LIFE IN THE PEE DEE: PREHISTORIC AND HISTORIC RESEARCH ON THE ROCHE CAROLINA TRACT, FLORENCE COUNTY, SOUTH CAROLINA

CHICORA FOUNDATION RESEARCH SERIES 39

Front Cover: One of the most interesting artifacts from Chicora's excavations at 38FL240 is this small, stamped brass "circus medallion." The disk shows the profile of an elephant, surrounded by the announcement that the "GREAT EASTERN MENAGERIE MUSEUM AVIARY CIRCUS AND BALLOON SHOW IS COMING."

The Great Eastern Circus was only in operation from 1872 through 1874, under the direction of Andrew Haight, who was known as "Slippery Elm" Haight, due to his unsavory business practices. The Circus featured a young elephant named "Bismark" -- probably the very one shown on this medallion.

In 1873 the Circus came to Florence, South Carolina, stopping for only two days -- October 18 and 19 -- on its round through the South. It is likely that this brass token was an advertisement for the circus. In this case it was saved, probably by the child of a tenant farmer, and worn as a constant reminder of Bismark, and a truly unusual event for the small, sleepy town of Florence.

LIFE IN THE PEE DEE:
PREHISTORIC AND HISTORIC RESEARCH ON THE ROCHE CAROLINA TRACT, FLORENCE COUNTY, SOUTH CAROLINA

Research Series 39

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If you want knowledge, you must take part in the practice of changing reality.

-- Chinese proverb

ABSTRACT

This study reports on the archaeological data recovery excavations undertaken at two sites, 38FL240 and 38FL249, in Florence County, South Carolina for Roche Carolina, Inc. These two sites, previously identified eligible for inclusion on the National Register of Historic Places may be avoided by initial construction efforts, but the decision was made to conduct the necessary work, simply to ensure that there would be no loss of significant data as the plant grows.

Site 38FL240 represents a late antebellum slave settlement which continued to be occupied during the postbellum and into the early twentieth century by tenant farmers as a nucleated settlement. Three structures, thought to represent a continuum of architectural styles and temporal episodes, were examined using broad block excavation techniques to maximize data recovery. The goal of the research, to explore the transition from slavery to tenancy, was only partially successful since so much of the early occupation had been "swamped" by the later tenant occupations and episodes of rebuilding. In spite of this difficulty, the site supported the decline in edged and annular wares from slavery to freedom, an increase in the diversity of personal and clothing artifacts, and possibly the rejection of tobacco as a tool of power and racism during slavery. The excavations were also useful in revealing the lifestyle of early tenant farmers in the upper coastal plain of South Carolina. The faunal study revealed greater diversity of meat cuts in slavery than in freedom, although the cuts were uniformly of low status, such as jaw and jowl. Examination of landscape and yard areas revealed patterning and an indication of sweeping.

This site, situated on a sandy ridge which has not been plowed since site abandonment, was also compared to two tenant sites, 38FL235 and 38FL269, more typically set in plowed fields. Techniques including survey level shovel testing, close interval shovel testing, and complete surface collections are compared in an effort to better understand site formation and degradation processes in the sandy soils of the Upper Coastal Plain, as well as the ability of various archaeological techniques to predict research value. More significant findings include the inability of traditional shovel testing practices to accurately establish site boundaries, and the importance of a large sample when creating pattern analysis.

Site 38FL249 is a Middle Woodland (ca. A.D. 500 based on a radiocarbon date) Native American site situated on a sand ridge overlooking the backwaters of the Pee Dee swamp. The initial survey found material both in plowed fields and into the woods lines. Excavations emphasized exploration of the deposits in the woods, finding that while more intact, even here there was evidence of plowing. A dispersed pattern of excavations revealed that the initial survey had accurately plotted the site core, and that this core did represent the most intact area of the site, producing large quantities of ceramics and lithics, ethnobotanical remains, and calcined bone. Of particular importance is the detailed analysis of pottery and lithics from this site -- one of the few such Middle Woodland sites investigated in this area of South Carolina.

The ceramics revealed three primary assemblages -- Wilmington, Yadkin, and Cape Fear or Badin, based on a detailed macroscopic analysis of the paste. Incorporated into the study was an equally detailed analysis of the fabric and cordage present on the wares. Lithic analysis included exploration of raw materials used, the types of debitage present, and the variety of formal and informal tools present. Materials identified range from Early Archaic Palmer to Woodland triangular forms.

The research at these two sites is primarily important for its comparative value, providing researchers with base-line data from an area of South Carolina for which there has been very little intensive scientific investigation. Recommendations are offered for additional research in the region.

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ACKNOWLEDGEMENTS

The work was funded by Roche Carolina, Inc., a subsidiary of the international pharmaceutical firm Hoffmann-La Roche of Nutley, New Jersey. While undertaken in compliance with federal permitting requirements, this firm never wavered from its position of support, encouragement, and enthusiasm. In fact, Roche Carolina far exceed the letter of preservation law, which dictates archaeological studies as being in the "public good," by also ensuring that the results of the investigations were accessible for to South Carolina school students. Through their auspices Chicora Foundation was able to work with over 1000 kids and 200 adults on-site, helping teachers and students better understand the importance of their fragile heritage. This level of truly public archaeology would have been impossible through traditional "compliance" archaeology, but Roche Carolina was willing to take their efforts far beyond the traditional approaches. For this support I want to thank all of the Roche staff, especially Mr. Harry Kociencki, Mr. Rocco Ricciardi, Larry Feigenbaum, Esq., Mr. Guy Steenrod, Mr. John McPhaul, Ms. Karen Vick, and Mr. Kevin Kelly.

Our work was aided by the constant support and excitement of the Pee Dee Regional Council of Governments, especially Mr. Phil Goff and Ms. Sheri Musick. Their assistance ran the entire spectrum from technical support to logistical advice. It was a pleasure working with a group so excited by the past.

A number of others made our work more pleasant and profitable. Ms. Patti Just, with WRJA TV 27 highlighted our work, making the site more accessible for teachers around the state. Mr. Phil Britton assisted us in plowing and general logistics. Mr. Frank Willis, with Willis Construction kept the roads passable not only for us, but also for the 1000 school kids that visited the site, often during very rainy periods. Dr. Robert Simpson at Coker College assisted us publicize the work through the *Pee Dee Recorder*, the newsletter of the Pee Dee Heritage Foundation. Both Mr. Fred Dahlinger, Jr. with the Circus World Museum in Baraboo, Wisconsin and Ms. Jill Blake with the Hertzberg Circus Collection and Museum, San Antonio, Texas both assisted us in our research on the Great Eastern Circus. Ms. Susan Leath, Director of the Florence Museum, invited us to speak on the excavations in Florence and Ms. Penny Forrester with the Florence County Public Library asked us to provide a children's program, reaching additional 120 kids who weren't able to actually visit the site. The good people at the Coca-Cola® bottling plant in Florence, along with Roche Carolina, and the Pee Dee Regional Council of Government, donated drinks for all the kids, teachers, and parents who visited the site -- often a welcome relief for the heat of an early spring. Mr. Keith Derting with the South Carolina Institute of Archaeology and Anthropology assisted us in the identification of lithic specimens -- a service above and beyond the call of his duty. Dr. Ted Rathbun assisted us in tracking down references to African American lactase dificiency in response to a review comment. A number of local people visited us during the work and we want to thank all of them for their interest.

We want to thank all of the teachers, parents, and others who came out to the site. Their enthusiasm was often overwhelming, at times almost intimidating. Occasionally, usually when we were behind schedule and facing several bus loads of excited kids, we had to remind ourselves that if the research we were doing as "public archaeology" wasn't for these kids, then who was it for?

From the regulatory perspective, we appreciate the oversight, comments, and reviews offered by Dr. Charlie Hall and Mr. Lee Tippett, Staff Archaeologists with the South Carolina State Historic Preservation Office. Their interest in the project has certainly contributed to the success of the

research and has made an impact on its contribution to the discipline and the public.

We want to thank those who participated in the field work, including Mr. Tariq Ghaffar, Ms. Katherine Kelly, and Ms. Liz Pinckney. In particular, we want to thank Ms. Becca Fipps for volunteering and assisting us in the drudgery of fieldwork. Mr. Keith Derting graciously agreed to serve as a peer reviewer for this study and we appreciate both his time and insightful comments.

Finally, for anyone else who offered assistance, information, or even a kind word but isn't remembered here, we offer our apologies -- it was appreciated.

INTRODUCTION

Background

The investigations at 38FL240 and 38FL249 were conducted by Chicora Foundation under the direction of Dr. Michael Trinkley and Ms. Natalie Adams, for Roche Carolina, Inc., subsidiary of Hoffmann-La Roche, Inc. The sites are situated on the Roche Carolina plant site in eastern Florence County, which is bordered to the north and east by the swamps of the Pee Dee River, to the south by the Seaboard Coast Railroad, and to the west by several roads and a Carolina Power and Light easement (Figure 1). Site 38FL240, which consists of the remains of a slave and tenant row, is situated north of an east-west dirt field road running along a sand ridge through the northern half of the property (Figure 2). Site 38FL249, a large stratified Archaic and Woodland prehistoric site, is situated on a similar sand ridge about a half mile to the east of 38FL240 (Figure 3).

Both sites were initially identified during Chicora's summer 1992 survey (Trinkley and Adams 1992) in anticipation of Roche Carolina's construction of a major pharmaceutical research facility on the 1400 acre plant site. A series of 42 archaeological sites were identified, with 38FL240 and 38FL249 being recommended as eligible for inclusion on the National Register and two additional sites, 38FL235 and 38FL269 being recommended as potentially eligible. While the eligibility recommendations were being reviewed by the State Historic Preservation Office (SHPO), Chicora Foundation was requested by Roche Carolina to submit a proposal for data recovery at 38FL240 and 38FL249. The Pee Dee Regional Council of Governments requested that we also submit a proposal for additional testing at sites 38FL235 and 38FL269, sufficient to determine eligibility of these sites. A proposal was prepared and submitted to Roche Carolina, Pee Dee Regional Council of Governments, and the SHPO on September 22, 1992. These eligibility recommendations received the concurrence of the SHPO and the data recovery plan was approved with minor modifications, reflected in an October 16, 1992 revision (letter from Dr. Charlie Hall to Ms. Sheri Musick, dated October 6, 1992). An agreement was signed to undertake the data recovery and testing November 19, 1992.

Archaeological investigations were begun at 38FL240 and 38FL249 by a crew of five (including the principal investigator) on February 1, 1993 and were continued through March 19, 1993. A total of 491 person hours were spent in the field at 38FL240 and an additional 42.5 person hours were spent on in-field laboratory processing. At 38FL249, 677 person hours were spent in the field with an additional 85.5 person hours spent on laboratory analysis and field processing. As a result of this work 1,825 square feet were excavated at 38FL240 and 2,000 square feet were excavated at 38FL249[1]. This resulted in the movement of 1,431 cubic feet of soil at 38FL240 and 2364.2 cubic feet of soil at 38FL249, all dry screened through ¼-inch mesh. At 38FL240, excavation of Structure 1 produced 191 pounds of brick and mortar, Structure 2 produced 1,528 pounds, and Structure 3 produced 481 pounds, for a site total of 2,223 pounds. A management summary of these investigations was produced by Chicora Foundation at the conclusion of the field investigations (Adams et al. 1993).

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[1] As discussed in more detail later, the proposed investigations at 38FL240 were to include the excavation of 1,500 square feet. This minimum amount was exceeded during the investigations by 325 square feet. At 38FL249 the approved proposal specified the excavation of 1,600 square feet. This level of minimum investigation was exceeded by 400 square feet.

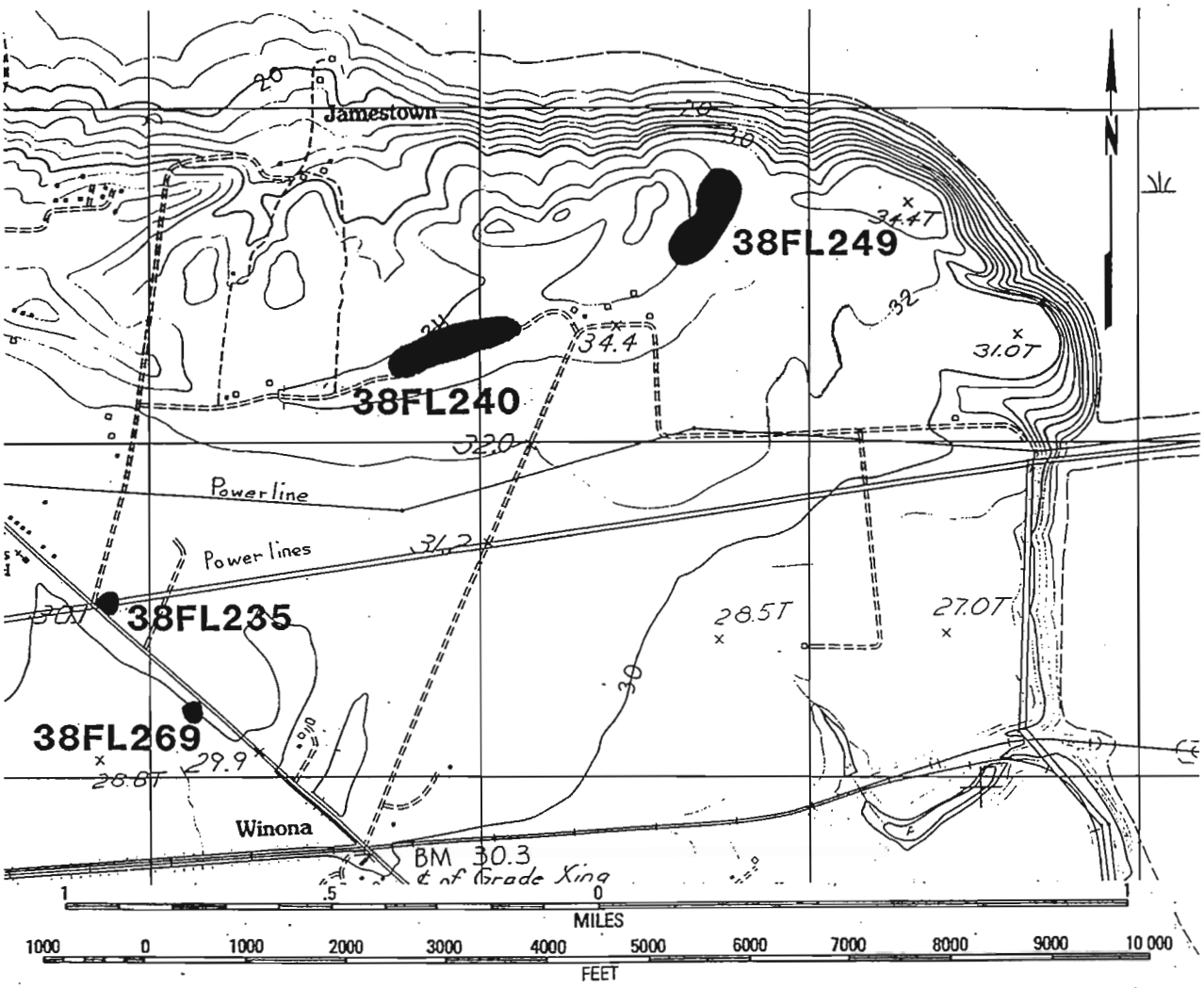

Figure 1. Portion of the 1986 Pee Dee USGS provisional topographic map showing the location of 38FL235, 38FL240, 38FL249, and 38FL269.

Figure 2. Clearing vegetation around one of the structures on the sand ridge at 38FL240.

Figure 3. Clearing a line to an excavation unit at 38FL249, showing the dense vegetation.

The investigations at 38FL235 and 38FL269 were conducted by Ms. Natalie Adams and a crew of three archaeologists on March 22 and 23, 1993. The work included a combination of controlled surface collections, close interval shovel testing, and unit excavation. In lieu of a written report, the investigations were visited by the SHPO's archaeologist, Dr. Charlie Hall and an on-site meeting was held to evaluate the sites' National Register eligibility. This meeting (reported on in a letter from Dr. Charlie Hall to Mr. Phil Goff, dated March 24, 1993) concluded that the information the two sites could contribute had been recovered from the testing and that the sites would be considered by the SHPO as not eligible for inclusion on the National Register. Consequently no additional research was conducted at these two sites.

Goals

Compliance and the Public's Interest in the Past

The compliance related goals of this project have already been alluded to in the previous discussion. The work was undertaken in response to the use of federal CDBG and EDA funding to assist in the location of Roche Carolina and is intended to satisfy the compliance responsibilities of the client under Section 106 of the National Historic Preservation Act of 1955, as amended (16 USC §470 f), and HUD's CD regulations at 24 CFR 58.

These requirements are based on the belief that the investigation and preservation of our nation's heritage is in the "public interest." Of course, such work can only be in the public's interest if it is **truly accessible to the public**. Put another way, the Congressional intent was not to promote intellectual scholarship isolated from the public's interest in the past and ability to use, appreciate, and learn from that scholarship. Consequently, Chicora Foundation has developed one of the professions strongest policies on accessibility of research. Not only are reports, such as this one, made widely available to over 30 local, regional, and national libraries (ranging from the Florence Public Library to the Library of Congress), but with our partners like Roche Carolina the work is advertised through the media, ensuring that the interested public is aware of the research. During this project, the investigations were covered by the local newspaper, as well as two commercial television stations and the local educational television station.

The Florence sites were also targeted for a new program, fully supported by Roche Carolina. Called ***Searching for the Past***, this program reached out to teachers and their students, inviting them to visit the site, go on tours, ask questions, and learn from real artifacts (Hacker and Trinkley 1993). Programs such as this go beyond the letter of the compliance regulations and actually achieve the spirit of the laws by reaching out to the public, especially kids, and letting them know why archaeology is important and what this kind of research can tell them about their past. Over 1000 kids and 200 adults participated in Chicora's program with Roche Carolina over a five week period.

This was the first time, to our knowledge, that such an innovative program was incorporated into compliance archaeology in South Carolina. As such, it sets a new standard for organizations conducting archaeological research, for clients undertaking that work, and for those responsible for interpreting the meaning of federal law. The Roche Carolina project demonstrated that public education **can** be incorporated into cost-effective research.

While it is not difficult for most people to understand that studying Native American sites several thousand years old is important and part of our history, it is often more difficult to understand the need to excavate a "tenant house" that is only 50 years old. This is particularly true in the rural South, where this lifestyle has not completely vanished, even today. One very concise explanation of the goal of this research, offered by Leslie Steward-Abernathy, is to generate:

> data on ordinary people of two or three generations ago whose routines of daily life were too recently abandoned to interest many scholars, but are long enough ago to be outside the personal experiences of most people today (Stewart-Abernathy 1986:1).

Even in compliance archaeology, archaeology is primarily interested in the lives of the common, and often invisible, person. For the South there has been no more invisible class than the African American, either in slavery or in tenancy.

Research and Methodological Issues

Moving into the realm of research goals and methodological questions, the work with Roche Carolina continued to open new doors, exploring a part of South Carolina and the Pee Dee which has previously received little attention. The project also incorporated several methodological interests, to explore how archaeology can better meet the demands for cost-effective, but productive research.

Site 38FL240 consists of the remains of a slave, and later tenant, row. Ceramics recovered during the survey phase documented the long period of occupation, producing creamwares, pearlwares, and whitewares, with a mean ceramic date of 1883. Shown on the 1914 soil survey map (discussed in more detail below) as a double row of 15 structures (eight to the north and seven to the south), by 1945 only six of these structures still survived.

The survey indicated relatively little site disturbance and the ability to address several broad areas concerning how African American lifeways changed from slavery to freedom -- questions suggested by Chicora's research at Fish Haul on Hilton Head Island (Trinkley 1986). Research in the low country revealed that this change could be seen, to some degree, in the artifacts and the artifact patterns. Most surprising, perhaps, was that the change was not pervasive, affecting all parts of African American life. For example, while clothing and personal item increased and changed in content, foodways appear to have changed little. In addition, research at Fish Haul found that some aspects of freedman life changed in unexpected ways. For example, housing got smaller, not larger, clearly reflecting a conscience decision on the part of the newly freed slaves. Whether similar changes are found at interior slave compounds turned freedmen settlements is unknown.

Just as importantly, it was not entirely clear from the survey information whether it would be possible to isolate slave from freedmen remains on a consistent basis. It seemed likely that there would be both associated with the same house -- a problem found by other researchers on coastal sites (see for example testing at "site 2" in Smith 1986). Regardless, the survey did suggest that it might be possible to identify several structures with at least the outward appearance of different temporal occupations.

In addition, the tenant occupation itself was of special interest. While most sites investigated have been relatively isolated (or dispersed) tenant occupations, this site offered the opportunity to explore a nucleated settlement. Like Millwood Plantation (Orser 1988), the Gibson tract most likely incorporated three labor/settlement systems -- that of nucleated slavery, freed slave collectives operating as squads, and eventually as tenant farmers. While it seems likely that these changes in settlement patterning correspond to changes in labor organization, with associated differences in material culture, the correlations at Middleton were found to be less than precise. Orser remarks:

> It would seem that the most informative physical evidence for the material basis of the postbellum plantation, or at least the easiest to discern at this early stage of archaeological investigations, is settlement pattern and housing form and size. Both these aspects of plantation life appears to relate directly to plantation labor organization. The study of the kinds of artifacts used by each tenure class is much

more difficult to understand, possibly because the wage hand found it easier to purchase a plate like the landlord's then to construct a similar house (Orser 1988:245).

The exploration, using basically identical techniques and similar levels of intensity, of three separate structures would also allow intra-site comparative analysis, similar to that undertaken by Geismar at Skunk Hollow to explore the social disintegration of that community in the late nineteenth century (Geismar 1982). While the absence of the extensive historic documentation available for Skunk Hollow, as well as the difference between this community of free New Jersey blacks and the "community of tenant farmers," would prevent the same theoretical approach, there is ample evidence that examination of individual households can provide a more complete picture of the variability of African American life experiences.

Research at tenant sites has also raised issues relating to the disposal of refuse through the use of trash dumps and sheet middens (see Moir 1982); the importance of plantation stores and the impact on artifact assemblages through this form of coercive capitalism; the difference in foodways most clearly observed through time (see Holland 1990); and the ability to identify social stratification in the archaeological record (see Saunders 1982; Stine 1990). Beyond, and incorporating, these questions, very little is known about slave and tenant life on the Atlantic Coastal Plain[2], so investigations at this site was developed to shed light on how life here was similar to, or different from, life at coastal (and piedmont) plantations.

Several methodological issues were incorporated into the research at the tenant site, 38FL240. First, the SHPO's office suggested using 5-foot, rather than 10-foot, units to explore activity areas associated with the houses and yard areas. Consequently, excavations and analyses were performed at this level to be compared with overall unit results. Central to the study was achieving a better understanding of what might be increased analytic precision compared with what would certainly be increased time in excavation. In other words, would the additional analytical precision be sufficient to out-weigh the additional time involved in collecting the data?

Second, a number of tenant sites during the initial survey, and elsewhere in the region, are found in plowed fields. Our investigations at 38FL235 and 38FL269 would be compared to 38FL240 not only as representatives of a different settlement system, but would also serve to examine different collection strategies for plowed sites. This research compared results of shovel tests, controlled surface collections, close interval shovel tests, and dispersed 5-foot excavations. Again, the goal was to better understand whether the additional costs of different methodological or analytical approaches would outweigh the additional costs of the more labor intensive approaches.

Obviously, these methodological considerations are important to the discipline since they can offer advice to other researchers on how to more cost-effectively conduct testing and data recovery operations. The studies may also caution us on too quickly adopting methodological approaches simply to achieve the lowest possible cost.

At the prehistoric site, 38FL249, the survey had identified two loci -- one in a plowed field

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[2] Woofter (1936) in his study of Southern tenancy, divided South Carolina into the Upper Piedmont, incorporating Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg, and York counties; the Black Belt, incorporating most of South Carolina and generally described as the old cotton-producing plantation area, often characterized by absentee owners; and the Atlantic Coastal Plain, incorporating Clarendon, Darlington, Dillon, Florence, Horry, Lee, Marion, Sumter, and Williamsburg counties, described as medium-sized cotton and tobacco plantations. In each area Woofter outlined differing conditions further discussed in following sections.

and the other in the nearby woods. It was thought that the portion of the site in the plowed field would be thin and devoid of features, essentially truncated or deflated by erosion and cultivation. In spite of this there remained the potential for the locus to contribute meaningful comparative information. For example, do the different loci represent different campsites -- essentially identical in artifact content and variety only separated temporally? Or do they have different artifact assemblages, perhaps suggesting different activity areas within one settlement zone? This research, however, was approach cautiously since it was uncertain whether the data to answer these questions could, in fact, be recovered from the plowed locus.

Further in the woods, however, there was evidence from shovel tests of deposits up to 2 feet in depth, little (if any) plowing, daub, and evidence of both faunal (largely calcined) and ethnobotanical remains. Lithics were particularly abundant, with examples of Palmer (Coe 1964), Taylor Side Notched (Michie 1966), Kirk Corner Notched (Coe 1964), St. Albans (Chapman 1975), Morrow Mountain, Eared Yadkin (Coe 1964), Large Triangular, and Caraway/Roanoke (South 1959) projectile points being recovered. The pottery included small quantities of Stallings and Thom's Creek, although Badin, Yadkin (Coe 1964), and Hanover (South 1960) wares were most common.

One of the major goals of the research was simply to determine the extent and degree of stratification. The shovel test suggested, but did not conclusively demonstrate, that the stratigraphy or preservation of the stratigraphy was "spotty," not being consistent throughout the site area. Consequently, a decision was made to explore the entire site area using a series of eight dispersed 10-foot units. We recognize this as controversial -- first for using dispersed units rather than concentrating on known areas of intact site and second for not using a greater number of smaller units. Obviously both decisions represent areas where professionals can disagree. The dispersed testing was used in the hope of identifying additional areas of intact deposits, allowing from intra-site comparison. The use of 10-foot, rather than perhaps 5-foot, units was based on our belief that if features were present, the unconsolidated sandy soils which quickly leach organic materials would make them difficult or impossible to identify in small units with limited floor area (see Trinkley 1980 for a discussion of this phenomena). Ultimately we choose an attempt to collect good data from fewer units over questionable data from more units.

While it may sound simplistic, research at this site, given the sparsity of prehistoric investigations in this part of South Carolina, was largely explorative, with the goal of gathering a base of information useful in future comparative studies. However, even this exploratory or descriptive research was focused on several areas. The first was a better understanding of the pottery present at the site. Efforts have been made to import North Carolina (largely Piedmont) types such as Badin and Yadkin into South Carolina. Often this attempt appears to have been fruitful (see, for example, Blanton et al. 1986; Ward 1983). The similarity of the materials at 38FL249 to North Carolina types is probably a function of the Pee Dee River drainage region rather than the current "political regions". Still, the experiences extending North Carolina typologies to the south, out of their original areas of definition, are limited and often are not associated with reliable radiocarbon dates. Consequently, one goal of this research was to utilize a more detailed level of ceramic analysis, concentrating on a visual (rather than chemical) examination of the pottery fabrics. The premise was simple: rather than starting with an idea (that the pottery is "Yadkin") and setting out to find support (correct temper, paste, and so forth), we would start out by looking at the ceramics and interpreting from the data to a possible ware definition. In addition, the ceramic analysis utilized not only counts (commonly used by other researchers), but also minimum vessel equivalencies (MVE) to provide a more reliable indicator of type frequency, as well as site use.

