Daniel 2001). Collection implies "curation" for modified lithics and "carrying items from one location to another in anticipation of future use" would be typical for sites that had a high occurrence of quality stone tools (Daniel 2001: 250). Expedient tools on the other hand, such as utilized flakes, represent more of a forager settlement system (Daniel 2001). "It is crucial that curation and expediency not be perceived as mutually exclusive *systems*, but as planning options that suit different conditions within a set of adaptive strategies" (Nelson 1991:65).

The lithic assemblage at 1Wx15 demonstrates both high quality stone tools, as well as modified flakes and expedient tools and would suggest a settlement system that represents an adaptation to available regional resources within the biophysical environment. The high occurrence of Tallahatta Quartzite, (often described as a sandstone but for this study will continue to be referred to as Tallahatta Quartzite), and Quartz modified lithics is consistent with being "the most common types of material found in the creek beds and alluvial ridges" of the Alabama River systems and within this project area (Keene 1999: 137).

The variability of lithic materials provides an understanding of the spatial locations of the various exploited geological resources. Lithic source use analysis provides insight and data

that aids in the formulation of a culture history understanding and demonstrates transitions between cultural periods.

In the preceding Archaic, lithics assemblages demonstrate the social phenomenon of hunting and gathering.

> There is also an apparent increase in gathering; it is in this stage that sites begin to yield large numbers of stone implements and tools that are assumed to be connected with the preparation of vegetable foods (Willey and Phillips 1958: 107-108).

Lithic analysis remains an important factor in understanding subsistence practices for it emphasizes process and concentrates on the interdependence of culture and the environment. In analyzing lithic sources used at 1Wx15, the materials included quartz, quartzite, Tallahatta quartzite, Ocala chert and Knox chert. Consistent with other sites from this period "white quartzite greatly predominates the materials used for stemmed projectile points" (Wimberly 1960: 216). These raw materials would be easily abundant from the available sand and gravel bars located in Pine Barren Creek and other tributaries of the Alabama River drainage system. Though these lithic types are considerably different from one another, they would have been deposited from various sources north of the Indian Hill site and all possess similar qualities that are suitable for human modification. The varieties of stone that prehistoric people preferred for lithic tool production were those that are hard and brittle, and would break in the most predictable way when force was applied. Quartz, quartzite, Tallahatta quartzite, Ocala chert and Knox chert are available and were utilized by varied populations over time.

In lithic modification, tools are produced by applying precise percussive force or pressure to the material being knapped, which allows the individual the ability to control the size and shape of the flakes that are removed. "Two distinctly different trajectories of stone tool

production dominated the prehistoric production of unretouched or minimally retouched flake tools from simple cores, while the second is the extensive shaping of bifacial tools" (Cowan 1999:593). The transition from the Late Archaic to the Early Woodland demonstrate a change in mobility based on the occurrence of light weight lithic tool kits and thin bi-faces. The Late Woodland culture period demonstrates the manifestation of small points suitable for use with the technological advancement of the bow and arrow, though there seems to be a limited participation in the Late Woodland Period at the Indian Hill Site. Various stemmed points and bi-faces that were contiguous with earlier cultural periods in the Alabama River Region "gave way to small, triangular types, which probably marks the introduction of the bow and arrow" and represents the transition from the Middle Woodland Period into the Late Woodland Period (Walthall 1980:154).

Figure 7: 1Wx15 Tallahatta Quartzite drills.

Given that much of the source lithics for the Indian Hill site came from Pine Barren Creek and its surrounding landscape, some of the recovered lithics were not procured from the creek beds. Large fragments of fossiliferous sandstone were utilized as nuttingstones at the Indian Hill site. The lithic source is particularly interesting for within 10 miles of the project area

is the Prairie Bluff Chalk Formation, a geological formation which represents marine sediments. Understanding lithic source procurement demonstrates the geographical range and energy expenditure of a specific culture. The lithic source analysis for the Indian Hill site demonstrates a relatively low cost benefit ratio.

The lithic inventory for the Indian Hill site is consistent with other known archaeological sites within the Middle Woodland Period and within the same geographical range. The amount of modified lithic materials was "disproportionate to the potsherds recovered" at the site and is consistent with lithic reporting from other sites such as the Porter Village, James Village and McVay Village (Wimberly 1980:216). The lithic material from the Indian Hill site was largely identical to other Middle Woodland sites and represents an inventory of various stemmed projectile points, plain projectile points, bi-faces, knives and drills. The limited amount of recovered projectile points in relation to the pottery sherds recovered, though notable, makes it difficult to type projectile points. Modified lithics were analyzed by lithic source, type of modification, and weight. "Points in this area of Alabama have not received the attention - naming, ect.- which they have in some other areas" thus, modified lithics for this research study were not formally typed though they were given a descriptive name (Wimberly 1960: 215).

Floral and Faunal Remains. Simply measuring the amount of carbonized plant and animal remains is not always sufficient for understanding the variability in subsistence practices. "Many interpretative problems are encountered when one attempts to infer patterns of human subsistence behavior from the botanical remains recovered from an archaeological site" (Cadell 1982:8).

The predicament encountered in analysis comes from the potential for preservation of each plant and animal part, the method of gathering, processing, and the means and rate of utilization by a prehistoric population, the activities that occur on a site after it has been abandoned by the prehistoric population, and the identification methods by the archaeologist (Cadell 1982). Understanding how bias and external factors affect the data allows the archaeologist to carefully infer patterns in a processual framework. Thus, one could presume that based on the high occurrence of turtle bones present in the samples that1Wx15, as a site having been utilized during the summer (Cadell 1982). However, it is important to consider that "seasonality of plant resources cannot therefore be tied to seasonality of residence without other supporting information," for certain plant and animal remains may have a limited seasonality and may be stored to be eaten later (Cadell 1982:36). Inferring subsistence patterns using flora and faunal remains recovered from an archaeological investigation can reveal the variability of subsistence, though certain variables must be considered when forming relationships. These include and are not limited to seasonality, climate change, preservation factors and the environment.

Currently there are no ongoing investigations into the carbonized plant material for the Indian Hill site. Burned seeds and shells were sorted and separated from the coarse screen material and await analysis. The use of indigenous plants as food sources in the Woodland

Period would be a continuation of the hunting and gathering economies in the preceding Archaic (Walthall 1980). Given the abundance of hickory, walnut, and acorns native to the deciduous forests of the Alabama River region, Woodland Period investigations demonstrate that the aboriginal people exploited their local ecology. This abundance of food sources available within 1Wx15 suggests a form of Primary Forest Efficiency (Caldwell 1958). "Certain foods, such as acorns, were utilized on an unprecedented scale, especially after the introduction of ceramic vessels for processing and cooking" (Walthall 1980:108). Analysis of recovered plant material would be beneficial in creating a more specific narrative for this Woodland archaeological site.

The Indian Hill site, situated in close proximity to aquatic habitats, utilized the various freshwater food sources. "Freshwater drum, catfish, bowfin, and gar are the most commonly identified fish from archaeological sites in this region" and include "basses and sunfishes, suckers and minnows" (Lovett 2010: 10). Sorting the Indian Hill site during analysis at Auburn University also demonstrated a high occurrence of turtle bone and other mammalian bone fragments.

All faunal remains were sorted and the entire faunal assemblage from 1Wx15 was analyzed at the University of Tennessee in Knoxville by a zooarchaeologist. Included in this assemblage was 66,843 number of identified specimens or NISP with 44 percent of the faunal remains classified as unidentifiable which made up 14 percent of the weight of the total NISP (Lovett 2010). Using the NISP to determine variability within a faunal assemblage "does not account for the fact that the number of skeletal remains differs between species" (Grayson 1984: 22), "which inflates some taxa by overestimating their count" (Klein and Cruz-Uribe 1984: 25). Thus, using NISP may not be an accurate assessment of available faunal food sources in a

prehistoric context, though it is useful tool in understanding which proteins were exploited within the specific archaeological context.

The faunal remains from the 1Wx15 excavation were differentiated by class and included mammals, reptiles, birds, fish, amphibians, and crawfish. Mammals represented 31 percent and reptiles at 22 percent account. Mammals account for 70 percent of the weight of the total assemblage (Lovett 2010). The most abundant species noted in the class of mammals for the Indian Hill site include "deer, rabbits, grey squirrel, and opossum" with deer remains making up 41 percent of the weight though only accounts for "7 percent of the mammal NISP" (Lovett 2010: 38). NISP introduces an additional bias because it over-represents those species with robust diagnostic bones that are more easily identifiable such as deer and terrapins (Klein 1980).

Faunal remains in the archaeological record are not only indicators for protein consumption, but they also supplied materials for creating tools. Often deer bones, which made up a large proportion of the excavated faunal remains, were made into tools (Figure 8). After the deer were processed for food, the remainder, including bone and antlers, were made into "projectile points, fishhooks, and a variety of awls, needles, pins flakers, spatulas, saws (mandibles), scrapers, scoops, hammers and ornaments" (Walthall 1980: 75).

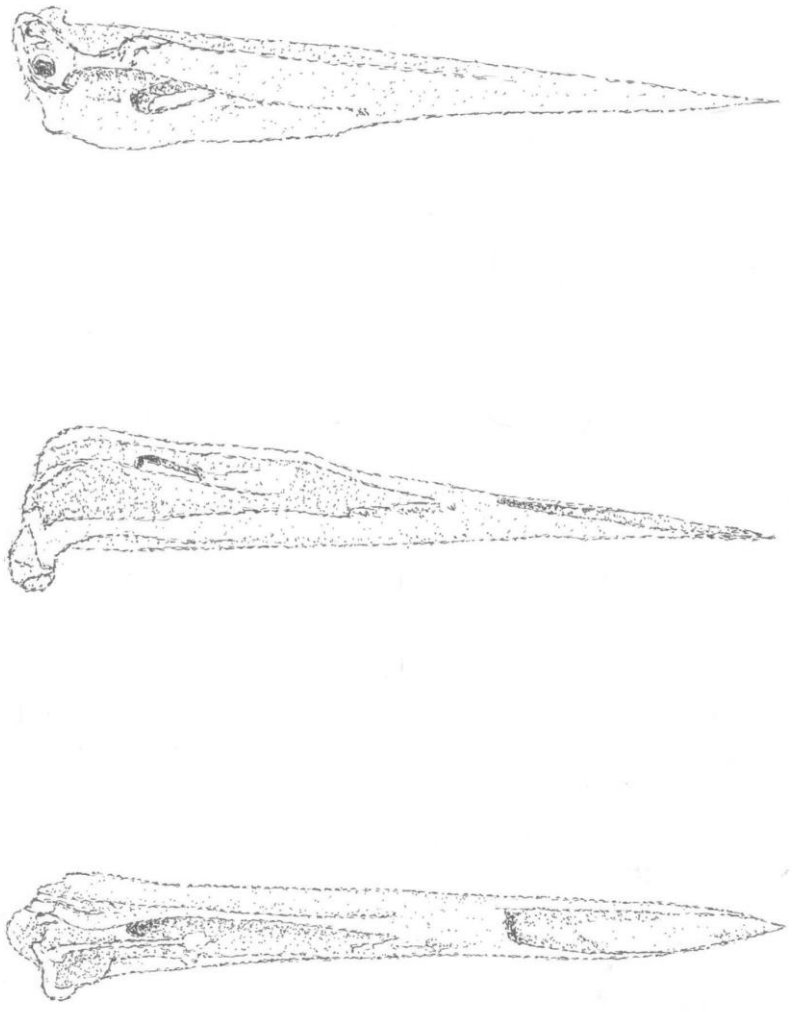

Figure 8: Three views of a deer bone awl.

Included in the mammalian remains recovered from the Indian Hill Site was Feature 38, a dog burial in a shallow pit. Dogs as domesticated companions have been present since the Holocene in North America and represent "the development of human hunting technology and strategy" (Morey and Wiant 1992: 224). However, based on the analysis from Feature 38, it is unknown whether or not this domesticated young female dog was the burial of a companion or a meal. This particular dog burial is atypical of southeastern dog burials and food refuse disposal (Lovett 2010). Interpretation for the dog burial versus dog meal presents several obstacles for analysis based on the presence of an articulated dog skeleton with little evidence of scattering, though it may demonstrate cut marks and gnaw marks without evidence of breaking any of the bones (Lovett 2010). Though not ascertained, the evidence is interpreted as a burial which provides an element of human depth and furthers inquiry into this Middle Woodland culture.

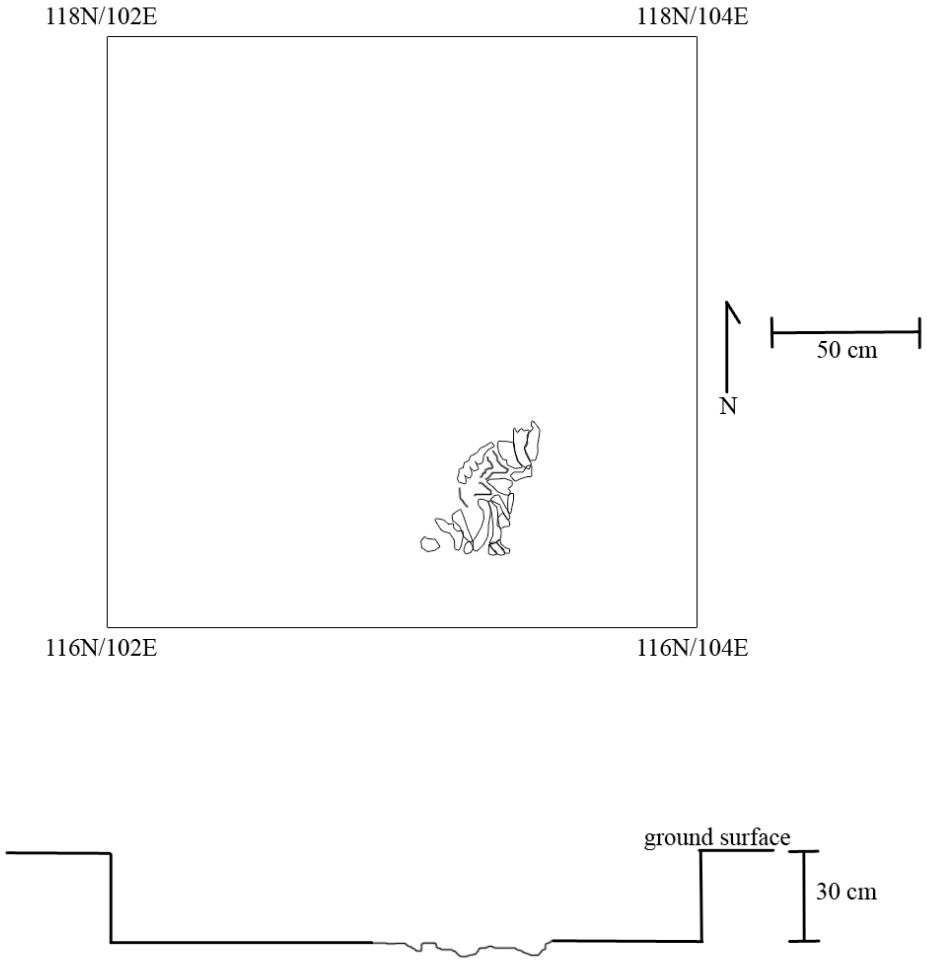

Figure 9: Dog burial and orientation of skeletal remains (Lovett 2010).

Chapter 6: Research Methods

The key to archaeological analysis is patience, consistency, focus, and time. It is with these often shattered remains of an unknown people that archaeology becomes a quantitative science. Without the data created and extrapolated from the archaeological record the science would not have a bone to stand upon. Using the data from the Indian Hill site this research study proposes testable statements to determine subsistence strategies and place this site within a distinctive cultural period, the Middle Woodland.

Hypotheses

1.) The greater the amounts of shellfish midden present, the greater the reliance on shellfish as a dietary supplement as indicative of the Middle Woodland.

2.) Increase in shell midden size reflects an increase in sedentism.

3.) Increase in pottery demonstrates an increase in sedentism.

4.) The presence of vegetable fiber tempered pottery sherds relatively increases the age of the site to that of Gulf Formational Period.

5.) An increase in the amount of excavated plain sand tempered pottery relatively dates the site to Middle Woodland Period.

6.) The presence of shell tempered pottery sherds would demonstrate an occupation during the Mississippian period.

7.) The amount of different faunal remains from the Indian Hill site increases the variability of prehistoric subsistence patterns.

8.) The presence of a variety of modified lithics increases the variability of adaptive strategies.

9.) Pottery types recovered can demonstrate cultural interaction between various ethnic groups.

Sample and Data Sources: This study examined and analyzed previously excavated material from the archaeological site of 1Wx15. This Middle Woodland site was excavated in the summer of 1996 by Dr. John W. Cottier of Auburn University with the help of students as a part of the Expedition program with the University of Alabama Museum. Analysis of the recovered remains started in 2005. Artifacts were grouped by aboriginal pottery, carbonized floral remains, charcoal, faunal remains, shell assemblages, lithics, modified lithics, daub, and miscellaneous. This site was chosen as a unit of study for it is culturally significant to understanding prehistoric people of Alabama since only minor studies have been accomplished on sites dealing with the Middle Woodland Period within the lower Alabama River drainage.

This study considers all artifacts from the excavation as pertinent indicators of an unknown subsistence system. However, this research project focused purely on the ceramic and lithic inventory for the entire Indian Hill site. Once the artifacts were washed, sorted, weighed, measured, and recorded, the total sample set for this research project included 136,360 separate artifacts. 1Wx15 was chosen as it contained excellent preservation due to the calcium carbonate from freshwater shell middens. This aids in artifact preservation so that a more representative picture may be formulated from the analysis. It is the hope that this investigation will provide a means for comparative analysis for future investigations regarding the Middle Woodland Period in the Alabama River region.

***Data Collection*.** Field notes and feature forms were compiled by Dr. John W. Cottier and students during the summer of 1996 for 1Wx15. Bins containing the excavated materials were rough sorted into like groups. All faunal remains, floral remains, pottery sherds, modified lithics, bone and shell were removed and further separated based on classification for typological correlation. All artifacts were washed and or floated if not previously water screened in the field and then dried. It was not necessary to rewash previously dried material for "experiments indicate that wetting and drying charred plant remains causes severe deterioration, especially after the second period of wetting and drying" (Jarman et al. 1972:45). After analysis, all artifacts were placed within a database. The data collected and artifacts analyzed makes it possible to conceive relationships based on recovered artifacts and ecofacts. These relationships demonstrate the variability in subsistence of the Middle Woodland archaeological site, 1Wx15, and its relation to its prehistoric environment.

The 1996 archaeological investigation of the Indian Hill site was systematically excavated as 2 by 2 meter units in levels of 10 cm. The maximum depth for this excavation was 100 cm and a total of 90 2 by 2 meter units and 56 features were excavated.

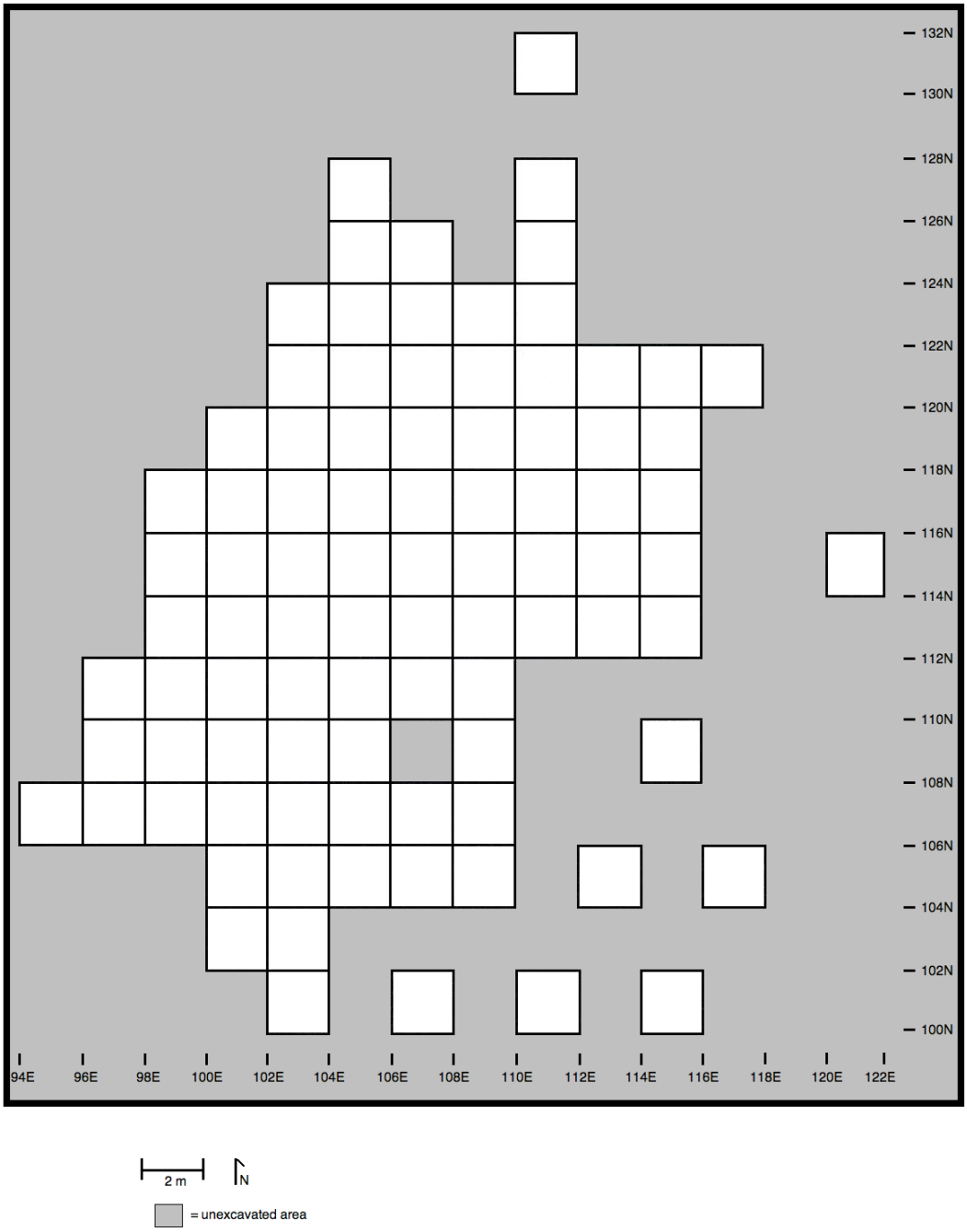

Figure 10: 1Wx15 map of the 1996 excavation area (Lovett 2010).