Similar attention was devoted to the lithics in the hope to better understand several key features, including selection and use of different raw materials. For example, it seems that greater attention to the existence, and probable origin, of exotic or extralocal materials may help establish

the limits of scheduled band mobility, utilizing Binford's theory of "embedded strategy." Binford suggests that:

> procurement of raw materials is embedded in basic subsistence schedules. *Very rarely, and only when things have gone wrong does one go out into the environment for the express and exclusive purpose of obtaining raw material for tools* (Binford 1979:259).

However, Binford's statement can not totally account for the apparent wide distribution of Uwharrie Metavolcanics and the Allendale Chert raw materials. Overlapping seasonal rounds of groups based in different areas was a excellent opportunity for trade and, therefore, a wider dispersion of materials. This and other social factors must also be considered.

The research at 38FL249 concentrated on ceramics and lithics not simply because they represented the vast majority of the artifacts recovered (which, of course, they did), but also because these are the types of remains present at almost all Middle Woodland sites in this Inner Coastal Plain region of South Carolina. Simply put, if these artifacts can't eventually be used to better explain prehistoric life it is unlikely that we will ever be able to break the barrier between then and now. Obviously this study is not exhaustive, nor is it particularly unique. Our methodologies, however, were developed to try to maximize data return within the limitations of funding and time. Hopefully future research at similar prehistoric sites will be able to build on this research.

One reviewer commented that, "an alternative historical approach to understanding these sites was selected" instead of a "quantitative analysis" which "would be unlikely to produce meaningful scientific results." We would not be quite so catagorical in our own description of the study, since we do, in fact, incorporate rather detailed quantitative analysis of lithics, pottery, and historic artifacts. Yet, we have tried to ensure that the study is not readable, but that it also offers something of value beyond simply counts and quantification.

Curation

The field notes, photographic materials, and artifacts resulting from Chicora Foundation's investigations will be curated at the South Carolina Institute of Archaeology and Anthropology, University of South Carolina using that institution's lot provenience system under site numbers 38FL235, 38FL240, 38FL249, and 38FL269. The artifacts have been cleaned and (where necessary) conserved prior to curation. Further information on conservation practices may be found in the **Historic Archaeology at 38FL240** section of this study. None of the prehistoric materials required conservation treatments prior to curation. All original records and duplicate copies were provided to the curatorial facility on pH neutral, alkaline buffered paper and the photographic materials were processed to archival permanence.

NATURAL SETTING

Physiography

Florence County is situated in the Inner Coastal Plain of South Carolina and is bounded to the north by Marlboro and Dillon counties, to the west by Darlington, Lee and Sumter counties, and the Lynches River, to the south by Clarendon and Williamsburg counties and to the east by the Pee Dee River, which separates it from Marion County. The land primarily consists of gently rolling hills with elevations ranging from about 20 feet above mean sea level in parts of the river floodplains to a high of about 150 feet above sea level in the Florence-Timmonsville area. Most of the county has an elevation between 70 and 150 feet above sea level (Pitts 1974:109).

The county is drained by the Pee Dee river system which flows in a southeasterly direction and forms somewhat of a dendritic drainage pattern. It includes Lynches River, which merges with the Pee Dee in the southeastern corner of the county, as well as smaller streams such as Claussen Creek, Jeffries Creek, and Muddy Creek. In the project area, Buckley Creek is found on the western edge of the Pee Dee River Swamp and off the eastern edge of the survey tract. A small intermittent stream is located in the south western corner of the tract.

The Gibson Plantation tract is situated in the northeastern portion of Florence County. It is bordered to the north and east by the swamps of the Pee Dee River, and to the south by the Seaboard Coast Line Railroad. The western boundary is irregular, conforming to several roads and a Carolina Power and Light easement. The topography tends to be flat with a range of elevation between 80 and 110 feet above sea level. The lower, nearly level, areas of the tract are located south of S.C. 24 and in the southern portion of the tract north of S.C. 24. Both 38FL235 and 38FL269 are found in these low areas. In fact, during much of this project the two sites were covered by rain water (to a depth of nearly foot) which would not percolate through the clay subsoil. The property rises gently in the northern area. The highest elevations are found along the northern boundary of the property, in the vicinity of 38FL240 and 38FL249, where narrow sand ridges run parallel to the swamp. These ridges are periodically cut by perpendicularly running drainages fed by springs. Occasionally there will be a moisture trapping depression, which probably provides a seasonal water supply, as well an ecotone for both floral and faunal resources. The ridges rise 15 to 25 feet above the surrounding terrain before gradually falling into the Pee Dee River swamps.

Perhaps the most interesting topographic feature associated with 38FL249 is the presence of a spring at the western edge of the site. While the Pee Dee swamp is relatively close (about a mile), this spring represents a nearby oasis offering a relatively close and relatively rich resource zone for human exploitation. It is likely that, in a more xeric landscape, prehistoric populations selected this particular spot because of the spring.

Geology and Soils

The geology is characteristic of the Coastal Plain. The parent materials of the soils are marine or fluvial deposits which consist of varying amounts of sands, silts, and clays. There are four primary geologic formations deposited at different periods during alternating transgression and recession of the ocean: the Duplin Marl Formation underlies parts of the southern and western portions of the county; the Black Creek Formation is found in the northern portion of the county (including the

project area). The Black Creek Formation directly underlies the Pee Dee Formation and is Upper Cretaceous in age. It is described as fossilliferous, pyritic, lignitic white to gray, fine to medium-grained phosphatic sands, and blue-gray to black pyritic, plastic, or brittle clays (Park 1980).

Overlying all of these formations is a relatively thin mantle of undifferentiated light-colored sands and gravels with clay layers of Plio-Pleistocene age. The Pleistocene deposits include the Brandywine terrace (215 to 270 feet MSL), the Coharie terrace (170 to 215 feet MSL), the Sunderland terrace (100 to 170 feet MSL), the Penholoway terrace (42 to 70 feet MSL), the Talbot terrace (25 to 42 feet MSL), and the Pamlico terrace (less than 25 feet MSL) (Pitts 1974:109-110).

The project area contains 13 soil series including Coxville, Duplin, Exum, Goldsboro, Lakeland, Lucy, Lynchburg, Norfolk, Orangeburg, Pantego, Sunsweet, Varina, and Wagram soils. Of these, Pantego is classified as very poorly drained, Coxville is poorly drained, Lynchburg is somewhat poorly drained, Duplin, Exum, and Goldsboro soils are moderately well drained, Lucy, Norfolk, Orangeburg, Sunsweet, Varina, and Wagram soils are well drained, and Lakeland soils are excessively drained. Of these soils 17.9% are classified as poorly drained while 81.2% are well drained. In a very general sense the poorly drained soils occur adjacent to the Pee Dee River, below the bluff edge, as well as along the smaller drainages. More xeric soils exist on top of the adjacent bluffs where sandy soils dominate.

Site 38FL240 is situated on excessively well drained Lakeland soils, while 38FL249 is situated on both Sunsweet and Lucy soils. Both are well drained and found primarily in sloping areas, such as the ridge on which the site is located. Sites 38FL235 and 38FL269 are located on Exum and Duplin soils respectively (Pitts 1974). These soils are considered moderately well drained, although during the time of the study they were inundated by seasonally heavy rains. Unlike the Lakeland, Sunsweet or Lucy soils, the Exum and Duplin series tend to have more loam and, hence, are more likely to trap heavy rainfall.

Mills comments that the swampland soils are composed of the "richest soil". He notes that "[w]hile the swamp lands reclaimed and secured from freshets, will bring 50 dollars an acre; and the oak and hickory lands 15 dollars an acre; the pine lands will scarcely sell for 1 dollar per acre" (Mills 1972:623 [1826]). He also observed that "[o]ff the water courses the situations are healthy", but "[a]s the swamps are the principal sources of disease in this country, it is much to be regretted that measures are not taken to drain, or reclaim them, which would not only secure the blessing of health to the people, but afford an immense quantity of rich soil for cultivation to the district" (Mills 1972:625 [1826]). The products cultivated during that time were "cotton, corn, wheat, pease, and potatoes" (Mills 1972:623 [1826]).

Another important consideration is an understanding of the "lithic landscape," or where different prehistorically utilized lithic materials might have originated. Since there is good evidence that lithic procurement was "embedded" in other subsistence related activities, taking place largely during normal rounds, the location of specific used resources provides some general indication of how wide an area might have been used by the prehistoric group. Most research, including this study, harkens back to the initial compilation of sources provided by Anderson et al. (1982:120-131, Figure 53) from work at Mattassee Lake in Berkeley County, South Carolina.

The closest resource was likely the neighboring region where quartz cobbles are frequently found in the soils. Studies at other sites, such as 38SU83 (see Blanton et al. 1986) have found these local sources to have been used with bi-polar flaking technology. In addition, chert nodules are reported in river gravels in the Pee Dee River, about 10 miles south of the 38FL249. Orthoquartzite materials are reported from the Black and Santee drainages 25 to 50 miles southwest of the site. Metavolcanics, used in the generic sense to include various tuffs, rhyolites, and argillite, are available

from above the fall line, again probably within 25 to 50 miles of the site (see Figure 4). It seems likely that most of the lithics identified at the site would have been available within a 50 mile radius of the site.

Climate

The general climate of the Florence county area is characterized by mild humid conditions. This climate is influenced by the warm Gulf Stream, as well as by the Appalachian mountains which block the coldest air masses. Other factors include latitude, elevation, distance from the ocean, and location with respect to the average tracts of migratory cyclones. Day to day weather is controlled primarily by the movement of pressure systems across the nation. However, during the summer months there are few complete exchanges of air masses because tropical maritime air persists for extended periods (Pitts 1974:108).

The average annual precipitation in the Florence area is 44.5 inches and is unevenly distributed throughout the year, with 28.9 inches occurring from April through October which is the primary growing season (Pitts 1974:108).

The climate, according to Mills (1972:625 [1826]), "taking the whole year round, is pleasant". The annual average temperature in Florence is 63.2°F, and the average monthly temperature ranges from 44.8°F in January to 80.3°F in July. Frozen precipitation occurs only one to three times a year during the winter season. The abundant supply of warm, moist and relatively unstable air produces frequent scattered showers and thunderstorms in the summer. Severe weather usually means violent thunderstorms, tornadoes, and hurricanes. The tropical storm season is in late summer and early fall, although storms may occur as early as May or as late as October (NOAA, 1977). Heavy rains and high winds occur with tropical storms about once every six years. Storms of hurricane intensity are much more infrequent. Notable droughts have occurred twice in modern times; in 1925 and 1954. Typically a serious drought may occur once every fifty years. Less severe dry periods have occurred more often, normally in late spring or in autumn (Pitts 1974:109).

Floristics

There are two major categories of plant communities, based primarily on topographic location, which exist in the project area. The first category consists of upland vegetation. Supported here are a mixture of coniferous and deciduous forests dominated by pines and broadleaf taxa such as upland oaks, sweetgum, hickories, and various understory species. Incorporated may be small upland depressions and drainages, which contain more hydric species.

Portions of the upland area were found to contain pine forest, typically found on soils of low fertility, high acidity, and excessive drainage. Most often these area have been subjected to extensive disturbance, often agricultural, and the pine represent an early stage of revegetation. A few areas of hardwood forest exist in the project area, where oaks, maple, sweetgum, black gum, and mockernut hickory are prevalent. More common, however are mixed forests, containing both pines and hardwoods. On the slopes overlooking the Pee Dee swamp, and often in close proximity to 38FL240 and 38FL249, is a beech-oak-hickory forest. This area may have been particularly attractive to prehistoric utilization since it contains both upperstory trees such as mockernut hickory and understory vegetation such as redbud, dogwood, grape, and pawpaw -- all attractive to browsers such as deer.

Lowland forests, which account for the second category, are located on the floodplain of the Pee Dee River. This floodplain is 30 to 40 feet lower in elevation and is clearly defined by a scarp, such as found on the north and east boundary of the survey tract. These floodplain soils are forested

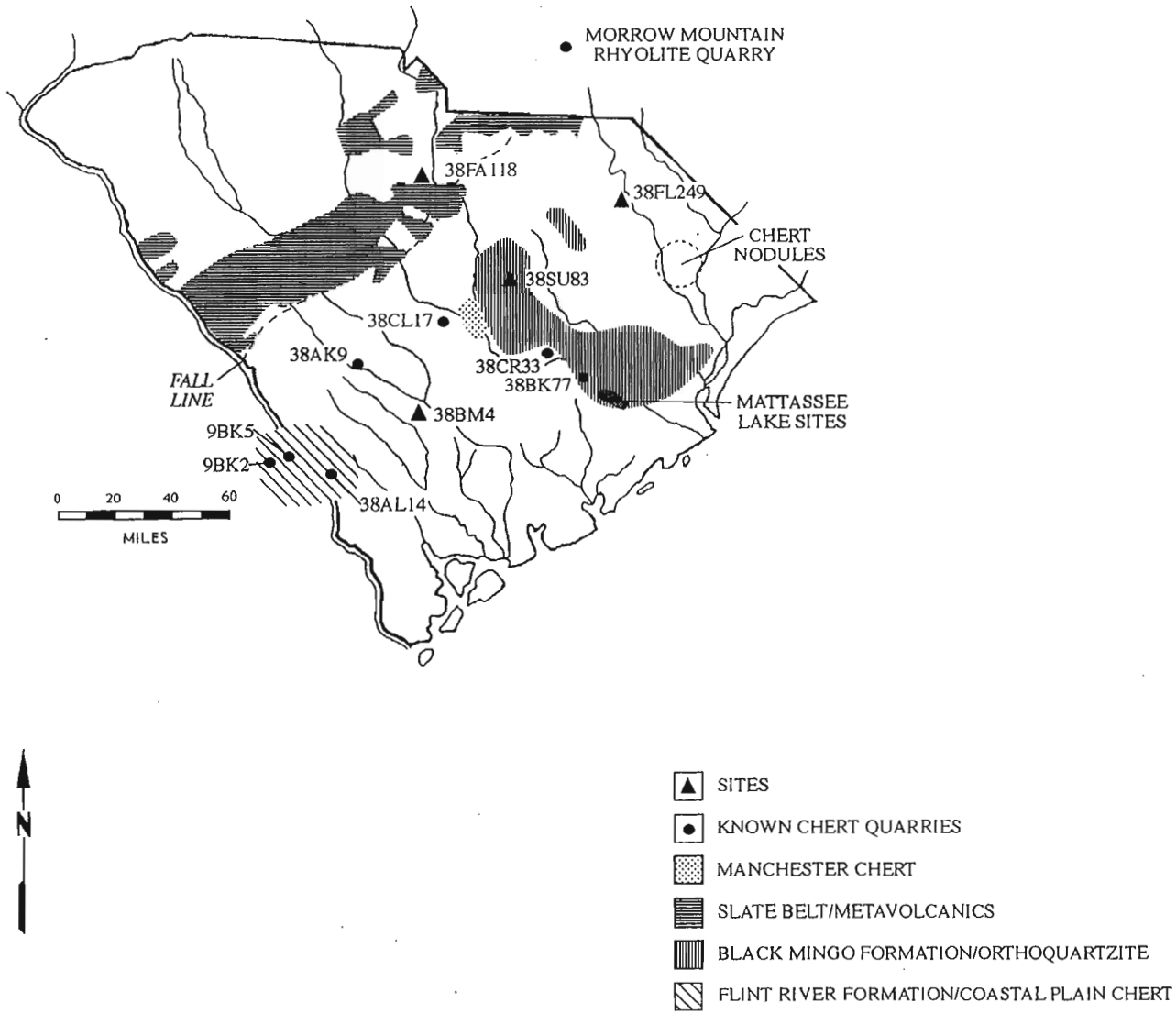

Figure 4. Lithic raw material source locations (adapted from Anderson et al. 1982 and Blanton et al. 1986).

with bald cypress, gum, sycamore, water hickory, lowland oaks, soft maples, willows, and other herbaceous species.

In the early nineteenth century Mills observed that:

> the long leafed pine is most abundant of the forest trees; next the cypress, various kinds of oak, the hickory, tupilo &c. Of fruit trees the peach, apple, pear, plum,. &c. are common (Mills 1972:624 [1826]).

Mills also observed that the major use of these forest resources was construction, also noting that "good clay is found in various places, suitable to make brick" (Mills 1972:625 [1826]). Only lime, largely made of burnt shells, needed to be imported into the area (primarily from neighboring Georgetown). Mills encouraged the residents to make better use of their local "shell limestone" for lime, a suggestion which appears to have made little impact in the local economy (Mills 1972:628 [1826]).

Today, about a third of the Florence's uplands have been cleared for cultivation. On the survey tract, approximately 70% of the land is in fallow fields or active cultivation. The remainder of the area consisted primarily of coniferous and deciduous trees including pines, oaks, sweetgums, and hickories. In addition, the wooded areas consisted of a very thick understory of plants including blackberry (particularly along field edges), muscadine, wild and domesticated flowers, and various shrubs, vines, and herbaceous species.

Paleo-Environmental Reconstructions

Table 1 offers a generalized view of one possible reconstruction of Florence area ecology, based on data from a wide variety of sites on the Atlantic Slope. Obviously, any such reconstruction would be more reliable based on data from nearer the project. One study used in the reconstruction is from sediments and pollen collected at White's Pond near Camden, South Carolina (Watts 1980), less than 75 miles from the project location.

Table 1.
Generalized Paleo-Environmental Reconstruction

Episode	Climate	Vegetation
Late Glacial (15,000 - 10,000 B.P.)	Cooler and moister than present	Oak, hickory, beech, hemlock
Early Post Glacial sharp (10,000 B.P. to 8,000 B.P.) gum	Warming trend continued from Early or Full Glacial Period with increased moisture	Oak and hickory maximum, decline in beech and
Later Post Glacial (8,000 B.P. to present)	Continued warming with gradual desiccation.	Oak and pine. Pine increases relative to the decreasing oaks. Modern vegetation patterns by 7000 B.P.

There are several significant issues involved in this brief reconstruction. First is that by the time of the earliest occupation of South Carolina (correlating with the Post-Glacial) the landscape was dominated by a closed canopy oak-hickory forest. Of equal importance is that pine did not achieve its partial dominance in the overstory, taking on a more "modern" appearance[3]. The forest types present would have played important role in the nature and distribution of critical resources, and hence the distribution and subsistence rounds of Native American populations. Most important for our study of 38FL249 is that the site area would likely have been attractive to a wide range of mast or fruit producing resources, such as hickories, oaks, grapes, and other species common to disturbed environments, as well as faunal resources associated with edge communities, such as deer, racoon, and opossum. It is also possible that the swamp resources, such as fish, turtles, and migratory birds were also important in the prehistoric period.

In spite of this, accounts of Native Americans making it clear that even they dramatically altered the nature and appearance of the Southeastern forests. Through fire, many believe that the Indians created a heterogeneous forest, interspersed with different vegetation, erosional areas, old growth, and new growth. There is some correlation between the apparent "haphazard" burning and the nature of Native American forest utilization. There is good evidence from areas surrounding South Carolina that at least in the late protohistoric and early historic periods the native inhabitants were irregular and unpredictable in their use of resources. One observer, Hugh Jones, an early eighteenth century professor at the College of William and Mary, observed that, "They have no notion of providing for futurity; for they eat night and day while their provision lasts, falling to as soon as they aware, and falling asleep again as soon as they are well crammed." Silver remarks that:

> Indians were equally cavalier about food shortages. During their summer migrations, when they depended largely upon berries and other wild produce, they sometimes went for days without food. Late winter, too, could brings periods of sporadic hunger as game animals moved out of the oak forests and supplies of corn began to dwindle. In keeping with their stoic nature, the natives accepted such lean times as inevitable and rode them out without complaint. Their seemingly imprudent eating habits and willingness to go hungry in a land of apparent plenty never ceased to amaze Europeans. John Smith spoke for many Englishmen when he remarked about the "strange" manner in which the Indians' "bodies alter[ed] with their diet." Like "deare and wilde beastes they seem[ed] fat and lean, strong and weak" (Silver 1990:65).

It should be clear that paleo-environmental reconstructions can be useful for better understanding where resources **might** be located, but they cannot tell us how these resources were **actually used** by the Native Americans. Reconstructions of subsistence rounds based on logic and availability are likely to mask the reality of human nature. The caution here is not to throw one's hands up in despair (since we must try to make sense of the data), but rather that we cannot take for granted that Native Americans were humans and fell prey to the same inconsistencies that "plague" humans today.

One interesting reconstruction is that offered by Hanson et al. (1981) for their investigation of the Steel Creek drainage in Aiken County. Although their study area is within a sand hill region, rather than the inner coastal plain, there are broad similarities in vegetational, hydrological, and faunal resources. Although most of their specific resource zones are related to streams, Zone I represents the Upland Sand Hills, which approximates the 38FL249 area. Zone I faunal resources are

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[3] The modern Pee Dee upland flora largely reflects land uses over the past 300 years, such as forest management, agricultural activities, and timber management. It is admittedly difficult to conceive of an original forest, given the extent of these disturbances.

most abundant in the fall and winter, and early spring; floral resources are found in both the fall and winter (representing nuts and acorn masts) and in the spring (representing fruits and greens).

We must also realize that the alteration of the environment, begun by the Native Americans on a limited scale, continued through the eighteenth and nineteenth centuries and into the early twentieth century. Indeed, using European technology and African slave labor, the early colonists found it easy to clear lands which had been too heavily forested for the Native Americans. The process of clearing changed the pattern of animal use, reducing many species while opening up new niches for others. The clearing, specially in the piedmont, brought sudden erosion to a land where erosion was limited (Trimble 1974). The extent of this clearing is evidenced in nearby Williamsburg County where there were 70,360 acres of improved land in 1850 and 160,000 acres in 1978 (DeBow 1854:304; Ward 1989:55).

The gradual changes in the land included increased use of very toxic pesticides, increased infertility and finally exhaustion of land overplanted in cotton, and large areas of second growth as land went out of use during the 1930s. As Raper and Reid observed:

> nowadays the South is anything and everything. It is problem and opportunity, proud and pitiful -- a land of unlimited possibility and of unrelieved privation. Potential adequacy and actual deficiency walk hand in hand across the Southern scene (Raper and Reid 1941:v).

The Effects of Agriculture

The South's large arable area, in relationship to its relatively small population (at least prior to the growth of the "sunbelt") has resulted in two centuries of unparalleled land exploitation. Historian Lewis C. Gray remarked that, "planters bought land as they might buy a wagon -- with the expectation of wearing it out." Poor husbandry coupled with a fragile environment resulted in extensive changes to the natural environment.

Cotton's history, coupled late with tobacco, is the history of Florence County, and the history of the environment. From slavery through tenancy, cotton ruled the agricultural efforts of Florence, her plantation owners, and her tenants. Work began in the spring, breaking the land, running rows, and planting. After the seeds sprouted and plants emerged, there was constant chopping and hoeing in an effort to keep the cotton from being swallowed by the weeds. Lay-by time arrived in mid-summer and in the autumn the bolls matured and opened, signalling the time for picking. While typically associated with slavery and later with large plantations, even the South's yeoman farmers could never resist the siren lure of cotton (see Eaton 1964:148; Harris 1985:25-26).

The crop was always subject to problems. Beginning in the 1920s, the cotton boll weevil, *Anthonomous grandis* B., arrived in South Carolina, having begun its journey from Mexico nearly 30 years earlier. By depositing eggs in the cotton square, the boll weevil prevented the development of the locks of fiber. Planters attempted to reduce the impact by modifying growing practices, for example by planting early maturing varieties earlier in the spring. While such cultural practices helped, recovery was never quite achieved. Likewise, a variety of pesticides were developed for the boll weevil, beginning with calcium arsenate in 1919. While these succeeded in polluting the land, poisoning the farmers, and increasing production costs, they had less significant affects on the boll weevil.

Cotton has also long been recognized for its ability to deplete soils. Early agricultural practices included limited efforts to fertilize fields, with planters preferring abandonment and opening of new

lands. By the 1850s one commentator remarked, "tens of thousands of acres of once productive lands are now reduced to the maximum of sterility," another exclaimed that "the destroying angel has visited these once fair forests and limpid streams . . . everything everywhere betrays improvident and reckless management," while a third used even more morbid terms:

> nearly all the lands have been cut down and appropriated to tillage: a large maximum of which have been worn out, leaving a desolate picture for the traveler to behold (Olmsted 1856:533).

Tobacco, another important crop in the Florence area, affecting not only the culture of the region, but also its land and environment. Bright leaf tobacco was developed in North Carolina during the 1850s and spread into Virginia, South Carolina, and Georgia by the 1880s. Instead of air-drying the tobacco leaf on the stalk in well ventilated houses, this new process cured tobacco leaves, minus the stalks, using carefully controlled heat in tightly closed tobacco barns -- turning the leaves a bright golden color. To prevent the leaves from being darkened by smoke and soot, a flue-curing method was adopted, which also served to distribute the heat more uniformly, producing a smoother, and milder, tobacco.

Tobacco was turned to by farmers in the Florence region as an alternative to cotton and its low prices of the 1880s and early 1890s[4]. The new tobacco grew best in the light-colored sandy loams which dominated the Pee Dee region. In fact, the imported "experts" from North Carolina advised that the best tobacco grew in thin soils and that "starved leaf made the lightest and most aromatic weed," providing hope to farmers with exhausted cotton lands. The initial boom of tobacco turned sour with the depression. Tobacco was a hard crop -- using intensive hand labor and practically no machinery. Over production eventually resulted in low prices and collapse of this commodity.

Like cotton, tobacco required pest control procedures that poisoned pests, users, and land alike. Arsenical compounds such as London purple and Paris green were the main insecticides for chewing insects. In spite of the early claims farmers quickly found that tobacco grew best on newly cleared lands rich in humus. Consequently, a new round of land clearing and exhaustion began, since tobacco removes large amounts of potash and nitrogen (Duggar 1921:525).

The cultivation of the soil was not, as the agrarianists believed, especially blessed by God, nor was agriculture especially likely to create an ideal social order. In spite of this agrarian romance which infected the South, it is clear that agricultural production was as devastating in its own way to the natural environment as was the industrial development of the North.

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[4] In 1893 cotton reached an all-time low of 4¢ a pound, making tobacco both attractive and lucrative, even for the uninitiated. Even with an average price of 8¢ a pound and an average yield of 400 pounds per acre, a Pee Dee farmer in 1885 might *gross* about $32 from a typical acre of cotton. *Net* profits on tobacco, however, could run as high as $116 an acre -- about what four acres of cotton would yield, before taking out all of the expenses.

PREHISTORIC AND HISTORIC OVERVIEW

Previous Research in the Vicinity

Although considerable research has been conducted in the lower coastal plain of South Carolina, little scholarly research has focused on the region inland to the fall line. Prior to the mid-1970s, fewer than 20 sites were recorded in Florence County, and most of these represented small Native American sites along inland swamp edges. One exception was the remnants of a Civil War prisoner of war camp (38FL2) used by the Confederates just outside the City of Florence.

Nineteen of the 28 archaeological studies (68%) conducted in Florence County have involved highway construction and have examined only very small, isolated areas of the County (see Derting et al. 1991). The only major investigation was the 1984 survey of the 2700 acre Santee Cooper Pee Dee Electrical Generating Station, which is situated considerably south of the proposed project, but in a similar environmental context (Taylor 1984). The Santee Cooper study identified 103 cultural resources, including 38 prehistoric sites, 33 historic sites, and 32 standing structures. The most intensively used environmental zones were the bluff edge and along minor tributaries. Upland areas were only lightly used, primarily by Woodland Period groups.

The study also found evidence of increasing occupational intensity from the Late Archaic through Woodland periods. Identified pottery types include Stallings, Deptford, Yadkin, Wilmington[5], and Cape Fear[6]. Taylor reports finding the Wilmington and Cape Fear ceramics spatially separated, noting that "if the two past categories indeed reflect temporally or behaviorally distinct assemblages, then some degree of spatial discreetness might be expected" (Taylor 1984:86). The study also obtained two dates from the sandy paste pottery, A.D. 920±70 and A.D. 730±50, interpreted to support a temporal succession from the grog tempered Wilmington to the sandy paste Cape Fear. Taylor provides a relatively detailed account of the lithics recovered from the survey and testing at one site, 38FL115, finding that many of the sites exhibited a similar distribution of flake sizes and decortification stage profiles. At the same time there were different profiles for several of the sites which exhibited similar occupational histories. While such differences could represent sampling bias, or other unrecognized factors, Taylor argued the data indicated "that these locations were used in similar ways by groups with widely different demographies," while the "redundancy of use is very likely strongly conditioned by the scarcity of lithic raw materials which are not present in the immediate area" (Taylor 1984:195). Also of interest is the conclusion that the presence of metavolcanic raw material, available in the Piedmont about 50 or 60 miles distant, in both Archaic and Woodland assemblages indicates that "geographical scale of these different adaptations is similar and that transport costs (i.e., procurement of raw materials) were similar" (Taylor 1984:195). Although these might be interpreted as brash conclusions based on such a limited survey, the study obviously provides a "springboard" for additional research and testing of ideas.

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[5] Essentially the same as the Hanover type used in this study.

[6] Originally described as sandy paste cord and fabric impressed pottery, often further subdivided today into such types as Deptford, Deep Creek, Mount Pleasant, and Santee, all dating primarily from the Middle to early Late Woodland.

For historic settlement, the study found that eighteenth century sites were found either on the bluff edge, or along major roads. In the nineteenth century the bluff edge was abandoned and settlements were almost exclusively "road-oriented," although they might be set back from the road as much as 300 feet. By the early twentieth century the settlement pattern is less well defined, with tenant sites occurring in a variety of locations (Taylor 1984).

Relatively little attention was paid by the survey to historic sites compared to the prehistoric resources. Taylor remarks that:

> identification of tenant farmsteads is problematical, because, after the beginning of tobacco agriculture, these may become confused with the artifact assemblages associated with the use of tobacco barns. Although the intensity of use of a farmstead is greater than that of a tobacco barn, the extremely meager artifact assemblages represented make it presently impossible to separate these types, unless there is independent evidence, such as a chimney (Taylor 1984:196).

This analysis is curious since while the excavations conducted at tobacco barns revealed domestic refuse (such as bottle glass and an occasional button), as well as architectural items (primarily nails), they failed to produce a single ceramic. While tobacco barns were locations of considerable social importance, where a number of individual spent considerable time, it appears that the artifact patterns around tobacco barns are clearly different from those around tenant houses.

Similar prehistoric results were found in a survey of the White Creek drainage in Marlboro County (Ward 1978). There a large number of Archaic and Middle Woodland sites were found on the edges of terraces, overlooking the creek swamp. Ward noted that the survey area, while poor for horticulture, represents a "rich and varied selection of wild plant and animal resources [resulting from its location] in an ecotonal zone" (Ward 1978:57). Wards' work represented the first clearly defined Middle Woodland Yadkin occupation sites in he upper coastal plain of South Carolina.

More recent research at 38SU83 in Sumter County yielded additional information concerning on the Yadkin phase in the upper coastal plain (Blanton et al. 1986). A short term, domestic settlement, 38SU83 documents Yadkin phase ceramic and lithic technology, while offering some very tentative suggestions of a seasonal round and possible caching behavior. This work remains one of the few published reports on the excavation of a Yadkin phase site.

An Overview of Prehistoric Archaeology

The Paleo-Indian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). The Paleo-Indian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124).

Unfortunately, little is known about Paleo-Indian subsistence strategies, settlement systems, or social organization. Generally, archaeologists agree that the Paleo-Indian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

The Archaic period, which dates from 8000 to 2000 B.C., does not form a sharp break with

the Paleo-Indian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited mammal. The chronology established by Coe (1964) for the North Carolina Piedmont may be applied with little modification to the South Carolina coastal plain and piedmont. Archaic period assemblages, exemplified by corner-notched and broad-stem projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

In the Coastal Plain of the South Carolina there is an increase in the quantity of Early Archaic remains, probably associated with an increase in population and associated increase in the intensity of occupation. While Hardaway and Dalton points are typically found as isolated specimens along riverine environments, remains from the following Palmer phase are not only more common, but are also found in both riverine and interriverine settings. Kirks are likewise common in the coastal plain (Goodyear et al. 1979).

The two primary Middle Archaic phases found in the coastal plain are the Morrow Mountain and Guilford (the Stanly and Halifax complexes identified by Coe are rarely encountered). Our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work in the Little Tennessee River Valley. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and South Carolina, where axes, choppers, and ground and polished stone tools are very rare.

The Late Archaic is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued the intensive exploitation of the uplands much like earlier Archaic groups. The bulk of our data for this period, however, comes from work in the Uwharrie region of North Carolina.

The Woodland period begins by definition with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast (the introduction of pottery, and hence the beginning of the Woodland period, occurs much later in the Piedmont of South Carolina). It should be noted that many researchers call the period from about 2500 to 1000 B.C. the Late Archaic because of a perceived continuation of the Archaic lifestyle in spite of the manufacture of pottery. Regardless of terminology, the period from 2500 to 1000 B.C. is well documented on the South Carolina coast and is characterized by Stallings (fiber-tempered) pottery (see Figure 5 for a synopsis of Woodland phases and pottery designations). The subsistence economy during this early period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish.

Like the Stallings settlement pattern, Thom's Creek sites are found in a variety of environmental zones and take on several forms. Thom's Creek sites are found throughout the South Carolina Coastal Zone, Coastal Plain, and up to the Fall Line. The sites are found into the North Carolina Coastal Plain, but do not appear to extend southward into Georgia.

In the Coastal Plain drainage of the Savannah River there is a change of settlement, and probably subsistence, away from the riverine focus found in the Stallings Phase (Hanson 1982:13; Stoltman 1974:235-236). Thom's Creek sites are more commonly found in the upland areas and lack evidence of intensive shellfish collection. In the Coastal Zone large, irregular shell middens, small, sparse shell middens; and large "shell rings" are found in the Thom's Creek settlement system.

The Deptford phase, which dates from 1100 B.C. to A.D. 600, is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement

pattern involves both coastal and inland sites.

Inland, sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Coastal Plain, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1978, 1980c). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1989:96-98).

Throughout much of the Coastal Zone and Coastal Plain north of Charleston, a somewhat different cultural manifestation is observed, related to the "Northern Tradition" (e.g., Caldwell 1958). This recently identified assemblage has been termed Deep Creek and was first identified from northern North Carolina sites (Phelps 1983). The Deep Creek assemblage is characterized by pottery with medium to coarse sand inclusions and surface treatments of cord marking, fabric impressing, simple stamping, and net impressing. Much of this material has been previously designated as the Middle Woodland "Cape Fear" pottery originally typed by South (1960). The Deep Creek wares date from about 1000 B.C. to A.D. 1 in North Carolina, but may date later in South Carolina. The Deep Creek settlement and subsistence systems are poorly known, but appear to be very similar to those identified with the Deptford phase.

The Deep Creek assemblage strongly resembles Deptford both typologically and temporally. It appears this northern tradition of cord and fabric impressions was introduced and gradually accepted by indigenous South Carolina populations. During this time some groups continued making only the older carved paddle-stamped pottery, while others mixed the two styles, and still others (and later all) made exclusively cord and fabric stamped wares.

The Middle Woodland in South Carolina is characterized by a pattern of settlement mobility and short-term occupation. On the southern coast it is associated with the Wilmington phase, while on the northern coast it is recognized by the presence of Hanover, McClellanville or Santee, and Mount Pleasant assemblages. The best data concerning Middle Woodland Coastal Zone assemblages comes from Phelps' (1983:32-33) work in North Carolina. Associated items include a small variety of the Roanoke Large Triangular points (Coe 1964:110-111), sandstone abraders, shell pendants, polished stone gorgets, celts, and woven marsh mats. Significantly, both primary inhumations and cremations are found.

On the Coastal Plain of South Carolina, researchers are finding evidence of a Middle Woodland Yadkin assemblage, best known from Coe's work at the Doerschuk site in North Carolina (Coe 1964:25-26). Yadkin pottery is characterized by a crushed quartz temper and cord marked, fabric impressed, and linear check stamped surface treatments. The Yadkin ceramics are associated with medium-sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least A.D. 300 coexisted with this Triangular Tradition. The Yadkin series in South Carolina was first observed by Ward (1978, 1983) from the White's Creek drainage in Marlboro County, South Carolina. Since then, a large Yadkin village has been identified by DePratter at the Dunlap site (38DA66) in Darlington County, South Carolina (Chester DePratter, personal communication 1985) and Blanton et al. (1986) have excavated a small Yadkin site (38SU83) in Sumter County, South Carolina. Anderson et al. (1982:299-302) offer additional typological assessments of the Yadkin wares in South Carolina.

Over the years the suggestion that Cape Fear might be replaced by such types as Deep Creek and Mount Pleasant has raised considerable controversy. Taylor, for example, rejects the use of the

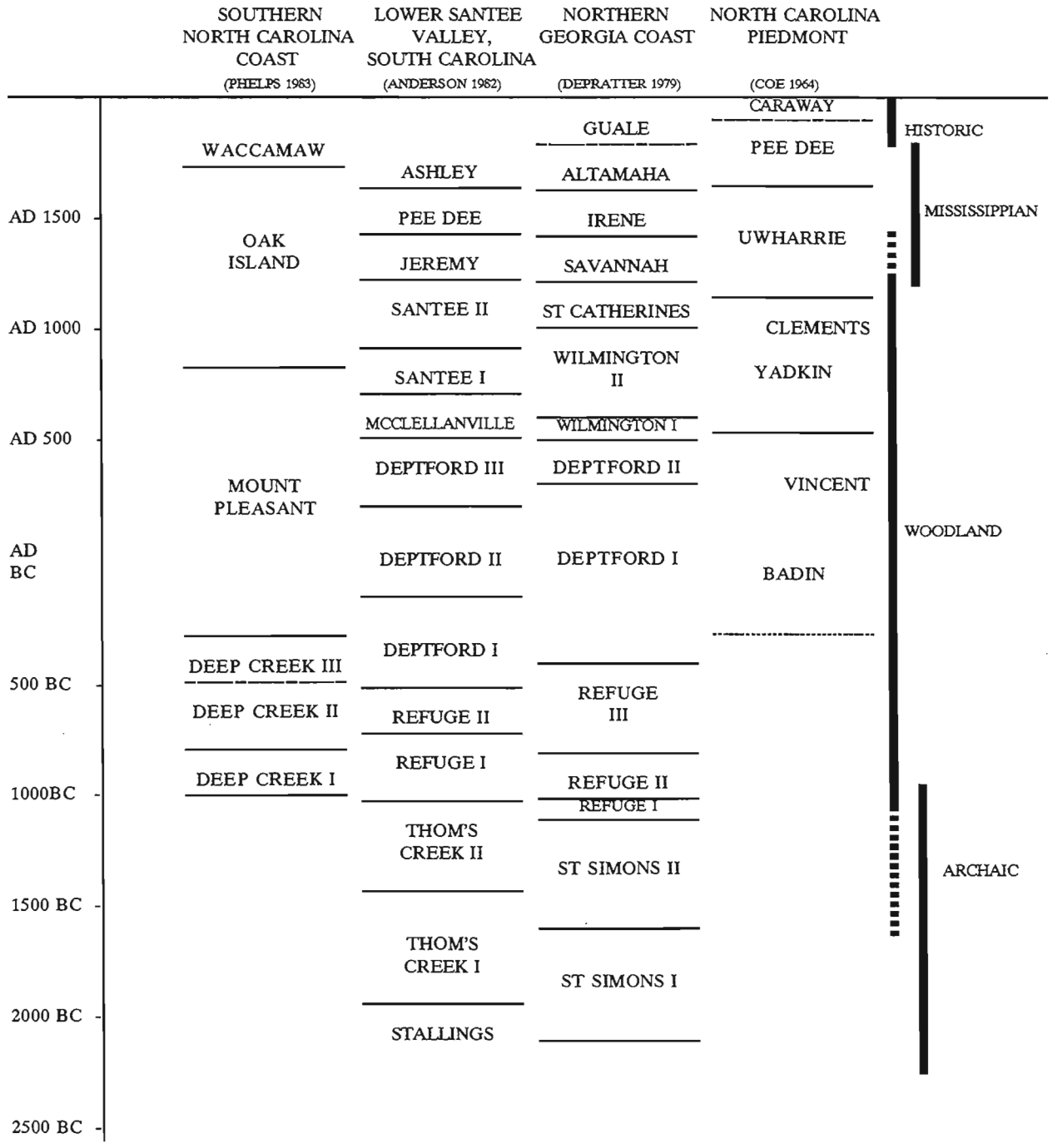

Figure 5. Chronology of the Woodland and Protohistoric periods in the Carolinas.

North Carolina types in favor of those developed by Anderson et al. (1982) from their work at Mattassee Lake in Berkeley County (Taylor 1984:80). Cable (1991) is even less generous in his denouncement of ceramic constructs developed nearly a decade ago, also favoring adoption of the Mattassee Lake typology and chronology. This construct, recognizing five phases (Deptford I - III, McClellanville, and Santee I), uses a type variety system.

Regardless of terminology, these Middle Woodland Coastal Plain and Coastal Zone phases continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the Fall Line, shell midden sites evidence sparse shell and artifacts. Gone are the abundant shell tools, worked bone items, and clay balls. Recent investigations at Coastal Zone sites such as 38BU747 and 38BU1214, however, have provided some evidence of worked bone and shell items at Deptford phase middens (see Trinkley 1990).

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500 to 700 years (cf. Sassaman et al. 1989:14-15). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

The South Appalachian Mississippian Period (ca. A.D. 1100 to 1640) is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease. The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers. The earliest phases include the Savannah and Pee Dee (A.D. 1200 to 1550).

Protohistoric Period

The principal secondary sources for the Native Americans of South Carolina are Mooney (1894), Hodge (1910), and Swanton (1952). Despite considerable investigation of the recognized primary sources, little can be added to these earlier, rather sketchy, accounts of the Pedee.

The first Native American groups to make contact with the English settlers and explorers were the "feeble and unwarlike coast tribes" (Gregorie 1926:8), such as the Cussoes, Wandos, Wineaus, Etiwans, and Sewees. The Pedee are first mentioned in 1711 when they formed a small part of Colonel John Barnwell's force against the Tuscarora in North Carolina (Milling 1969:118). Mooney (1894:76-77) notes that their village, in 1715, was situated on the east bank of the Pee Dee, probably in the vicinity of Marion County. A military map dating from 1715 shows the Pedees to be about 38 miles down river from the "Saraus" (Saras) and about 80 miles up river from the Atlantic Ocean. This would place the Pedee very close to their location shown by DeBrahm on his 1757 map.

By 1716 the Pedees were in a region called Saukey (thought by Swanton to be what is today Socatee) which was mentioned as a possible trading post or "factory" site (McDowell 1955:80). Several months later, however, the Indian Trade Commissioners abandoned Suakey in favor of Uauenee (or Great Bluff, today known as Yauhannah). It was observed that:

> 1st, its Vicinity to our English Plantations, will afford us News from thence, at all Times, by Land, within three or four Days, at most; whereas Saukey (the appointed Place) is much more remote; 2ndly, that Saukey being only covered by the Pedea's, is exposed to the Insults of the Charraws; 3rdly, that (besides the Interest it will be to us, in obliging the Wackamaws, a People of greater Consequence then the Pedeas, by such a Settlement), Uauenee being contiguous to the Wackamaws, the most populous

> of those two Nations; so on the other Hand, 'tis the best seated for a general Consourse and frequent (McDowell 1944:111).

This passage, while ambiguous, suggests that Saukey was situated further north, perhaps along the Pee Dee River. But it is unlikely that it was at Socatee as suggested by Swanton.

During the early eighteenth century there was constant warfare between the southern and northern Indian groups, with a tremendous loss of life. An account in the British Public Records Office states:

> Before the end of the said year [1716] we recovered the Charokees and Northward Indians after several Slaughters and Blood Sheddings, which has lessened their numbers and utterly Extirpating some little tribes as the Congarees, Santees, Seawees, Pedees, Waxhaws and some Corsaboys, so that by Warr, Pestilence and Civill Warr amongst themselves, the Charokess may be computed reduced to about 10,000 souls & the Northern Indians to about 2500 Souls (quoted in Mills 1972:223-224).

While it is possible that the Pedee suffered a severe reduction in population, it is clear from the historic accounts that some of their number survived. In February 1717 a Pedee, Tom West, came to Charleston to arrange a peace between the English and the Charraw (McDowell 1955:160, 176). Apparently the peace was not formed, or at least was short lived (McDowell 1955:209). Late in 1717 the Pedee appealed to the English not to move the trading post from Uauenee to the Black River (McDowell 1955:208).

At least as early as the 1740s some of the Pedee had joined with the Catawba in an uneasy confederation (Mooney 1894:77), while the remaining Pedee were classified as "Settlement Indians," living among the English (McDowell 1958:85, 166). Mooney reports that the Settlement Pedee joined in a variety of Anglo activities, even keeping black slaves (Mooney 1894:77). In 1752 the Catawba wrote Governor James Glen:

> There are a great many Pedee Indians living in the Settlements that we want to come and settle amongst us. We desire you to send for them and advise them to this, and give them this String of Wampum in Token that we want them to settle here, and will always live like Brothers with them. The Northern Indians want them all to settle with us, for as they are now at Peace they may be hunting in the Woods or stragling about killed by some of them except they join us and make but one Nation, which will be a great Addition of Strength to us (McDowell 1958:362).

While many of the remaining Pedee apparently joined the Catawba, it did not provide total protection. As late as 1753 the Northern Indians took at least one Pedee Indian slave during a "visit" to the Catawba area (McDowell 1958:388). In 1755 a Settlement Pedee was killed by the Notchee and Cherokee (Mooney 1894:77, 84).

DeBrahm's "Map of South Carolina and a Part of Georgia," dated 1757 shows the "Peadea Indian Old Town" situated almost immediately east of the survey tract. By the time of Mouzon's "An Accurate Map of North and South Carolina" in 1775 no further evidence of the Pedee was shown.

The last mention of the Pedee comes from Ramsay's History of South Carolina:

> Persons now living remember that there were about thirty Indians, a remnant of the Pedee and Cape Fear tribes that lived in the Parishes of St. Stephens and St. Johns. King John was their chief. There was another man among the same tribe who was

> called Prince. Governor Lyttelton give him a Commission of Captain General and Commander-in-Chief of the two tribes, which superseded Johnny. The latter took umbrage at the promotion of the former and attempted to kill him. There were some shots exchanged, but no mischief was done. All this remnant of these ancient tribes are now extinct except for one woman of a half-breed (Ramsay 1808:Appendix II).

Swanton was able to determine little more than this about the Pedee, observing that no words survived. In spite of this, he attributed the Pedee to the Siouan linguistic stock, probably on the basis of their frequent identification with other, supposedly Siouan, groups.

No archaeological sites attributable to the Pedee have been identified and Swanton observed, "no village names are known apart from the tribal name, which was sometimes applied to specific settlements" (Swanton 1952:97). The presumed protohistoric remains in this region are essentially identical (at least in a gross sense) to those found elsewhere. They include small, triangular projectile points, often crudely made; complicated stamped pottery with motifs ranging from finely applied to crudely stamped; and diminutive ground stone celts. Protohistoric to historic Pedee villages, when found, are likely to be evidenced by a significant quantity of trade goods, including glass beads, copper bangles, guns or gun parts, tobacco pipes, iron hatchets and knives, and similar items.

The presence, and particularly the association, of these trade items may be of considerable importance. Work in North Carolina by Wilson (1984) has revealed that at Siouan sites the trade goods assemblage changes dramatically from the terminal seventeenth century through the early eighteenth century, with an increase in kitchen, arms, and tobacco artifacts and the replacement of beaded clothing by European fashions with buttons.

At the present, however, there is virtually nothing known of the Pedee Indians and their villages remain lost. The Pedee settlement which should be most easily identified based on period maps has received no professional attention, although there is some evidence that it has been looted by relic hunters.

Historic Synopsis

The area today known as Florence County received little attention until the Yemasee War of 1715 forced many of the Native Americans from the region, allowing a more aggressive settlement policy in the region below the fall line, termed the "lower middle country" (Brown 1963:2; see also Wallace 1951). From about 1715 to 1727 there was a period of tremendous lust for land, with the accompanying fraud so common to period politics. In 1730 Governor Robert Johnson began a policy of frontier settlement, hinged on the creation of 11 townships and intended to increase the number of small, white farmers. This increased settlement would provide protection from South Carolina's enemies from within (as the African American slaves were viewed) and from without (including both the Spanish and the Native Americans).

With the creation of Georgia, only nine of the proposed 11 townships were actually established. One of these was Queensborough, 20,000 acres situated on the east and west sides of the Pee Dee River (Figure 6). Although well south of survey tract, the Queensborough boundaries have frequently been extended to include a large portion of southern Florence County, up to the Mars Bluff region (see King 1981:5). While not strictly a township, the Welch Tract was another center of frontier settlement. Joining Queensborough on the northwest, the Welch Tract originated in 1736 and was settled by a colony of Welsh Baptists from Newcastle County, Pennsylvania (Wallace 1951:155).

Settlement in Queensborough was sporadic and limited, at least partially because the topography and soils were better suited to large plantations than to small farms. The rather limited

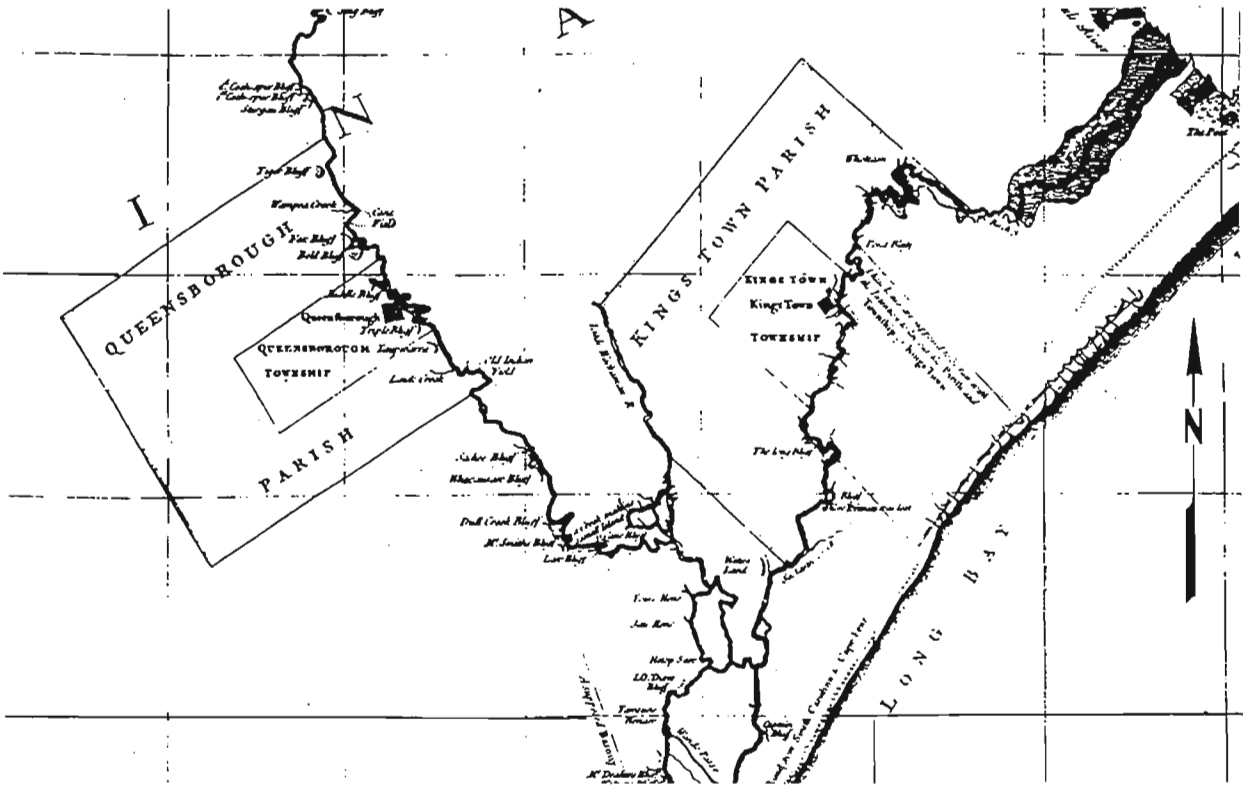

Figure 6. Vicinity of the Queensborough Township.

high ground area was quickly obtained by a limited number of settlers (Merriwether 1940:89-90). One early settler in the Queensborough Township was Jacob Buckholt, a native of Prussia, who obtained two tracts in 1735 (Suzanne Linder, personal communication 1992). Buckholt apparently obtained several additional parcels on the Pee Dee in 1738 (S.C. Department of Archives and History, Mortgage Book B, p. 330, 410).

By the mid-eighteenth century Gideon Gibson was beginning to obtain small tracts of land on both sides of the Pee Dee River. A tract of 200 acres on the southwest side of the Pee Dee was laid out in October 1755 (S.C. Department of Archives and History, Colonial Plats, volume 6, p. 45; see also Cook 1926). Another 200 acre tract in the same vicinity was laid out in 1764 (S.C. Department of Archives and History, Colonial Plats, volume 8, p. 453). A Memorial for 462 acres was issued in 1767 for a tract "near the Pee Dee" (S.C. Department of Archives and History, Memorial Book 9, p. 270). In 1773 Gibson obtained two additional tracts, totalling 1800 acres, both on the west side of the Pee Dee (S.C. Department of Archives and History Memorial Book 12, p. 150).

During this period the economy of the Pee Dee was oriented toward both mixed agricultural production, supplying the needs of the Georgetown rice plantations (see Rogers 1970:27) and also to the cash crop of indigo (Rogers 1970:52-53; Suzanne Linder, personal communication 1992). King (1981:11) found that a resident of the Mars Bluff area, Malachi Murphy, offered 1800 acres, ideal for

the planting of indigo, for sale in 1745.

Only certain areas of the low country could produce rice profitably. This limiting factor, coupled with the dramatic decline in rice prices in the 1720s (see Coclanis 1989:106), provided the incentives necessary for serious consideration of indigo by planters. The economic motive for indigo was clear. Carman noted:

> Mr. Glen's account is that one acre of good land will produce 80 lb. and one slave may manage two acres and upwards, and raise provisions besides, and have all the winter months to saw lumber and be otherwise employed: 80 lb. at 3s., the present price, is 12£ per acre; and 2½ acres at that rate amount to 30£ per slave, besides lumber, which is very considerable: but I should observe, that there is much indigo being brought now from Carolina which sells in London for from 5s. to 8s. a pound, some even higher, though the chief part of the crop may not yield more than 3s. or 4s.; this will alter the average price (Carman 1939:281-290 [1775]).