Features: Features in reference to an archaeological excavation are the non-portable human activity areas demonstrating stratigraphic deposition and definable boundaries. The features from the 1996 excavation identified at 1Wx15 were organized into groups of distinct human interaction. These include small pits, medium pits, large pits, rock hearths, rock concentrations, middens, shell middens, shell concentrations, post holes, dog burial, and miscellaneous features.

The few post holes recovered during excavation may represent the use of crude shelters. The lack of "substantial dwellings seems to have been due to occupation in the warm late spring and summer months when only minimal shelter was necessary. This coincides with the large presence of turtle bones and mussels excavated from the Indian Hill site which implies a similar seasonal occupation (Walthall 1980: 69). The identified features are briefly reported in Table 2.

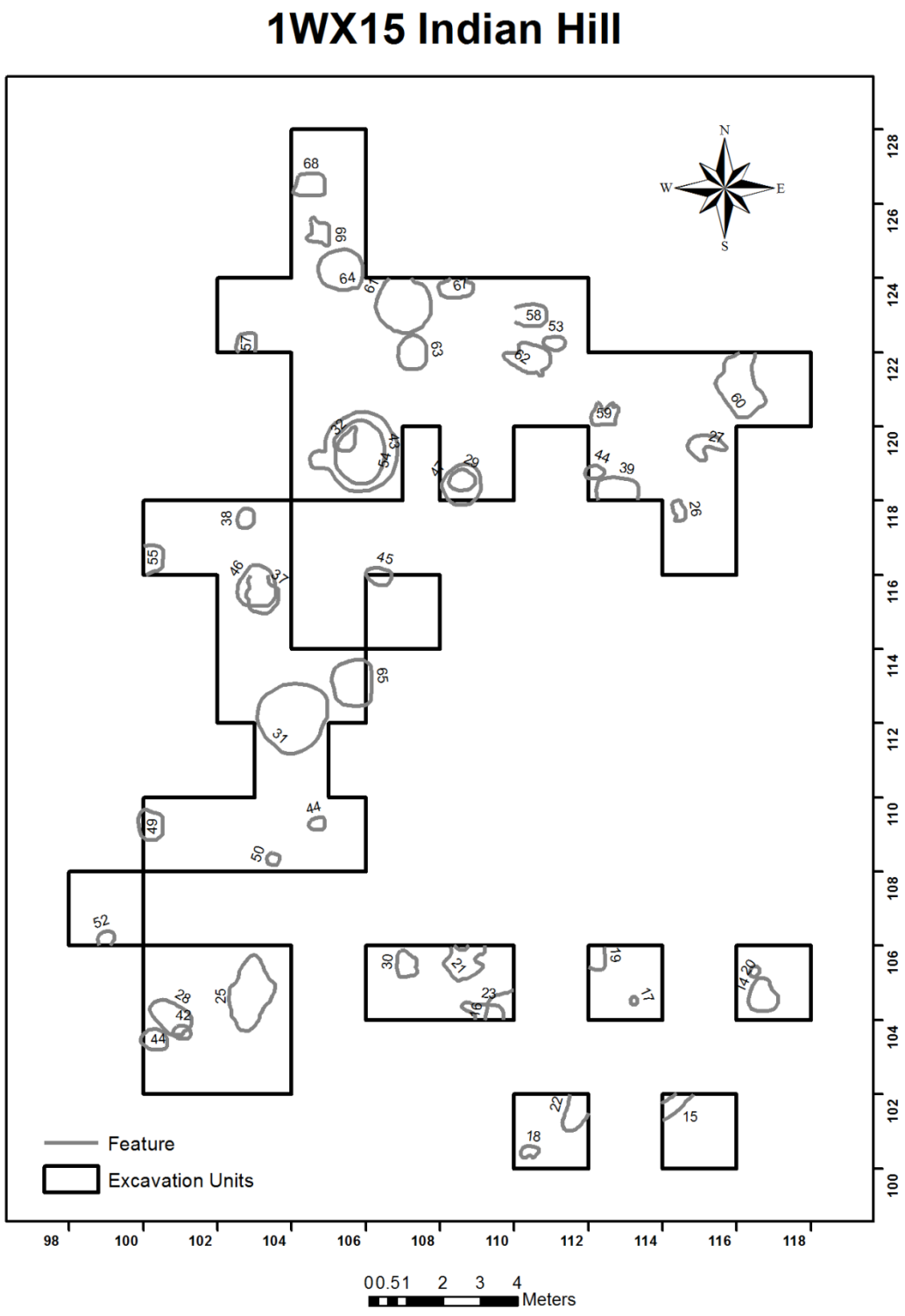

Figure 11: 1Wx15 map of excavated features.

Small Pits:

Feature	F.S.	Unit	Level	Description	Associations
14	2	104N/118E	30-40 cm	An oblong pit with sloping sides and a rounded base.	Sand Tempered ceramics, animal bone, fine charred material.
16	4	104N/110E	40-50 cm	A basin shaped pit with sloping side and an irregular bottom	Sand Tempered ceramic , quartzite and chert flakes, fine charred material.
19	7	104N/114E	30-40 cm	An oblong pit with sloping sides and a rounded base.	Section of a Bayou Basin vessel and portion of a box turtle shell.
30	18	104N/110E	20-30 cm	An irregular circular pit with vertical to sloping sides and an irregular bottom.	Sand Tempered ceramics, quartzite flakes, bone fragments, charred material.
44	42	108N/106E	30-40 cm	An elliptical shaped pit with sloped sides.	Charred material and a few cobbles.
42	30	102N/102E	30-40 cm	A circular shaped pit with sloping sides.	Deer scapula, lithic flakes and Sand Tempered Plain pottery sherds.
45	34	114N/108E	30-40 cm	A circular pit, with sloping side and a flat bottom.	Charred material, a few cobbles and flakes.
49	46	108N/102E	20-30 cm	A small oval pit.	Sand Tempered ceramics, shell concentration and a few cobbles.
50	47	108N/104E	40-50 cm	A basin shaped pit with sloping side and an irregular bottom	Quartzite Cobbles
54	54	120N/106E	20-30 cm	An oblong pit with steeply sloping sides and a rounded base	Nutting stone, tallahatta flakes, gastropods

63	63	120N/108E	40-50 cm	A oblong pit with sloping sides and a rounded base	Heat treated quartzite cobbles and shell fragments.

Medium Pits:

Feature	F.S.	Unit	Level	Description	Associations
22	10	100N/112E	30-40 cm	A shallow rectangular shaped pit with sloping sides and a basin shaped base.	Sand Tempered ceramics, deer bone and a large cobble.
31	19	110N/104-106E	20-30 cm	An incomplete shaped pit with vertical sides sloping into a rounded base.	Shell concentrations around edges of pit with animal bone. Sand Tempered Plain, Franklin Rim shreds, Sand Tempered Fabric Marked, and Carrabelle Incised.
39	27	118N/114E	20-30 cm	A circular pit with undefined edges and a basin shaped bottom.	Bone awl, deer long bone, fire cracked cobbles, projectile point/knife, and lithic flakes. Ceramics include Sand Tempered Plain, Franklin Plain rims, Wakulla Check-Stamped and Bayou La Batre Cord Wrapped Dowell Impressed
47	40	118N/110E	20-30 cm	An oblong pit with sloping sides and an irregular bottom.	Wood ash, charcoal, shell, and quartzite

					cobble.
60	60	120N/118E	30-40 cm	An oblong pit with sloping sides and a rounded bottom.	Sand Tempered Plain, Franklin Plain rims, Wakulla Check-Stamped pottery, milling stone, charred animal bones, lithic flakes, shell fragments, heat treated and fire cracked stones.
61	61	122N/108E	30-40 cm	A circular shaped pit with slanting sides and a rounded base.	Wood ash, shell fragments, large pieces of limestone and quartzite and including Sand Tempered Plain ceramics, Wakulla Check-Stamped and Sand Tempered Fabric Marked.
62	62	120N/112E	30-40 cm	An oval pit with rounded sides and a flat to rounded base	Franklin Plain rims and Sand Tempered Plain ceramics.
64	64	122N/106E	40-50 cm	A circular shaped pit with sloping vertical sides demonstrating no evidence of stratification	Sand Tempered plain sherds mixed with shell fragments, animal bone and charred materials.
66	66	112N/106E	20-30 cm	A circular shaped pit with slopping sides.	Sand Tempered Plain, Weeden Island Punctuate, Sand Tempered Incised ceramic sherds as well as shell fragments,

					pebbles, flakes, animal bone and charred material.

Large Pits:

Feature	F.S.	Unit	Level	Description	Associations
25	13	104N/104E	10-20 cm	An oblong pit with slopping sides and irregular shaped base with rounded bottom.	Sand Tempered Plain and Sand Tempered Cord-Marked sherds with shells, charred animal bone, animal bone, cobbles, flakes and charred material.
28	16	102N/102 E	20-30 cm	An oblong pit with a basin shape that is shallower at the east end.	Sand Tempered plain sherds, flakes, charred animal bones, shells, fired clay and heat treated rocks.
43	31-52	120N/106 E	30-100 cm	A very large circular shaped pit with vertical to slopping sides and a rounded base. The fill is a very dense humic midden with no stratification with possible use as a storage pit. The eastern profile collapsed during excavation.	Midden included shell frags, animal bone, charred remains and Sand Tempered Plain, Franklin Plain rims, Wakulla Check-Stamped, Bayou Basin, Sand Tempered Simple Stamped, Weeden Island Plain Rim and Fired squeezed clay,
65	65	112N/106E	30-40 cm	A circular pit with sloping sides. Functioned as a burned trash deposit.	Sand Tempered Plain, Weeden Island Punctuate rim sherds, heat

					treated and fire cracked rock, lithic flakes, charred animal bones, charred turtle shell pieces, and charcoal.

Rock Hearths:

Feature	F.S.	Unit	Level	Description	Associations
21	9	104N/110E	40-50 cm	Cluster of yellow quartzite cobbles in a yellow sand matrix irregular in shape	Heat treated large red quartzite stones.
23	11	104N/110E	50-60 cm	Circular scatter of quartzite cobbles.	None.
44	33	102N/102E	30-40 cm	An oblong concentration of cobbles.	Heat treated and fire cracked cobbles, some charcoal and flakes.
46	38	114N/104 E	30-40 cm	An irregular shaped quartzite concentration.	Heat treated and fire cracked cobbles with shells, flakes and charred animal bone.
52	49	106N/100E	30-40 cm	Circular scatter of quartzite cobbles with slightly sloping sides.	Heat treated and fire cracked cobbles and a piece of Sand Tempered Plain sherd.
55	55	116N/102E	30-40 cm	Oval shaped rock hearth.	Archaic projectile point and Sand Tempered Plain pottery sherds.
59	59	120N/114E	40-50 cm	Scatter of quartzite cobbles irregular in shape with no visible pit outline.	Fired clay and heat treated and fire cracked quartzite cobbles.
66	66	124N/106E	30-40	An irregular shaped	Fiber Tempered

			cm	quartzite concentration.	and Sand Tempered ceramic sherds.
67	67	122N/110E	40-50 cm	Circular scatter of quartzite cobbles.	Fired cracked quartzite cobbles. No evidence of charcoal.

Rock Concentration:

Feature	F.S.	Unit	Level	Description	Associations
26	14	116N/116E	30-40 cm	A cluster of 11 quartzite cobbles moderately scattered across a 39x22 cm area.	Lithic flake.
27	15	118N/116E	30-40 cm	A cluster of 24 quartzite cobbles loosely scattered across a 60cm x47 cm area.	Sand Tempered sherd.
68	68	126N/106E	30-40 cm	A small oblong scatter of quartzite cobbles.	Heat treated fire cracked quartzite cobbles, broken Nutting stone, Plain Sand Tempered sherd.

Midden:

Feature	F.S.	Unit	Level	Description	Associations
53	53	122N/112E	0-10 cm	Two deer tibia in dark grey sand at the base of midden. No signs of pit outline.	None.
41	29	106N/102E	0-10 cm	Midden concentration of shells, and charred animal bones in a dark humic soil matrix.	Sand Tempered Plain pottery.

Shell Midden:

Feature	F.S.	Unit	Level	Description	Associations
29	17	118N/110E	0-10 cm	Circular Midden with dark brown humic soil and vertical sloping sides and a flat base. High concentration of shell along the surface.	Shells, Plain Sand Tempered Pottery, fire cracked cobbles, animal bone
32	20	118N/106E	0-10 cm	Semi- circular in shape with a high concentration of shell on the surface mixed with humic soil.	Shells, Plain Sand Tempered Pottery, animal bone, deer vertebra and deer ulna.

Shell Concentration:

Feature	F.S.	Unit	Level	Description	Associations
37	25	114N/104E	10-20 cm	Circular shaped shell concentration with vertical sides and flat bottom.	Plain Sand Tempered Pottery sherds, deer bone.

Post Hole:

Feature	F.S.	Unit	Level	Description	Associations
17	5	104N/114E	20-30 cm	Cylindrical rounded base with a maximum length of 21 cm, maximum width of 21 cm, and a maximum depth of 43 cm.	
18	6	100N/112E	20-30 cm	Elliptical, irregular in shape with an irregular shaped base with a maximum length of 32 cm, maximum width of 18 cm, and a maximum depth of 50 cm.	

31	539	112N/104-106 E	20-80 cm	Cylindrical rounded base with a maximum length of 16 cm, maximum width of 16 cm, and a maximum depth of 37 cm.	

Dog Burial:

Feature	F.S.	Unit	Level	Description	Associations
38	26	116N/104 E	20-30 cm	Excavated domestic dog remains in anatomical order.	Shell fragments and Sand Tempered Plain Pottery.

Miscellaneous:

Feature	F.S.	Unit	Level	Description	Associations
20	8	104N/118E	40-50cm	Circular intrusion with a conical base.	None.
15	3	100N/118E	30-40 cm	Animal Burrow. Slightly rounded trench and rounded base.	Sand Tempered Plain pottery, quartzite cobbles and shell.

Table 2: 1Wx15 features by content and description.

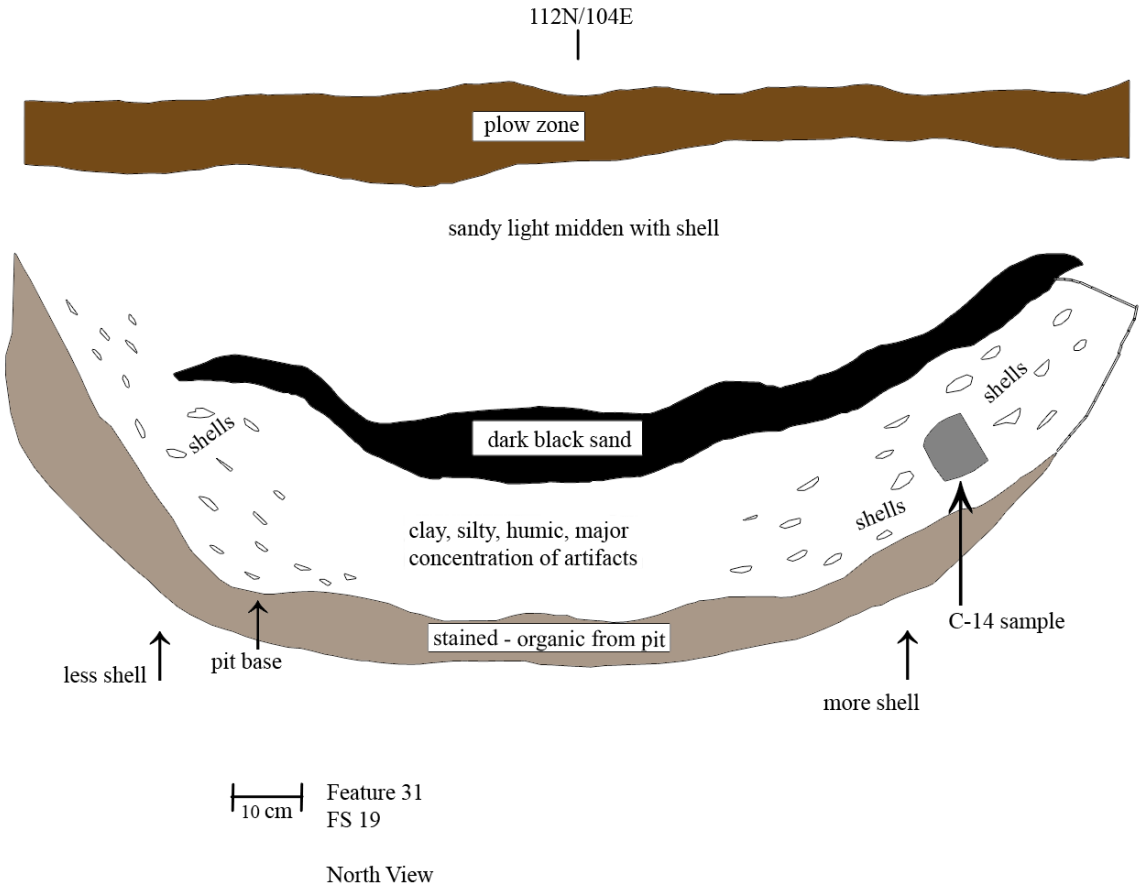

Figure 12: 1Wx15 Feature 31 profile. Profile of a medium pit with C-14 sample (Lovett 2010).

Chapter 7: Ceramic and Lithic Analysis

Using lithic and ceramic analysis the present study considers the materials from the Indian Hill site as demonstrating adaptive practices to the environment. All lithic and ceramic artifacts recovered from the Indian Hill site were analyzed. Ceramics were analyzed and measured by temper, type, size of the units and weight. Unit size was determined by a sorting criteria which included: 0 to ¼ inch, ¼ to ½ inch, ½ to 1 inch, 1 to 2 inch, 2 to 4 inch and 4 inches and larger. Lithic materials were examined and categorized by their materials, modifications and weights. The lithics and ceramics analyzed from the Indian Hill site in Wilcox County, Alabama provided the basic units of analysis for this study.

Since the amount and pottery by type affects the known variable, culture, all pottery sherds were analyzed according to weight, size of the sherd and surface decoration. All external decorations were typed by temper and decoration and included 33 specific types:

Fiber Tempered Plain, Sand Tempered Plain, Franklin Plain, Weeden Island Plain, Wakulla Check-Stamped, Bayou Basin Incised, Sand Tempered Incised , Sand Tempered Simple Stamped Sand Tempered Punctated, Podal Supports, Sand Tempered Check Stamp, Bayou La Batre Stamped, Santa Rosa Punctated, Santa Rosa, Dunlap Fabric Marked, Deptford Bold Linear Stamped , Alligator Bayou Stamped, Sand Tempered Brushed, Sand Tempered Fabric Marked, Deptford Bold Check Stamped, Swift Creek Stamped, Sand Tempered Fabric Wrapped Dowell Impressed, Sand Tempered Cord Marked, West Florida Cord Marked, Sand Tempered Adorno, Keith Incised, Carrabelle Incised, Weeden Island Incised, Calloway Plain, Sand Tempered Pinched, Sand Tempered Complicated Stamped, Sand Tempered Weeden Island "like" , McLeod Linear Stamped and Alligator Bayou Incised. Ceramic types are listed in the order in which they were first noted in the archaeological record and denote the cultural expression of various ethnic

groups that inhabited this portion of the Alabama River region. The entire ceramic assemblage for the Indian Hill site consisted of 88,881 ceramic sherds weighing 23, 5985.83 grams and representing a predominately Sand Tempered Plain ceramic inventory.

Lithics were analyzed by their lithic source, the characteristics of debitage, chipped stone tools and the presence of fire cracked and uncracked rock. All lithics were counted and weighed and demonstrated a limited tool inventory in relation to the amounts of recovered lithics. The weight of the total lithic inventory was 602,652.61 grams representing 47,479 individual specimens. The majority of recovered lithics was quartz and quartzite and represents the available natural resources of the site.

The analysis was conducted in order to observe the hypotheses concerning variability in the archaeological record for a Middle Woodland population, 1Wx15, in Wilcox County, Alabama. The analysis of the Indian Hill Site demonstrates relationships between floral and faunal remains, freshwater shellfish, and pottery with consideration to modified lithics as they were often used to process animals and plants for consumption and shelter. The data set used in this study comes from the years long task of sorting, cleaning and analyzing the recovered materials from 1Wx15. This data set created in this study can be used to determine the variation between the total samples of artifacts from the given archaeological site, 1Wx15, with other excavated archaeological sites in the Alabama River region or within similar biophysical environments.

Chapter 8: Ethical Considerations

This investigation does not involve live human subjects. Rather the focus of study deals with artifacts; thus, no risk of harm to human individuals is anticipated. However, since this investigation deals with a previously excavated archaeological site with human remains from a Native American population careful consideration to the analysis, handling and curation of the cultural material was executed. All analysis forms have been placed with the archaeological collections curated the Archaeological Laboratory at Auburn University.

Chapter 9: Summary

The features analyzed for the site, along with the field specimens from the general excavation, demonstrates the evidence for human activity and human interaction. The structure of the site, based on the presence of rock hearths, post holes, middens and pits, is consistent with what is presently known of Middle Woodland cultures in this area of the Alabama River region. The sample of ceramics reported in this thesis represents one of the largest data sets from Woodland context in the Alabama River drainage.

The analysis of features and general field specimens allowed for the formulation of datasets from the ceramic and lithic inventory. These datasets created will be extremely beneficial overall for future investigations of the Middle Woodland Period in the Alabama River region. The overall analysis of the material cultural remains from 1Wx15 provides a means for cross cultural comparisons and adds depth to this relatively undefined cultural period.

This research study uses a processual approach, while utilizing multiple disciplines, to provide a concise archaeological interpretation of the Indian Hill site. Ecological theoretical approaches helped to interpret data collection as well as providing generalizations for understanding the adaptation of cultures to specific environments, in this case a major stream locale along the Alabama River. Processual archaeology uses the background of previous ecological approaches in correlation with both cultural and non cultural components to link the complexities of human adaptation to the environment as defined by the environmental niche.

The environmental niche in processual archaeology has definable boundaries dictated by the regions resources and how a population utilizes those resources. Various cultures may share similar ecological systems though they exploit different variables based on their adaptive strategies (Binford 1968). Considering the environment of the Indian Hill site, this investigation

demonstrates a relatively low amount of energy was expended to obtain resources used in adaptive strategies and may be considered an example of Primary Forest Efficiency as defined by Caldwell in 1958.

Site catchment analysis views the cost/benefit ratio of a site and the willingness of a population to travel for resources. The prehistoric environment for 1Wx15 made this site highly suitable for human habitation with regards to low energy expenditure. Representing a continuation of previous adaptive strategies, the Middle Woodland Period allows for a more sedentary settlement pattern to emerge than from the hunter gatherers of earlier periods. Additionally, the Indian Hill site demonstrates a relatively homogenous ceramic assemblage of sand tempered plain ceramics with fewer decoration motifs than was originally expected. This evidence may indicate fewer interactions with other cultural groups in the Alabama River drainage.

A review of previous archaeological research on the Woodland Period in Alabama demonstrates a disputed ceramic chronology of the Alabama River region. Based on prior archaeological investigations this area has demonstrated continual occupation beginning in the Archaic Period as defined by lithic analysis. The ceramic materials from the Indian Hill site were analyzed using previously established ceramic typologies as such ceramic types are helpful in defining specific cultural phases. Considerations to regional ceramic traditions further the understanding of cultural periods within a region and can demonstrate interaction between these distinct ethnic groups.

Demonstrating what is known from the Indian Hill site allows for a more thorough understanding of the transition into the Middle Woodland Period. The interactions with other regional ceramic phases help to define a chronology of cultural interaction for the Indian Hill

site. The earliest known ceramic producers for the region were represented in the ceramic inventory by the limited amounts of the Bayou La Batre pottery series and fiber tempered pottery. This places the earliest known evidence for cultural interaction and ceramic technology in the Bryant's Landing Phase within the Later Gulf Formational Period.

The analysis of ceramics from the Indian Hill site demonstrates limited interaction with the Blakely Phase, a transitional ceramic phase in the Early to Middle Woodland Periods. The Porter Phase, within the Middle Woodland, was represented by the occurrence of Franklin Plain rim sherds. The limited frequency of identifiable Porter Phase ceramic types may represent limited cultural interactions between distinct aboriginal groups.

The last ceramic phase of the Indian Hill site was associated with Weeden Island. This Late Woodland ceramic phase is identifiable by check stamping similar to Wakulla Check Stamping and may also be represented by the unclassified check stamped sherds from the Indian Hill site. This Late Woodland ceramic phase is the last known cultural interaction demonstrated by the ceramic analysis of 1Wx15. The general local of Pine Barren creek demonstrates a concentration of Weeden Island archaeological sites. No shell tempered pottery was recovered from the Indian Hill site, which demonstrates no cultural interactions with the Mississippian Period.

The information gleaned from this analysis supports the hypotheses presented and defines Indian Hill as an almost purely Middle Woodland based on the evidence of the predominately plain sand tempered ceramic inventory and a minority of decorative sand tempered ceramics. Nonetheless, the high frequency of plain fine sand tempered pottery demonstrates a technological advancement in Middle Woodland ceramic manufacturing that did not exist in the preceding Gulf Formational and Early Woodland Periods. Marginal amounts of later ceramics

types such as Keith Incised and Wakulla Check Stamped demonstrated the limited interaction of this population within the Late Woodland Period.

Often the disappearance of a pottery type suggests a shift in culture and the information extrapolated from the datasets demonstrates that this Middle Woodland occupation did not fully participate in the Hopewellian sphere of interaction.

The analysis of the Indian Hill site narrates a relatively unknown cultural period. The Middle Woodland subsistence base for the site shows the interrelationships of this group of aboriginal peoples to their environment, the dynamics of their human activities, and the variation within a prehistoric economy. The faunal analysis for 1Wx15 determined that this group of people exploited the littoral resources of Pine Barren Creek as well as demonstrated a heavy reliance on mammalian populations native to the area, especially deer (Lovett 2010). It could be concluded that over foraging of shellfish in conjunction with climate change may have led to a depletion of aquatic resources and made this site less attractive to subsequent culture periods after the Middle Woodland Period. However, given the many unknown variables this is merely speculative and would necessitate in depth climatological studies.

This investigation has provided a glimpse into the Middle Woodland prehistory of the Alabama River region. Without a written record, archaeological analysis helps offer an explanation to the lifeways of past populations. This research offers insight into the adaptive strategies of a Middle Woodland population in Wilcox County, Alabama. This project amalgamates the research of past archaeological investigations and uses the data from the analysis of a major ceramic data set in order to demonstrate a Middle Woodland culture at the Indian Hill site. Exotic materials were conspicuously absent in the analysis, and further demonstrates that the interaction between different culture groups was limited and that the

surrounding environment provided abundant resources for consumption. Based on the archaeological analysis of the cultural remains this specific Middle Woodland population demonstrates that it was a fairly cohesive community that exploited the rich environment of the Alabama River region. The data gathered and analyzed from this investigation represents a period of increased ceramic technology, transition and increased sedentism for the Middle Woodland inhabitants of this archaeological site, in Wilcox County, Alabama.

The Indian Hill site would benefit from additional analysis of the floral remains, shellfish, and soil samples curated at the Archaeology Laboratory at Auburn University.

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Appendix

Ceramics:

Feature 1	Count	Weight
Sand Tempered Plain	35	15.3
Fiber Tempered Plain	5	5.9
West Florida Cord Marked	2	9.8
Franklin Plain	1	4.3

Feature 14	Count	Weight
Sand Tempered Plain	16	55.8

Feature 15	Count	Weight
Sand Tempered Plain	7	5.7

Feature 16	Count	Weight
Sand Tempered Plain	11	2.6

Feature 17	Count	Weight
Sand Tempered Plain	3	2.2

Feature 19	Count	Weight
Sand Tempered Plain	3	0.1

Feature 20	Count	Weight
Sand Tempered Plain	1	.2

Feature 22	Count	Weight
Sand Tempered Plain	4	0.9

Feature 25	Count	Weight
Sand Tempered Plain	565	98.2
Santa Rosa Punctated	1	2.4
Santa Rosa Rocker Stamped	1	8.7
Wakulla Check-Stamped	12	38.7
Sand Tempered Incised	4	6.8
Sand Tempered Simple Stamp	1	2.5
Franklin Plain	1	74.7
Sand Tempered Cord Marked	1	1.6

Feature 27	Count	Weight
Sand Tempered Plain	5	16.6

Feature 28	Count	Weight
Sand Tempered Plain	14	50.8

Feature 29	Count	Weight
Sand Tempered Plain	27	49.9

Feature 30	Count	Weight
Sand Tempered Plain	9	22.7

Feature 31	Count	Weight
Sand Tempered Plain	1,616.8	6,507.1
Sand Tempered Brushed	27.8	67.2
Deptford Bold Check Stamped	1	30
Santa Rosa	1	27.3
Fiber Tempered Plain	2	29.4
Franklin Plain	8	90.4
Sand Tempered Fabric Marked	1	5.9
Dowell Impressed		
Sand Temp Complex Stamp	1	0.9
Sand Tempered Incised	1	19.5
Deptford Bold Linear Stamped	11	111.5
Wakulla Check-Stamped	1	9.9
Bayou Basin Incised	15	39.5
Sand Tempered Check Stamp	9	43.8
Dunlap Fabric Marked	16	79.3
Carabelle Incised	1	4.1

Feature 37	Count	Weight
Sand Tempered Plain	171	601.7
Sand Tempered Incised	1	0.4
Bayou Basin Incised	1	4.5
Franklin Plain	1	2.6

Feature 38	Count	Weight
Sand Tempered Plain	35	215.3
Fiber Tempered Plain	5	15.9
West Florida Cord Marked	2	19.8
Franklin Plain	1	4.3

Feature 39	Count	Weight
Sand Tempered Plain	167	1,477.5
Franklin Plain	6	20.8
Wakulla Check-Stamped	18	213.1

BayouLa Batre Stamped	2	12.4
Sand Tempered Incised	1	44.5

Feature 41	Count	Weight
Sand Tempered Plain	6	112.4

Feature 43	Count	Weight
Sand Tempered Plain	1,284	3,900.7
Sand Temp Fabric Marked	1	8.7
Franklin Plain	19	349.1
Sand Tempered Brushed	6	67.2
Sand Tempered Incised	2	28.8
Wakulla Check-Stamped	5	118.3
Bayou Basin Incised	2	6.3
Sand Tempered Simple Stamp	3	36
Weeden Island Plain	1	13.8
Weeden Island Like	1	18
Dunlap Fabric Marked	1	9
Weeden Island Incised	3	41.1

Feature 44	Count	Weight
Sand Tempered Plain	5	2.5

Feature 46	Count	Weight
Sand Tempered Plain	4	10.2

Feature 47	Count	Weight
Bayou Basin Incised	2	4.1
Sand Tempered Plain	15	4.4
Sand Tempered Incised	1	0.9

Feature 48	Count	Weight
Sand Tempered Plain	2	1.4

Feature 49	Count	Weight
Sand Tempered Plain	13	48.4

Feature 52	Count	Weight
Sand Tempered Plain	9	48.5

Feature 54	Count	Weight
Sand Tempered Plain	2	7.6

Feature 60	Count	Weight
Sand Tempered Plain	354	1,418.1
Wakulla Check-Stamped	26	313.5
Dunlap Fabric Marked	9	121.7
Franklin Plain	4	21.2
Deptford BoldLinear Stamped	27	319.1

Feature 61	Count	Weight
Sand Tempered Plain	349	1,886.3
Wakulla Check-Stamped	28	496.1
Sand Tempered Brushed	3	11.8
Dunlap Fabric Marked	1	2.3
Franklin Plain	9	65.1

Feature 62	Count	Weight
Franklin Plain	2	.4
Fiber Tempered Plain	2	115.7
Sand Tempered Plain	26	198.8

Feature 63	Count	Weight
Sand Tempered Plain	4	9.7

Feature 64	Count	Weight
Sand Tempered Plain	161	862.6
Wakulla Check-Stamped	4	41.4
Sand Tempered Brushed	4	97.9
Sand Tempered Incised	3	11.1
Deptford Bold Linear Stamped	2	11.5
Franklin Plain	6	29.1

Feature 65	Count	Weight
Sand Tempered Plain	147	585.2
Sand Tempered Incised	1	1.9
Franklin Plain	1	10.3
Weeden Island Incised	3	8.9

Feature 66	Count	Weight
Fiber Tempered Plain	2	9.7

Table 3: IWx15 Features by count and weight.

Depth: 0cm – 10cm

BODY	0>1/4	G	1/4>1/2	G	1/2>1	G	1>2	G	2>4	g	4>	g
Fiber Tempered Plain	0	0	3	1.2	9	25.4	4	43.5	0	0	0	0
Sand Tempered Plain	349	329.8	10698	14813.1	14656	24783.8	3455	15091.6	104	1816.9	2	139.5
Franklin Plain	0	0	117	43.9	195	226.8	21	82.6	0	0	0	0
Weeden Island	0	0	1	1.1	0	0	0	0	0	0	0	0
Wakulla Check-Stamped	0	0	5	4	48	143.9	16	131.4	0	0	0	0
Bayou Basin Incised	0	0	0	0	14	48.5	6	42.1	0	0	0	0
Sand Tempered Incised	2	1.2	22	21.6	75	209.1	32	142.7	0	0	0	0
Sand Tempered Simple Stamp	0	0	5	4.4	8	23.5	3	37.7	0	0	0	0
Sand Tempered Punctated	0	0	3	2	8	21.1	0	0	0	0	0	0
Sand Tempered Check Stamp	0	0	3	2.8	54	146.2	34	146.4	1	51.7	0	0
Bayou La Batre Stamped	0	0	0	0	4	15.2	2	14.3	0	0	0	0
Dunlap Fabric Marked	0	0	0	0	0	0	0	0	0	0	0	0
Deptford Bold Linear Stamped	0	0	0	0	2	6.3	19	139	8	164.9	0	0
Sand Tempered Brushed	0	0	0	0	0	1	17	90.4	5	46.1	0	0
Sand Temp Fabric Marked	0	0	3	4.8	13	234.8	9	6.9	0	0	0	0
Deptford Bold Check Stamped	0	0	1	6.8	4	26.8	1	15.2	0	0	0	0
Swift Creek Stamped	0	0	0	0	2	7.9	0	0	0	0	0	0
Sand Tempered Fabric Marked Dowell Impressed	0	0	0	0	6	18.4	2	32.3	0	0	0	0
Sand Tempered Cord Marked	0	0	0	0	2	5	1	6.4	1	12.5	0	0
Sand Tempered Adorno	0	0	0	0	0	0	0	0	0	0	0	0
Keith Incised	0	0	0	0	2	10.2	0	0	0	0	0	0
Calloway Plain	0	0	0	0	3	6.3	0	0	0	0	0	0
Sand Temp Complex Stamp	0	0	0	0	0	1	4	14.1	0	0	0	0
TOTAL BODY:	351	331	10861	14906	15105	25961	3627	16037	119	2092	2	140

BASE	0>1/4	G	1/4>1/2	G	1/2>1	G	1>2	G	2>4	g	4>	g
Fiber Tempered Plain												
Sand Tempered Plain	0	0	0	0	2	14.9	2	18.5	1	21.1	0	0
Franklin Plain	0	0	0	0	1	2	0	0	0	0	0	0
Wakulla Check-Stamped	0	0	0	0	0	0	1	9.6	0	0	0	0
Bayou Basin Incised	0	0	0	0	0	0	0	0	1	12.2	0	0
Sand Tempered Incised	0	0	0	0	0	0	2	10.2	0	0	0	0
Podal Supports	0	0	0	0	1	3	0	0	0	0	0	0
TOTAL BASE:	0	0	0	0	4	20	5	38	2	33	0	0

RIM	0>1/4	G	1/4>1/2	G	1/2>1	G	1>2	G	2>4	g	4>	g
Fiber Tempered Plain	0	0	0	0	1	3.8	1	25.2	0	0	0	0
Sand Tempered Plain	3	1.61	441	343.7	559	1193.9	102	532.9	6	65.4	0	0
Franklin Plain	0	0	10	13.3	64	112.2	62	264.8	4	71.3	1	179
Weeden Island	0	0	0	0	1	6	0	0	0	0	0	0
Weeden Island Plain	0	0	0	0	0	0	0	0	1	30.5	0	0
Wakulla Check-Stamped	0	0	1	0.6	6	8.2	3	21.3	6	179.1	0	0
Bayou Basin Incised	0	0	0	0	3	6.4	2	14.7	0	0	0	0
Sand Tempered Incised	0	0	0	0	9	23.2	4	42.7	0	0	0	0
Sand Tempered Check Stamp	0	0	0	0	10	51.1	0	0	1	20.2	0	0
Bayou La Batre Stamped	0	0	0	0	1	4.5	0	0	0	0	0	0
Dunlap Fabric Marked	0	0	0	0	0	0	0	0	1	45.6	0	0
Deptford Bold Linear Stamped	0	0	1	0.5	0	0	1	2.4	1	24.3	0	0
Sand Tempered Brushed	0	0	0	0	1	2.6	3	41.3	2	74.4	0	0
Sand Temp Fabric Marked	0	0	0	0	1	2	1	5.8	0	0	0	0
Deptford Bold Check Stamped	0	0	0	0	3	5	2	13.9	1	6.1	0	0
Swift Creek Stamped	0	0	0	0	2	5.6	2	8.3	0	0	0	0

Sand Tempered Cord Marked	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	**0**	**0**	**0**	**0**
TOTAL RIM:	**3**	**2**	**453**	**358**	**661**	**1425**	**184**	**979**	**23**	**517**	**1**	**179**

GRAND TOTAL:	**354**	**333**	**11314**	**15264**	**15770**	**27406**	**3816**	**17054**	**144**	**2642**	**3**	**319**

Table 4: 1Wx15 Ceramics Inventory by level.

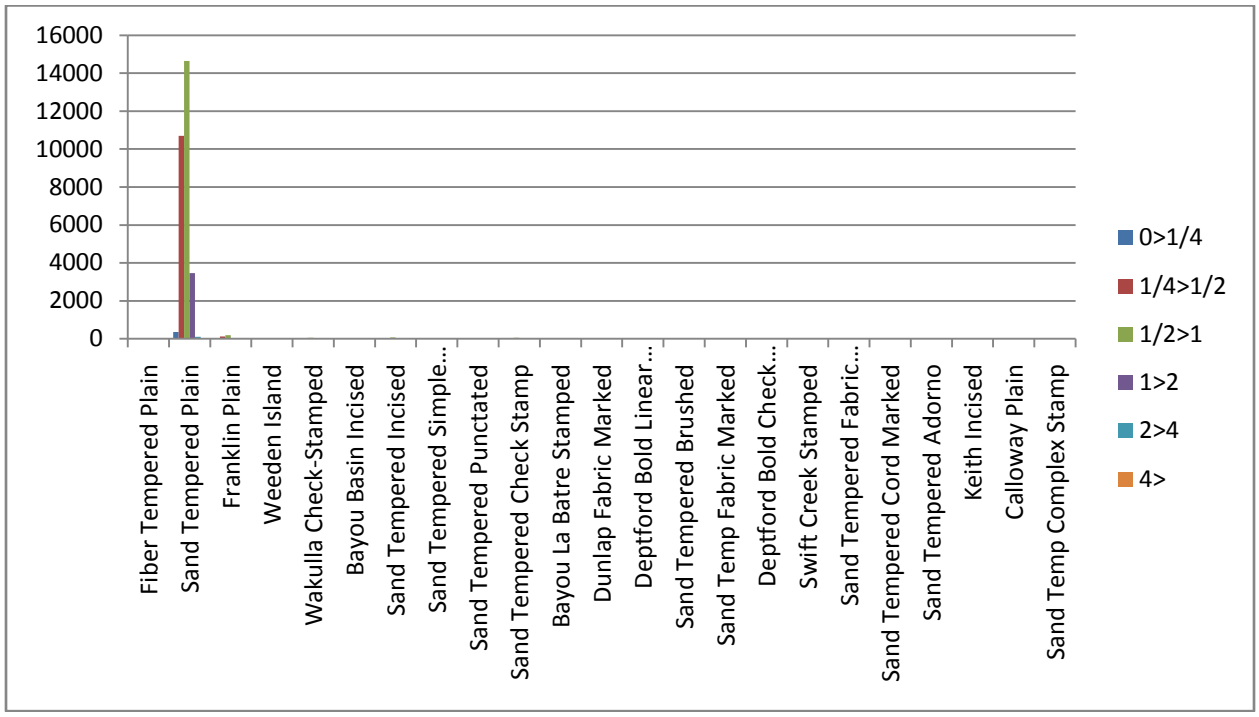

Table 5: Frequency of ceramic types (Body 0cm – 10cm)

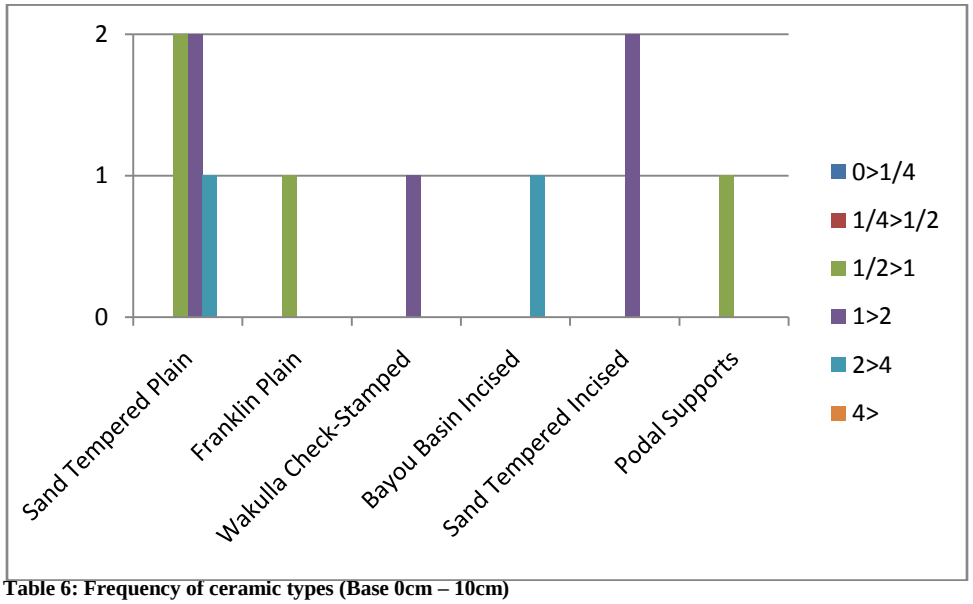

Table 6: Frequency of ceramic types (Base 0cm – 10cm)

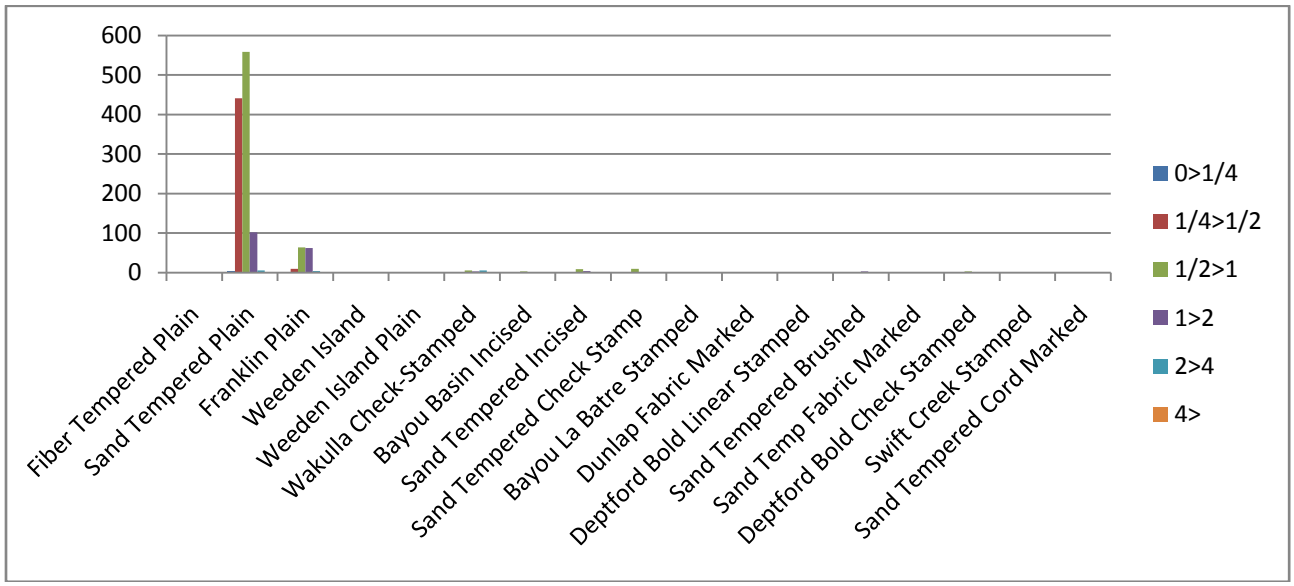

Table 7: Frequency of ceramic types (Rim 0cm - 10cm)