Copenhaver (1930) suggests that a yield of 80 pounds per acre was high and a better average was 30 to 40 pounds per acre. Eight slaves could cultivate, harvest, and prepare the dye from a 40 acre plot -- with returns from 30¢ to $2.25 per pound.

The industry also flourished because of its unusual advantages -- an indirect bounty, a protective tariff, and a monopoly on the British market during the various wars which cut off access to the better Spanish and French indigo supplies (Sharrer 1971). Winberry also suggests that South Carolina's love affair with indigo ran hot and cold, unlike its commitment to rice. At the end of King George's War in 1748, many Carolina planters returned to rice. Indigo cultivation continued, but it was always of poor quality, typically the cheapest "copper indigo" quality. Carolina planters failed to pay close attention to the exacting requirements of processing, and the result was disastrous. According to Winberry, "importers also noticed that in many of the casks there was nothing but a black spongy substance producing a muddy effect, as if the indigo were mixed with soil" (Winberry 1979:248).

If processing was difficult, cultivation was fairly simple. The crop was planted from seed in middle April, with a preference for dry, loose soil typical of "hickory lands and pine barrens." The plant was harvested in late June or early July, immediately after it blossomed, by cutting it off at ground level. This allowed the roots to produce a second, and sometimes a third, crop before it was filled by frost.

The plants were hauled to the indigo vats and placed in a steeper made from pine or cypress planks measuring 16 feet square and 3½ to 5 feet deep. The plants were weighted down, covered with water, and allowed to ferment for 10 to 14 hours to remove the dye. The "liquor" was drained off to the wooden beating vats, which were typically 15 feet long, 8 feet wide, and 5 feet deep. There the solution was oxidized by beating. After visible precipitation began, limewater was added from the adjacent lime vat to aid coagulation of the dye. Agitation was continued for about an hour. Afterwards the liquid was drained from the vat and strained through woolen cloth to catch the dye. As Carman notes, "indigo has a very disagreeable smell, while making and curing; and the foeces, when taken out of the steeper, if not immediately buried in the ground (for which it is excellent manure) breeds incredible swarms of flies" (Carman 1939:288 [1775]).

The wet dye was carried to the curing shed where it was pressed to remove as much water as possible and cut into cubes about 2 inches square. It was dried on trays in the shade, then placed in barrels with damp moss, where it was allowed to mold for several days. Afterwards it was brushed off and graded into four categories -- fine blue, ordinary blue, fine purple, and ordinary copper, the

least desirable (Copenhaver 1930:895).

Although relatively little is known about the economic activities of Gideon Gibson, his political sentiments are at least superficially understood (see King 1981:6, 9, 24). While geographically part of the "low country," the Florence and Pee Dee region was too remote and isolated from the seat of government in Charleston to feel the "taming influences of church and state" (King 1981:7). More to the point, however, there were a variety of serious complaints the Pee Dee region (as well as the rest of the "lower middle country") had with Charleston. In 1767 citizens of the region petitioned Charleston, noting:

> Married Women have been ravished - virgins deflowered, and other unheard of cruelties committed by these barbarous Ruffians - who, by being let loose among us (and connived at) by the Acting Magistrates, have thereby reduced numbers of Individuals to Poverty (quoted in King 1981:7).

The region's repeated requests for assistance to stem the tide of lawlessness were rejected, creating a division between the wealthy planter elite of Charleston and the small farmers of the interior. In the wake of the broken trust the Regulator Movement was formed, the most significant vigilante movement in the pre-Revolutionary back country (see Brown 1963 for additional details). By the summer of 1768 the Regulators, to many, had become the criminals. A skirmish of shorts was fought in July 1768 between a group of Regulators, led by Gideon Gibson, and a band of constables intent upon restoring order. One of the constables was killed and several Regulators were wounded, with the battle a victory for the Regulators (Wallace 1951:226). Shortly afterward a second effort by Provost Marshall Roger Pinckney met similar, if not so severe, failure when the region's militia refused to take action (King 1981:9; Wallace 1951:226-227).

The establishment of judicial districts for the South Carolina back country in April 1768 offered some political stability for the region. What is today northern Florence County was placed in the Cheraws District (St. David's Parish), with court located at Long Bluff on the Pee Dee, near Society Hill. The southern part of Florence County, including the survey tract, remained in the Georgetown Judicial District of Prince Frederick Parish (Wallace 1951:166). Typical of the region's distrust of authority, Long Bluff quickly became known as a "resort of judges and lawyers" and in spite of this improvement in the political system, the residents still lacked free schools, adequate bridges and roads, and ordinances to provide for the safe navigation of the Pee Dee River.

In 1757 the white population of the region later to become Florence County was approximately 4300, while there were only about 500 black slaves. This predominance of white farmers was typical of the entire back country and, to some degree, exacerbated the differences between the low country and the back country. Certainly the back country was little concerned with world affairs during the last half of the eighteenth century. Instead, the region continued to turn inward, working to improve both land and river navigation. The first road in the region was the Cheraw-Georgetown stagecoach road, established in 1747, but it wasn't until 1768 that a public ferry across the Pee Dee was established on James Welch Tract property (King 1981:18).

In fact, the South Carolina Provincial Congress sent William H. Drayton into the region in 1774 to explain to the rural population how badly they were being treated by England and engender support for the growing revolutionary movement (King 1981:19). From the beginning of the war until about 1780 the American Revolution in the Pee Dee region was little more than a civil war, with occasional desultory raids by Whig and Tory factions. In 1780 this changed, as the British sought to "Americanize" the war, bringing it to the South and encouraging "local participation" using large numbers of Tories. At first the strategy was very successful, with Charleston falling in mid-1780 and Camden falling later that same year.

In an effort to consolidate their hold on South Carolina, the British, under Major General James Wemyss, took up a savage war in the South Carolina back country. Ostensively to destroy local resistance, and particularly to isolate and neutralize General Francis Marion, Wemyss marched through the back country, leaving a trail of destruction 15 miles wide and 70 miles long. Many of the plantations shown on the 1775 Mouzon map were likely destroyed by Wemyss (King 1981:23; Rankin 1973:79). This proved to be a mistake, as it encouraged even more aggressive resistance to British military rule. Marion relentlessly attacked British lines of communication, camping at Snow Island (at the confluence of Lynches and Pee Dee rivers).

While the Revolutionary history of the Florence area is complex, it is well documented by King (1981) and Rankin (1973). Only four notable engagements were fought in the region (although most of the action consisted of maneuvers and partisan activities). These include the capture of Snow Island by British troops in March of 1781, the engagement at Witherspoon's Ferry that same month, a skirmish at Black Creek, and the Lynches Creek Massacre (Lipscomb 1991). None of these, however, are in the immediate survey area.

By September 1781 the British abandoned the back country, fleeing to Charleston and fighting in the Pee Dee region ended with the June 1782 surrender of Tory forces. On December 14, 1782 the British evacuated Charleston, ending the southern campaign of the American Revolution.

The transition from war to peace appears to have come rapidly to the Pee Dee region. Prince Frederick Parish, the political subdivision of Georgetown District which then encompassed the study area, sustained the majority of war activity. Yet by 1790 the Parish contained 3500 whites and 4500 slaves, figures which Rogers (1970:158-169) interprets to show that social and economic recovery after the Revolution was reasonably rapid. The only evidence that the war affected the survey tract comes from Gideon Gibson's claim for 49 hogs delivered to the Revolutionary army (South Carolina Department of Archives and History, Claims Growing Out of the American Revolution, File 2786).

Shortly after the Revolution efforts were again made to make the political divisions of the region more responsive. In 1785 the new districts of Marlboro, Chesterfield, Darlington, and Marion were created, with Marion called Liberty Precinct until 1795. Modern Florence County was contained within Marion, Darlington, and Marlboro districts, with the survey vicinity part of Marion.

The period from about 1784 until 1860 is characterized a maturing of the economic and, especially, agricultural potential of the region. By 1820 the Pee Dee had been made navigable up to Cheraw and it was noted that:

> cotton has been carried from Chatham [Cheraw Hill] and Society Hill to Georgetown fort seventy-five cents the bale; whereas it could not be carried the same distance by land for less than two dollars, or by water by the former navigation for less than one dollar and twenty-five cents (Kohn 1938:85).

The Pee Dee continued to be the major transportation route until the arrival of the railroads in the late 1840s and early 1850s. Land transport continued to be unreliable at best and life threatening at worst.

The map of Marion District prepared for Mills' Atlas of 1825 shows the Old River Road running west of the Pee Dee River from Dubose's (formerly Witherspoon's) Ferry over the Lynches River northward to Jefferies Creek and from there to the Darlington District line. This is the same road shown on the 1773 "Map of the Province of South Carolina" and Mouzon's 1775 "An Accurate Map of North and South Carolina." By 1825, however, there are additional roads shown, including one which runs west from the Darlington line, crossing the Pee Dee at Mars Bluff and continuing to

the Marion-Marlboro road (Figure 7). Two structures are shown on this road in the project vicinity -- "Gibson's" and further south, a store.

The Gibson shown on this map is Captain John Gibson, who owned at least two tracts encompassing over 3991 acres, including the Mars Bluff ferry (Marion County Clerk of Court, Plat Book B, p. 216; Marion County Plat Book B, n.p., dated June 22, 1828). The plat showing Gibson's residence (described as "Capt. Gibson's Mansion House") provides a detailed drawing the structure. It was a two story, frame structure with end chimneys and a hipped roof. It had a full facade porch on at least three elevations. The symmetry and scale of the structure suggests a recently built Georgian house. A "Ferry House" is shown at the ferry.

Captain John Gibson acquired additional lands to the north of Mars Bluff, including a 827 acre tract, a 900 acre tract, and at least one other for which no survey had been found (Marion County Clerk of Court, Plat Book B, p. 36, 37). In spite of the existence of these plats, no deeds for John Gibson could be located. No wills could be identified to suggest that the property had passed from Gideon Gibson to John Gibson. And while one plat suggests that at least some of the property had been previously granted to others and Gibson was consolidating his claims, no documentation of this could be found in the Combined Alphabetic Index at the South Carolina Department of Archives and History.

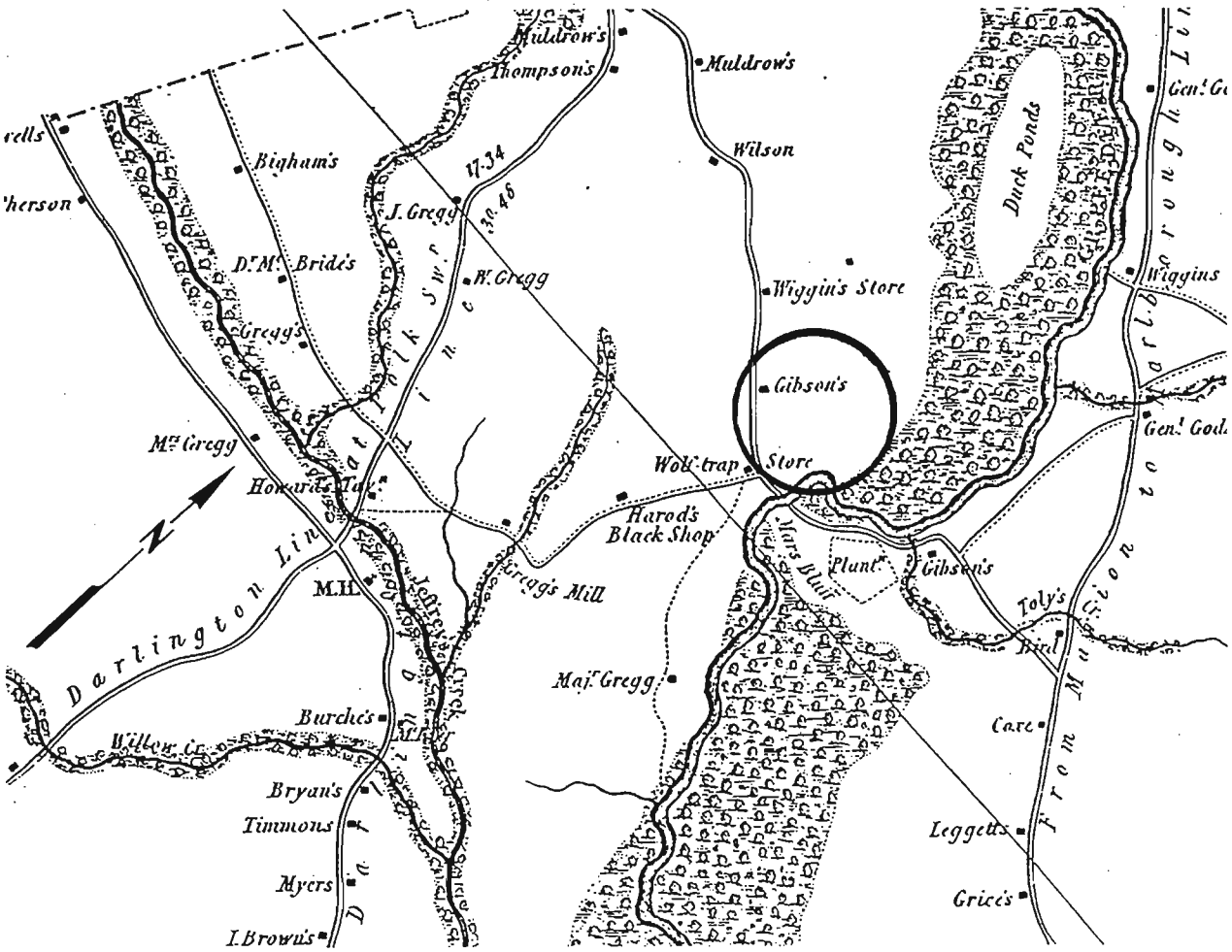

Figure 7. A portion of Marion District from Mills' Atlas of 1825.

By 1820 Marion District had a population of 10,201, of which over a third, or 3463, were African American slaves. Compared to the 1800 census, there was a slow increase in the proportion of black slaves in the district, largely the result of an increasing emphasis on cotton (Mills 1972:623). Mills notes that the swamps, if properly drained, yield the most valuable lands, bringing upwards of $50 an acre (still far below the $100 an acre demanded for prime Georgetown rice lands). Vast amounts of the Marion swamps, however, were classed as waste lands since no efforts had been made to either drain and reclaim them. These tracts were most often used as cattle ranges, continuing a practice that was common in the low country during the early eighteenth century, but abandoned as the region began to emphasize cash crops (Mills 1972:628).

The preliminary research indicates that the vast Gibson holdings in the survey area passed from John Gibson to his son, James S. Gibson sometime between 1830 and 1840 (James S. Gibson is first listed in the 1840 census for Darlington District, with only John Gibson listed in the 1830 census).

In 1850 the Agricultural Census for Marion County reveals that James S. Gibson owned 10,000 acres, 2,000 acres of which were improved. This holding was valued at $90,000, while the plantation contained $900 worth of implements and equipment, and slaughtered $1130 worth of animals the previous year. The plantation contained 15 horses, 3 asses or mules, 30 milk cows, 19 oxen, 100 other cattle, 93 sheep, and 300 swine, accounting for $6543 in livestock. Gibson's plantation produced 30 bushels of wheat, 150 bushels of rye, 7500 bushels of corn, 1500 bushels of oats, 1000 pounds of rice, 200 pounds of wool, 1000 pounds of peas and beans, 10 bushels of Irish potatoes, 300 bushels of sweet potatoes, and 200 pounds of butter.

While this indicates a diversified plantation, maximizing its potential (such as using waste lands for cattle and growing rice in the Pee Dee swamp), the most impressive accomplishment is the cultivation of 206 bales of cotton. In fact, only one other planter, James' brother, Samuel, reported more cotton and the district wide average was slightly more than 5.6 bales per farmer. Gibson's plantation represents one of the largest, most significant holdings in the region and it appears, based on this evidence alone, that James S. Gibson was wealthy far in excess of the smaller planters and farmers surrounding him.

On August 23, 1854 Gibson died and his estate was thrown into a lengthy battle for partition, not settled until after the Civil War. The various appraisements, inventories, and court papers, however, clearly reveal the wealth and prosperity of this unusual Pee Dee planter. Gibson's estate consisted of a house and lot in Darlington (his principle residence at which he also ran a store), 1161 acres in Darlington, and 10,000 acres in Marion. The court action to partition the estate reveal that at least the Marion plantation was obtained by Gibson "as heir of his father, John Gibson," from his mother, Martha Gibson, and from his brother, S.F. Gibson (Darlington County Court of Equity, Roll 397). A large number of slaves, plantation utensils, and $85,000 in cash, bonds, stocks, and notes also were part of the estate. Gibson left complex directions for the division of his estate, which at least partially resulted in it eventually taking the 1857 court case to decipher all of the requirements (Darlington County Wills, Case A, Apartment 16, package 46, stamped 830; see also Marion County Probate Court, Roll 1037).

The inventory found a total of 231 slaves, valued at $119,325, on the Marion plantation. The seven slaves, valued at $3900, tallied for Darlington District represented house servants and consisted almost entirely of women and young children. The plantation furniture, with such items as pine side board, pine tables, sitting chairs, and irons, linen sheets and pillow cases, a tine foot tub, one silver tea spoon, one lot of crockery, and a tin watering pot, suggests a rather spartan atmosphere, in spite of Gibson's wealth and prosperity. The appraisement of his Darlington residence reveals that the bulk of his furnishings were found there, suggesting that he spent little time on his Pee Dee plantation.

The inventory also divides the Marion property between a "Lower Plantation" and an "Upper Plantation." The items at each are shown in Table 2. The total value of Gibson's estate was nearly a quarter of a million dollars prior to the Civil War. The documents also reveal that Gibson's plantation was operated by a Mr. Owens, listed as the overseer.

Apparently the plantation continued to be farmed while attempts were made to settle the estate. At the same time the estate apparently advanced funds to Gibson's primary heirs, including his wife, Amarantha D. Gibson, and his two sons, J. Knight Gibson and Nathan S. Gibson. Not surprisingly, by the time the Court eventually partitions the estate in 1866 its value had declined considerably from the 1856 appraisal, with 25 shares of Confederate securities listed as having "doubtful" returns. The life estate eventually established for Gibson's wife was slightly over $16,000, while the children, exclusive of lands, received no more than about $1300 each (Darlington County Court of Equity, Roll 397). Although no plat showing the partition has been found, the 10,000 acre Marion County plantation was divided between Gibson's two sons, with Nathan S. Gibson receiving what appears to be the "Upper Plantation," composing the study tract, while his, brother J. Knight Gibson, received the "Lower Plantation" (see Marion County Court of Common Pleas, Case 195). Curiously, no property belonging to Gibson is listed in the 1860 agricultural census, perhaps suggesting that the tract was being operated by a slave driver at the time of the census.

Florence in some ways was better treated by the Civil War than it had been by the Revolution. The Pee Dee Rifles were created in July 1861 and joined as Company D of the First South Carolina Regiment, as well as the Pee Dee Light Artillery (King 1981:46). In November 1862 a site just above the Wilmington and Manchester Railroad was selected by the Confederate Navy for the Pee Dee Navy Yard. One of the three completed vessels of this yard was the CSS Pee Dee, which was scuttled March 1865. King reports that the propellers of the gunboat were "salvaged" in 1926 while the hull was removed from the Pee Dee River in the 1950s. When it failed as a tourist attraction in the Florence area it was moved to the South of the Border Complex near Dillon (King 1982:55-56). Still unsuccessful as a tourist attraction, these remains were apparently destroyed during the construction of I-95 (Hartley n.d.).

The closest the war ever got to Florence was the creation of a Confederate prison in September 1864. Widely recognized as comparable to Andersonville in brutality and cruelty, the camp functioned for only five months before the advancing Union army necessitated its abandonment. At least 2800 Union soldiers, or about 560 a month, died at the 24 acre camp (King 1974).

Sherman's troops passed to the northwest of Florence, leaving the town and the Pee Dee region little worse for the experience. Eventually, the 167th New York Infantry occupied Florence, ensuring at least in the short term its reconstruction (King 1982:60). The only account dealing with the Gibson plantation is the May 8, 1865 murder of Gibson's overseer, Darius Gandy. A black man, Jeff Gee, was arrested and quickly sentenced to be hung. King notes that through the intervention of Frances E.W. Harper, Gee was eventually pardoned by the military authorities (King 1981:59). This was certainly not an isolated event; violence was typical during the reconstruction period and Florence saw considerable Klan activity into the early twentieth century.

There is, however, some evidence that both Nathan S. and J. Knight Gibson were not totally intolerant of their new black neighbors. It was during the early days after the Civil War that the kin-based community of Jamestown was formed by Freedmen immediately west of Nathan Gibson's holdings. Similar communities are common in South Carolina and represent efforts by the Freedmen to establish themselves as small farmers, while ensuring the support of family and friends. These communities represent a unique response to the increasing discrimination and threat of violence typical of South Carolina during the late nineteenth century.

Table 2.
1856 Inventory and Appraisement of James S. Gibson

	Lower Plantation	Upper Plantation
horses and mules	24	28
sheep		59
oxen (yoke)		3
cattle		40
fat hogs	28	36
stock hogs	80	100
wagons and harnesses	3	
ox carts	1	1
horse carts	1	4
log carriage	1	
weeding hoes	34	42
grubbing hoes	6	12
socket spades		8
long handled shovels	9	10
bull tong shovels		15
plow gear	20	23
club axes	10	
plows and stocks, complete	100	120
plow hoes	20	
single and double truss	40	50
blacksmith tools (set)	1	
peas, bushels	200	150
corn, bushels	6000	1200
fodder, stacks	70	70
cotton seed, bushels	4500	5000
oats, bushels	80	
slips, bushels		70
corn sheller	1	1

It is uncertain whether the land was deeded, or was simply occupied by the Freedmen, but today the property is largely listed as "heirs property," with names such as Jim James, Sidney James, Eli James, Mitchel James, Robert James, and Ervin James (Florence County Tax Assessor, Tax Map 305). At least one deed from the early twentieth century demonstrates that occasionally the absence of clear ownership caused court actions (Florence County Deed Book 32, p. 37).

In 1875 Nathan S. Gibson and J. Knight Gibson deeded a four acre tract of land for the Liberty Chapel Church parsonage (Marion County Deed Book GG, p. 229). Liberty Chapel, in the vicinity of Secondary Roads S-24 and S-33. was built about 1855 as a Methodist Episcopal church (Florence Chamber of Commerce n.d.).

It was also during this time that the railroads began to recover from the Civil War (King 1981:71). In 1877 the Wilmington, Columbia and Augusta Railroad wanted to change the location of their track through Nathan S. Gibson's plantation and he sold them a tract of land "for the purpose

of improving the alignment of said RR and getting earth to fill trestles in the Pee Dee Swamp" (Marion County Clerk of Court, DB HH, p. 127). The plat accompanied the deed indicates that this transaction moved the railroad to the location presently used by the CSX Railroad. The plat also shows that the railroad was between the plantations of Nathan and his brother, Knight. A few days later, J. Knight Gibson deeded "all the land owned by me the said John Knight Gibson on the North side of the said RR" to his brother, Nathan S. Gibson (Marion County Clerk of Court, DB LL, p. 4).

The immediate post-Civil War economy was unstable at best, yet it appears that the Gibson's managed to maintain their tracts relatively intact. The only major sale of Gibson land was to dispose of the 4,482 acres of Pee Dee swamp land east and north of their highland tracts. This property, which the deed indicates was first obtained by John Gibson on October 1, 1839, was sold to Benjamin F. Newcomer of Baltimore, Maryland. Nathan and J. Knight Gibson, however, retained the Mars Bluff Ferry and ferry landing, as well as the right "to get and use firewood on said lands herein granted for our plantation use, and also the oak and other timber necessary for use for plantation purposes for ploughs, wagons &c, and the right to rake surface from the same" (Marion County Clerk of Court, DB HH, p. 31). This swamp land is the same 5601 acre tract that eventually came to be owned by the Atlantic Coast Lumber Company in the early twentieth century (South Caroliniana Library, Atlantic Coast Lumber Company Property Map, 1925) and is today owned by Georgia Pacific Corporation.

The 1870 agricultural census fails to list the Upper Plantation owned by Nathan S. Gibson, but does enumerate the holdings of J. Knight Gibson of Jeffries Township. At that time the Lower Plantation consisted of 500 acres of improved land, 300 acres of woodland, and 1400 acres of other unimproved land, with a total value of $8573. The farm implements were valued at only $150. Livestock included two horses, four mules or asses, and two oxen, valued at $900. Gibson produced 250 bushels of corn, 25 bushels of peas and beans, and 25 bushels of sweet potatoes. Only 26 bales of cotton were produced by Gibson, although $1200 in wages were paid.

This suggests that farmers in Marion, like elsewhere in South Carolina, experimented with wage labor immediately after the Civil War. Faced with uncertainty, but the need to begin planting immediately, many accepted the wage labor solution begun by the Union Army and latter espoused by the Freedman's Bureau. To support the wage system no less than seven major types of contracts were used by Southern planters (see Sholmowitz 1979). This system, however, was doomed to failure, being disliked by both the Freedmen, who found it too reminiscent of slavery, and the plantation owners, who found that it gave the Freedmen too much liberty. In response to both the Freedman's Bureau and the growing freedom the blacks, the South Carolina legislature passed the Black Codes in September 1865. These extended the restrictions placed on blacks and, in Charles Orser's words, "the Black Code had established what whites wanted for blacks: a nominal freedom that would lead them to a new kind of slavery" (Orser 1988:50).

In 1886 J. Knight Gibson died, throwing his estate into nearly as much turmoil as that of his father, over 30 years earlier. Nathan S. Gibson, as executor, eventually brought the case to court in order to force a partition of the estate and to obtain payment for debts against the estate. Nathan took over the operation of the Lower Plantation, as well as his brother's store, J.K. Gibson and Company. According to one witness:

> J.K. Gibson was very much involved and my opinion was confirmed when I looked over his books. I regarded him utterly insolvent from the examination of his books and from my knowledge of his affairs being intimately associated with him. From my knowledge of his affairs he lived above his income. . . . At the time of the death of J.K. Gibson the farm was very much out of repairs (Marion County Court of Common Pleas, Case 195).

Nathan S. Gibson testified that he, "had a large number of stumps taken up; ditches cleaned out and new ones cut; had a new set of stables built in the place of stables burnt; had fine tenement houses built" on his brother's property, which he managed without payment. In addition, Nathan S. Gibson and his mother, Amarantha D. Gibson, took in Knight's children, raising and educating them, again without cost to the estate.

The Court eventually decided that Knight's plantation should be sold to settle the debts of the estate, after a "Homestead" tract of 273 acres was struck off for his children. That "Homestead" included Knight's residence, which was at the same location as Capt. John Gibson's early nineteenth century house. The remainder of the plantation was purchased by his brother, Nathan S. Gibson (Marion County Court of Common Pleas, Case 195). This consolidated the bulk of the Gibson holdings initially split as a result of James S. Gibson's death before the Civil War.

Examination of Joseph Sampson's 1873 map of Marion County reveals that little had changed since Mills' Atlas was published nearly 50 years earlier and it seems likely that Sampson took little care to update his map (Figure 8). Unfortunately, no other map or plat showing the Gibson holdings for this time period has been identified.

Beginning in 1887 there was a growing sentiment for the creation of a new county. A pamphlet arguing the cause explained:

> The foremost and most powerful reason is, that Marion - a county possessing the area of Rhode Island, and three-fifths that of Delaware - is divided in two by the Great Pee Dee River. The court house is in the eastern portion, the people in the western portion are thus not only remote from the county seat, even if access were easy, but access is attained only by penetrating the dense river swamp . . . by perilous and roundabout roads, so called, and crossing the stream by ferries, there being no bridges, public or private . . . . To go from west Marion to the court house, involves two days in traveling, besides spending the night at a Marion hotel (Evans 1888:1).

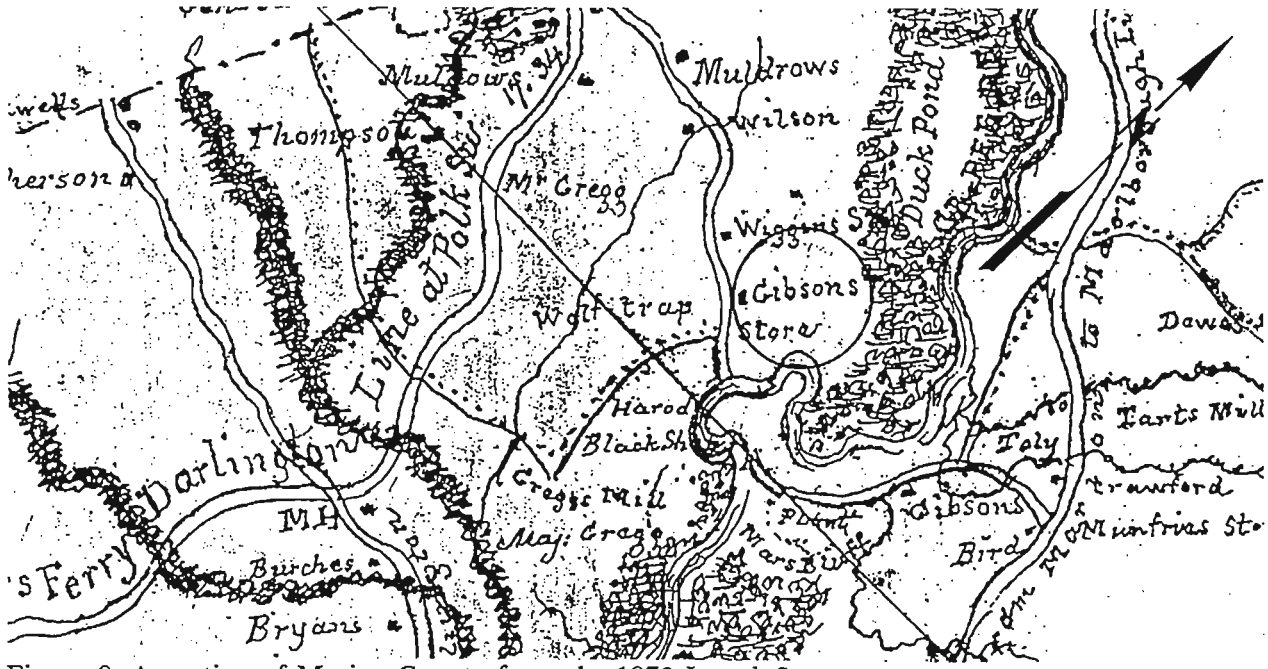

Figure 8. A portion of Marion County from the 1873 Joseph Sampson map.

It further explained that as trade from western Marion County began to desert Marion, it turned to the City of Florence:

> ...a town which has spring up where 30 years ago there was seen an unbroken forest. The junction there of three important (and completed) railroads first give it an impetus (Evans 1888:2).

Florence was created as a county that same year -- 1888 -- carved out of neighboring Marion, Darlington, and Marlboro counties.

The creation of the new county began what King (1981) calls an era of "boasterism," loudly proclaiming the benefits of Florence. One example is the advertisement of Florence County at the 1895 Atlanta Cotton Exposition:

> ...situated as she is, the great railroad center of eastern South Carolina, surrounded by lands which produce corn, wheat, rye, oats, tobacco, rice, sugarcane, cotton, potatoes, onion, and vegetables of all kinds, apples, pears, peaches, plums, grapes, berries, melons in profusion, whose forests contain most of the woods of commerce, with water power and easy access to fuel for manufacturing, Florence County presents an inviting field for investment and immigration (quoted in King 1981:168).

This advertisement is interesting since it begins the promotion of tobacco in Florence County, as well as encourages immigration.

Tobacco was a growing concern during this period, with the first tobacco growers association formed in 1895. Tobacco was referred to "Our Nicotiana Tobacum - Pearl of the Pee Dee." That same year there were 139 tobacco growers, with most planing around 5 acres and the largest planting only 40 acres (King 1981:170). By the mid-1890s the average profit on an acre of tobacco was $150 to $200 an acre, well over the $10 an acre provided by cotton.

Acreage increased from about 1200 acres in 1891 to over 4400 acres just a year later, in 1892. Pee Dee tobacco production grew at an even more fantastic rate in the first decade of the twentieth century, with the acreage increasing from 25,000 to 98,000 acres. Table 3 indicates that Florence participated in the gradual recovery of cotton after the Civil War, only to evidence the decline in 1930 resulting from the boll weevil and the depression. Tobacco, in contrast, held strong.

Table 3.
Cotton and Tobacco in Florence County from 1900 through 1930

	Cotton		Tobacco	
Year	(a)	(lbs)	(a)	(lbs)
1900	37,966	17,707	3,961	2,995,410
1910	56,590	36,062	5,052	4,362,338
1920	59,768	38,797	17,060	11,991,883
1930	31,253	11,259	25,201	19,221,611

Coupled with the increased planting of tobacco were efforts to bring tobacco markets to South Carolina. The first tobacco warehouse auction in South Carolina was organized by Frank Rodgers in 1890 at his Florence Tobacco Manufacturing and Warehouse Company. Even this first auction was a social event, with 300 persons attending. Other businessmen and investors followed this lead and

a number of warehouses were established in the Pee Dee[7]. These warehouses were visible indications of prosperity and progress and often the buildings were financed by joint stock companies composed of local citizens hoping to cash in on this new wealth. One such warehouse in Florence was described:

> It is a handsome structure, having a floor space 60 by 100 feet, and this is lighted by twenty large ground glass skylights. In front is a two-story brick structure, 40 by 50 feet in size, containing the offices. It has large sliding doors on all sides and is equipped with the latest improved trucks, etc. (*The State*, August 30, 1895).

Farmers brought their tobacco to these warehouses from mid-July through September. The tobacco was weighed and stacked in long rows on the floor for sale, with the auctions being memorable social events, often compared to fairs. When the auctions were over, the buildings continued to be a focal point in the community, being used for political rallies, tobacco exhibits, and social events.

This last decade of the nineteenth century marked the culmination of 30 years of effort to remove blacks for the political process and to re-assert white supremacy. The 1895 South Carolina Constitutional Convention almost totally disenfranchised blacks and the Federal government's retreat from its duty to protect the freedom of black citizens was symbolized by the 1896 Supreme Court decision of Plessy v. Ferguson which established the doctrine of "separate but equal." The Ku Klux Klan remained active in Florence County well into the 1920s, with the 1923 Confederate Veteran's Reunion in 1923 marking the climax of their activity (King 1981:331).

Being unable to vote in elections, an increasing number of Florence County blacks "voted with their feet," leaving Florence and South Carolina for the north. This exodus spurred many to encourage immigration into the region, in order to replenish the work force. In spite of this, by 1923 upwards of 100 blacks a month were leaving Florence.

In 1909 Nathan S. Gibson died, leaving his estate to his wife, Rebecca Gibson, in trust for his daughter, Mary Savage Gibson, and his wife's children from a previous marriage, George Hyman, Mary A. Hyman, and McCall Hyman (Florence County Probate Court, Case 551). His plantation was described as a "large fifteen horse farm stocked with mules, wagons, plows and all of the various paraphernalia generally used in the conduct of a farm of equal size." Also included in his estate was his general store at Winona. Inventoried were 304 bales of cotton packed and ready to be shipped out of Winona, over 73 tons of cotton seed meal at the Darlington Oil Mill, and a car load of cotton seed on a siding at Winona.

The first activity by the executors was an effort in January 1909 to rent the farm, "together with the mules, farming implements, dwelling houses, grist mill, gin, and store which are situated on and go with said land." By the end of February the farm was rented to H.S. Rose and the executors requested the Court's permission to sell Rose the store stock for 65% of its invoiced cost, noting that the "stock of merchandise at Winona [is] old and of not much value, and is only of special value to the party running the farm" (Marion County Probate Court, Case 551). This suggests that the primary function of the store, like many others, was to supply Gibson's tenants.

Over the next several years the estate continued to sell off items, including livestock, hay, display cases from the store, and excess farm equipment. The executors also attempted to clear up the notes and accounts due to Gibson, often accepting far less than the face value realizing that many of

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[7] At the height of bright leaf production there were 77 markets in 29 towns across South Carolina.

those involved were unlikely to pay more. The estate papers also reveal that Gibson had been paying Talbert Bailey for working in the store and C.S. Bailey as an overseer of the plantation. Others paid were Pink Hinds for her work at the house, and Ezra Bailey for work on the farm. Accounts were created for what may have been Gibson's old tenants, including Nap Scipio, G. Avant, Herbert James, Tom Ford, and Mose Carter.

Regrettably little is known about the operation of the plantation during this time, although the Adams and Ervin 1913 "Map of Florence County, South Carolina" shows the Gibson estate north of the railroad (Figure 9). J.S. Gibson to the south is the son of J. Knight Gibson who was operating the Homestead. No reference has been found to the H. Hubbard who is shown on the map in the vicinity of Gibson's plantation. The 1914 Florence County Soil Survey map (Figure 10) provides the best plan of the plantation found. Twelve structures are found scattered across the property, with an additional 15 structures forming a double row at the north edge of the plantation, adjacent to the Pee Dee swamp. This row strongly resembles a nineteenth century slave settlement that continued to be used by freedmen into the twentieth century. The scattered houses represent both laborers' housing and also the dwelling of Nathan S. Gibson. The Jamestown settlement is also shown on the map as a loosely nucleated settlement at the edge of the Pee Dee swamp.

In the most simple of terms, two types of tenancy existed in the South -- sharecropping and renting. Sharecropping required the tenant to pay the landlord part of the crop produced, while renting required the tenant to pay a fix rent in either crops or money. While similar, there were basic differences, perhaps the most significant of which was that the sharecropper was simply a wage laborer who received his portion of the crop from the plantation owner, while the renter paid his rent to the landlord.

Further distinctions can be made between sharecropping, share-renting, and cash-renting. With sharecropping the tenant supplied the labor and one-half of the necessary fertilizer, while the landlord supplied everything else, including the land, housing, tools, work animals, feed, and seed. At harvest the crop would be divided, usually equally. In share-renting the landlord supplied the land, housing, and either one-quarter or one-third of the fertilizer, while the tenant supplied everything else necessary, including the animals, feed, seed, and tools. At harvest the crop was divided equal to the portion of fertilizer each party provided. Finally, with cash-renting the landlord supplied the land and the housing, while the tenant supplied everything else. The owner received a fixed rent per acre in cash.

Agee et al. provide some general information on agricultural activities during the early twentieth century, observing that:

> Farms operated by tenants are usually devoted mainly to the production of cotton, corn, and tobacco. The ordinary yield of cotton on such farms is a little over one-half bale per acre, while that of corn is about 16 bushels. These yields could easily be increased, as is demonstrated by the better farmers, who obtain 1 bale to 2 bales of cotton and 40 to 60 bushels of corn per acre. . . . About 65 per cent of the farms are operated by tenants. . . . The ordinary yield of tobacco in the county is somewhat over 800 pounds per acre. The price has averaged about 14 cents per pound (Agee et al. 1916:9).

By the late 1920s the boll weevil was reaching Florence County and one newspaper editorial reported that the weevil had "put a stop to the lazy man's crop," and that now planting took "brains, money, hard work, and poison to raise cotton hereabouts these days" (quoted in King 1981:338).

Florence County is within the Atlantic Coastal Plain of the Cotton Region, while further to

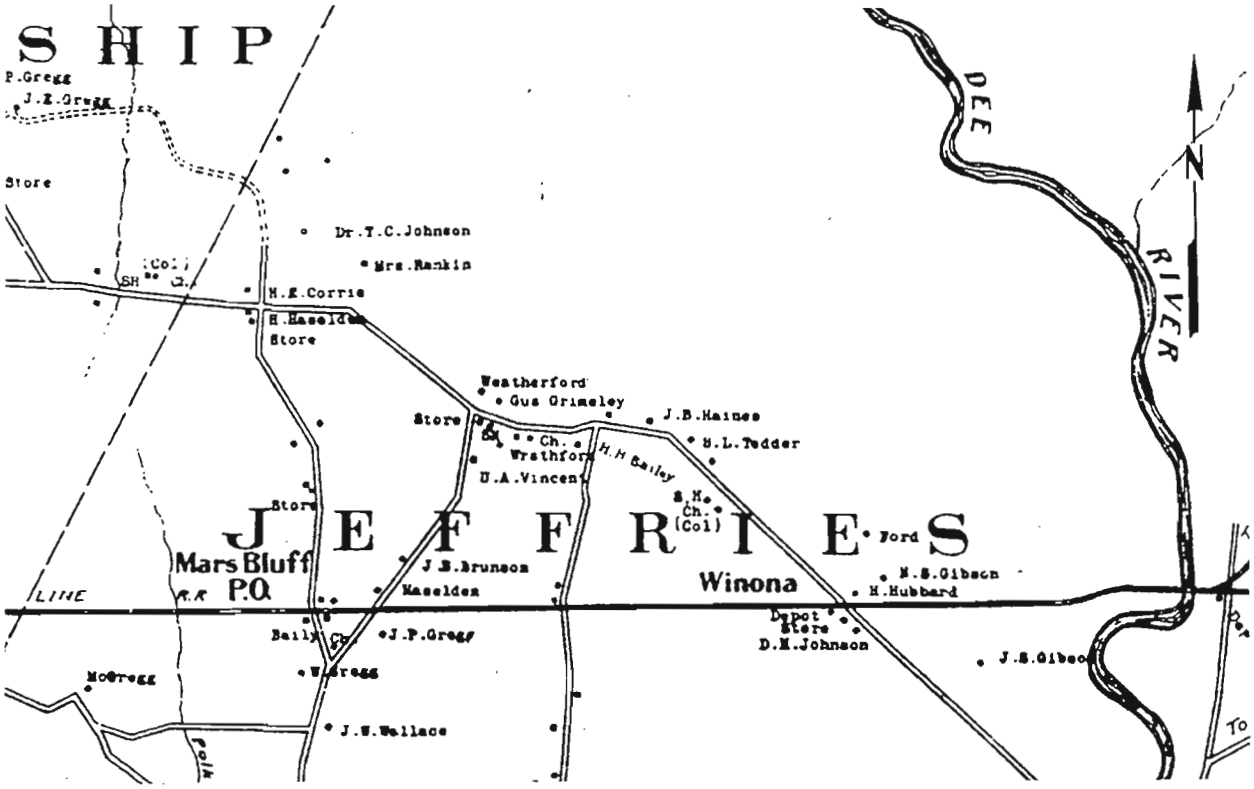

Figure 9. A portion of the 1913 Adams and Ervin "Map of Florence County, S.C."

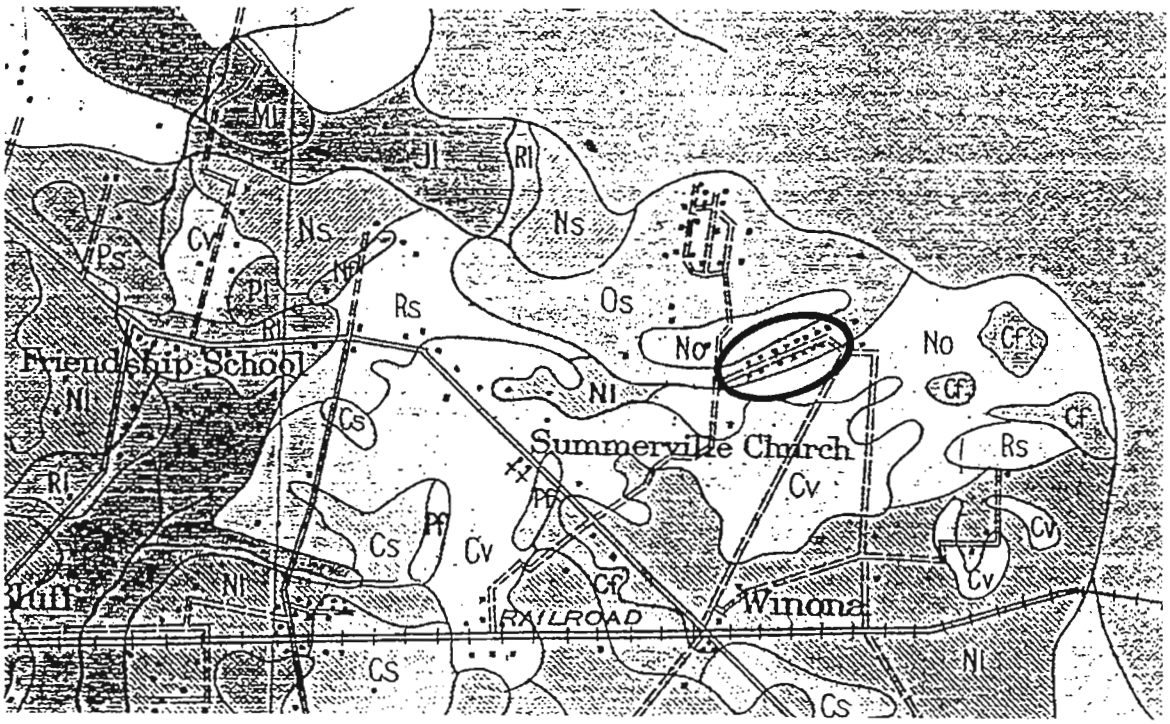

Figure 10. The vicinity of the Gibson Plantation, shown on the 1914 "Soil Survey of Florence County, South Carolina."

Table 4.
Systems of Tenure

	Share-Cropping	Share Renting	Cash Renting
Landlord furnishes:	land	land	land
	housing	housing	housing
	fuel	fuel	fuel
	tools	1/4 or 1/3 fertilizer	
	work stock		
	seed		
	half of fertilizer		
	feed for work stock		
Tenant furnishes:	labor	labor	labor
	half of fertilizer	work stock	work stock
		feed for work stock	feed for work stock
		tools	tools
		seed	seed
		3/4 or 2/3 fertilizer	fertilizer
Landlord receives:	1/2 of crop	1/4 or 1/3 of crop	fixed amount in cash or lint cotton
Tenant receives:	1/2 of crop	3/4 or 2/3 of crop	entire crop less fixed amount

the west (and encompassing most of the South Carolina) was the Black Belt (Woofter 1936). The Atlantic Coastal Plain was characterized by medium sized plantations, while the Black Belt was the heart of the South's oldest Southern cotton plantations. As a consequence of these historical differences the two regions developed distinctively different forms of tenancy.

There was little difference in owner wealth between the two areas and the difference in net income per average plantation ($5,343 compared to $3,087) is partially the result of the smaller average plantation size in the Black Belt. There was considerable difference in the net income of tenants in the two areas. In the Atlantic Coastal Plain croppers averaged $255 and share-renters averaged $426 a year. The tenants in the Black Belt fared far worse, averaging $127 for croppers and $106 for share-renters. In addition, the tenancy rates varied from about 60% in the Atlantic Coastal Plain to 74% in the Black Belt. The Atlantic Coastal Plain tenancy system, however, had a high percentage of wage tenants (10.7%) than did the Black Belt (1.8%).

Florence County was in most respects typical of these findings. The tenancy rate in 1930 was about 66%, slightly higher than the region, but below that typical of the Black Belt. On the other hand, wage renters comprised fully a quarter of the tenants. Florence had nearly equal numbers of white and black tenants -- 1927 white tenants (51.6%) and 1807 black tenants (48.4) in 1930. Yet the white tenants farmed 101,185 acres compared to the blacks' 63,047 acres, suggesting a disproportionate distribution of agricultural wealth.

At Nathan Gibson's death in 1909, the property apparently consisted of 2575.7 acres shown on a 1930-1931 plat made to assist in the partition of the estate (Marion County Clerk of Court, PB C-2, p. 329; Figure 11). Tracts 1, 2, 3, 4, 5, 6, and 7, totalling 1473.5 acres account for the study area. In 1931 George H. Hyman, McCall Hyman, and Mary A. Hyman conveyed tracts 4 and 11 (with 1005 acres) to their mother, Rebecca A. Gibson "to effect a portion of the estate of N.S. Gibson, deceased" (Florence County Clerk of Court, DB 13, p. 203). At Rebecca Gibson's death in 1938 she devised her 1/3 interest in the property she obtained from her daughter, Martha Gibson, to her children, Italine

Hyman Finklea, George H. Hyman, Mary A. Hyman, and McCall Hyman (Florence County Probate Court, Box 3543). The general area of the Gibson lands is also shown on the Atlantic Coast Lumber Corporation and United Timber Corporation map of the Duckponds made in 1933 and 1934 (Marion County Clerk of Court, PB E, p. 238; Figure 12).

The estate was finally settled in 1940 with the partition of the estate, which gave the bulk of the plantation to George Hyman. Mary Hyman was provided with the homestead built about 1909 by Rebecca Gibson after her husband's death (Florence County Probate Court, Box 3543). A 1941 aerial photograph maintained by the Soil Conservation Service in Florence County shows the operations of both George Hyman and Mary Hyman (Florence County 1941 Photo PC 6B 12, Thomas Cooper Map Repository, University of South Carolina). At that time six structures are shown on the survey tract, including Mary Hyman's homestead, the probable homestead of George Hyman, and a series of tenant houses. The slave settlement first identified on the 1914 soil survey is shown as just within the woods, although the road bisecting the settlement is clearly shown. This suggests that this row, or replacement structures, were present. The aerial photograph also reveals that something approaching 85% of the plantation was under cultivation.

Slightly more detail is provided by the 1945 edition of the Florence East topographic map (Figure 13; this map is not appreciably different from the 1940 edition of the Florence topographic map available at the Thomas Cooper Map Repository). The neighboring black community is named Jamestown for the first time on a published map. A series of six structures in the slave settlement are shown as still standing. In addition, 14 structures are shown scattered over the property.

Examination of the aerial photographs at the Thomas Cooper Map Repository indicates that between 1949 and 1969 the cultivated acreage in the survey area was reduced by approximately 25%. This is much greater than the county average of nearly a 6% reduction of cropland between 1958 and 1975. It seems likely that after 100+ years of cultivation some of the Gibson lands were nearly exhausted and no longer profitable for cultivation.

At his death in 1969 George Hyman passed his farm of 1691 acres on to his wife, Florence F. Hyman (Florence County Probate Court, Roll 10333). At the death of Mary A. Hyman her homestead tract of 21 acres and 85 acres of woodland were devised to the Francis Marion College Foundation (Florence County Probate Court, Roll 16733). In addition, she bequeathed to the Foundation:

> all furnishings presently located in my sitting room, hall and dinning room. These items consist mainly of antiques that I and my family have owned for many years and it is my request that they be used in my home as nearly as possible as they are being utilized at the present time (Florence County Probate Court, Roll 16733).

Although the Mary Hyman property was sold by the Foundation in 1985 to Philip Britton (Florence County Clerk of Court, DB A-227, p. 152), the bulk of the antiques were transferred to the President's home, the restored Wallace House, where they are still being used (Mrs. Libby Cooper, Vice President for Development, Francis Marion College, personal communication 1992).

Florence Hyman devised the bulk of the property inherited from her husband to her children. One tract of 14.92 acres was bequeathed to her sister, Margaret F. Johnson, while another tract of 2.92 acres was given as a life estate to McKinley Jesse, then to pass to Frank M. Davis, III (Florence County Probate Court, Case 13354; see also Florence County Clerk of Court, PB 15, p. 795). The executors of Florence Hyman's estate sold the property in 1977 to Philip Britton (Florence County Clerk of Court, DB A-153, p. 533). Britton also acquired the two out parcels, one from Margaret F. Johnson (Florence County Clerk of Court, DB A-153, p. 532) and the other from Frank M. Davis,

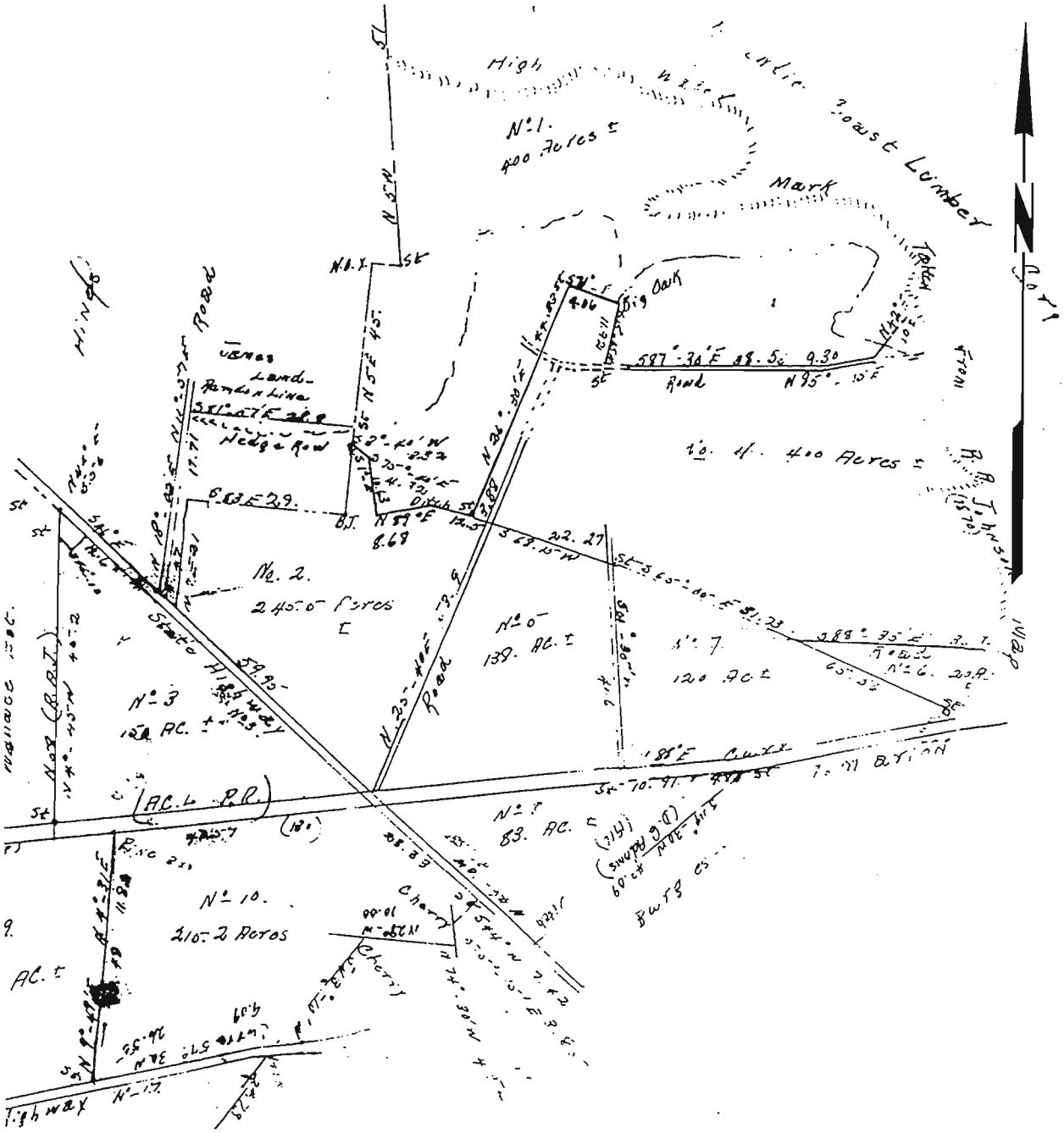

Figure 11. Plat of the Gibson lands in 1930-1931 (Marion County Clerk of Court, Plat Book C-2, page 329).