Depth: 10cm – 20cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Fiber Tempered Plain	0	0	39	25	58	130.8	60	413.4	15	395.3	0	0
Sand Tempered Plain	792	219.77	8604.1	4979.73	13201.5	22763.3	6103.6	33150.92	1938.2	13210.9	2	223.7
Franklin Plain	0	0	0	0	10	8.5	75	391.1	7	125.9	1	75.9
Weeden Island	0	0	0	0	3	10.9	0	0	0	0	0	0
Wakulla Check-Stamped	0	0	46	36.7	90	255.3	51	537.9	28	884.4	0	0
Bayou Basin Incised	0	0	9	709.1	32	114.3	37	315.5	17	147.5	0	0
Sand Tempered Incised	9	4.9	13	10.2	72	164.6	39	229	2	45.4	0	0
Sand Tempered Simple Stamp	0	0	0	0	11	39.2	10	64.8	0	0	0	0
Sand Tempered Punctated	1	0.7	0	0	5	22.6	2	24	2	49.7	0	0
Sand Tempered Check Stamp	0	0	0	0	19	107.1	10	111.2	52.4	192	0	0
Bayou La Batre Stamped	0	0	0	0	1	5.9	2	15.7	0	0	0	0
Santa Rosa Punctated	0	0	0	0	0	0	2	18.3	2	28	0	0

Dunlap Fabric Marked	**0**	**0**	**0**	**0**	**2**	**6.7**	**9**	**45.4**	**0**	**0**	**0**	**0**
Deptford Bold Linear Stamped	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5.9**	**0**	**0**	**0**	**0**
Sand Tempered Brushed	**0**	**0**	**0**	**0**	**16**	**34.8**	**20**	**128.3**	**39.2**	**274**	**0**	**0**
Sand Temp Fabric Marked	**0**	**0**	**4**	**7.4**	**10**	**22.1**	**2**	**12.4**	**0**	**0**	**0**	**0**
Deptford Bold Check Stamped	**0**	**0**	**4**	**2.9**	**29**	**76**	**54**	**329.9**	**17**	**425.6**	**0**	**0**
Swift Creek Stamped	**0**	**0**	**0**	**0**	**4**	**12.7**	**1**	**6.8**	**0**	**0**	**0**	**0**
Sand Tempered Fabric Marked Dowell Impressed	**0**	**0**	**0**	**0**	**8**	**31.1**	**5**	**60.1**	**0**	**0**	**0**	**0**
Sand Tempered Cord Marked	**0**	**0**	**0**	**0**	**5**	**10.6**	**9**	**44.6**	**2**	**21.4**	**0**	**0**
West Florida Cord Markered	**0**	**0**	**10**	**8.9**	**4**	**10.1**	**3**	**30.1**	**0**	**0**	**0**	**0**
Sand Tempered Adorno	**1**	**1.6**	**0**	**0**	**3**	**14.6**	**1**	**22.4**	**0**	**0**	**0**	**0**
Keith Incised	**0**	**0**	**1**	**1.3**	**0**	**0**	**2**	**21.1**	**0**	**0**	**0**	**0**
Weeden Island Incised	**0**	**0**	**0**	**0**	**1**	**4.9**	**0**	**0**	**0**	**0**	**0**	**0**
Sand Temp Complex Stamp	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**5.6**	**0**	**0**	**0**	**0**
McLeod Linear	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Aligator Bayou Incised	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**28.3**	**0**	**0**	**0**	**0**
TOTAL BODY:	**803**	**226.97**	**8730.1**	**5781.23**	**13584.5**	**23846.1**	**6501.6**	**36012.72**	**2121.8**	**15800.1**	**3**	**299.6**

BASE	**0>1/4**	**g**	**1/4>1/2**	**g**	**1/2>1**	**g**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Fiber Tempered Plain	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Sand Tempered Plain	**0**	**0**	**1**	**0.2**	**3**	**7.7**	**6**	**66.1**	**3**	**90.6**	**1**	**130.7**
Franklin Plain	**0**	**0**	**3**	**5.8**	**3**	**14.9**	**0**	**0**	**0**	**0**	**1**	**95.7**
Podal Supports	**0**	**0**	**0**	**0**	**1**	**9.3**	**1**	**6.1**	**1**	**22.9**	**0**	**0**
TOTAL BASE:	**0**	**0**	**4**	**6**	**7**	**31.9**	**7**	**72.2**	**4**	**113.5**	**2**	**226.4**

RIM	**0>1/4**	**g**	**1/4>1/2**	**g**	**1/2>1**	**g**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Fiber Tempered Plain	**0**	**0**	**5**	**4**	**2**	**4.2**	**1**	**10.5**	**0**	**0**	**0**	**0**

Sand Tempered Plain	**20**	**2.5**	**322**	**291.3**	**618**	**1858**	**256.5**	**1797.5**	**44**	**1226.1**	**0**	**0**
Franklin Plain	**0**	**0**	**5**	**4.3**	**103**	**182**	**81**	**613.9**	**33**	**719.5**	**0**	**0**
Weeden Island	**1**	**1.6**	**0**	**0**	**1**	**1.6**	**1**	**7.9**	**1**	**28.1**	**0**	**0**
Wakulla Check-Stamped	**0**	**0**	**1**	**0.8**	**8**	**26.9**	**14**	**124.8**	**5**	**124.3**	**0**	**0**
Bayou Basin Incised	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6.4**	**0**	**0**	**0**	**0**
Sand Tempered Incised	**0**	**0**	**1**	**1.4**	**8**	**25.2**	**11.7**	**55.3**	**3**	**79.6**	**0**	**0**
Sand Tempered Simple Stamp	**0**	**0**	**0**	**0**	**5**	**14**	**15**	**87.2**	**0**	**0**	**0**	**0**
Sand Tempered Punctated	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**2.2**	**0**	**0**	**0**	**0**
Dunlap Fabric Marked	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12**	**0**	**0**	**0**	**0**
Sand Tempered Brushed	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**12**	**3**	**42.3**	**0**	**0**
Sand Temp Fabric Marked	**0**	**0**	**0**	**0**	**2**	**6.7**	**0**	**0**	**0**	**0**	**0**	**0**
Deptford Bold Check Stamped	**0**	**0**	**0**	**0**	**39**	**77.9**	**5**	**31.9**	**0**	**0**	**0**	**0**
Sand Tempered Cord Marked	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6.6**	**1**	**23.7**	**0**	**0**
Carabelle Incised	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**28.2**	**0**	**0**
Weeden Island Incised	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**9.5**	**0**	**0**	**0**	**0**
TOTAL RIM:	**21**	**4.1**	**334**	**301.8**	**786**	**2196.5**	**392.2**	**2777.7**	**91**	**2271.8**	**0**	**0**
GRAND TOTAL:	**824**	**231.07**	**9068.1**	**6089.03**	**14377.5**	**26074.5**	**6900.8**	**38862.62**	**2216.8**	**18185.4**	**5**	**526**

Table 8: 1Wx15 ceramic inventory by level.

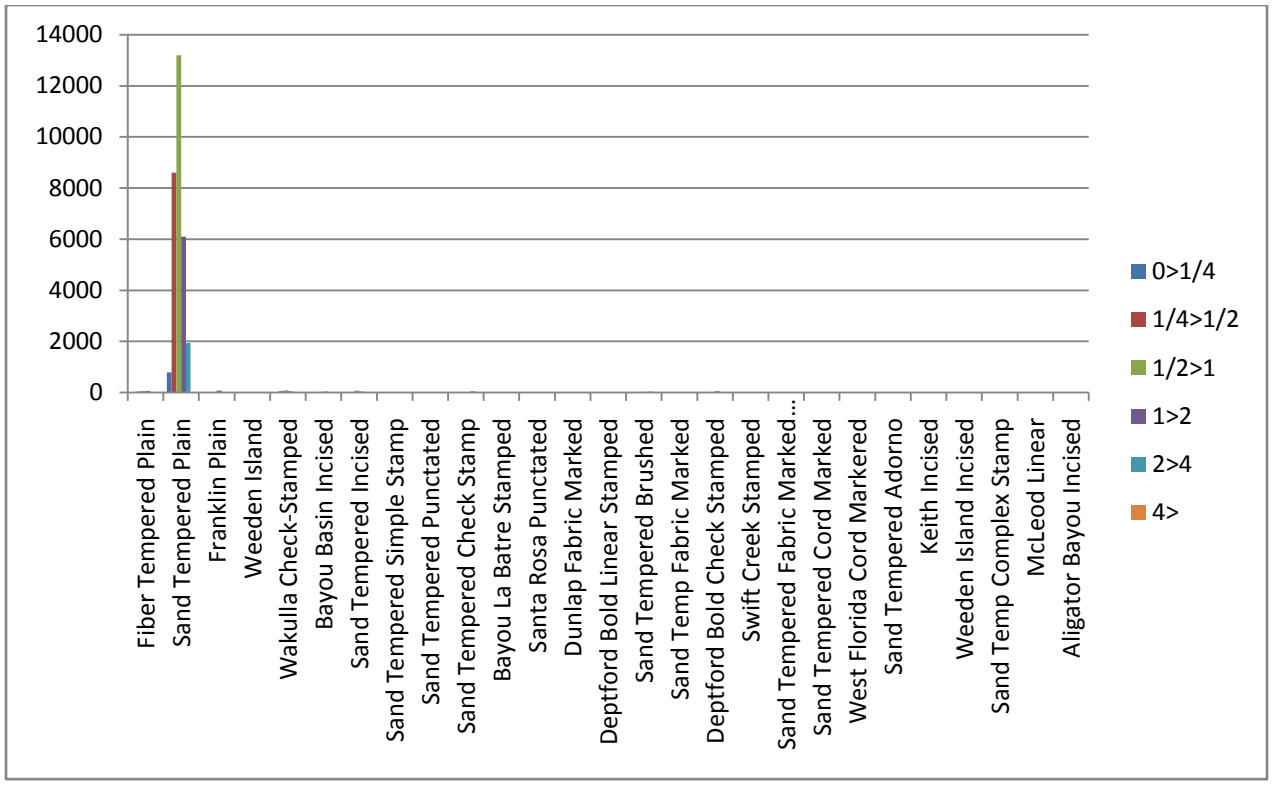

Table 9: Ceramic frequency by level (Body 10cm - 20cm)

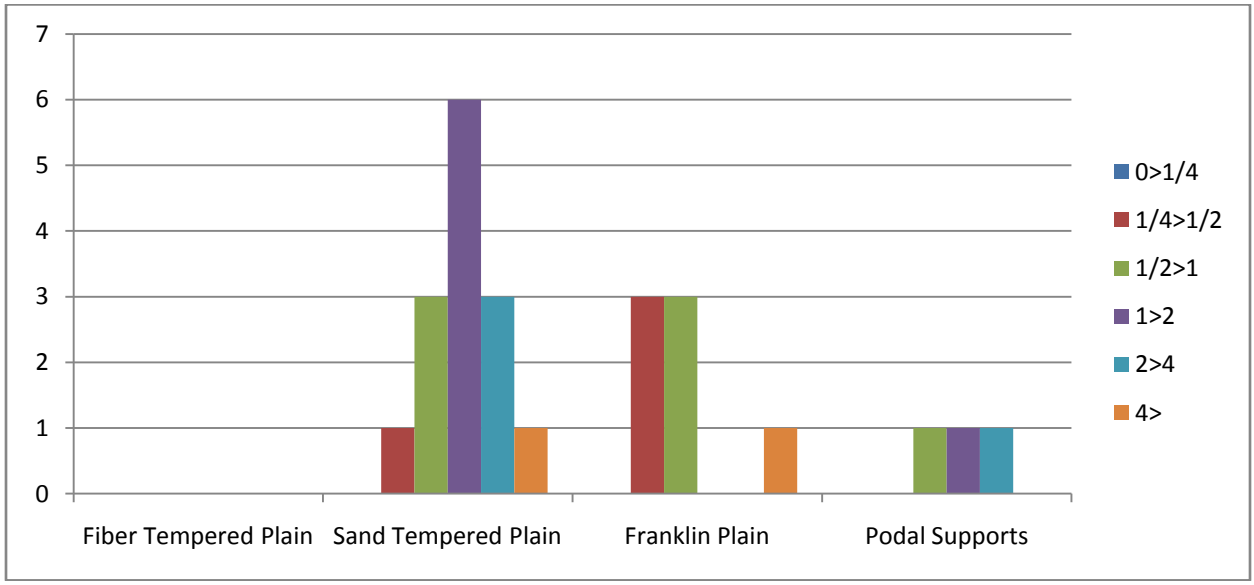

Table 10: Ceramic frequency by level (Base 10cm - 20cm)

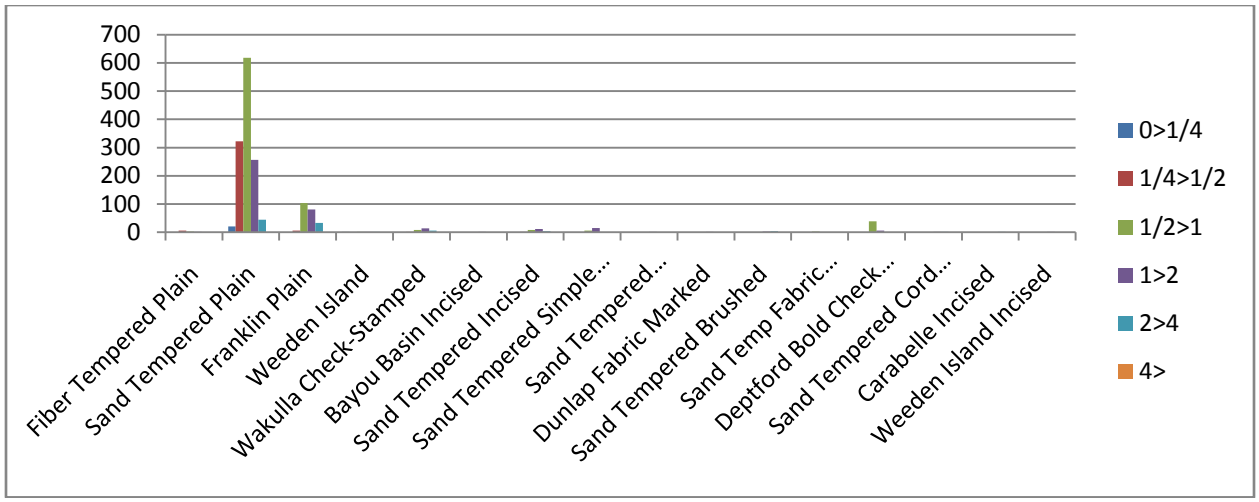

Table 11: Ceramic frequency by level (Rim 10cm - 20cm)

Depth: 20cm – 30cm

BODY	0>1/4	G	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Fiber Tempered Plain	5	4.1	31	22.6	49	159.7	38	318.9	5	102.1	0	0
Sand Tempered Plain	286	96.6	3106	1815.6	6193.7	11613.7	3978.8	21489	989.6	10235.4	132.4	430.8
Wakulla Check-Stamped	0	0	7	11.1	35	132.6	51	487.1	19	650.7	0	0
Bayou Basin Incised	0	0	4	6.8	16	73.2	7	61.6	1	28.5	0	0
Sand Tempered Incised	6	7	5	8.9	26	47.3	12	94.9	1	19.5	0	0
Sand Tempered Simple Stamp	0	0	1	0.6	13	65.4	8	63.2	0	0	0	0
Sand Tempered Punctated	0	0	3	1.8	5	24.4	1	5.4	0	0	0	0
Sand Tempered Check Stamp	0	0	0	0	29	84.1	27	250.3	5	162.9	0	0
Bayou La Batre Stamped	0	0	0	0	0	0	1	5.6	0	0	0	0
Santa Rosa Punctated	0	0	0	0	0	0	0	0	1	10.3	0	0
Dunlap Fabric Marked	0	0	0	0	3	11.	6	35.	2	71	0	0

						8		7				
Deptford Bold Linear Stamped	**0**	**0**	**0**	**0**	**2**	**5.1**	**3**	**27**	**1**	**22.5**	**0**	**0**
Sand Tempered Brushed	**0**	**0**	**0**	**0**	**1**	**3.9**	**6**	**83.7**	**5**	**98.1**	**0**	**0**
Sand Temp Fabric Marked	**0**	**0**	**5**	**6.7**	**6**	**19.7**	**1**	**6.1**	**0**	**0**	**0**	**0**
Deptford Bold Check Stamped	**0**	**0**	**0**	**0**	**4**	**29.4**	**6**	**52.1**	**5**	**156.7**	**0**	**0**
Sand Tempered Fabric Marked Dowell Impressed	**0**	**0**	**4**	**4.7**	**6**	**30.8**	**4**	**34.5**	**1**	**24.7**	**0**	**0**
Sand Tempered Cord Marked	**0**	**0**	**1**	**0.4**	**6**	**12.8**	**1**	**18.4**	**0**	**0**	**0**	**0**
West Florida Cord Markered	**0**	**0**	**5**	**5.2**	**9**	**19.5**	**8**	**61.2**	**0**	**0**	**0**	**0**
Carabelle Incised	**0**	**0**	**1**	**4.3**	**4**	**13**	**0**	**0**	**0**	**0**	**0**	**0**
Calloway Plain	**0**	**0**	**0**	**0**	**1**	**5.1**	**0**	**0**	**1**	**23.9**	**0**	**0**
Sand Temp Complex Stamp	**0**	**0**	**0**	**0**	**1**	**3.4**	**0**	**0**	**0**	**0**	**0**	**0**
McLeod Linear	**0**	**0**	**0**	**0**	**2**	**73**	**3**	**31.7**	**0**	**0**	**0**	**0**
TOTAL BODY:	**297**	**107.7**	**3173**	**1888.7**	**6411.7**	**12427.9**	**4161.8**	**23126.4**	**1036.6**	**11606.3**	**132.4**	**430.8**

BASE	**0>1/4**	**G**	**1/4>1/2**	**g**	**1/2>1**	**g**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Fiber Tempered Plain	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**20**	**0**	**0**	**0**	**0**
Sand Tempered Plain	**0**	**0**	**0**	**0**	**4**	**28.5**	**13**	**130.8**	**8**	**349.5**	**0**	**0**
Sand Tempered Incised	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**44.5**	**0**	**0**
West Florida Cord Markered	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**13.8**	**0**	**0**	**0**	**0**
TOTAL BASE:	**0**	**0**	**0**	**0**	**4**	**28.5**	**15**	**164.6**	**9**	**394**	**0**	**0**

RIM	**0>1/4**	**G**	**1/4>1/2**	**g**	**1/2>1**	**g**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Fiber Tempered Plain	**0**	**0**	**3**	**2.4**	**3**	**2.8**	**5**	**41.1**	**1**	**64.4**	**0**	**0**
Sand Tempered Plain	**1**	**0.7**	**81**	**65.1**	**142**	**416.5**	**82**	**774.7**	**15**	**467.7**	**1**	**104**
Franklin Plain	**0**	**0**	**4**	**1.9**	**58**	**152.3**	**40**	**300.5**	**5**	**137.8**	**0**	**0**

Weeden Island Plain	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7.7**	**1**	**76**	**0**	**0**
Wakulla Check-Stamped	**0**	**0**	**0**	**0**	**5**	**20.7**	**12**	**131.1**	**5**	**151.7**	**0**	**0**
Bayou Basin Incised	**0**	**0**	**0**	**0**	**1**	**3.1**	**1**	**2**	**0**	**0**	**0**	**0**
Sand Tempered Incised	**0**	**0**	**2**	**3.5**	**4**	**8.1**	**11**	**81.7**	**2**	**43.8**	**0**	**0**
Sand Tempered Punctated	**0**	**0**	**0**	**0**	**1**	**1.8**	**1**	**7.2**	**0**	**0**	**0**	**0**
Sand Tempered Check Stamp	**0**	**0**	**1**	**1.6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Bayou La Batre Stamped	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6.8**	**0**	**0**	**0**	**0**
Santa Rosa Punctated	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**23**	**0**	**0**
Dunlap Fabric Marked	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**20**	**0**	**0**
Sand Tempered Brushed	**0**	**0**	**0**	**0**	**1**	**3.4**	**0**	**0**	**0**	**0**	**0**	**0**
Sand Temp Fabric Marked	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**14.8**	**0**	**0**	**0**	**0**
Deptford Bold Check Stamped	**0**	**0**	**0**	**0**	**1**	**1.4**	**2**	**20.1**	**0**	**0**	**0**	**0**
Swift Creek Stamped	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**7.2**	**0**	**0**	**0**	**0**
Sand Tempered Fabric Marked Dowell Impressed	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**15**	**0**	**0**	**0**	**0**
Sand Tempered Cord Marked	**0**	**0**	**0**	**0**	**3**	**7.5**	**1**	**8.6**	**0**	**0**	**0**	**0**
Carabelle Incised	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12.2**	**0**	**0**	**0**	**0**
Weeden Island Incised	**0**	**0**	**0**	**0**	**2**	**2.3**	**1**	**6.6**	**0**	**0**	**0**	**0**
Incised	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**9.1**	**0**	**0**	**0**	**0**
Sand Tempered Pinched	**0**	**0**	**0**	**0**	**1**	**3.3**	**0**	**0**	**0**	**0**	**0**	**0**
Sand Temp Complex Stamp	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**12.5**	**0**	**0**	**0**	**0**
TOTAL RIM:	**1**	**0.7**	**91**	**74.5**	**222**	**623.2**	**165**	**1458.9**	**31**	**984.4**	**1**	**104**

GRAND TOTAL:	**298**	**108.4**	**3264**	**1963.2**	**6637.7**	**13079.6**	**4341.8**	**24749.9**	**1076.6**	**12984.7**	**133.4**	**534.8**

Table 12: 1Wx15 Ceramic Inventory by level.

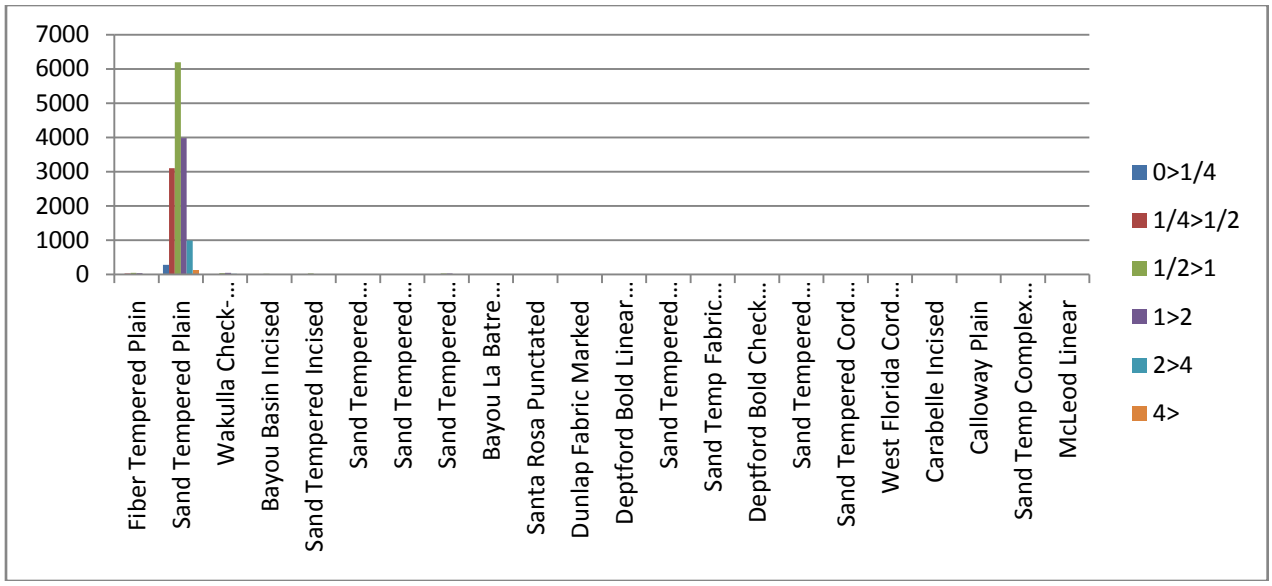

Table 13: Ceramic frequency (Body 20cm - 30cm)

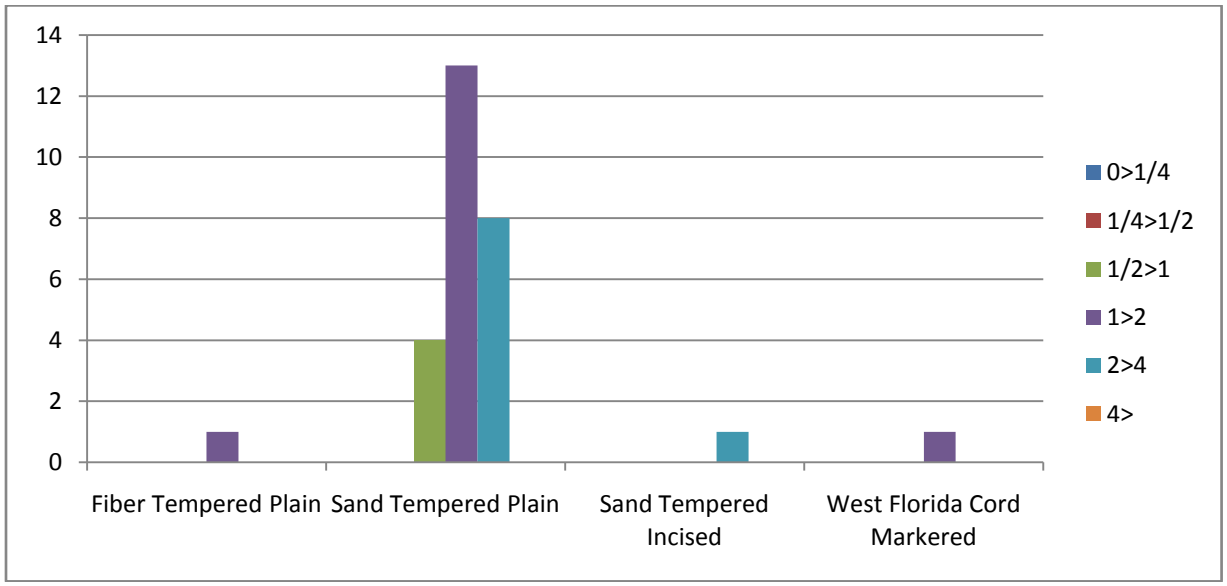

Table 14: Ceramic frequency (Base 20cm - 30cm)

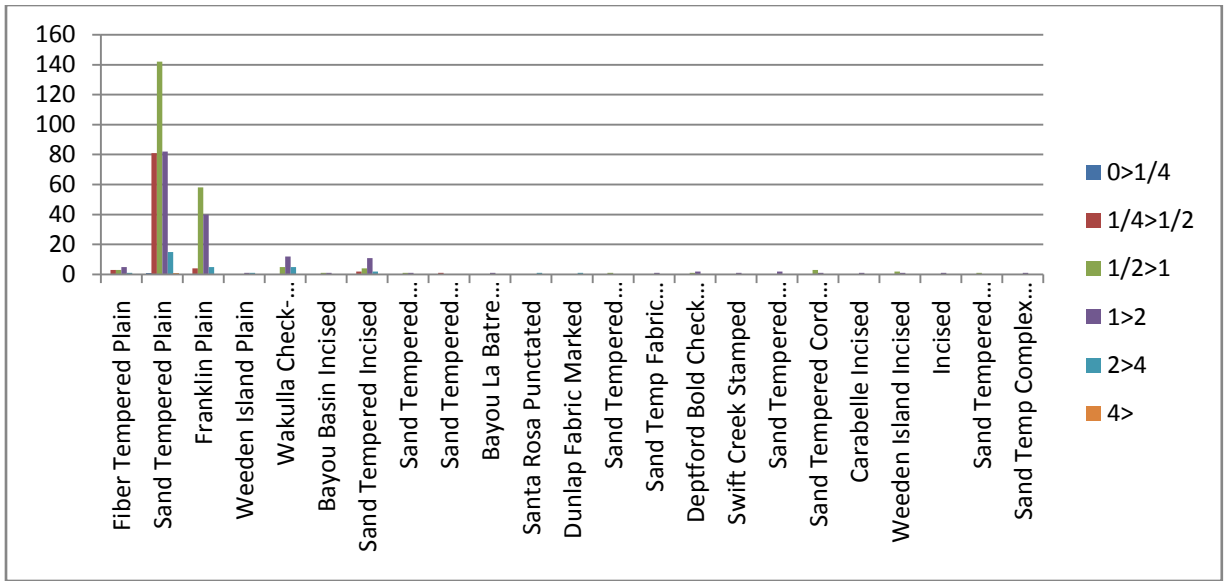

Table 15 : Ceramic frequency (Rim 20cm - 30cm)

Depth: 30cm – 40cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Fiber Tempered Plain	0	0	2	0.6	20	41.4	30	194.4	2	35.4	0	0
Sand Tempered Plain	267	86.9	1182	1066.6	2462.6	4937.7	1368.9	8695.4	456.3	5030.3	187.9	52.4
Franklin Plain	0	0	0	0	0	0	3	26.5	1	63.9	0	0
Weeden Island Plain	0	0	0	0	0	0	0	0	0	0	0	0
Wakulla Check-Stamped	0	0	1	1.8	17	80.6	23	222.9	7	191.3	0	0
Bayou Basin Incised	0	0	4	8.6	6	17	2	9.7	0	0	0	0
Sand Tempered Incised	0	0	1	0.9	5	11.2	5	38.7	1	19.3	0	0
Sand Tempered Simple Stamp	0	0	0	0	3	33	1	4	1	26.5	0	0
Sand Tempered Punctated	0	0	1	1.8	0	0	1	8.5	0	0	0	0
Sand Tempered Check Stamp	0	0	0	0	7	13.3	6	37	6	91	0	0
Santa Rosa Punctated	0	0	0	0	1	2.4	1	8.7	1	12.1	0	0

Dunlap Fabric Marked	**0**	**0**	**2**	**2.3**	**16**	**56.5**	**5**	**56.2**	**1**	**7.2**	**0**	**0**
Deptford Bold Linear Stamped	**0**	**0**	**0**	**0**	**6**	**27.7**	**2**	**24.5**	**0**	**0**	**0**	**0**
Sand Tempered Brushed	**0**	**0**	**0**	**0**	**1**	**1.8**	**12**	**98.8**	**25.8**	**74.7**	**2**	**33.8**
Sand Temp Fabric Marked	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**8.7**	**0**	**0**	**0**	**0**
Deptford Bold Check Stamped	**0**	**0**	**0**	**0**	**1**	**2.3**	**4**	**28.7**	**6**	**143**	**2**	**127.6**
Sand Tempered Fabric Marked Dowell Impressed	**0**	**0**	**0**	**0**	**7**	**18.8**	**0**	**0**	**9**	**63**	**0**	**0**
Sand Tempered Cord Marked	**0**	**0**	**0**	**0**	**1**	**2.9**	**3**	**25.3**	**1**	**14.5**	**0**	**0**
Keith Incised	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**20.4**	**0**	**0**
Carabelle Incised	**0**	**0**	**0**	**0**	**1**	**4.1**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL BODY:	**267**	**86.9**	**1193**	**1082.6**	**2554.6**	**5250.7**	**1467.9**	**9488**	**519.1**	**5792.6**	**191.9**	**213.8**

BASE	**0>1/4**	**g**	**1/4>1/2**	**g**	**1/2>1**	**g**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Sand Tempered Plain	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**83.8**	**6**	**236.3**	**0**	**0**
Podal Supports	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**33.9**	**0**	**0**	**0**	**0**
TOTAL BASE:	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**117.7**	**6**	**236.3**	**0**	**0**

RIM	**0>1/4**	**g**	**1/4>1/2**	**g**	**1/2>1**	**g**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Fiber Tempered Plain	**0**	**0**	**0**	**0**	**2**	**8.8**	**3**	**34**	**1**	**31.1**	**0**	**0**
Sand Tempered Plain	**0**	**0**	**12**	**15.4**	**35**	**76.7**	**54**	**451.5**	**11**	**213.4**	**0**	**0**
Franklin Plain	**0**	**0**	**4**	**7.7**	**36**	**68.8**	**31**	**216**	**8**	**213.7**	**0**	**0**
Weeden Island	**0**	**0**	**0**	**0**	**1**	**13**	**0**	**0**	**0**	**0**	**0**	**0**
Wakulla Check-Stamped	**0**	**0**	**0**	**0**	**2**	**5.5**	**3**	**71.8**	**3**	**148.4**	**0**	**0**
Bayou Basin Incised	**0**	**0**	**0**	**0**	**2**	**3.9**	**4**	**7.5**	**0**	**0**	**0**	**0**
Sand Tempered Incised	**0**	**0**	**1**	**1.5**	**0**	**0**	**3**	**11.8**	**0**	**0**	**0**	**0**
Sand Tempered Punctated	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**6.7**	**0**	**0**	**0**	**0**
Bayou La Batre Stamped	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**20.**	**0**	**0**

										7		
Deptford Bold Linear Stamped	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**47.6**	**0**	**0**
Sand Tempered Brushed	**0**	**0**	**2**	**4.1**	**0**	**0**	**1**	**7.4**	**1**	**12.9**	**0**	**0**
Deptford Bold Check Stamped	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Keith Incised	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**38.8**	**0**	**0**
Sand Temp Complex Stamp	**0**	**0**	**0**	**0**	**1**	**1.7**	**0**	**0**	**0**	**0**	**0**	**0**
Weeden Island Like	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**18**	**0**	**0**	**0**	**0**
TOTAL RIM:	**0**	**0**	**19**	**28.7**	**79**	**178.4**	**101**	**824.7**	**28**	**726.6**	**0**	**0**

GRAND TOTAL:	**267**	**86.9**	**1212**	**1111.3**	**2633.6**	**5429.1**	**1579.9**	**10430.4**	**553.1**	**6755.5**	**191.9**	**213.8**

Table 16: 1Wx15 Ceramic inventory by level.

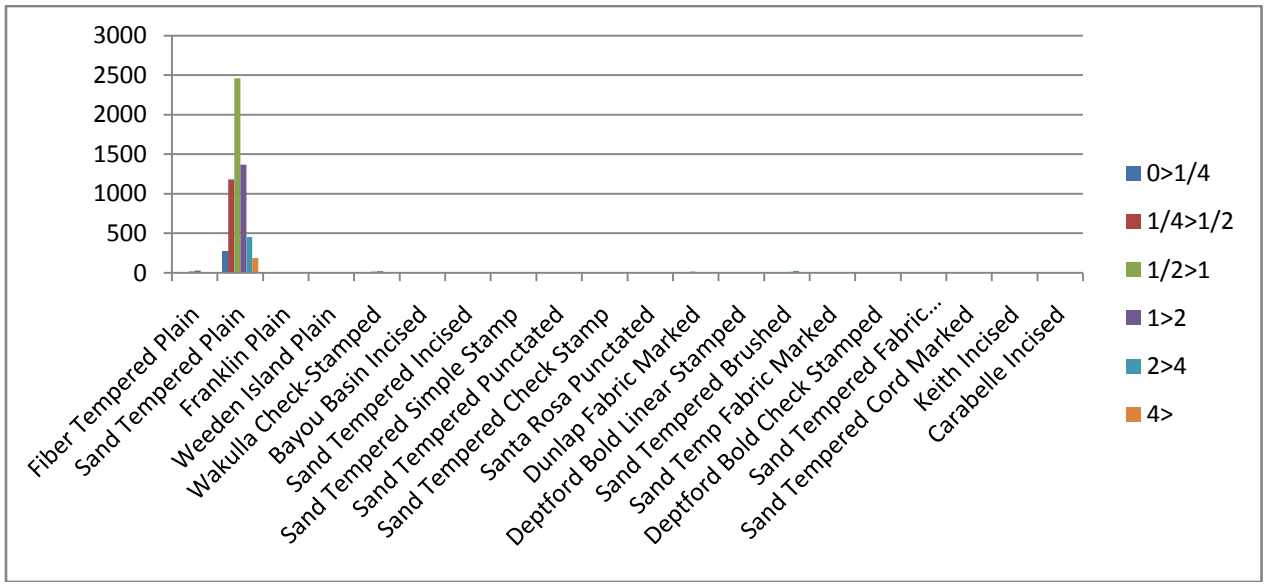

Table 17 : Ceramic frequency (Body 30cm - 40cm)

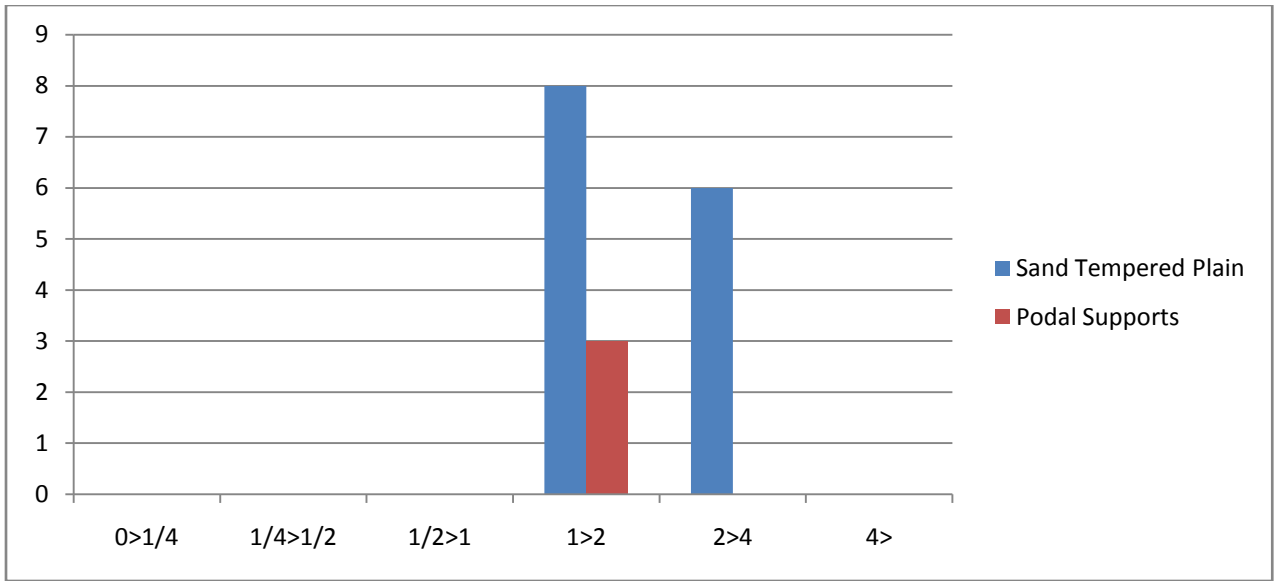

Table 18: Ceramic frequency (Base 30cm - 40cm)

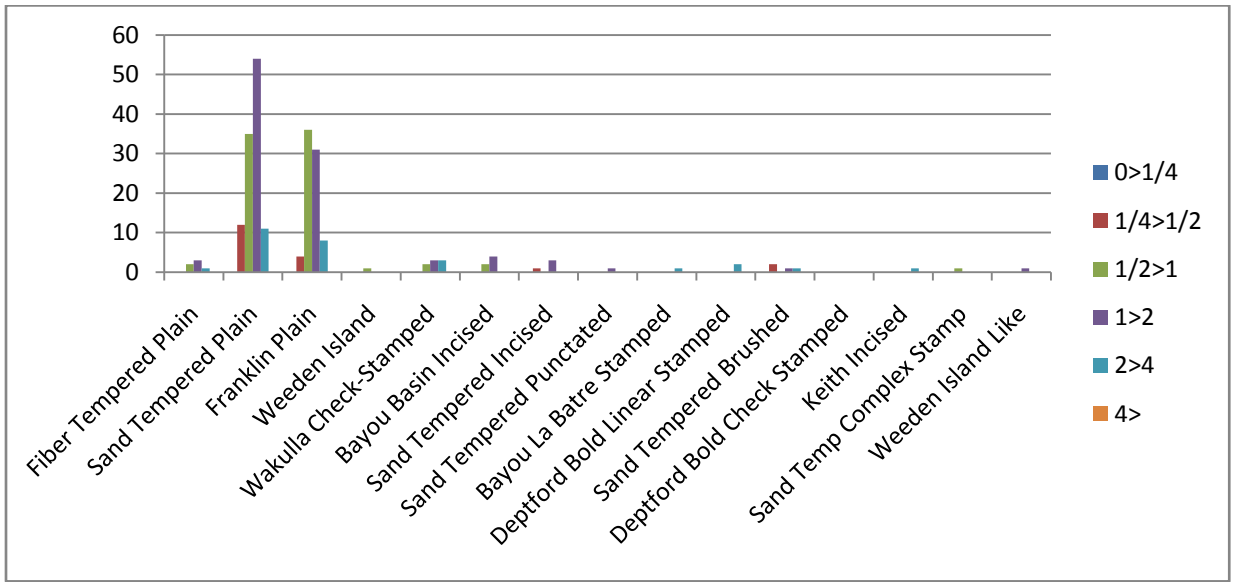

Table 19: Ceramic frequency (Rim 30cm - 40cm)

Depth: 40cm – 50cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	G	1>2	g	2>4	g	4>	g
Fiber Tempered Plain	0	0	0	0	1	0.6	0	0	0	0	0	0
Sand Tempered Plain	2	0.3	108	61.7	254	491.1	426	917.6	23	634.7	0	0
Franklin Plain	0	0	11	6.2	11	24	5	42.9	1	15.7	0	0
Wakulla Check-Stamped	0	0	0	0	2	9.7	2	15.7	2	63.6	0	0

Bayou Basin Incised	**0**	**0**	**1**	**2.4**	**1**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
Sand Tempered Check Stamp	**0**	**0**	**0**	**0**	**1**	**6.4**	**1**	**16.8**	**1**	**32.9**	**0**	**0**
Sand Tempered Fabric Marked Dowell Impressed	**0**	**0**	**0**	**0**	**1**	**8**	**0**	**0**	**0**	**0**	**0**	**0**
McLeod Linear	**0**	**0**	**0**	**0**	**1**	**6.4**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL BODY:	**2**	**0.3**	**120**	**70.3**	**272**	**548.2**	**434**	**993**	**27**	**746.9**	**0**	**0**

BASE	**0>1/4**	**g**	**1/4 >1/2**	**g**	**1/2 >1**	**G**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Sand Tempered Plain	**0**	**0**	**0**	**0**	**1**	**0.6**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL BASE:	**0**	**0**	**0**	**0**	**1**	**0.6**	**0**	**0**	**0**	**0**	**0**	**0**

RIM	**0>1/4**	**g**	**1/4 >1/2**	**g**	**1/2 >1**	**G**	**1>2**	**g**	**2>4**	**g**	**4>**	**g**
Sand Tempered Plain	**0**	**0**	**6**	**4.5**	**13**	**37.8**	**12**	**133.3**	**3**	**94.8**	**0**	**0**
Franklin Plain	**0**	**0**	**0**	**0**	**1**	**2.2**	**1**	**7.8**	**1**	**23**	**0**	**0**
Weeden Island Plain	**0**	**0**	**0**	**0**	**1**	**8.9**	**0**	**0**	**0**	**0**	**0**	**0**
Wakulla Check-Stamped	**0**	**0**	**0**	**0**	**1**	**2.3**	**0**	**0**	**0**	**0**	**0**	**0**
Sand Tempered Punctated	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**9**	**0**	**0**	**0**	**0**
TOTAL RIM:	**0**	**0**	**6**	**4.5**	**16**	**51.2**	**14**	**150.1**	**4**	**117.8**	**0**	**0**

GRAND TOTAL:	**2**	**0.3**	**126**	**74.8**	**289**	**600**	**448**	**1143.1**	**31**	**864.7**	**0**	**0**

Table 20: IWx5 ceramic inventory by level.