Figure 12. Plat showing George Hyman and N.S. Gibson estate lands in 1933 and 1934 (Marion County Clerk of Court, Plat Book E, page 238).

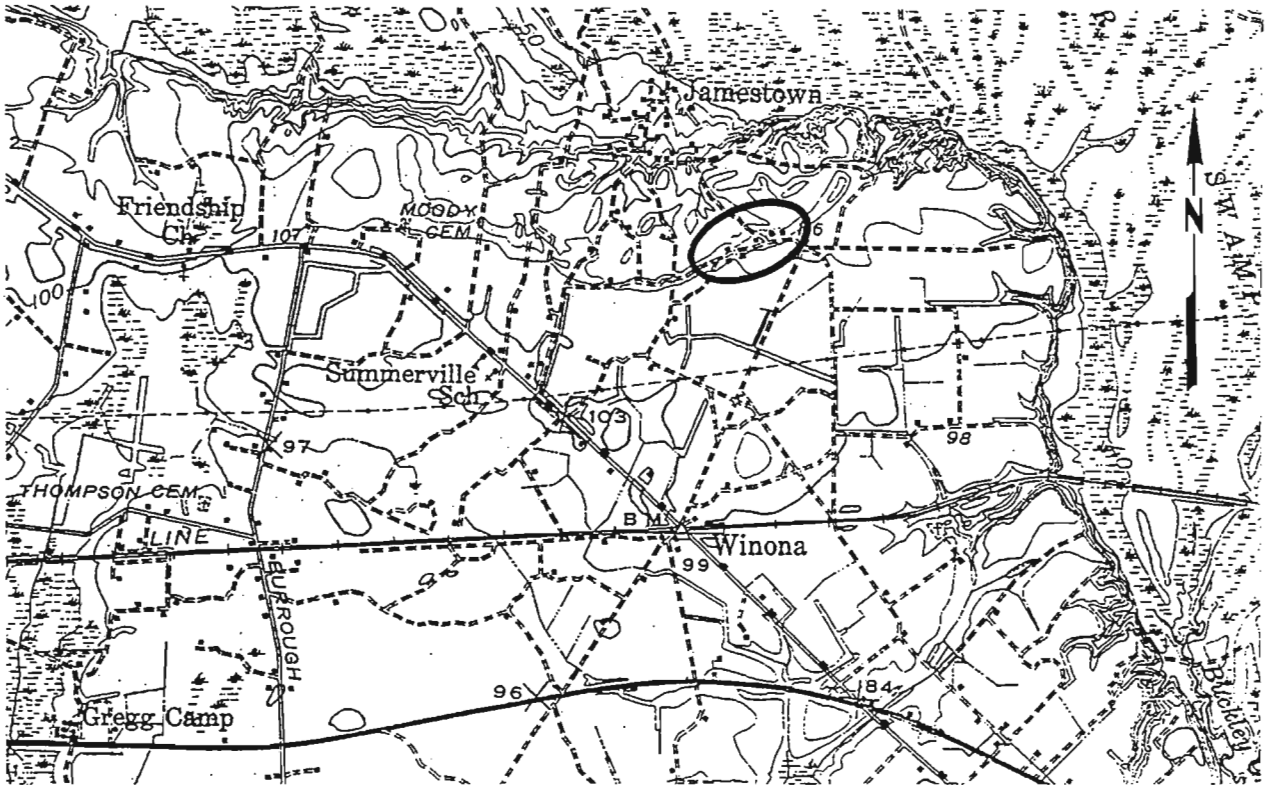

Figure 13. A portion of the 1945 edition of Florence East topographic map (reproduced scale is 1:46875).

III (Florence County Clerk of Court, DB A-346, p. 1424). Michael Wayne Britton, Philip Britton's son, also acquired two out parcels of the Mary Hyman estate (Florence County Clerk of Court, DB A-237, p. 1879 and DB A-258, p. 515).

A plat made in 1976 shows the estate of George Hyman (and Florence Hyman), as well as its boundary with the estate of Mary A. Hyman (Figure 14). A single tenant house is shown on the southwest edge of the tract and the major complex belonging to George Hyman, and built about 1940, is shown at the north edge of the property. This plat also identifies, for the first time, a small black cemetery between the Hyman tract and Jamestown.

The purchase of the property by Philip Britton represented the end of nearly 150 years of ownership by the Gibson family. Britton held the tract from 1977 until its sale to Roche Carolina in November 1991.

Oral history collected during this project provided little additional information about the operations of the Gibson farm. Most of the blacks interviewed were not familiar with, or were not willing to discuss, the farm's operation. One individual did remember some of the families living at the settlement (today 38FL240) from his childhood. Apparently all of those living at this settlement were blacks, just as nearby Jamestown is a black community. He remembered that one house was known as the spot where you could purchase alcohol, and pointed out the path that was used by local blacks to go down to the Pee Dee swamp to fish. Beyond these general observations, however, even he was reluctant to talk about the farming operations.

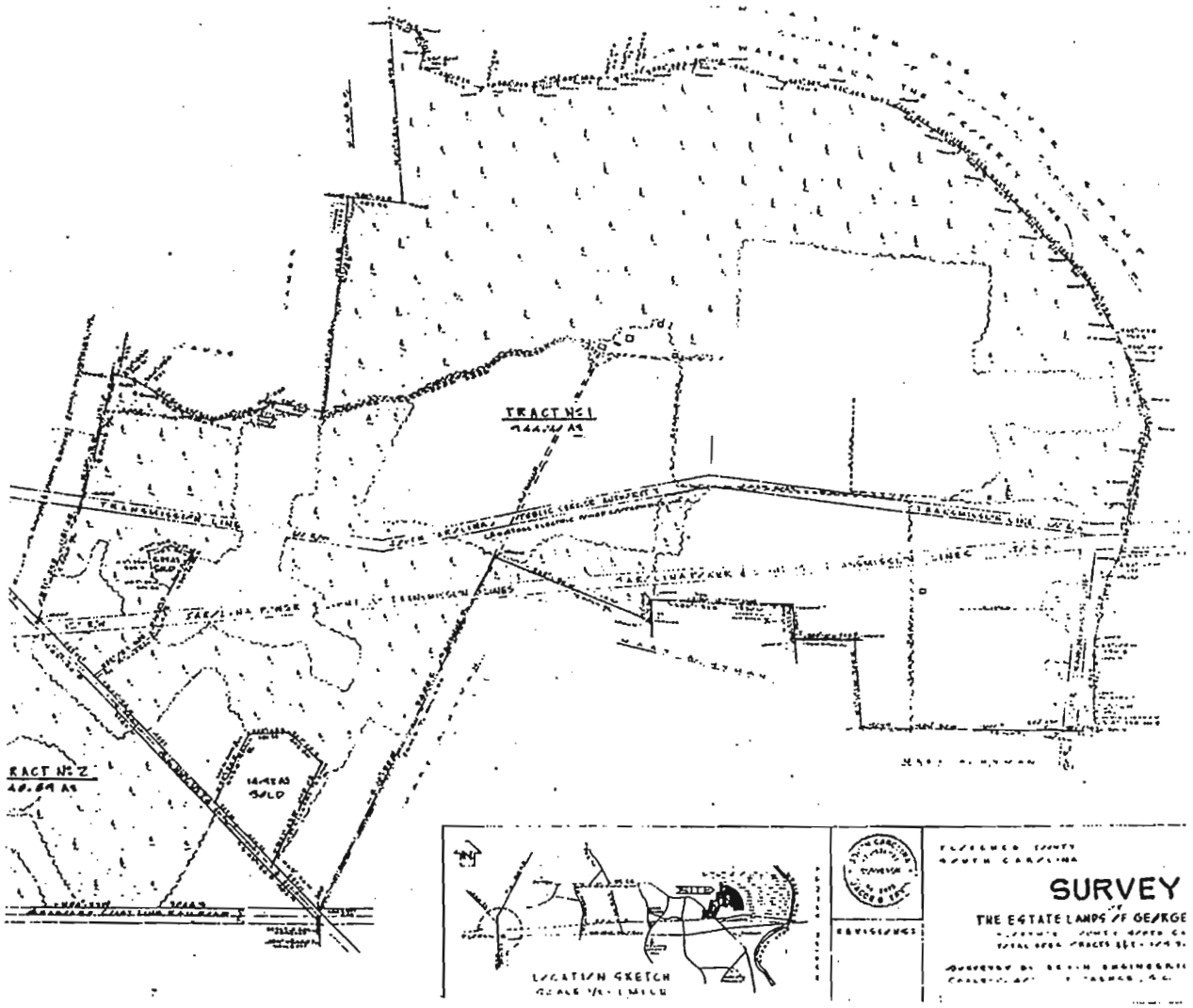

Figure 14. Plat of the George Hyman lands in 1976 (Marion County Clerk of Court, Plat Book 16, page 577).

Implications

This historical research reveals that the Roche Carolina survey tract was first occupied probably by the early nineteenth century. No clear evidence was encountered for any occupation or plantation development in the eighteenth century. However, by the early antebellum the Gibson plantation was established and operating using slave labor. There remains some doubt as to the actual location of the Gibson settlement from this early period and it is possible that the plantation operations were directed by an overseer or even a slave driver. Regardless, it is likely that a slave settlement was established during this period.

The economic upheaval of the postbellum certainly impacted the operation of the Gibson tract. The use of wage and/or tenant labor is evidenced by both the historic documents and various maps. While early the settlement previously used by the slaves continued to be occupied by the African American laborers in the postbellum, the earlier nucleated settlement gradually dissolved and a more diffuse settlement pattern began developing. Agricultural pursuits gradually shifted from a sole reliance on cotton to somewhat more diversified production of cotton, subsistence crops, and tobacco by the 1930s. Like many other plantations, those living on this tract were probably expected to use the Gibson store during its operation.

While the historic research fails to clearly indicate when the settlement was established, or when it fell into disuse, it seems likely that it was built toward the end of the antebellum. Recognizing that abandonment likely came slowly, a few structures were used as late as the 1940s, although most were likely abandoned as the face of the plantation began to change in the 1920s and early 1930s, shifting from cotton to tobacco. A second wave of change occurred in the early 1950s when mechanization arrived. The allotment system which had stabilized tobacco production from its introduction in 1934 had discourage mechanization since cultivation was largely concentrated on small family farms which were unable to make the financial investment in equipment. In 1961 a lease and transfer system was established, allowing allotments to change at the county and farm level -- contributing to the breakdown of traditional land and labor practices associated with tobacco since the 1890s. By the 1960s many of the tenant houses were razed and the farm had begun moving toward other crops, such as soybeans.

The Gibson plantation seems typical of many other moderately large tracts in the Pee Dee region, although there are few historical or archaeological investigations suitable for comparative purposes. The sparsity of the historical documentation for the late period is a clear indication that only through archaeological research will the lives of the African Americans who lived on the tract be recorded and better understood.

RESEARCH STRATEGY AND METHODS

Prehistoric Research Orientation

The **Introduction** has previously outlined some of the broad research issues involved, while the **Prehistoric and Historic Overview** section briefly outlined some of the previous work. The goal of this discussion will be to formalize the research orientation and explain the rationale for those decisions.

While there is not a great deal of previous research for this region of South Carolina, we are fortunate for the availability of work by Blanton et al. (1986) at a sand hill Yadkin site in Sumter County. While nearly 65 miles away, and in a different physiographic/geologic region, there are similarities at the microenvironmental level. Both sites border a spring and occur on a sand ridge. In the case of 38SU83 the site is in close proximity to a small branch, while 38FL249 overlooks the Pee Dee River Swamp. Largely the differences are of scale, although we certainly do not take broader environmental differences lightly. However, the review of site locations associated with cord and fabric impressed pottery at a series of studies in the region (undertaken by Blanton et al. 1986:16-18) reveals strong similarities throughout all of the slightly different physiographic regions. While sites are widely dispersed across different physiographic regions and microenvironmental zones, they are typically situated in inter-riverine zones overlooking a spring, swamp, creek, or non-flowing water source, such as an active or relic Carolina bay. Of course, the sample size is small, but the convergence of data is impressive and likely warrants careful attention, especially if the Pee Dee Electrical Generating Station data (Taylor 1984) and the Roche Carolina data (Trinkley and Adams 1992) were added.

Accepting the general comparability of the 38SU83 and 38FL249 site locations, it is important to fully understand the nature of the work at 38SU83 and, in general, its findings. In several ways the work undertaken in Sumter was more extensive than that in Florence, with the excavation of not only 25 5-foot test units, but also a 20 by 30 foot block in one site area. While the "features" encountered in the test pits were non-cultural (trees or animal disturbances), several exceptions were noted in the block excavations, including several pits, "pot bursts"[8], and possible post holes. It seems likely that this finding supports the contention that recovery of feature information will be more successful in large block excavations than in smaller test pits. Their work also reveals that features, in the sandy soil matrix, were found at several different levels and that the features (while very important for

[8] Blanton et al. (1986:99) note that while all archaeologists recognize the term as meaning the discovery of a large portion of a vessel in close context, the "behavioral correlate" of the term has generally been ignored. They argue that such finds likely do not represent a dropped, broken pot, since there is good ethnographic evidence that large debris (such as large pot sherds) are not usually left in situ. Rather they are mixed with other debris and moved to secondary deposits. Blanton et al. argue that the pot bursts found archaeologically more likely represent "vessels deposited below the living surface, as either caches of empty vessels or as storage facilities." The logic of their argument is sound and convincing; it only requires archaeologists to be more precise in defining "pot bursts," since it would appear that recovery of a third or less of a vessel would not behaviorally qualify for a cached vessel.

behavioral studies and recovery of carbonized material[9], produced relatively modest amounts of artifacts. These findings indicate that stripping of such sites are likely to reveal only a small sample of the features which might actually be present and that the work, absent extensive hand excavation, will provide too few artifacts for meaningful temporal, functional, or technological studies.

Artifact analysis focused on two materials: pottery and lithics. The level of detail was impressive, both in originality and in results.

Analysis of Pottery

A relatively large sample of the pottery (thought to represent what had traditionally been called Yadkin and Pee Dee) was examined using 19 variables: type, exterior smoothing, overstamping, rim shape, rim production step, thickness, rim diameter, shoulder form, coil breaks, interior treatment, core configuration, paste texture, temper size, other aplastics, mixing, apparent porosity, temper density, colors, and temper shape (for detailed discussions, definitions, and rationales see Blanton et al. 1986:79-81). The results of the study were surprising -- for example there appears to be a striking technological continuity between the Middle Woodland Yadkin and the South Appalachian Mississippian Pee Dee wares. In fact, "series separation would not be possible on a sherd-by-sherd basis using any one variable" (Blanton et al. 1986:91). They suggest that this continuity indicates that the acceptance of extra-areal ceramic traits was limited largely to decorative traits conveying social information, while the technological base for pottery production remained *relatively* stable through long periods of time. They associate such a philosophy with 38SU83 representing a "border area," and it is tempting to wonder, given the vast similarity of much Woodland pottery, if most of South Carolina wasn't such a "border area."

The pottery study also found considerable similarity between the Yadkin described by Coe (1964), the Yadkin described by Anderson et al. (1982:301) and the Yadkin at 38SU83. Temper density and type, thickness of the ware, interior treatment, generalized color and firing treatment, and the presence of large, straight-sided vessels were similar. Areas of divergence were minor:

- Coe's Yadkin shows rare overstamping of the cord marked, but more common overstamping among the fabric impressed motifs. At 38SU83 about half of the cord marked wares were overstamped, while none of the fabric impressed were. Blanton et al. (1986:82) observe that overstamping is functional attribute which will naturally vary with the construction needs of a particular vessel (or we might add, the idiosyncratic behavior of the individual potter). Consequently, this does not seem to be a particularly significant defining attribute.

- Coe's Yadkin was tempered with large amounts of intentionally crushed quart fragments ranging from 1 to 8 mm, with a 3 mm average size. At Mattassee Lake the Yadkin was found to contain large amounts of rounded to sub-rounded quartz ranging from 1 to 6 mm, with a 3 mm average. At 38SU83 the Yadkin quartz inclusions were subangular and common, consistent with the selection of an alluvial sand deposit. Consequently, while there is some variation in temper, it appears to reflect the available sources for the temper, not a behavioral difference. In fact, Anderson et al. (1982) suggest that the series should be based on temper size and density, with the temper shape free to vary.

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[9] Used at 38SU83 to yield three corrected radiocarbon dates on Yadkin materials: 220 B.C., 460 B.C., and 630 B.C.

- Coe's Yadkin includes almost equal amounts of cord marked (46%) and fabric impressed (44%) wares. The fabric is described as having a stiff warp about 4 mm in diameter. At 38SU83 they are again almost equal, although fabric impressed is slightly more common (37%) than cord marked (34%). The warps were also stiff, varying from 4 to 7 mm in diameter, while the weft was pliable and ranged from 0.5 to 1.5 mm id diameter. All were made with an S-twist. Blanton et al. (1986) suggest that this fabric is consistent with mats (probably more appropriate than the "wicker" term used by Coe). Further, they note that the condition ranges from good to very worn, with areas where there is no longer any weft fabric observable. Coe's cord marked Yadkin had twisted cord 0.5 to 2 mm in diameter. The cord marked wares at 38SU83 exhibited a similar range. About 73% of the assemblage represented an S-twist, while the remainder were Z-twists.

Beyond the typological assessment, which in itself tremendously helps to clarify issues surrounding the Yadkin type, Blanton et al. (1986:96-99) also tackled the even tougher question of vessel form and function. They found that the collection from 38SU83 contained predominately large vessels -- with mouth diameters of about 40 cm and capacities of about 18 l. They emphasize the size of these wares -- pointing out that they are at the large end of the vessel sizes mentioned in ethnohistoric accounts (see, for example, Swanton 1946:549-555).

Suggesting that the typology of vessel forms developed by other researchers primarily for late Woodland and South Appalachian Mississippian horticultural groups is likely not appropriate for Middle Woodland hunter and gatherers which required more general purpose vessels, they instead concentrate on size and secondary features to address vessel function. They consider, in turn, food preparation, water storage, and storage of dry foodstuffs. Relying on negative evidence -- the absence of exterior carbon build-up and the absence of light cores from repeated firings -- they dismiss the use of the vessels for food cooking. Likewise, they believe that such large vessels would have been impractical for collection of water -- being difficult to transport and likely unnecessary with springs nearby. They tend to support the third alternative -- storage of dry foodstuffs. Not only is this explanation given greater credence by the elimination of competing functions, but they argue the presence of pot bursts, in below ground contexts, supports the use of the vessels for storage.

Analysis of Lithics

Blanton et al. (1986) use relatively standard analytical approaches to review the lithic assemblage, finding, for example, temporal differences in the ways lithic raw materials were used and modified at the site (with limited pre-Woodland occupations most of the work was late-stage reduction, while during the Woodland there was greater evidence for production of tools), as well as differences in the way materials were worked (such as the reliance on bi-polar flaking for quartz cobbles).

The analysis of the small triangular points, like the work with Yadkin ceramics, begins to clarify some typological questions. First intuitively sorting the points, then comparing metric attributes, and finally plotting maximum length against basal width measurements revealed three clusters, termed Group 1 (the smallest), 2, and 3 (the largest). These are tentatively associated with the previously established Clarksville, Caraway, and Yadkin types. Exploration of function was limited by the small sample size of Group 3 materials, although there was convincing evidence in the form of breaks associated with use, that the Group 1 and 2 bifaces were used as arrow tips. While the Group 3 materials may have been used as knives, the collection from 38SU83 was inadequate to fully test this interpretation.

Investigations also explored the "mobility scale" of the Woodland group at the site, based on

the amounts of different raw materials present. They found that the Archaic people apparently used more non-local materials than did the Woodland group, which concentrated its efforts on the locally available quartz materials (although some metavolcanic materials may be considered local). The study adds yet another piece of evidence supporting the decline in mobility during the Woodland period when compared with the earlier Archaic people.

While not thoroughly explored by the study, Blanton et al. (1986:136) did identify "one seemingly distinctive type of informal tool." Six examples of flakes (up to 25 mm in length and averaging about 3 mm in thickness) with fine unifacial flake removals were recovered. They note that the edges "show only tiny flake removals that are suggestive [of] edge damage rather than intentional retouch" and that the tools were likely used for fine cutting or slicing tasks. It is likely that these tools may provide significant information on site activities no long visible in the archaeological record.

In an effort to explore what the lithic assemblage means behaviorally, Blanton et al. (1986) divide the assemblage into "personal gear" (items potentially carried by individuals in anticipation of a particular task or need, such as bifaces), "situational gear" (items, such as informal flake tools, that are non-anticipatory in nature which were made, used, and discarded when specialized tools were not necessary), and "site furniture" (items which are not part of the traveling tool kit, such as hammerstones and anvil/nutting stones). Obviously, personal gear would be more heavily curated than situational gear, while site furniture would be cached or casually left behind (see Claggett and Cable 1982, who used this approach at Haw River and Anderson et al. 1982 who adopted the concept for Mattassee Lake).

At 38SU83 76% of the lithic assemblage falls into the category of personal gear, while situational gear contributes 8%, and site furniture 16%. This is interpreted as a highly curated, rather specialized assemblage indicative of "well-planned, possibly specialized activities" (Blanton et al. 1986:141). The domination of the personal gear category by small triangular points further suggests that the activities being carried out was fairly limited -- representing hunting.

The excavation of a broad block also allowed the researchers to explore the nature of 38SU83, finding evidence of more than occasional, brief stops. Instead, they speculate (based on the potential activity area) that general living areas, if not actually temporary structures, were present. Further, the presence of discrete discard loci supports the concept of a specialized site function -- the manufacture of small triangular projectile points.

Behavioral Implications

Combining the pottery and lithic analysis with the examination of floral and faunal materials, allowed Blanton et al. (1986) to speculate on the complexity of the site. The spatial patterning of the lithic assemblage, especially when taken together with the presence of possibly cached ceramics, suggests a domestic sites, possibly with structures (although no definite post hole patterns could be identified). The lithic raw materials suggest a relatively limited round, perhaps not much more than 50 to 75 miles. At least two determinates of the site location were the presence of the spring and the availability of quartz cobbles suitable for bi-polar reduction into small triangular points. The examination of the floral remains is suggestive of perhaps a spring and fall occupation. One dry food-stuff which could easily be cached is hickory nuts, available from the late fall into the winter (and recovered in the ethnobotanical collection). The most revealing feature of the very small faunal collection is the near absence of deer. This may be taken as evidence (albeit speculative, given the small sample size) that other resources, such as small mammals, were being taken at this particular site.

The investigations at 38SU83 are not remarkable in the sense of having answered all of the

questions surrounding Middle Woodland Yadkin lifeways; rather the analytical approach is significant, since it relies on a convergence of evidence, with every possible data source examined for information which might be useful for the behavioral reconstruction. Of equal importance is that the researchers have, for the most part, clearly set out their analytical procedures. If allows other researchers to adapt the same approach and thereby ensure comparability of data sets.

Historic Research Orientation

Unlike research at prehistoric sites, those working with historic assemblages are blessed (or cursed, depending on the particular circumstances) with not only analytical approaches using the artifacts, but also approaches using historical data. And while the archaeological literature of tenant sites is not as abundant as that for some periods, such as coastal plantations, the literature created by historians and social researchers on tenancy is overwhelming. Just as we have not attempted to integrate all of the many excellent prehistoric archaeological studies into this outline of our research orientation, we will not try to exhaustively cover the historic literature. Rather we have selected several lines of inquiry which are seemingly appropriate at 38FL240.

Overview of Historical Research

Early in the depression, E.C. Branson commented on the state of knowledge about tenant farmers, sounding almost like an archaeologist in the late 1980s or early 1990s:

> In cold figures we know nearly all there is to know about farm tenants the country over -- the number, the ratios, the types, and the increases or decreases in each state since 1880[10]; and, in recent years in certainly closely surveyed areas in the South and Middle West, cold figures have told us much about their farm practices, their labor incomes, and the havoc they work upon soils and farm buildings. But we know much less, in most states nearly nothing, about the tenant as a human being -- his home life, his church and school interests, his habits and hopes, and the part he has played in lifting or lowering the level of civilization in his home community. We have reckoned him in dollars and cents; we have not yet appraised him as a home-maker or as community builder or destroyer in free American democracies (Branson 1923:215).

This wealth of documentary evidence includes, besides the federal census records collected every 10 years, studies such as Woofter's (1936) *Landlord and Tenant on the Cotton Plantation* and *The Farm-Housing Survey* conducted by the Bureau of Home Economics (1939). Just as observed by Branson, it is possible, using these and other data sources, to offer reconstructions of tenancy. For example, in South Carolina the average tenant house was 25 to 50 years old (although over 12% were older than 50 years), was of unpainted frame construction, had 4.5 rooms, lacked lighting, refrigeration, or a power washing machine, were in generally poor condition, and lacked screens. Most relied on dug wells, although between 10% and 16% used nearby springs. Nearly a third had no toilet facilities, although most used what was referred to in the studies as an "unimproved outdoor toilet," or privy. Over 97% used wood stoves for cooking. From these studies we can learn that black tenants were more stable and less likely to move than whites, that when tenants moved they typically didn't move very far, and that while black and white tenants were found on many plantations, at least 53% used only black tenants.

[10] This was somewhat overstated since it was not until 1920 that the federal census recognized the distinction between renters and croppers among tenants.

Of all the statistics, however, perhaps the most powerful are those dealing with income and expenditures. Obviously the numbers will vary depending on the sample area, the year, and the methods used. However, Branson himself offers a comparison of incomes in Chatham County, North Carolina -- an area of mixed tobacco and cotton in some respects not unlike Florence County (Table 5), while Woofter (1936:220) offers an average figure for the Atlantic Coastal Plain tenants over a decade later (Table 6).

Table 5.
Average Income of Chatham County Farmers and Tenants in 1921

Economic Class	Family Cash Per Year*	Daily Cash Per Person
135 white owners	$626 ($4900)	34¢
41 black owners	$597 ($4673)	32¢
38 white renters**	$251 ($1965)	14¢
66 black renters**	$289 ($2262)	16¢
13 white croppers***	$153 ($1198)	8¢
36 black croppers***	$197 ($1542)	10¢

Adapted from Branson (1923:219)
* - listed in 1921/3 dollars with 1992 dollars in parentheses
** - renter is the same as share renting, see Table 4
*** - cropper is the same as share-cropping, see Table 4

Table 6.
Average Income of Atlantic Coastal Plain Tenants in 1936

Economic Class	Per Family*	Per Capita
154 Wage Hands	$199 ($2008)	$58
212 Croppers**	$519 ($5238)	$87
16 Other Share Tenants	$833 ($8406)	$137
25 Renters***	$536 ($5409)	$119

Adapted from Woofter (1936:Table 38)
* - listed in 1936 dollars with 1992 dollars in parentheses
** - cropper is the same as share cropping, see Table 4
*** - renter is the same as cash renting, see Table 4

It is difficult to imagine life on 8 to 16¢ a day, or $833 a year, even when these figures are converted to 1992 dollars, yet the reality is made even clearer when Woofter explains where this income was spent -- 64.4% on food (flour or corn meal accounting for 23.3%, lard for 12.1%, meat for 9.1%, sugar for 5.5%, condiments for 5.4%, coffee for 2.5%, molasses for 1.7%), 14.2% on clothing, 3.3% on medicine (in spite of threats such as typhoid, pellagra, and malaria), 5.5% on tobacco, and 12.6% on other household items. To this generalized picture of tenancy, authors such as Johnson et al. (1935) added a social dimension, trying to explain the life of tenant farmers:

> The Kingdom of Cotton, reared first upon the backs of black slaves, is supported today by an ever-increasing horde of white and black tenants and sharecroppers whose lives are hopelessly broken by the system. . . . The cultural landscape of the cotton belt has been described as a "miserable panorama of unpainted shacks, rain-gullied fields, straggling fences, rattle-trap Fords, dirt, poverty, disease, drudgery, and monotony that stretches for a thousand miles across the cotton belt" (Johnson et al. 1935:1, 14).