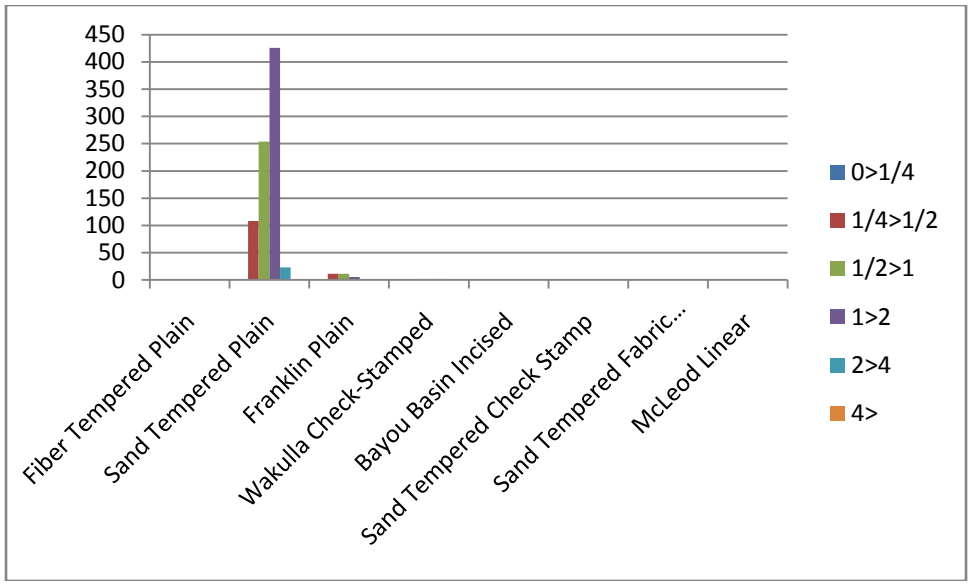

Table 21: Ceramic frequency (Body sherds 40cm - 50cm)

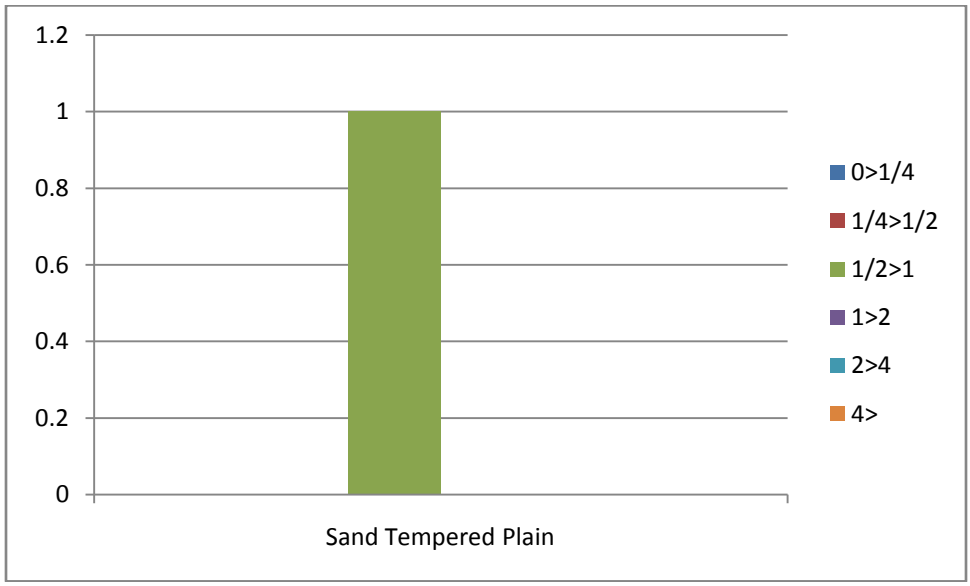

Table 22: Ceramic frequency (Base sherds 40cm - 50cm)

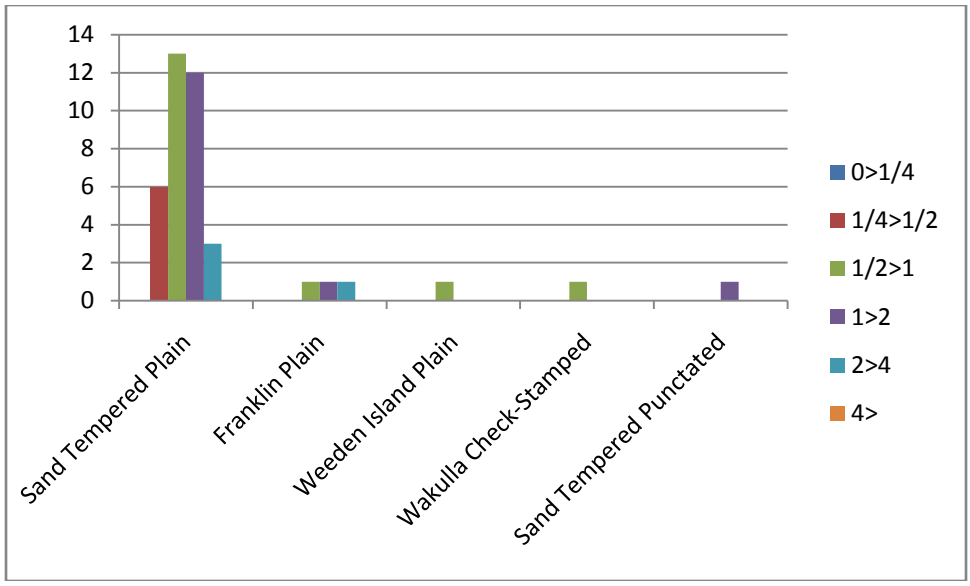

Table 23: Ceramic frequency (Rim sherds 40cm - 50cm)

Depth: 50cm – 60cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Sand Tempered Plain	5	3.4	22	21.7	27	87	23	139	4	103.2	0	0
TOTAL BODY:	5	3.4	22	21.7	27	87	23	139	4	103.2	0	0

BASE	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Sand Tempered Plain	0	0	0	0	1	6.1	0	0	1	29.4	0	0
TOTAL BASE:	0	0	0	0	1	6.1	0	0	1	29.4	0	0

RIM	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Sand Tempered Plain	0	0	1	2.9	0	0	0	0	0	0	0	0
Franklin Plain	0	0	0	0	1	3.9	0	0	0	0	0	0
TOTAL RIM:	0	0	1	2.9	1	3.9	0	0	0	0	0	0

GRAND TOTAL:	**5**	**3.4**	**23**	**24.6**	**29**	**97**	**23**	**139**	**5**	**132.6**	**0**	**0**

Table 24: IWx15 ceramic inventory by level.

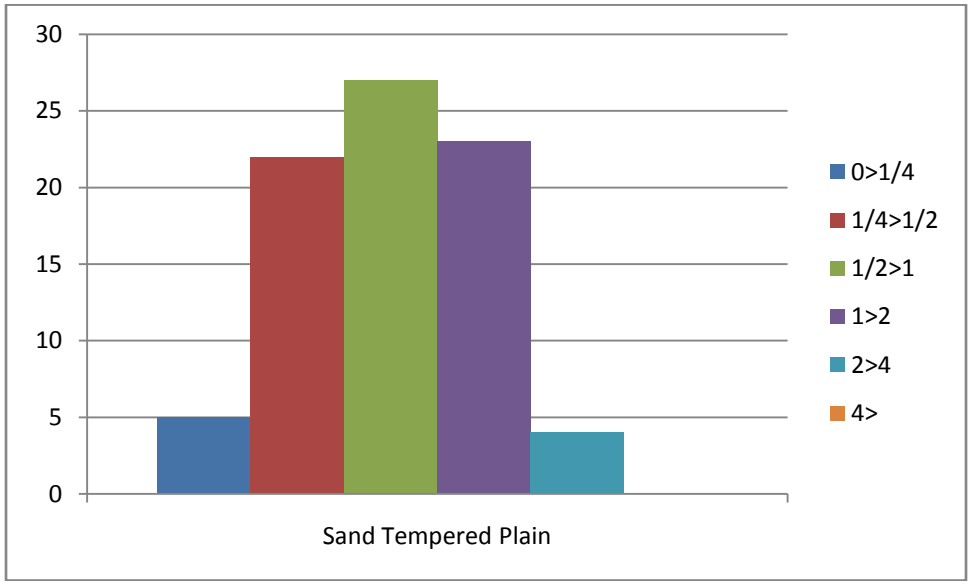

Table 25: Ceramic frequency (Body sherds 50cm – 60cm)

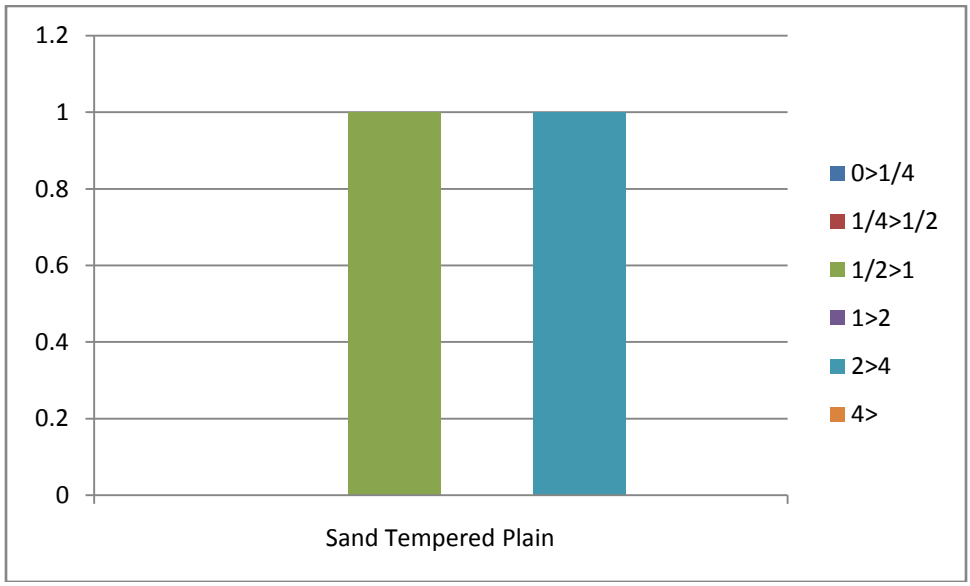

Table 26: Ceramic frequency (Base sherds 50cm – 60cm)

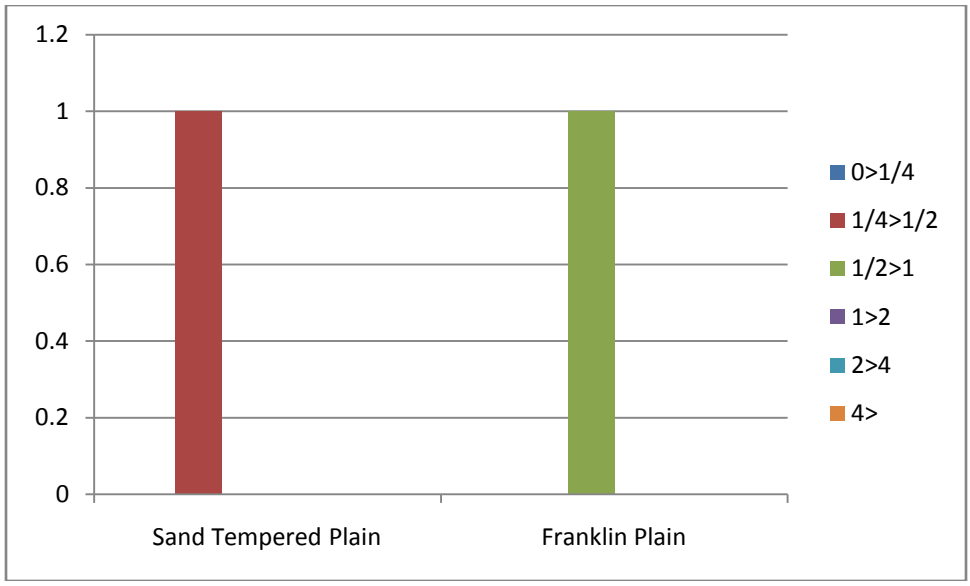

Table 27: Quantity x Type (Rim sherds 50cm – 60cm)

Depth: 60cm – 60cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Fiber Tempered Plain	0	0	0	0	0	0	0	0	2	29.4	0	0
Sand Tempered Plain	0	0	19	11.6	75	107.3	236.3	7	108.5	0	0	0
Franklin Plain	0	0	0	0	0	0	0	0	0	0	1	95.6
Santa Rosa Punctated	0	0	0	0	0	0	0	0	1	27.3	0	0
Sand Tempered Brushed	0	0	0	0	0	0	1	10	0	0	0	0
Sand Tempered Fabric Marked Dowell Impressed	0	0	0	0	0	0	1	5.9	0	0	0	0
Sand Temp Complex Stamp	0	0	1	0.9	0	0	0	0	0	0	0	0
TOTAL BODY:	0	0	20	12.5	75	107.3	238.3	22.9	111.5	56.7	1	95.6

RIM	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Sand Tempered Plain	0	0	1	0.8	6	12.5	3	24.3	3	130.6	0	0
Franklin Plain	0	0	0	0	0	0	0	0	1	50.	0	0

										4		
TOTAL RIM:	**0**	**0**	**1**	**0.8**	**6**	**12.5**	**3**	**24.3**	**4**	**181**	**0**	**0**

GRAND TOTAL:	**0**	**0**	**21**	**13.3**	**81**	**119.8**	**241.3**	**47.2**	**115.5**	**237.7**	**1**	**95.6**

Table 28: 1Wx15 ceramic inventory.

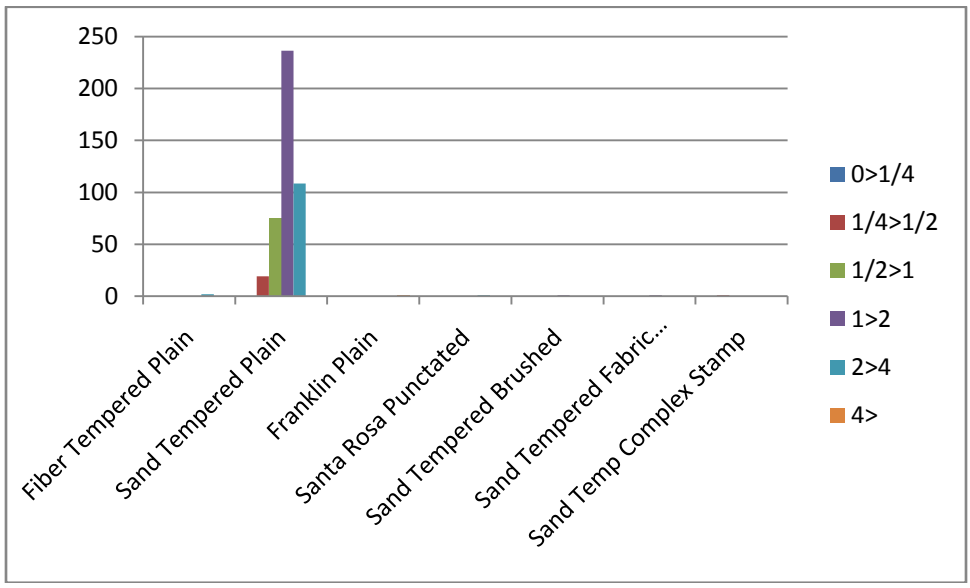

Table 29: Ceramic frequency (Body sherds 60cm - 70cm)

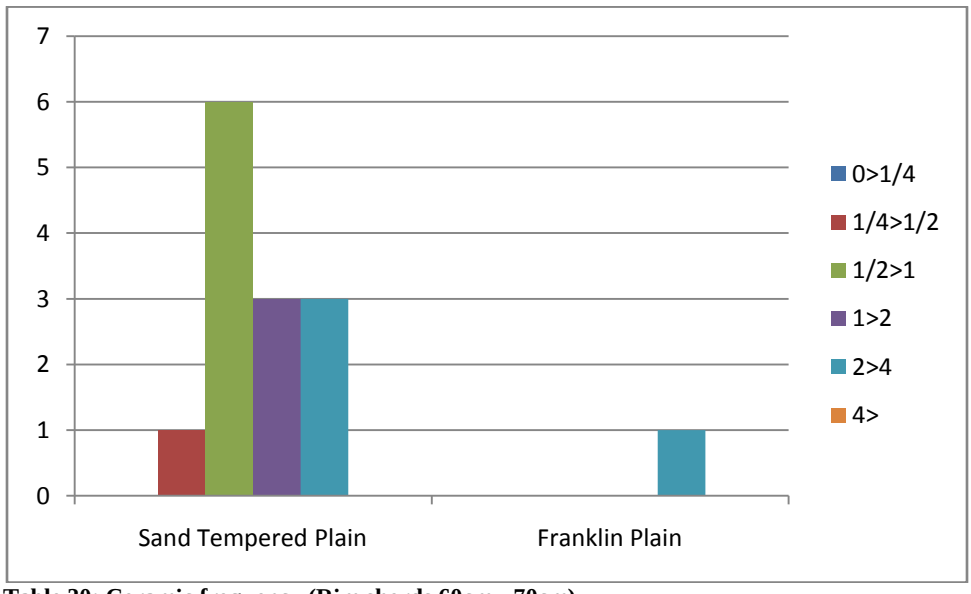

Table 30: Ceramic frequency (Rim sherds 60cm - 70cm)

Depth: 70cm – 80cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Fiber Tempered Plain	0	0	0	0	0	0	0	0	0	0	0	0
Sand Tempered Plain	0	0	10	4.5	16	31.8	4	36.5	2	44.4	0	0
TOTAL BODY:	0	0	10	4.5	16	31.8	4	36.5	2	44.4	0	0

RIM	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	g
Sand Tempered Plain	0	0	1	0.9	1	0.5	0	0	0	0	0	0
TOTAL RIM:	0	0	1	0.9	1	0.5	0	0	0	0	0	0

GRAND TOTAL:	0	0	11	5.4	17	32.3	4	36.5	2	44.4	0	0

Table 31: 1Wx15 ceramic inventory.

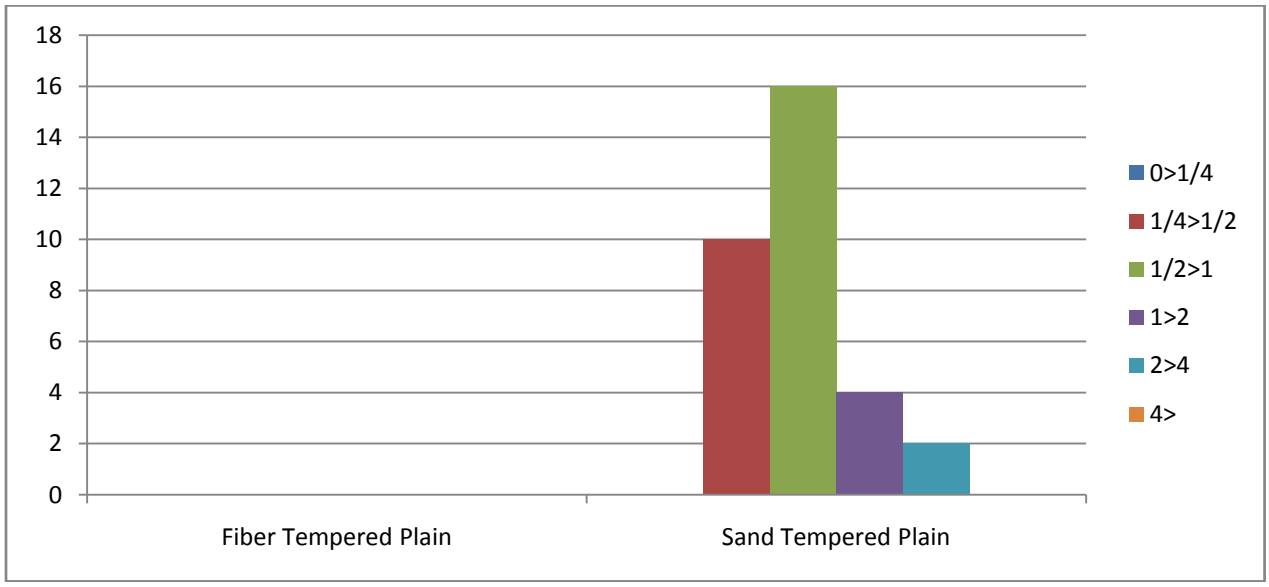

Table 32: Ceramic frequency (Body sherds 70cm - 80cm)

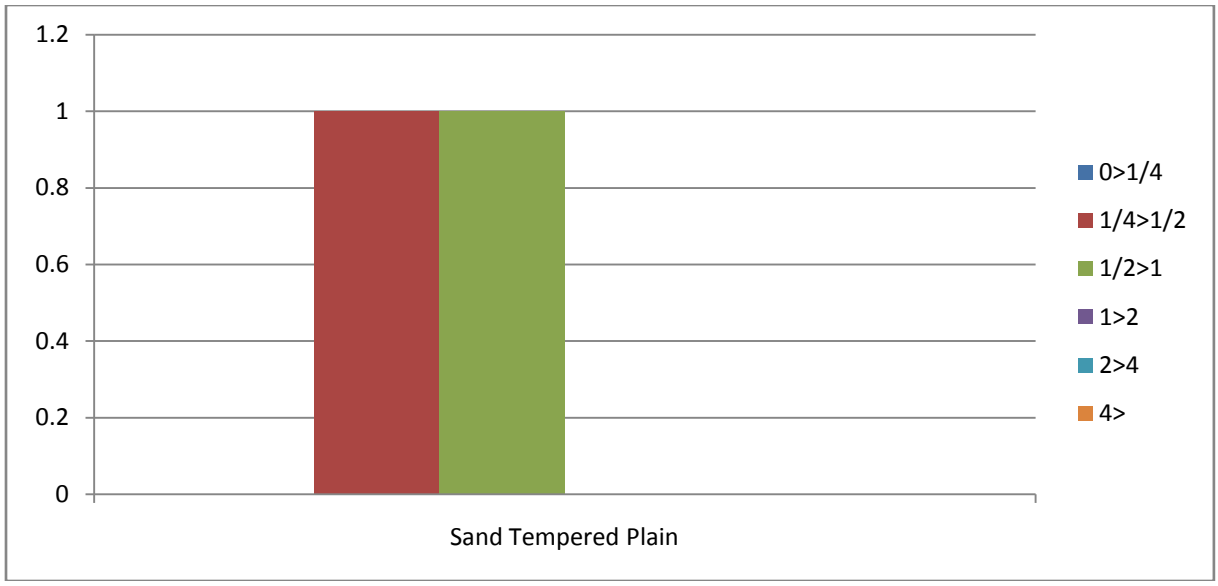

Table 33: Ceramic Frequency (Rim sherds 70cm - 80cm)

Depth 80cm – 90cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	G
Sand Tempered Plain	0	0	7	3.1	16	34.1	17	122.8	0	0	0	0
TOTAL BODY:	0	0	7	3.1	16	34.1	17	122.8	0	0	0	0
GRAND TOTAL:	0	0	7	3.1	16	34.1	17	122.8	0	0	0	0

Table 34: 1Wx15 Ceramic inventory by level.

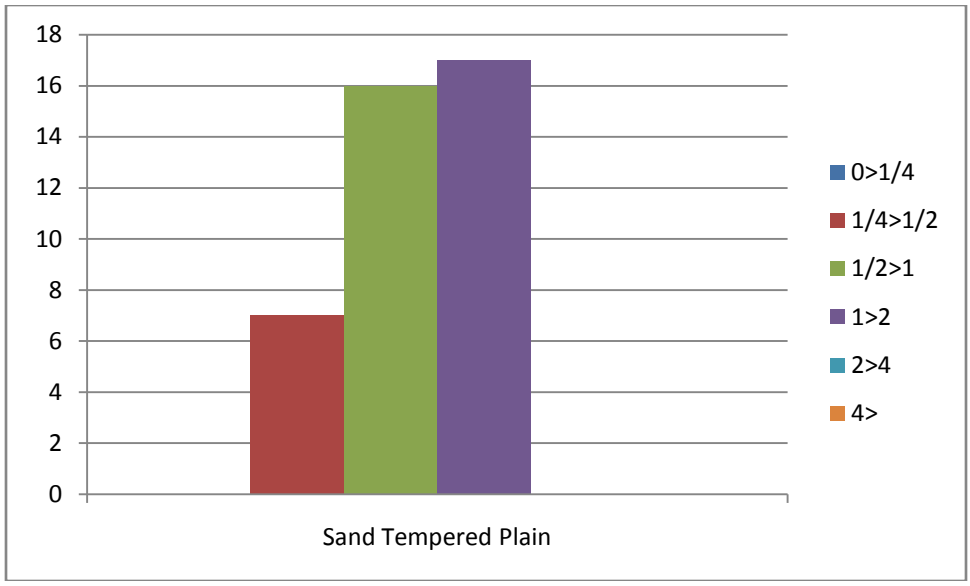

Table 35: Ceramic Frequency (Body sherds 80cm - 90cm)

Depth: 90cm – 100cm

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	G
Sand Tempered Plain	0	0	4	1.8	7	9.3	7	67.7	1	22.9	0	0
TOTAL BODY:	0	0	4	1.8	7	9.3	7	67.7	1	22.9	0	0
GRAND TOTAL:	0	0	4	1.8	7	9.3	7	67.7	1	22.9	0	0

Table 36: Ceramic inventory by level.

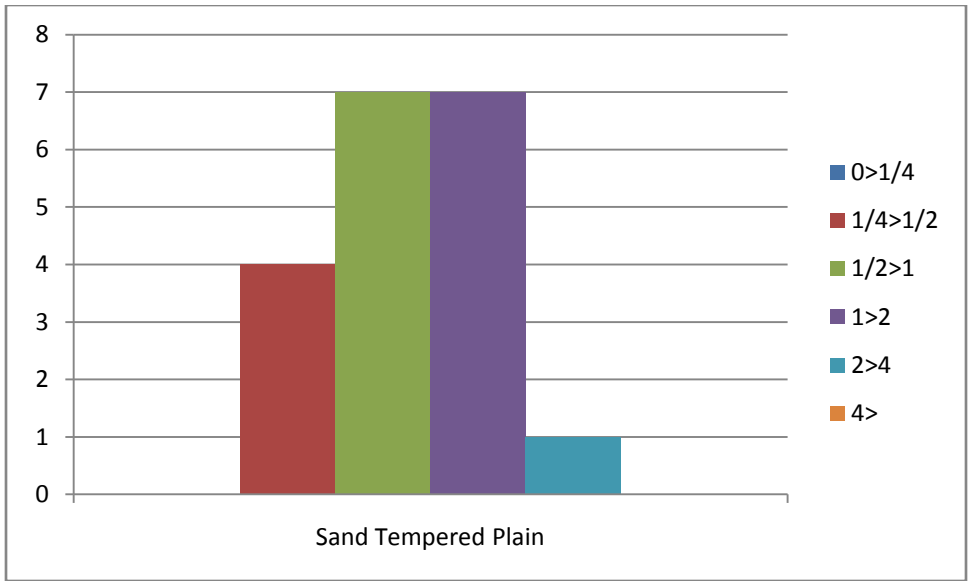

Table 37: Ceramic frequency (Body sherds 90cm - 100cm)

Depth: 100cm +

BODY	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	G
Fiber Tempered Plain	0	0	0	0	0	0	0	0	0	0	0	0
Sand Tempered Plain	0	0	98	45.2	163	394.4	77	579.7	8	212.3	0	0
Sand Tempered Simple Stamp	0	0	0	0	0	0	1	21.8	0	0	0	0
Dunlap Fabric Marked	0	0	0	0	0	0	1	9	0	0	0	0
Weeden Island Incised	0	0	0	0	0	0	2	28.8	0	0	0	0
TOTAL BODY:	0	0	98	45.2	163	394.4	81	639.3	8	212.3	0	0

BASE	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	G
Sand Tempered Plain	0	0	0	0	0	0	2	14	3	83.3	0	0
TOTAL BASE:	0	0	0	0	0	0	2	14	3	83.3	0	0

RIM	0>1/4	g	1/4>1/2	g	1/2>1	g	1>2	g	2>4	g	4>	G
Sand Tempered Plain	2	1.5	1	0.6	1	2.3	0	0	0	0	0	0
Franklin Plain	0	0	0	0	1	3.3	1	8.8	2	84.1	0	0
Weeden Island Plain	0	0	0	0	0	0	1	13.8	0	0	0	0
Wakulla Check-Stamped	0	0	0	0	0	0	0	0	1	54.5	0	0
Sand Tempered Incised	0	0	0	0	0	0	1	9.5	0	0	0	0
Weeden Island Incised	0	0	0	0	0	0	0	0	1	12.3	0	0
TOTAL RIM:	2	1.5	1	0.6	2	5.6	3	32.1	4	150.9	0	0
GRAND TOTAL:	2	1.5	99	45.8	165	400	86	685.4	15	446.5	0	0

Table 38: 1Wx15 ceramic inventory by level.

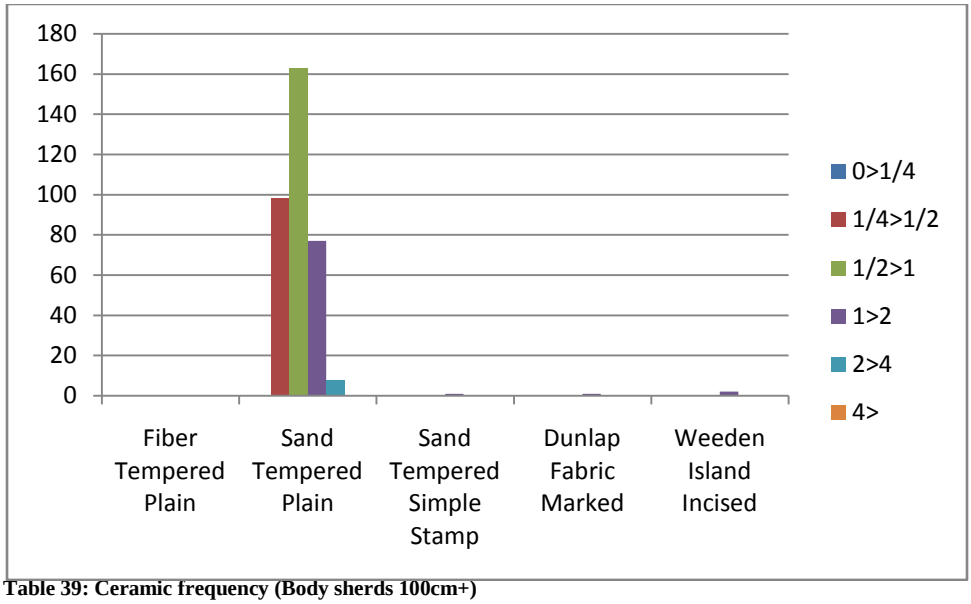

Table 39: Ceramic frequency (Body sherds 100cm+)

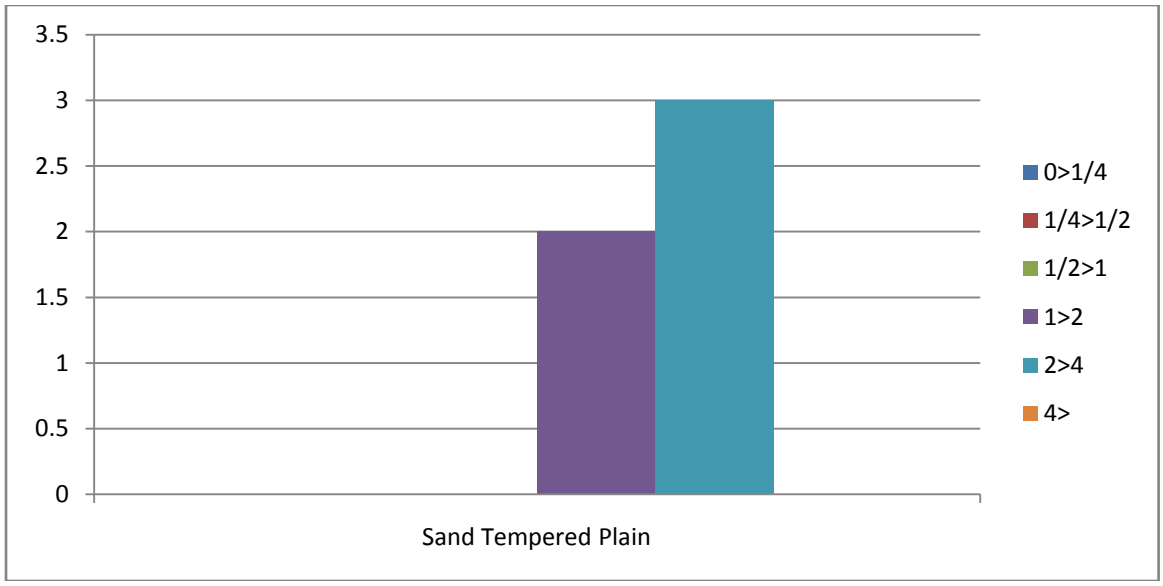

Table 40: Ceramic frequency (Base sherds 100cm+)

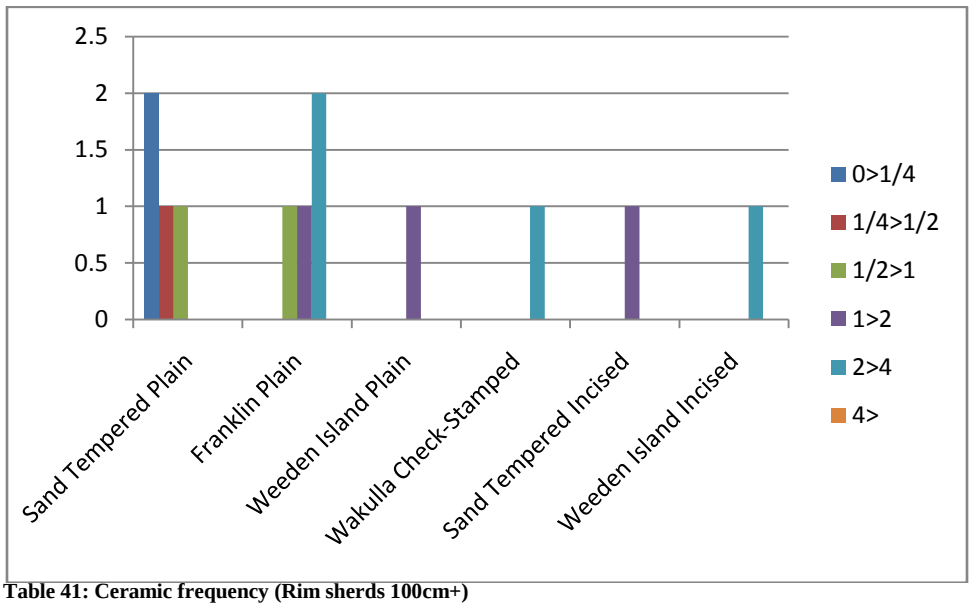

Table 41: Ceramic frequency (Rim sherds 100cm+)

Lithic Inventory:

Type	**Quantity**	**Weight**
Quartz/Quartzite:		
Primary Flake	8,340	7,578.74
Secondary Flake	6,351	3,276.62
Shatter	3,560	13,597.46
Cracked	16,444	368,548.504
Uncracked	6,090	175,094.26
Hammerstone	18	6,704.4
Preform	14	357.4
Core	32	3059
Grinder	8	2,659.2
Pebble Core	72	2,209.6
Nuttingstone	8	4,793.6
P.p.k.	46	471
Distal end of p.p.k	6	33.8
Modified Flake	8	18.4
Quartz Madison point	2	9
Quartz Archaic point	2	9.6
Modified Pebble Tool	2	43
Proximal End of p.p.k	12	62.4
Midsection of p.p.k	6	16.8
Scraper	14	370.8
Modified tool	4	722.8
Total	41,039.6	589,636.384

Type	**Quantity**	**Weight**
Sandstone:		
Cracked	46	2,762.4
Uncracked	19	1177
Nutting stone	1	529
Total	66	4,468.4

Type	**Quantity**	**Weight**
Tallahatta Quartzite:		
Primary Flake	54	99.05
Secondary Flake	5,158	2,909.83
Shatter	142	187.7
Cracked	42	119

Uncracked	4	95.8
P.p.k	26	224.6
Distal end of p.p.k	14	57.4
Ground p.p.k	1	4.4
Proximal end of p.p.k	15	87.3
Preform	5	45.7
Midsection of p.p.k.	4	12.3
Drill Tip	4	3.8
Cores	7	327.6
Scraper	2	43.2
Nutting Stone	1	394.4
Modified Flake	1	0.8
Micro Drill	1	8.7
Total	5,481	4,554.28

Type	**Quantity**	**Weight**
Conglomerate:		
Cracked	8	375.7
Uncracked	1	42
Total	9	417.7

Type	**Quantity**	**Weight**
Schist:		
Shatter	10	25
Cracked	15	72.9
Uncracked	3	72.2
Total	28	170.1

Type	**Quantity**	**Weight**
Ocala Chert (HT and NHT):		
Primary Flake	36	26.5
Secondary Flake	99	42.6
Shatter	72	140.2
Cracked	151	770.55
Uncracked	45	529.6
Modified Flake	4	5
Proximal end of p.p.k	1	1.3
Total	408	1,515.75

Type	Quantity	Weight
Knox Chert:		
Primary Flake	113	64.6
Secondary Flake	120	27.5
Shatter	23	18.1
Cracked	22	120.2
Uncracked	1	49.2
Modified Flake	1	0.3
Core	2	9.8
P.p.k	3	8.2
Proximal end of p.p.k	1	0.8
Preform	1	5.6
Total	288	304.3

Type	Quantity	Weight
Other Chert:		
Secondary Flake	2	0.4
Total	2	0.4

Type	Quantity	Weight
Other:		
Metamorphic Cracked	1	0.4
Unknown Cracked	10	10.9
Mica schist Uncracked	1	185.1
Fossiliferous Sandstone Uncracked	1	645.1
Limonite Uncracked	1	17.9
Siltstone Uncracked	1	123.3
Siltstone Cracked	6	305.1
Fossiliferous Limestone Uncracked	1	16.9
Siltstone secondary flake	1	0.6
Iron Siltstone Uncracked	1	19.9
Total	24	1,325.2

Table 42: Lithic inventory by count and weight.

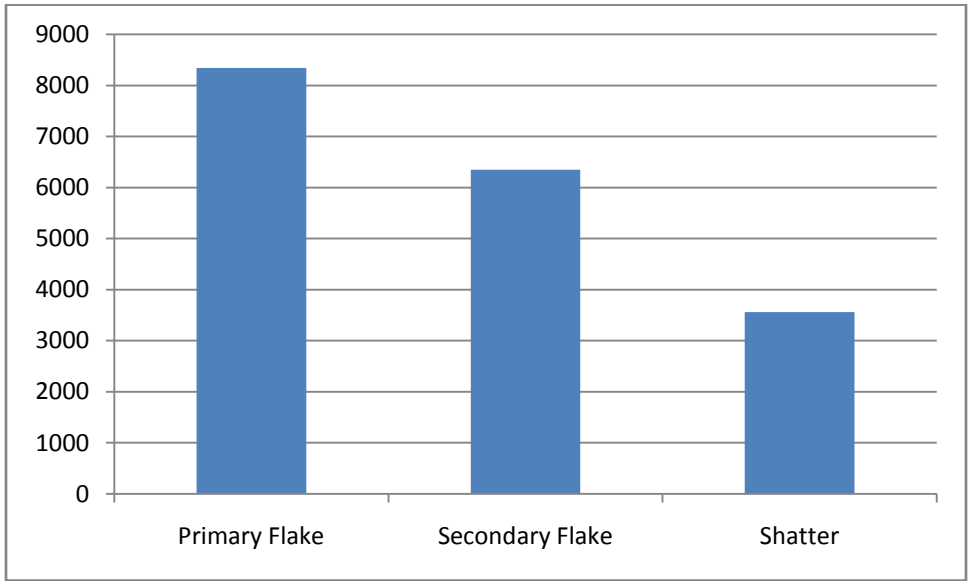

Table 43: Quartz/Quartzite debitage frequency.

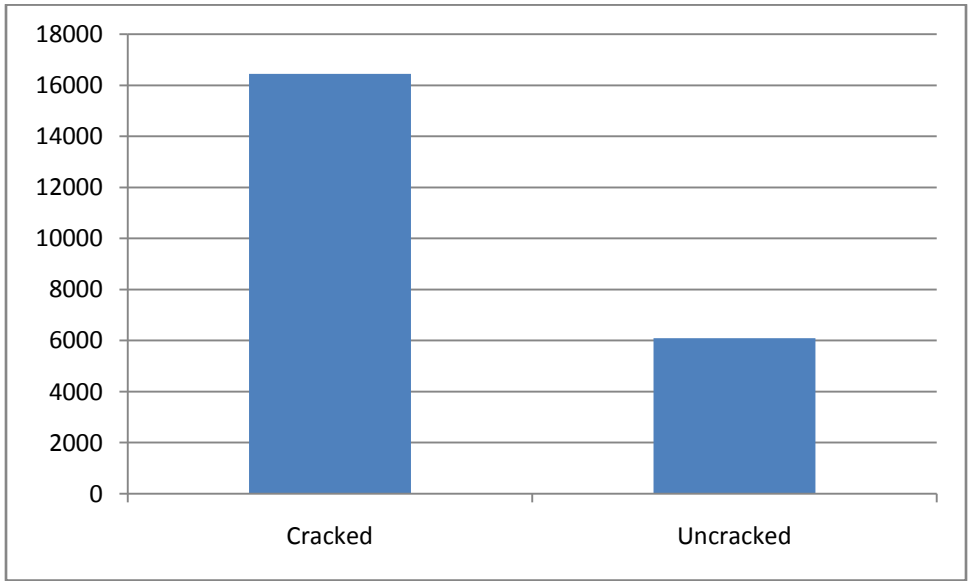

Table 44: Quartz/Quartzite cracked/uncracked rock.

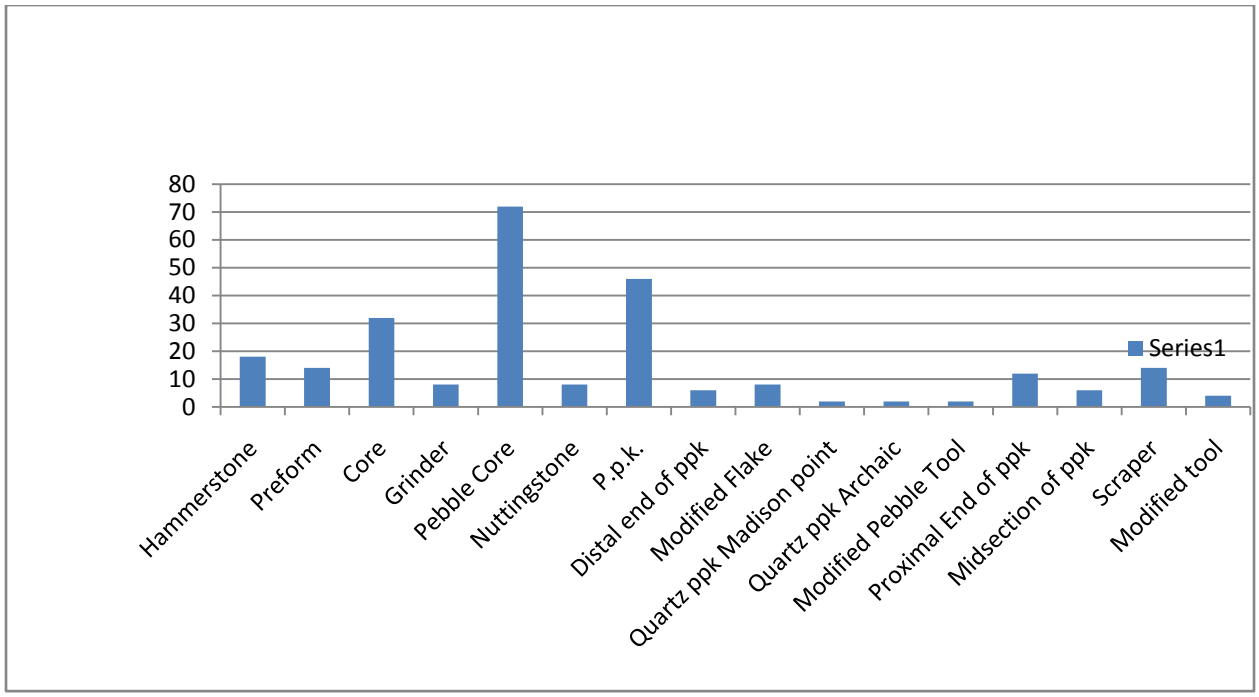

Table 45: Quartz/Quartzite tool frequency.

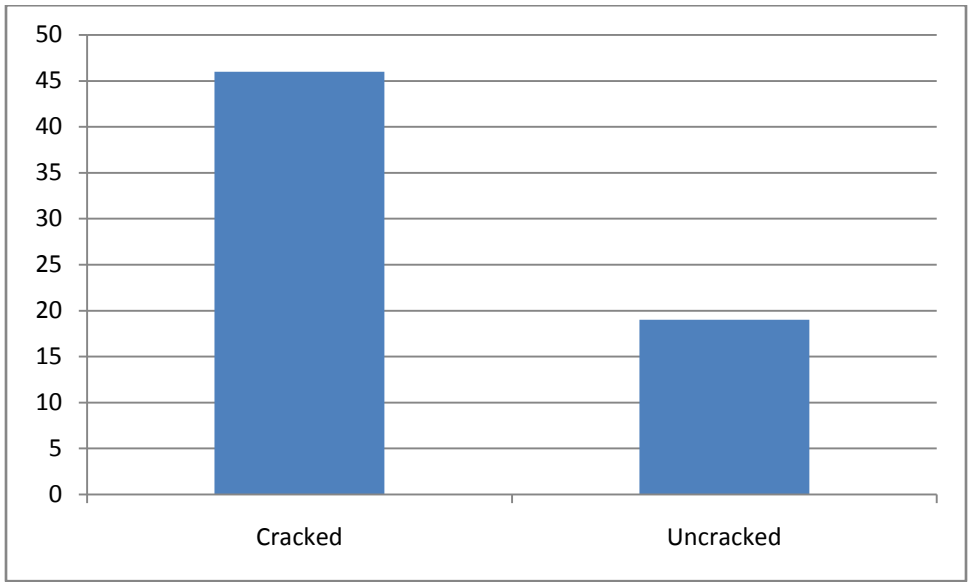

Table 46: Sandstone cracked/uncracked rock.