Of particular interest are more recent efforts by historians and archaeologists alike to redefine the nature of Southern plantations, exploring how tenancy changed the face of those plantations. Prunty (1955), for example, argues that plantations are simply agricultural factories and while the labor pattern changed after the Civil War, the plantations continued. Others, such as Orser (1988) have begun exploring how the changing labor patterns changed the settlement patterns. The antebellum plantation with its distinctive slave settlement was slowly changed after the Civil War, balancing work needs against those of community and kin. For the most part, when compared to slavery, tenancy is often a more dispersed settlement pattern (see, for example, Orser 1988; Prunty 1955:472). It has been argued that this dispersion can be explained on the basis of energy expenditure per return (not having to walk long distances to one's field) or risk aversion (wanting to keep watch over economically important crops), yet such explanations fail to explain nucleated settlements, such as 38FL240, which maintained a settlement system almost identical to the antebellum plantation for 50 to 70 years before abandonment, even while a dispersed pattern was developing around it. In fact, this nucleated settlement is perhaps one of the most distinctive features about the Florence site. The closest approximation to this settlement is that of the squad system described by Orser (1988), wherein the former slaves were organized into semi-autonomous groups of peer workers, often composed around an extended family core. These groups typically occupied their own cluster of buildings on the plantation. Later patterns of sharecroppers and renters are both much more dispersed, with differences in the arrangement of buildings and types of structures present.

Issues of yearly income and settlement aside, it is clear from many of the first-person accounts that, for many, tenancy was simply a variation on the theme of slavery. As one cotton planter explained:

> cotton is and must remain a black man's crop, not a white man's, because the former's standard of living has always been low, and his natural inferiority makes it unnecessary to change it (quoted in Johnson et. al. 1935:14).

Even many of the outward manifestations, such as the plantation owner's allotment of two pecks of meal and four pounds of fat back ration to tenants harkens back, almost unchanged, to slavery (see Johnson et al. 1935:18)[11].

Overview of Archaeological Research Perspectives

There are an equally large number of archaeological studies as historic accounts from which to abstract significant research perspectives. We have selected only a few as representative of major trends and issues worthy of additional consideration.

Excavations at a manager's site (38BK397), situated on Daniels Island in Berkeley County on

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[11] Curiously, just as slavery was defended by antebellum Southern plantation owners against Northern critics and abolitionists, so too was tenancy defended by plantation owners from the attacks of "Uplifters" and the "Left-wing" (see Moss 1938 for one such example).

the Lower Coastal Plain, revealed an occupation from about 1899 through about 1907. The site, while plowed, appeared to be relatively intact and offered the opportunity to explore yard proximics utilizing the research of the Richland/Chambers project (Raab 1982; Jurney et al. 1983) where evidence of yard cleaning, accumulation of debris in specific areas, and activity area differentiation was possible. Adams (1980), from excavations at the late nineteenth century Waverly Plantation, also found evidence of patterning, with a very low artifact distribution near structures. The surface data from 38BK397 failed to reveal any recognizable patterns, although the excavated data revealed what the authors term a "diffusion-from-the-center" pattern, with the density decreasing as collection units become more distant from the structure (Brockington et al. 1985:228). The highest artifact density is encountered under the house, with moderately dense deposits found in the near back and side yards.

Similar analysis of yard trash associated with a late nineteenth-early twentieth century tenant site in Horry County (38HR131), also situated on the Lower Coastal Plain, revealed somewhat similar patterns of trash disposal (Trinkley and Caballero 1983a). Concentrations were found on either side of the house, with a specific trash dump identified in the rear far yard of the structure. Since the structure was standing at the time of the work it was not possible to examine under the house or porch for artifact density. Work by McBride (1984) also found that late nineteenth and early twentieth century low status sites in Barton, Mississippi tended to have refuse scattered in the near yard, declining in density in the far yard areas (typically 30 feet or so).

Although not a major theme of their research Zierden et al. (1986) explored several additional tenant assemblages on Daniels Island in the Lower Coastal Plain. One of the more interesting discoveries was that at both sites the percentage ratio of container glass to utilitarian ceramics was between 23 and 26% to about 3%, compared to earlier nineteenth century ratios of 2 - 4% to 9 - 18%, clearly distinguishing the sites from both planter and slave (Zierden et al. 1986:7-13). Curiously, this same preponderance of glass was found at piedmont tenant sites by Trinkley and Caballero (1983b), where the shift away from coarse earthenwares was explained by the decline in glass prices during the last several decades of the nineteenth century and the early twentieth century.

Kennedy et al. (1991) explored the difference between two structures on Hilton Head Island in Beaufort County, South Carolina (38BU966 and 38BU967) -- one belonging to a small African American land owner and the other associated with a black who was probably a cash-renter. Both dated from the last decade of the nineteenth century into the first decade of the twentieth century. Not surprisingly, they found recognizable differences in the artifact assemblage of the two sites, with the owner site evidencing more ceramic sets, a larger minimum number of individual ceramics, a greater diversity of ceramic forms and types, and an overall higher artifact frequency. Perhaps of more interest is that both sites exhibited a low incidence of hollow vessels (such as bowls) in favor of plates. This seems to suggest that these black farmers were forsaking the one-pot stews so common in slavery -- indicative of a basic change in foodways. Examination of the floral and faunal remains is less convincing, with the floral remains indicating primarily domesticates, while the faunal remains suggesting a diet of both domesticates (primarily pig) and wild animals (Kennedy et al. 1991:126). Tin cans, indicative of processed foods, are nearly absent.

While not specifically dealing with tenancy, two reports are worthy of special mention because of their comparative value. One is the research conducted at the freedmen site of Mitchelville (38BU805) on Hilton Head Island (Trinkley 1986), which provides a baseline for immediate post slavery freedmen settlement, subsistence, status, and artifact pattern studies. Spanning the period from about 1863 through about 1890, the site offers a unique view of how slaves were transformed into wage earners, owners, or tenants. Another equally significant, albeit brief, study is that of the Midway slave settlement in Georgetown County (also on the Lower Coastal Plain of South Carolina). At this site Smith (1986) examined a small sample of slave settlement occupied from at least the last decade before the Civil War until about 1890. Consequently, the site spans almost equal periods of

slavery and freedom, offering an assemblage somewhat akin to Mitchelville, but not organized around an "urban" concept. The Midway data, in fact, may be similar to the work gang system used by plantation owners immediately after the Civil War. While not emphasizing the transitional nature of the collection, Smith (1886:53) does observe that the resulting artifact pattern "appears to be unusual."

While conducted in the piedmont, rather than the coastal plain, the efforts by Joseph et al. (1991) at the Finch Farm (38SP101) in Spartanburg County, South Carolina are also worthy of brief mention. Excavations at the main house, as well as at two structures found little distinction in artifact assemblages. They observe that the owner distinguished himself from his tenants through architecture and the settlement plan, with the material culture perhaps being of little consequence since he did not regularly interact with his social contemporaries. They, as others, noticed that cheaper production "made the bottle and jar ubiquitous artifacts of little value," but also remark that these items, not being burnable and capable of quickly encompassing yards, were hauled to "non-productive locations" for dumping (Joseph et al. 1991:258-259).

From this previous research comes a series of obvious concerns over identifying the material basis of tenancy (and comparing that basis with both higher and lower status occupations), identifying the subsistence remains typically associated with tenancy, exploring the nature of the refuse patterns associated with tenant sites, and examining the different artifact patterns. There has been relatively little attention devoted to exploring the shift from slavery to tenancy, probably because the overlap is great and our analytical precision is rather ineffectual at this level. Likewise, there has been relatively little effort to translate the studies into an understanding of what life as a tenant was like (beyond the information available in historical accounts). We hope to avoid giving the reader the uneasy feeling or impression that archaeology can contribute little toward our understanding of tenancy. While many of the studies cited date from the 1980s, archaeological exploration of tenancy has had an uneven history, being plagued by waves of interest and activity, only to then be ignored. The unevenness of the research interest and support has likely caused many researchers to stop short of a full commitment of time and resources. Consequently, at least in the Inner Coastal Plain of South Carolina, we are still in a data acquisition phase which is essential prior to any significant theoretical breakthroughs being claimed.

Excavations

Strategy and Methods

As previously discussed, each site (see Figures 1 and 15) had been previously examined by Chicora Foundation in 1992 (Trinkley and Adams 1992). This initial work consisted of an intensive surface survey and shovel testing, as well as the excavation of several 5-foot test units to better understand artifact density, site stratigraphy, and outline research questions. Briefly, the two sites determined eligible for inclusion on the National Register were identified as:

- 38FL240, the remains of an antebellum slave settlement on the Gibson Plantation which continued to be used into the twentieth century, albeit almost certainly with structural repair, modification, and replacement; and

- 38FL249, a Middle Woodland site dominated by cord marked and fabric impressed pottery with a depth of up to 2 feet revealed during testing.

The two sites determined potentially eligible for inclusion on the National Register were:

- 38FL235, a scatter of late nineteenth and early twentieth century ceramics in an agricultural field representing part of the plantation's later dispersed settlement

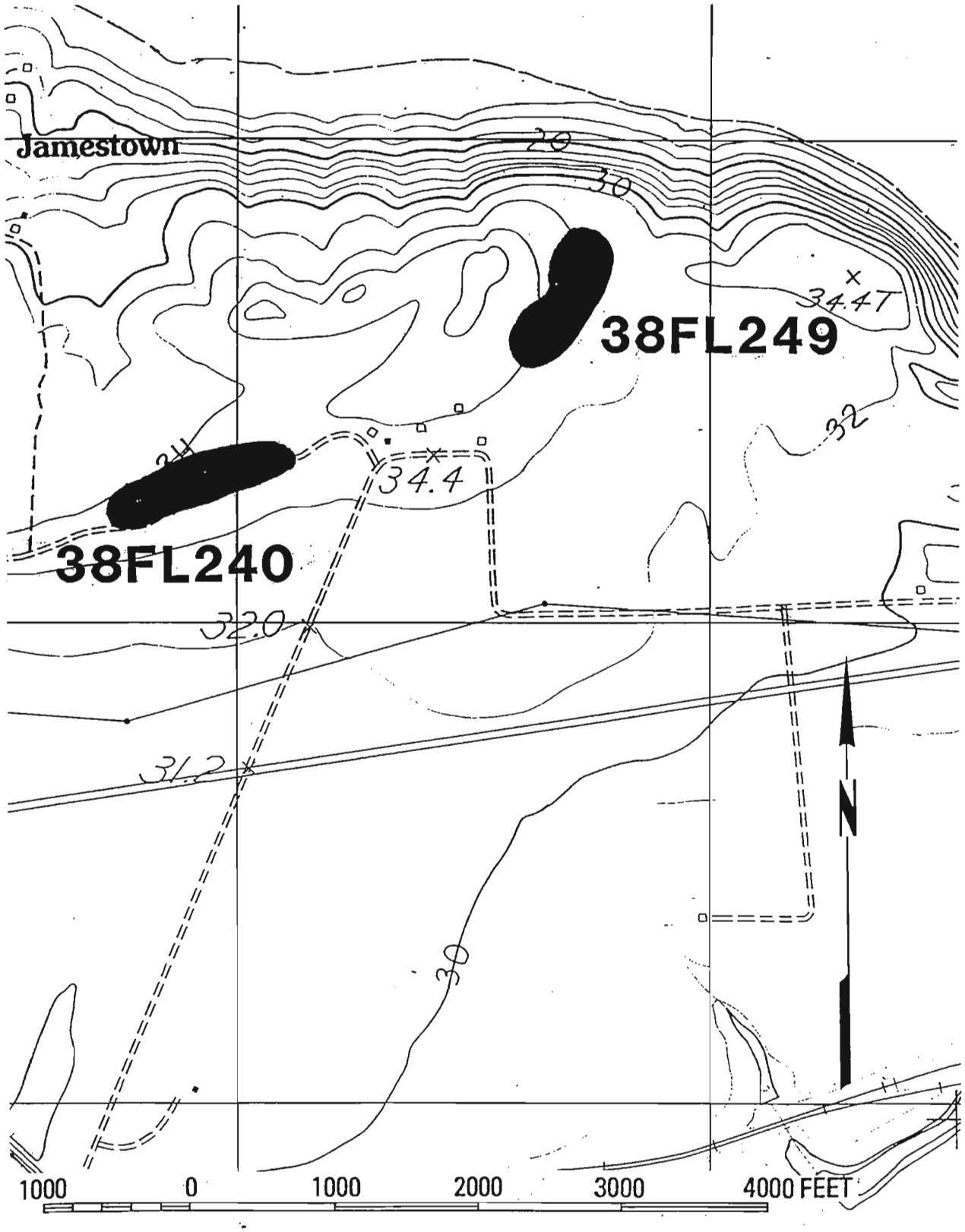


Figure 15. Sites 38FL240 and 38FL249.

pattern; and

- 38FL269, another scatter of historic remains in an agricultural field similar to 38FL235.

Taken as separate assemblages 38FL235 and 38FL269 were not especially spectacular, although they did represent some of the denser remains present. Taken together, however, they were felt to have the potential for providing comparative data and to help better understand the distinction between the dispersed settlement seen on the plantation and the nucleated settlement seen at 38FL249.

Enough work was conducted at 38FL240 to identify at least five probable structures based on the presence (in several cases) of standing chimneys and (in several other cases) brick piles probably representing chimney falls. Careful examination of the three loci revealed structures with what appeared to be distinctive features -- Structure 3 appeared to have been occupied until very recently, Structure 1 appeared to have been built of both "modern" machine made and older hand made bricks and to have been abandoned earlier, and Structure 2 was built entirely of hand made bricks. These three structures were selected for more detailed investigation in the hope of maximizing and more carefully defining the temporal periods present at the site. Because of this selected strategy which used structural remains visible on the surface and attempted to maximize variability, no additional testing was conducted at this site.

Each structure area was tied into the baseline established along the dirt field road. At Structure 2 on this baseline a metal capped rebar stamped "38FL240 AE 10.00" was established. All site elevations are tied into this vertical control. Horizontal control has been established at each structure using a grid oriented with the chimney remains. Each structure, therefore, has an independent grid, although each has been tied into the baseline (Figure 15). Structure 1 is oriented N14°E; Structure 2 is oriented N13°E; and Structure 3 is oriented N9°E, indicating some displacement of structures along the original row through replacement and abandonment.

Within each structure block a modified Chicago 10-foot grid was established, with each square designated by its southeast corner from a reference point located off-site. Thus, at Structure 1 the southeast corner of square 10R100 would be located north 10 feet and right (or east) 100 feet from the 0R0 point (situated off the site, typically on the road and in the field south of the structure). As an additional precaution to prevent units from being accidentally attributed to the wrong structure, the units were keyed to that particular structure. For example at Structure 1 the units were typically numbered under 100 (i.e., 10R100, 50R80, and so forth), at Structure 2 the units were in the 200 range (i.e., 210R200, 250R280, and so forth), while Structure 3 the units were typically in the 300 range. Obviously excavation needs at time precluded this system from being totally implemented, but numbering at the different structures was sufficiently different to prevent any misplacing of proveniences.

To permit additional horizontal control at the each structure the 10 foot units were further subdivided into 5-foot quadrants, with each quadrant being separately excavated, screened, and bagged -- essentially resulting in the excavation of the structures in 5-foot, rather than 10-foot, units. Each unit, as appropriate, was further divided into "interior" or "exterior" of structure, to allow for finer grain analysis of refuse disposal patterns or identification of activity areas.

Vertical control at each structure was maintained through the use of one or more elevation datums established in the site area by Chicora. Elevations are expressed as feet above an assumed elevation (AE) as determined by reference to the established datum. This system allows widely separated areas of the site to be precisely compared, although it was not possible to tie the structures into a mean sea level datum. The presence of a permanent vertical control datum will allow for more

easy re-establishment of the vertical control in the future, if necessary.

Soils from the block excavations were screened through ¼-inch mesh using mechanical sifters. Units were troweled at the top of subsoil, photographed in b/w and color slide film, and plotted. Excavation was by natural soil zones and soil samples were routinely collected. Features were usually bisected, with both small soil samples (approximately 2 quarts) and flotation samples (5 gallons) collected. Features were excavated by natural soil zones and were separately photographed, plotted, and profiles drawn during their removal. Feature fill was dry screened through 1/8-inch mesh to improve the recovery of faunal materials.

Site 38FL249 included two discrete areas -- Locus 1 was found in a densely wooded area just north of the plowed fields, while Locus 2 incorporated several concentrations of materials in the fields (Figure 25). The majority of the investigations concentrated on the area within the woods, where previous testing had demonstrated higher site integrity and stratigraphy to about 2.0 feet. Efforts in the plowed field would be limited to the excavation of several 10-foot units to provide comparative data, perhaps assisting in the identification of specific activity areas.

Less information was available from the initial survey concerning the spatial distribution of Locus 1 at site 38FL249 than had been obtained for the slave/tenant site. While general boundaries were determined, and the shovel tests revealed areas of particularly dense remains which had been tested with several 5-foot units, there had been no close interval testing of the site. Consequently, a sampling strategy was developed to explore the site. The process used involved gridding the entire site, as originally defined on the basis of the surface and shovel test survey, and numbering each 10 foot grid unit. A series of eight 10-foot units were randomly selected using a computer generated table of random numbers. There was no effort to stratify the site, since there were no obvious strata. Likewise, no effort was made to used an unaligned sample, since we believed that there was little opportunity for alignment of the sample.

This rather labor intensive method of site testing was selected over shovel or auger testing for both logistical and methodological reasons. Given the scheduling of the project there would be no equipment available which could cost-effectively clear the very dense vegetation in the site area, meaning that all work undertaken would require hand clearing. The excavation of either shovel tests or auger tests, on an accurate grid suitable for guiding further work, would require an inordinate amount of time clearing and setting grid lines at, for example, 25 foot intervals. While increasing the interval of testing would reduce the effort of clearing, it would also reduce the precision of the results. Given the depth of the site we had also found that shovel tests were difficult to excavate, very labor intensive, and prone to error. Likewise, auger testing, while less time consuming and more certain to identify the base of the cultural deposits, would still be very labor intensive. One of the greatest concerns in the use of either shovel or auger tests is that neither would be particularly effective at the identification of features. Since we were hopeful that features would be encountered, especially considering the density of remains found during the earlier site tests, we wanted a sampling technique which would allow features, if present, to be recognized.

All of these considerations, taken together, guided the decision to use formal units for testing rather than informal shovel or auger tests. The decision to use 10-foot, rather than 5-foot tests was also made on the basis of our desire to identify features. Based on previous work we felt that in the unconsolidated sands features would leach out, leaving only faint stains. These stains tend to be easier to see in larger, rather than smaller, units. Consequently, we selected 10-foot units which would maximize our ability to identify faint features.

All soils were dry screened through ¼-inch mesh using mechanical sifters. The soils, especially at the lower levels of Zone 2, were quite wet and screening was very time consuming. An exception

in screening techniques was made in Excavation Units 15, 16, 17, and 18 where large quantities of small remains were encountered. As a result, Zones 2 and 3 were water screened through ⅛-inch mesh after having been processed through the ¼-inch mesh. This resulted in exceptional recovery of very small fragments of calcined animal bone, charred hickory and walnut fragments, and very small thinning flakes. Because the fragments were "imbedded" in soil balls, it appears that very few items ⅛-inch and over were lost during the ¼-inch screening. Units were troweled at the base of excavations, photographed in b/w and color slide, and plotted.

Investigations at 38FL235 and 38FL269

In addition to the major emphasis of data recovery excavations at 38FL240 and 38FL249, this study also incorporated additional testing at two plowzone tenant sites. Site **38FL235** is a late nineteenth/early twentieth century tenant site located approximately 200 feet north of SC 24 and 200 feet east of Jamestown Road. The site consists of a scatter of artifacts measuring 125 feet east-west by 200 feet north-south in a plowed field. Of 15 shovel tests, 11 evidenced subsurface remains of artifacts and/or brick rubble. The site had been freshly plowed allowing surface collection. Forty-eight artifacts were recovered. Soil profiles revealed about 1.0 foot of gray brown plowzone (10YR5/2) overlying yellow brown subsoil (10YR5/6). Artifacts suggest a late nineteenth century occupation (the ceramics yielding a mean ceramic date of 1887) and historic maps indicate that the site was active in 1914 but had been abandoned by 1945. Site **38FL269** is a twentieth century historic scatter measuring 250 feet east-west by 150 feet north-south located 200 feet south of SC 24. A structure appears in this vicinity in both the 1914 and 1945 maps. The site exhibited a large amount of artifacts on the surface and a relatively large collection was made. Twelve shovel tests were excavated with eight yielding subsurface remains. In addition, a single 5-foot unit was excavated during the survey. The unit was excavated in one zone to a depth of 0.7 foot below ground surface. Soil in zone 1 was blackish in color (10YR2.5/1) and the subsoil was a yellowish brown (10YR5/4). The unit revealed dense subsurface remains (190 artifacts, or 10.8/1 ft^3).

Site 38FL235, which had been thoroughly plowed and rained on prior shortly prior to this study, was investigated through a controlled surface collection using a 25 foot grid encompassing an area 175 feet east-west and 225 feet north-south (Figure 16). The grid was laid out using information previously generated by the shovel tests to define site boundaries (i.e., a cruciform pattern of tests terminating with two successive negative tests). This created 63 collection units, each of which was 100% collected with the artifacts used to generate computer density maps for brick weight, total artifacts, kitchen group artifacts (using South's 1977 categories), and architectural group artifacts (Figures 17-20). In addition, two 5-foot units were excavated to explore the sub-surface artifact density, diversity, and correspondence with the surface collections. Excavation Unit 1 was placed at the southeast corner of surface collection grid 11 and Excavation Unit 2 was placed at the southeast corner of surface collection grid 17 (see Figure 16).

The surface collection revealed brick concentrated in the southwest quadrant of the surface collection grid and extending into the central north area, with this extension perhaps reflecting a second structure (see Figure 17). The artifact density followed a similar pattern, with a dense concentration in the southwest quadrant of the collection grid (Figure 18). When artifacts were divided into those related to South's kitchen group as opposed to those associated with the architectural group, the pattern shifted slightly. Kitchen related items remain densely concentrated in the southwest quadrant, although the architectural remains suggest a more diffuse patterning (see Figures 19 and 20). All of these density maps offer the same generalized information -- the concentration of artifacts appears to the be in the southwest quadrant. Of equal significance to this study the surface collection grid, *laid out on the basis of a traditional shovel testing approach commonly used in "compliance archaeology,"* did not allow the southern limit of the site to be defined.

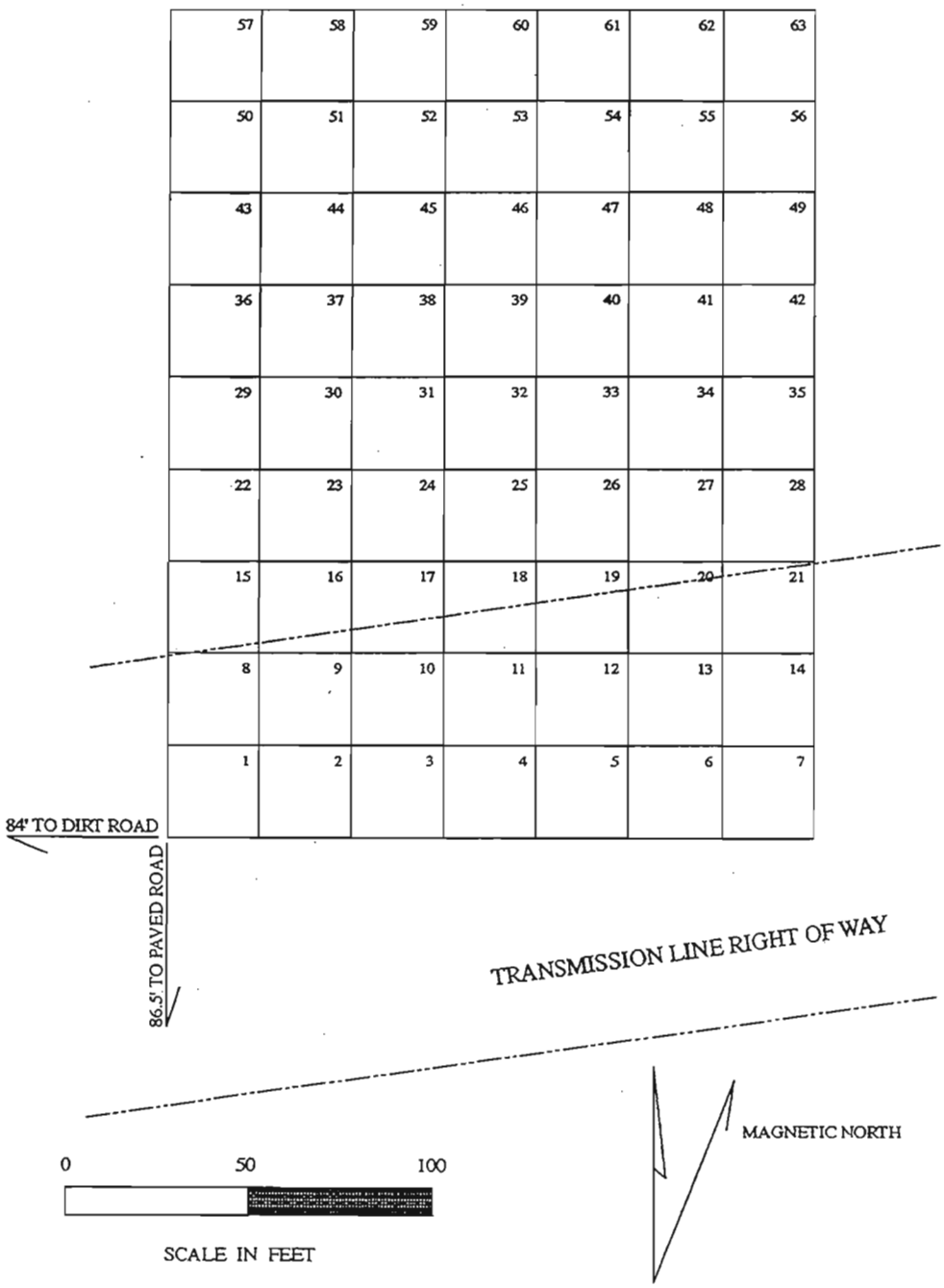


Figure 16. Surface collection grid at 38FL235.