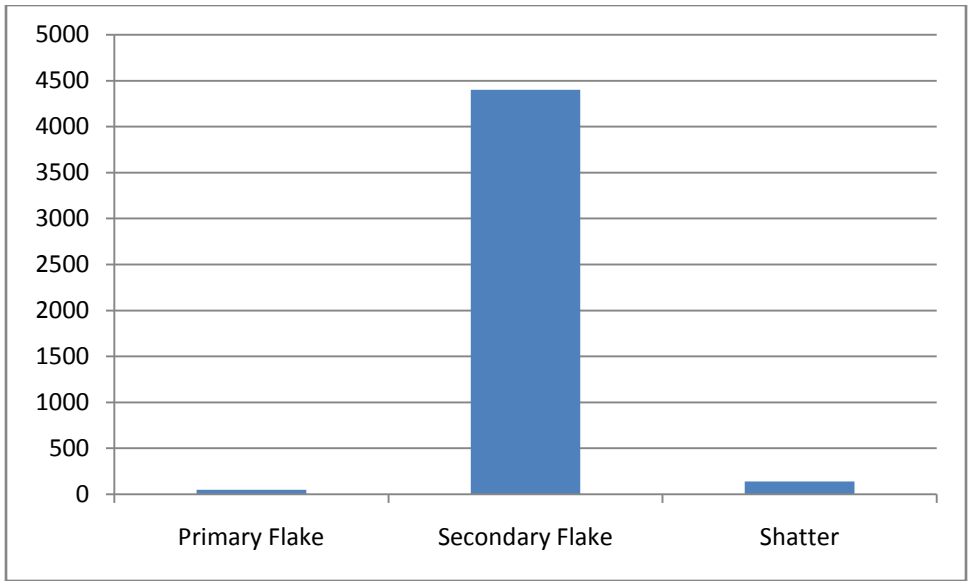

Table 47: Tallahatta Quartzite debitage.

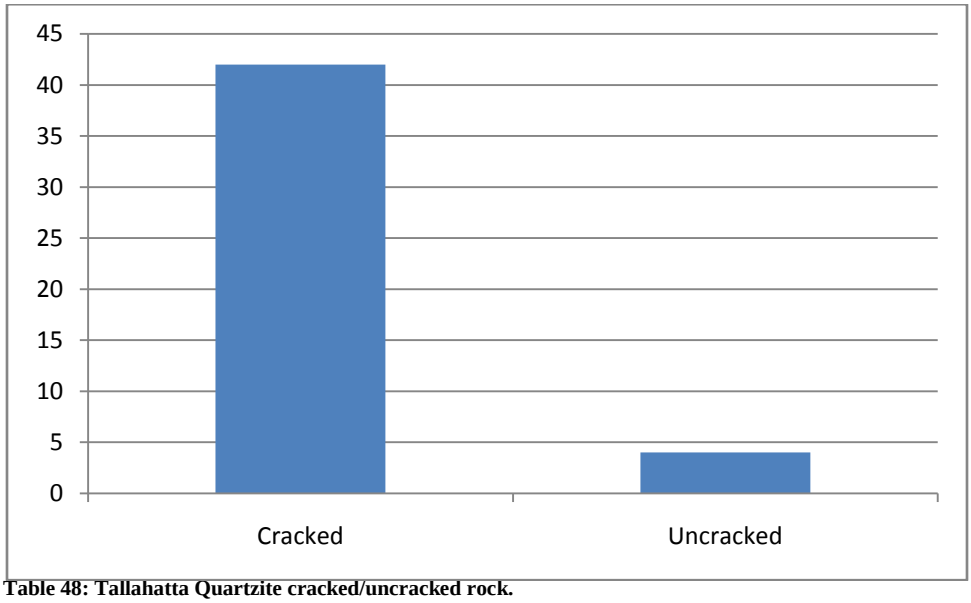

Table 48: Tallahatta Quartzite cracked/uncracked rock.

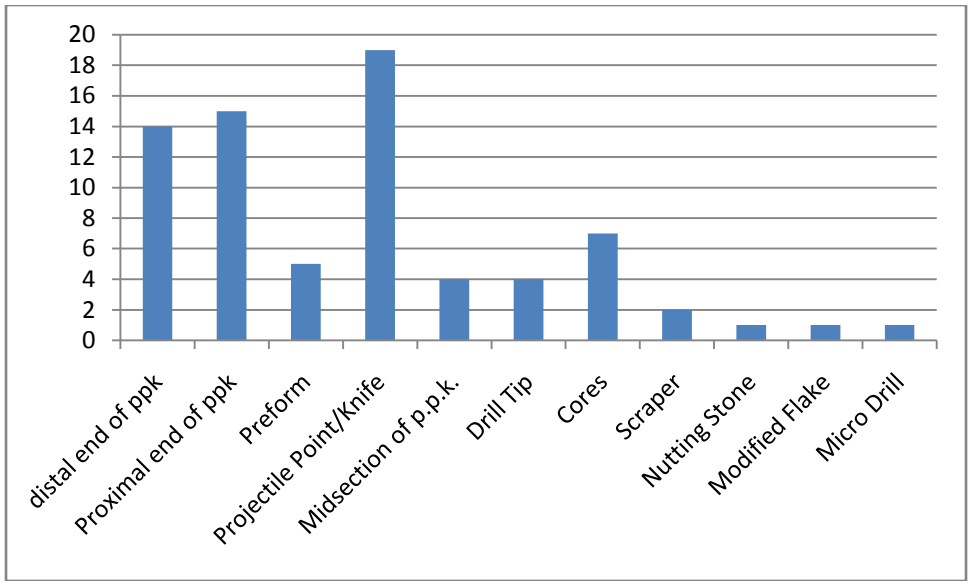

Table 49: Tallahatta Quartzite tool frequency.

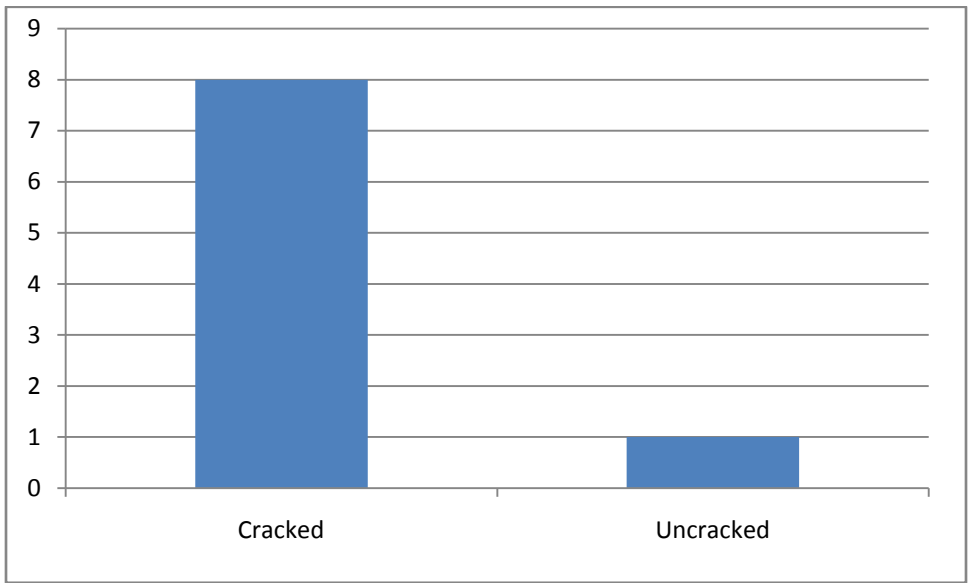

Table 50: Conglomerate cracked/uncracked rock.

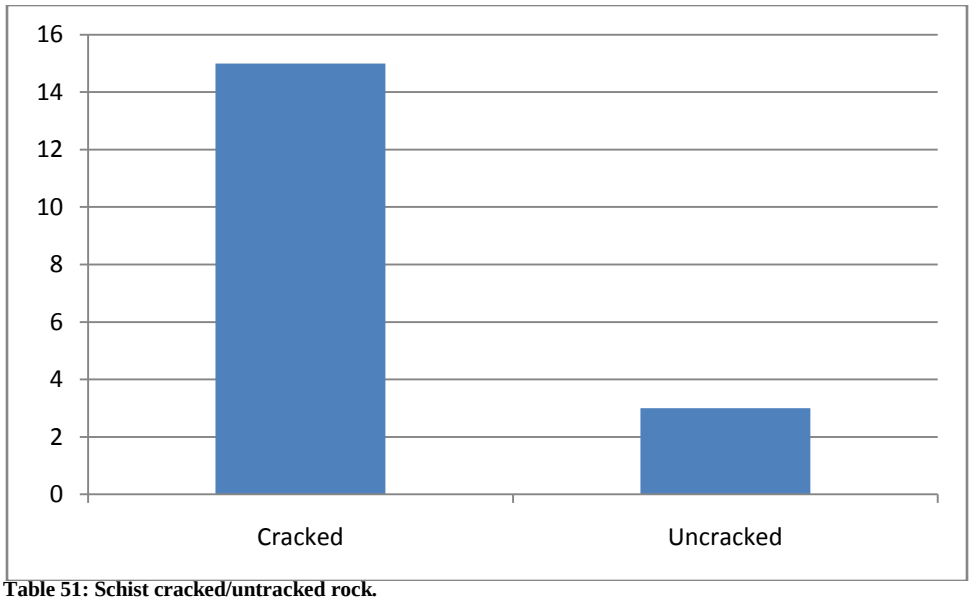

Table 51: Schist cracked/untracked rock.

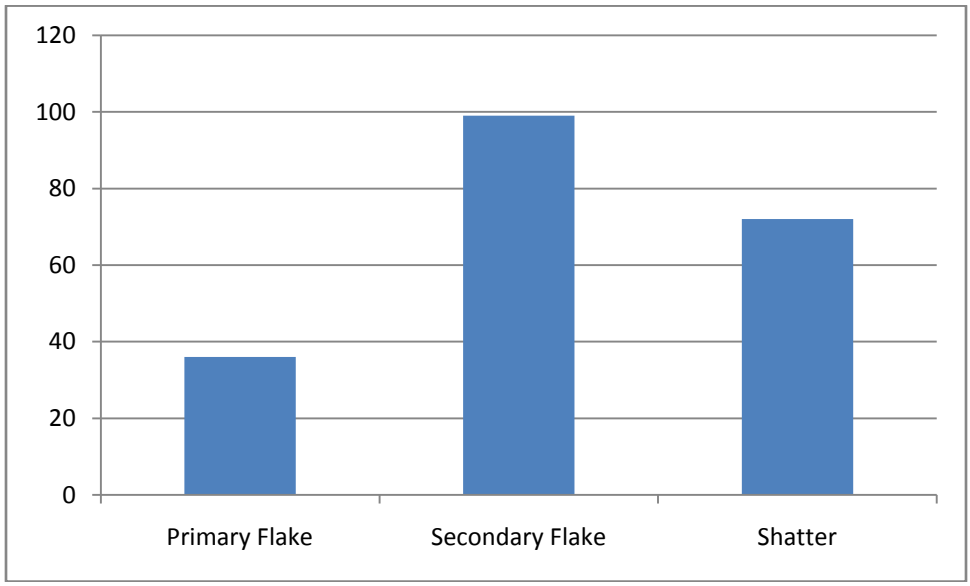

Table 52: Ocala Chert (HT and NHT) debitage.

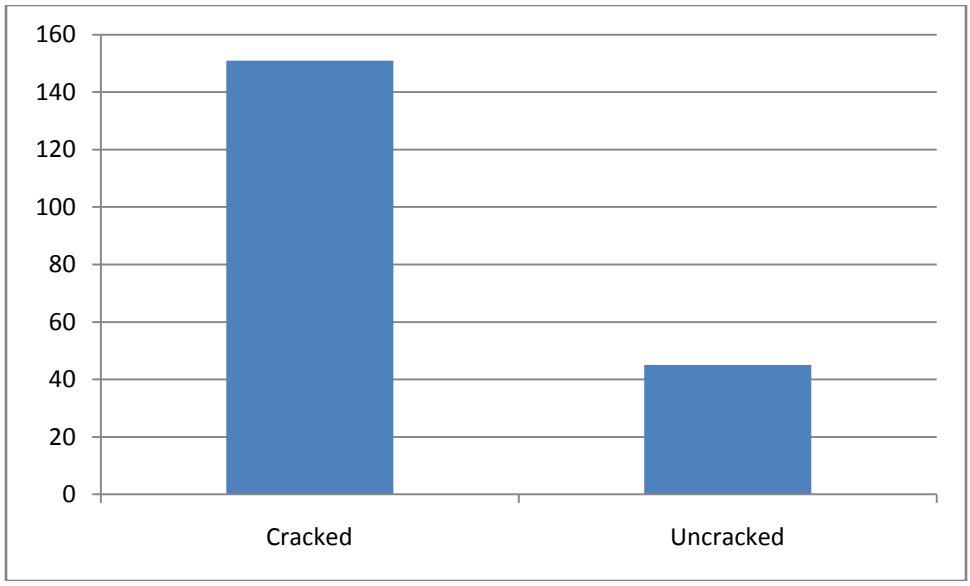

Table 53: Ocala Chert (HT and NHT) cracked/uncracked rock.

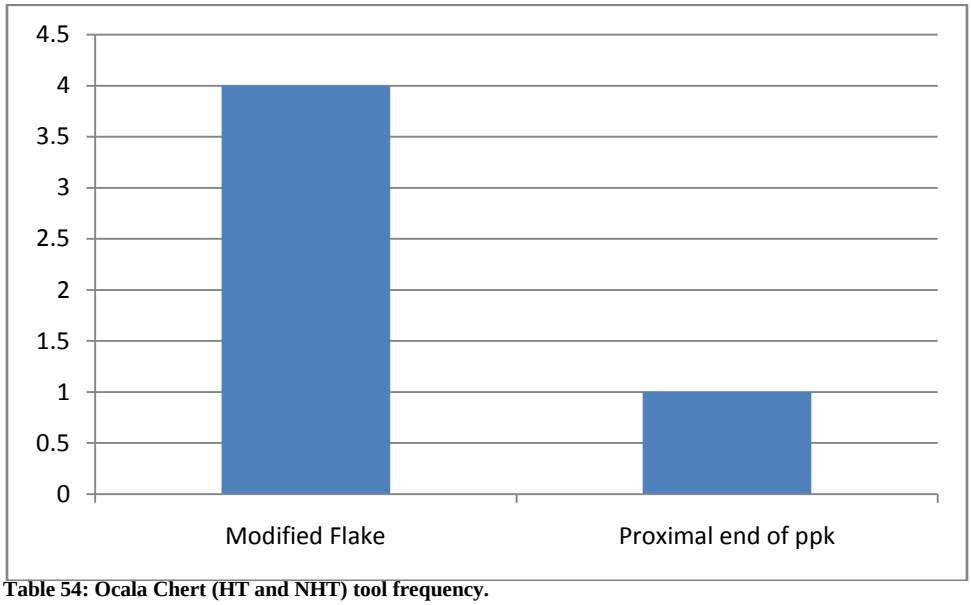

Table 54: Ocala Chert (HT and NHT) tool frequency.

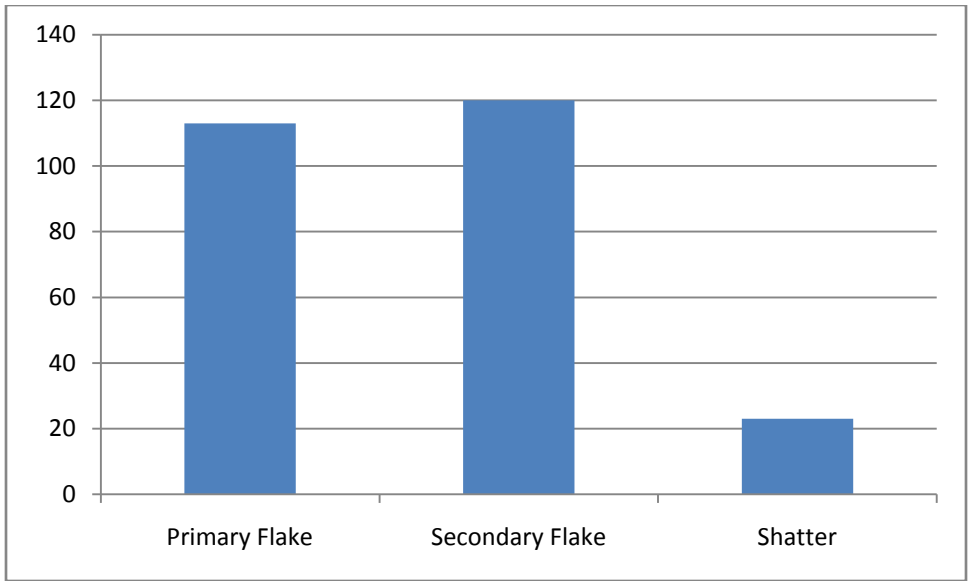

Table 55: Knox Chert debitage.

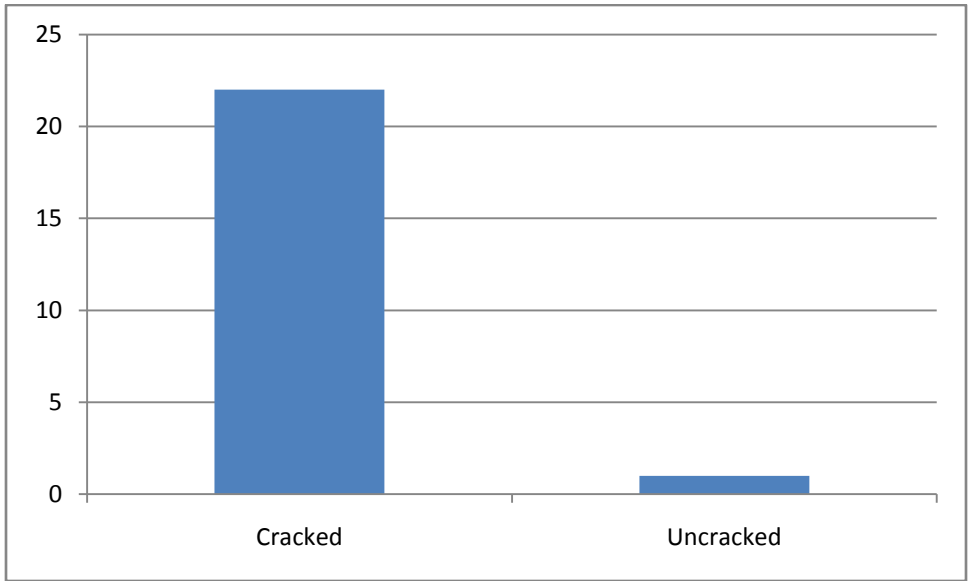

Table 56: Knox Chert cracked/untracked rock.

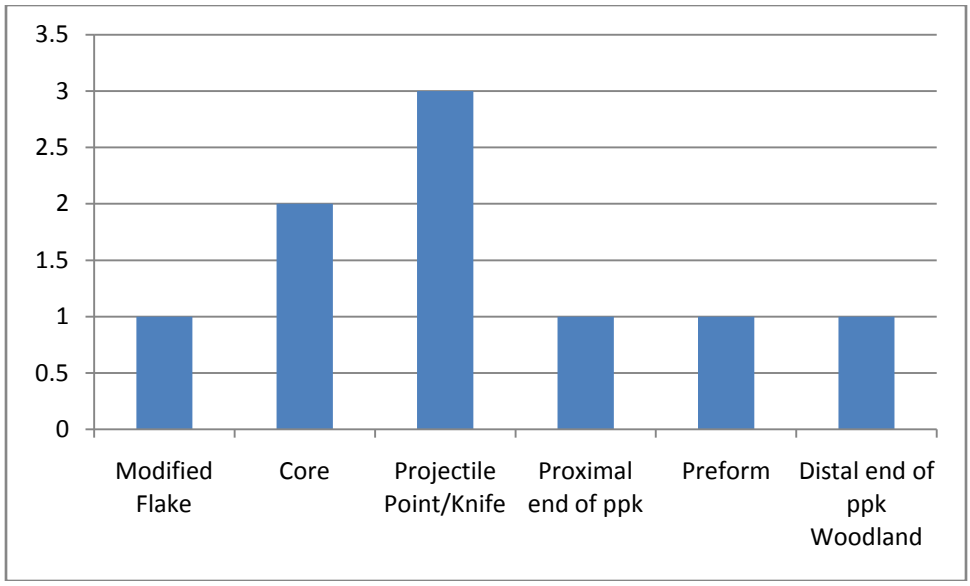

Table 57: Knox Chert tool frequency.

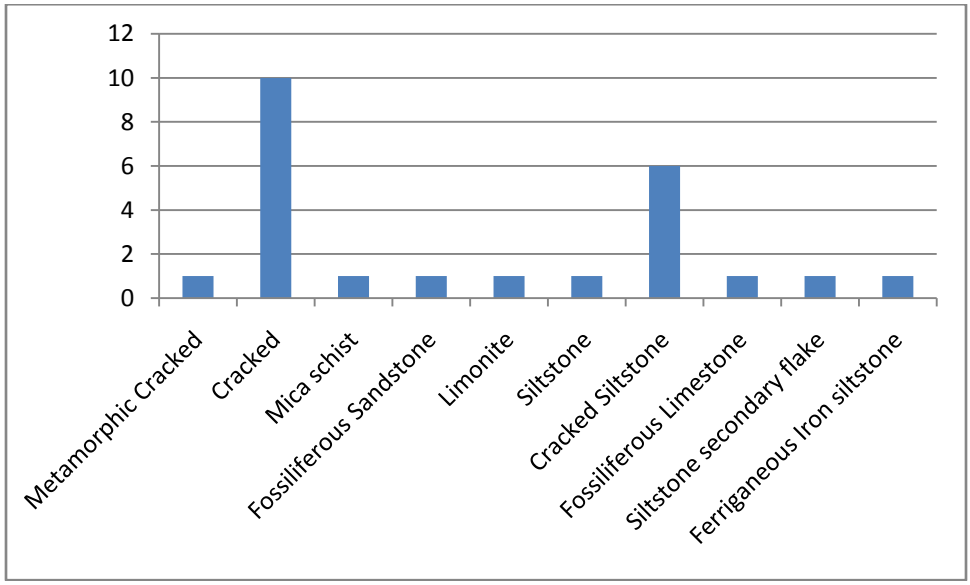

Table 58: Other lithics cracked/untracked rock.