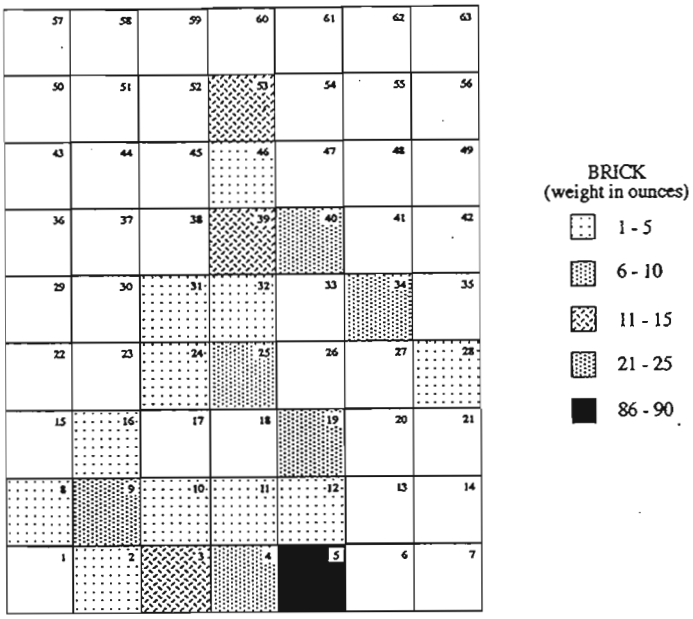


Figure 17. 38FL235, brick density.

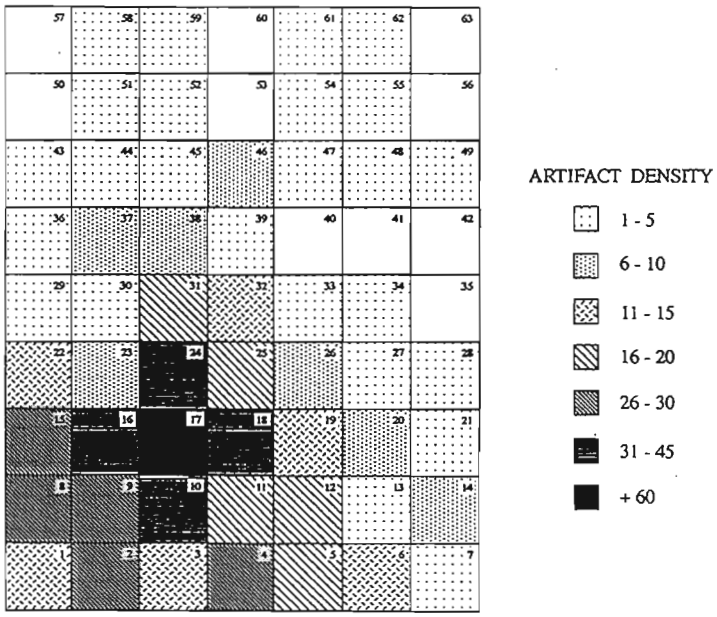


Figure 18. 38FL235, artifact density.

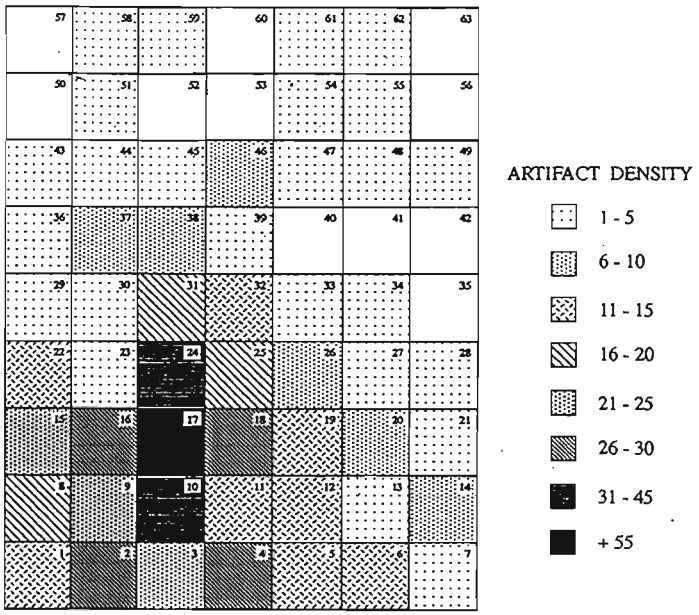


Figure 19. 38FL235, kitchen group artifact density.

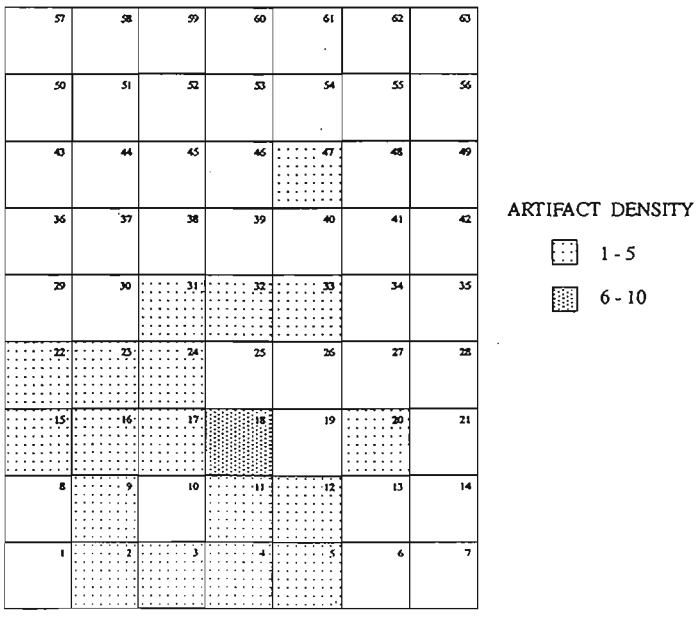


Figure 20. 38FL235, architecture group artifact density.

In fact, even to the north the site limits seem to have been only approximately defined, since kitchen remains continue to the found to the very edge of the collection grid. It is not surprising that the controlled surface collection was able to much more clearly define site areas than the initial shovel testing. It is, however, both surprising and potentially disturbing that the shovel testing was unable, with any reasonable degree of accuracy, to define the southern site boundary.

Table 7.
Comparison of Pattern Analyses from Controlled Surface Collections and Two Excavation Units at 38FL235

	Surface Collection		Excavations		Combined	
Kitchen Group						
Ceramics	256		55		311	
Glass	282		183		465	
Tableware	7				7	
Kitchenware	1				1	
Subtotal	546		238		784	
		91.0%		75.8%		85.8%
Architectural Group						
Window Glass	36		36		72	
UID Nail Frags	42		37		79	
Spikes	3				3	
Subtotal	44		73		117	
		7.3%		23.3%		12.8%
Furniture Group						
Furniture Group	1		1		2	
Subtotal	1		1		2	
		0.2%		0.3%		0.2%
Arms Group						
Shotgun Shells	1				1	
Subtotal	1				1	
		0.2%				0.1%
Clothing Group						
Buttons			1		1	
Subtotal			1		1	
				0.3%		0.1%
Personal Group						
Personal Items			1		1	
Subtotal			1		1	
				0.3%		0.1%
Activities Group						
Tools	1				1	
Storage Items	2				2	
Other Hardware	3				3	
Toys	2				2	
Subtotal	8				8	
		1.3%				0.9%

When the pattern analysis resulting from the controlled surface collection is compared to the pattern analysis generated on the basis of the excavations (Table 7), it appears that the surface collection over-selects for kitchen items, particularly at the expense of architectural remains. Although neither surface collections nor excavation units identified tobacco related items (most likely because pipes had been replaced by either cigarettes or chewing tobacco), only the surface collection revealed the existence of Activity Group Artifacts, which may be very loci specific (many being related to specific storage or farm activities).

While the disparity between the two pattern analyses is not totally unexpected, and has been commented on by other researchers, one cannot help but wonder how representative two five-foot units (totally 50 square feet) are when compared to the size (nearly 40,000 square feet) and complexity of the site (perhaps representing a house and at least one outbuilding). The issue of representativeness is of particular interest since the level of effort at sites such as this is constantly being reduced by regulatory agencies (in this case the SHPO determined on the basis of the surface collection that this site was not eligible for inclusion on the National Register).

The 286 temporally sensitive ceramics from the site were used to determine the mean ceramic date (Bartovics 1981; South 1977) as illustrated in Table 8. The early date of 1895 is clearly the result of relatively imprecise mean dates for the various whitewares recovered. The presence of one overglazed enamelled Chinese porcelain, dating from the early eighteenth century, is a reminder that there was earlier occupation on the Gibson Plantation, with resulting mixing of ceramics at a number of sites.

Table 8.
Mean Ceramic Date for 38FL235

Ceramic	Mean Date (xi)	(fi)	fi x xi
Overglazed Enamelled Porcelain	1730	1	1730
White Porcelain	1883	7	13181
White Porcelain Gilt	1883	1	1883
Whiteware, blue edged	1853	2	3706
blue trans print	1886	2	3772
poly decal	1926	7	13482
annular	1866	12	22392
sponge	1853	3	5559
tinted glaze	1941	4	7764
undecorated	1898	242	459316
		286	542050

$$542050 \div 286 = 1895.3$$

Historic maps indicate that the site was active in 1914, but had been abandoned by 1945. This is reasonable given the 1895 mean ceramic date. One artifact offers particular assistance in determining the terminal date for the site. The excavations produced a stamped brass pin in the shape of a police badge measuring about 1-3/8 inches by 1-1/8 inches. On the badge was stamped "A REPUBLIC SERIAL/DICK TRACY/191." Everson (1972:219) notes that the Republic serial *Dick Tracy* first appeared on the screen in 1937. By 1945 Dick Tracy moved into features for RKO Radio. Consequently, this badge would have been produced as a promotional item between 1937 and 1945, indicating that the site was occupied at least as late as 1937. Several Coca-Cola® bottle fragments are also helpful in further tying the occupation into the twentieth century. The excavations produced

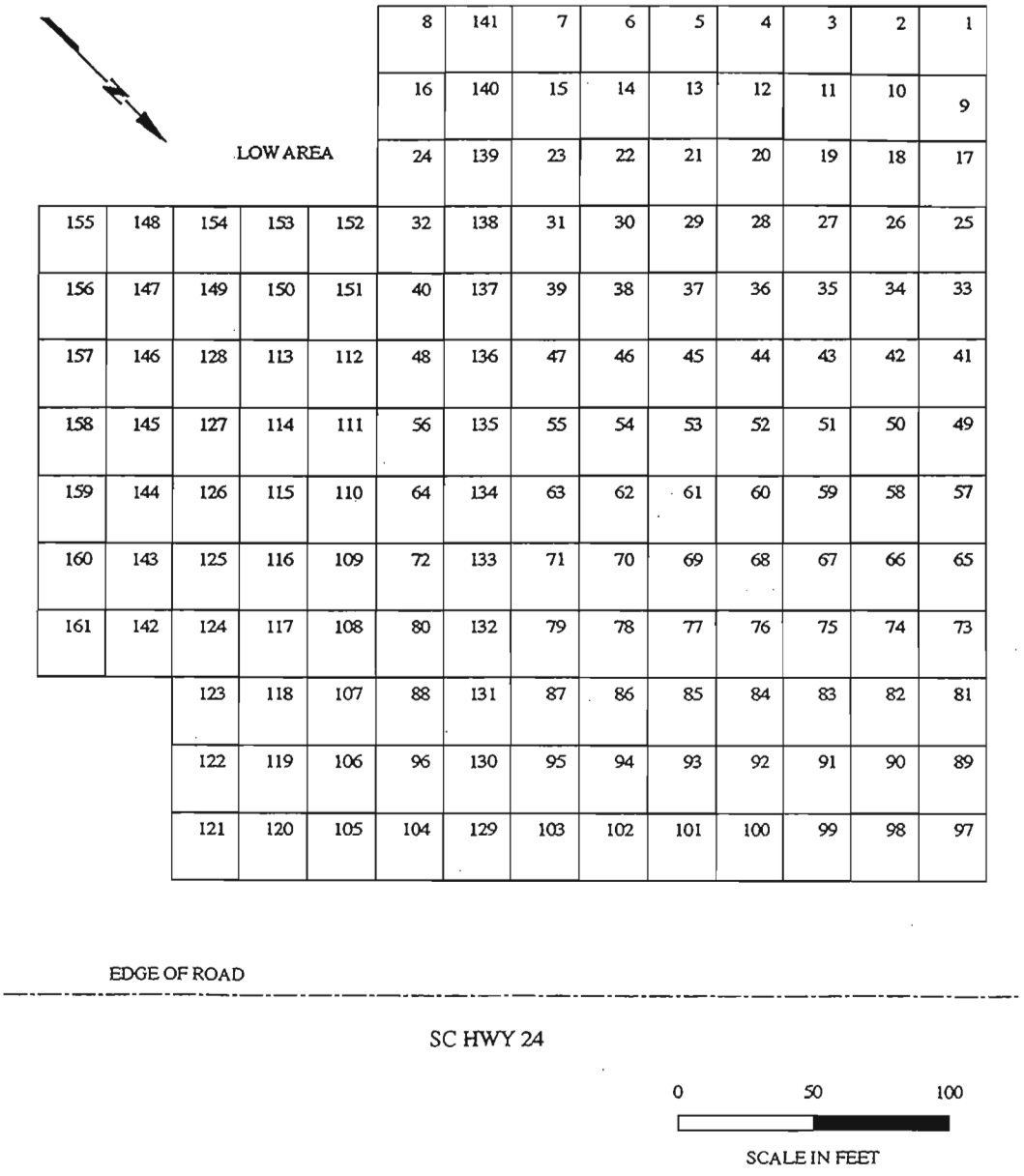
bottle fragments produced from 1915 on, the surface collection yielded materials dating between 1902 and 1920 (Jeter 1987:42). Two proveniences yielded Chero Cola® bottle fragments with designs dating from 1912 to 1925 (Jeter 1987:39). Finally, two maker's marks could be firmly dated. One for J. & G. Meakin, Ltd. was used from about 1880 until 1907 (Kovel and Kovel 1986:11). A Homer Laughlin mark was datable to the year 1904 (Kovel and Kovel 1986:242). There is considerable evidence that the site, while perhaps occupied as early as the last quarter of the nineteenth century, was most intensively used during the first quarter of the twentieth century, being abandoned by about 1940. Not surprisingly, considering the size the respective collections, better dating was achieved using the controlled surface collection than either the initial shovel tests (which suggested a mean date of 1887) or the two excavation units.

Site 38FL269 was similarly divided using a 25 foot grid over an area measuring 200 feet east-west and 300 feet north-south (and defined on the basis of the original shovel tests), creating a total of 96 collection units (Figure 21). Again, each grid unit was 100% collected, although because this site had not been as thoroughly plowed it was decided to also conduct a close interval shovel testing program over the entire site. Based on the surface collection results, however, the grid was extended to the east, creating 160 shovel test points (the newly created units were also surface collected to ensure consistently comparable information was available).

Figures 22 and 23 compare the density of total artifacts based on the surface collection and shovel tests. Several observations are immediately apparent. The first is that, as all field archaeologists know, proper ground preparation is essential if a controlled surface collection is to be undertaken. This study demonstrates the degree of bias which can be incorporated into the study when adequate preparation is not undertaken. Second, just as with 38FL235, this study clearly documents how poorly shovel testing boundaries correspond with boundaries determined through either controlled surface collection or controlled, close-interval shovel tests. *Again, this indicates that site boundary determinations, at least at some historic period sites, may bear little resemblance to reality and suggests that more time and funding may be necessary to adequately establish site boundaries, even at a survey level.* While subsurface tests were to be excavated at this site, as they were at 38FL235, to further explore the diversity of archaeological remains present as well as to offer controlled comparative collections from several methodological approaches, the SHPO determined that the shovel tests and surface collection had produced sufficient data and that no further work should be undertaken. Consequently it was not possible to examine how representative data from sub-surface excavations would be in comparison with the other approaches used at the site.

Table 9 compares the artifact pattern developed using the controlled surface collection data and that of the close-interval shovel tests. The two are very similar to the comparison of controlled surface collection and excavations at 38FL235, although at 38FL269 the surface collection *seems* to be providing a more accurate indicator of pattern diversity than the shovel tests. This may indicate that number of artifacts is more important than collection technique, meaning that studies would be best served by undertaking the type of controlled collection procedure which is likely to offer the largest possible collection, regardless of the precise technique. Considering the importance of sample size in most quantification statistics, this should not be surprising. In fact, considering the difference in the two sample sizes -- 320 compared to 21 -- what is surprising is that there is as much convergence as there is.

Examination of historic maps reveals the presence of at least one structure in the immediate vicinity of this site from at least 1914 through at least 1945. The original shovel test survey (which also included the excavation of a single 5-foot unit) produced a mean ceramic date of 1894. Consequently, this site was thought to have originated about the same time as 38FL235, but to have continued longer. Table 10 shows the mean ceramic date of 1885.3 for the combined shovel tests and



					8	141	7	6	5	4	3	2	1
					16	140	15	14	13	12	11	10	9
					24	139	23	22	21	20	19	18	17
155	148	154	153	152	32	138	31	30	29	28	27	26	25
156	147	149	150	151	40	137	39	38	37	36	35	34	33
157	146	128	113	112	48	136	47	46	45	44	43	42	41
158	145	127	114	111	56	135	55	54	53	52	51	50	49
159	144	126	115	110	64	134	63	62	61	60	59	58	57
160	143	125	116	109	72	133	71	70	69	68	67	66	65
161	142	124	117	108	80	132	79	78	77	76	75	74	73
		123	118	107	88	131	87	86	85	84	83	82	81
		122	119	106	96	130	95	94	93	92	91	90	89
		121	120	105	104	129	103	102	101	100	99	98	97

Figure 21. Surface collection and shovel test grid at 38FL269.

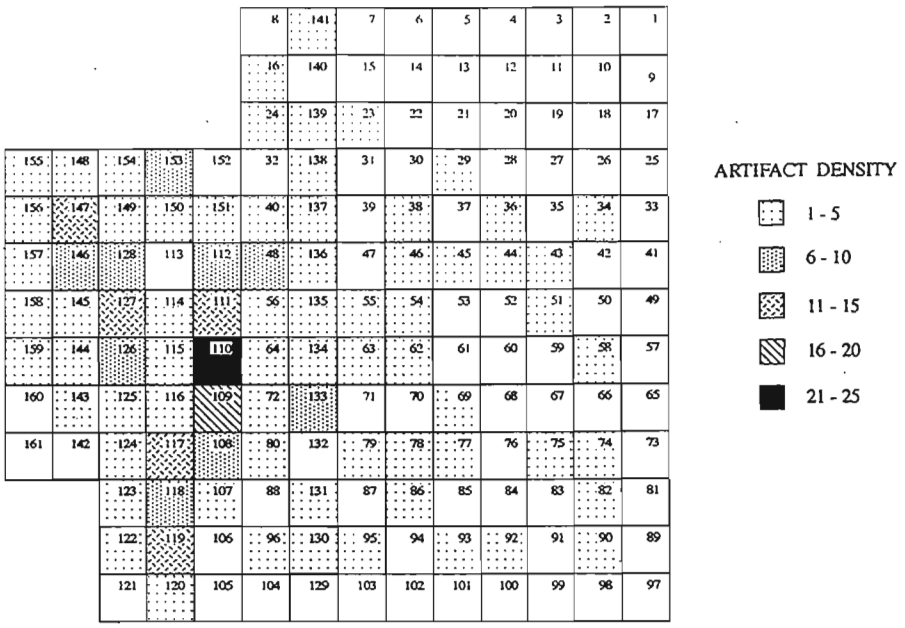


Figure 22. 38FL269, artifact density based on surface collections.

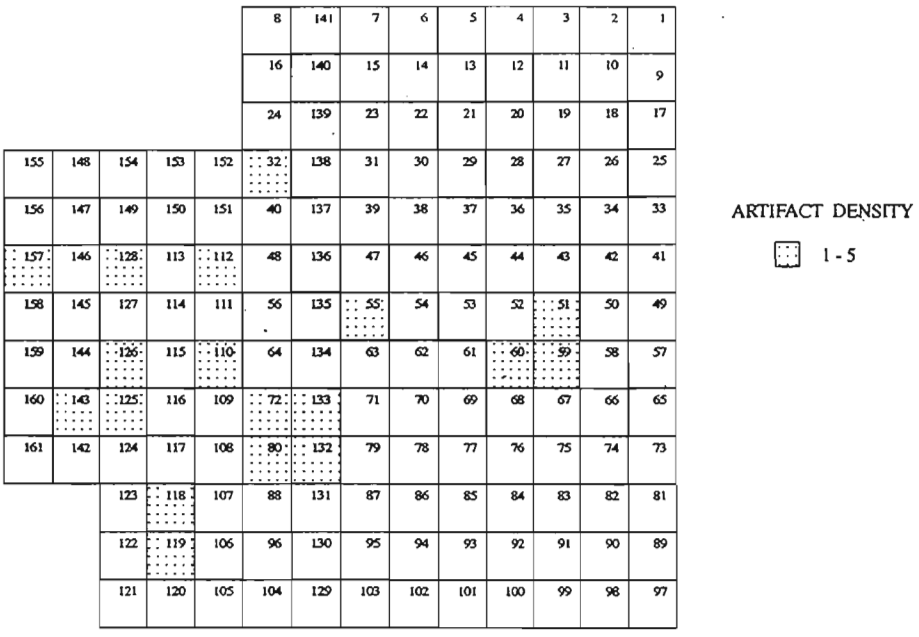


Figure 23. 38FL269, artifact density based on shovel tests.

Table 9.
Comparison of Pattern Analyses from Controlled Surface Collections and Shovel Tests at 38FL269

	Surface Collection		Shovel Tests		Combined	
Kitchen Group						
Ceramics	158		7		165	
Glass	151		8		159	
Tableware	3		2		5	
Kitchenware	2				2	
Subtotal	314		17		331	
		98.1%		81.0%		97.1%
Architectural Group						
Window Glass	2		1		3	
UID Nail Frags	1		2		3	
Spikes	1		1		2	
Subtotal	4		4		8	
		1.3%		19.0%		2.3%
Activities Group						
Tools	1				1	
Toys	1				1	
Subtotal	2				2	
		0.6%			0.6%	

controlled surface collection. Unlike the original study, this research identified a surprising number of early and mid-nineteenth century ceramics, such as pearlware, at the site. We believe that this small early assemblage was not identified during the initial survey work because it does represent a minority of the materials present. Regardless, it appears that the site contains two episodes of occupation -- one during the mid-nineteenth century, represented by the creamware and pearlware, and another during the very late nineteenth and early twentieth centuries.

There are some noticeable differences in the assemblages of 38FL235 and 38FL269. For example, although 38FL269 was occupied later, it contains no late whitewares, such as decalcomania or tinted glaze wares. The only other dateable items include a very fragmentary dispensary bottle and the large number of manganese glass. The dispensary bottle dates between 1893 and 1907, while manganese glass was most common from the 1890s through 1914 (Huggins 1971; Lorrain 1968). These offer convincing evidence that the site was present during the last decade of the nineteenth and first decade of the twentieth centuries, but provide little support of either earlier or later occupation.

Unlike 38FL235, there are no soda bottles present at 38FL269, in spite of its contemporaneous occupation. In fact, the diversity of artifacts at 38FL269 is much lower than recovered at 38FL235. The difference in artifact assemblages, and dispersion of these materials, may reflect a difference in the economic and/or social status of the two families. This is likely supported by the difference in vessel forms at the two sites. While 38FL235 is dominated by flatware, 38FL269 has a much higher proportion of hollow ware in its whiteware collection.

The investigations at 38FL235 and 38FL269 provide good evidence that traditional shovel testing (at close intervals bisecting the site, with fill screened), even under the seemingly ideal conditions of a fallow to lightly cultivated field, will fail to accurately identify site boundaries in at least one direction. This has implications in accurately defining green spacing boundaries, determining

Table 10.
Mean Ceramic Date for 38FL269

Ceramic	Mean Date (xi)	(fi)	fi x xi
White Porcelain	1883	10	18830
Creamware, undecorated	1791	2	3582
Pearlware, blue hand painted	1800	1	1800
edged	1805	3	5415
annular	1805	1	1805
undecorated	1805	11	19855
Whiteware, non-blue trans print	1866	1	1866
annular	1866	1	1866
undecorated	1898	125	237250
		157	295995

$$295995 \div 157 = 1885.3$$

the location of sites relative to project impacts, and even determining appropriate sampling strategies. The investigations also demonstrate the dramatically different analytical results possible when using data from survey shovel testing, intensive shovel testing, controlled surface collecting, and test excavations. While it is difficult to determine which "best" portrays the reality of the site, there seems to be a strong correlation between sample size and reliability of pattern analysis and dating. The study at 38FL269 also indicates that as more intensive testing is conducted it may be possible to identify assemblages completely overlooked by traditional shovel testing approaches. In the case of 38FL269 the presence of a previously unknown early to mid-nineteenth century assemblage was found.

The research also requires that so-called "tenant" sites be very carefully evaluated by both the field archaeologist and the regulatory agency. There may be that the most significant research questions can be formulated only as the data is better understood, such as the case with 38FL269. It is also surprising that there is a tendency to discount the potential contributions of sites like 38FL235 or 38FL269, simply because they are plowed or because they produce few artifacts. It is unlikely that such sites will make major contributions to our understanding of either architectural layout or subsistence (given how shallow foundations and chimneys tend to be laid and how dispersed subsistence materials will be by plowing). Yet, it is clear that there are other research issues of equal or greater importance -- exploration of intra-site patterning and variability, the effects of plowing on dispersion of tenant artifacts, and the signatures of different types of tenant sites around the state -- to name only a few.

It is also important to guard against the argument of redundancy -- which is little more than an excuse for professional callousness and a cavalier attitude toward archaeological resources. For a resource to be redundant implies, first, that we know how many such resources exist at any given time, and second, that we have studied a large number of sites throughout the state. All tenant sites are not the same -- it is likely that there will be at least temporal, spatial, and economic differences. There will also be idiosyncratic differences which can be balanced only by having adequate samples to understand the expected variation.

The work at 38FL235 and 38FL269 should be taken as an indication that even small, seemingly dispersed, tenant sites have the potential to answer significant questions about South Carolina's agrarian history.

Educational Component

Coupled with the research undertaken at these two sites was an educational program, "Searching for the Past: Archaeology in Education," conducted by Chicora Foundation under the auspices of Roche Carolina, Inc. This involved the development of curricula materials for use by teachers, extensive media attention on the heritage of the Pee Dee area, and school tours of the site. During a five week period over 1,000 school kids, from grades three to twelve, toured the site, seeing real archaeology and learning how archaeologists reconstruct the past. In addition to the school kids, nearly 200 adults, including teachers, toured the site. Over 100 curricula guides have been distributed to schools and individuals throughout the state.

The excavations were covered by two commercial television stations, WBTW (Channel 13 - CBS) and WPDE (Channel 15 - ABC). In addition, the Sumter ETV station, WJPM (Channel 33) produced a 10-minute segment on the excavations, with another segment to be aired on what archaeologists do in the lab.

While it is difficult to quantify the impact of the program, some estimates can be made. For example, recent Arbitron ratings for the two commercial television stations suggest that upwards of 230,000 total households in the Pee Dee area were exposed to the educational program, not counting those who saw the much longer ETV program. The 1,000+ school kids evidence more than a one-time exposure since it is likely that they will remember the event and the curricula materials are designed

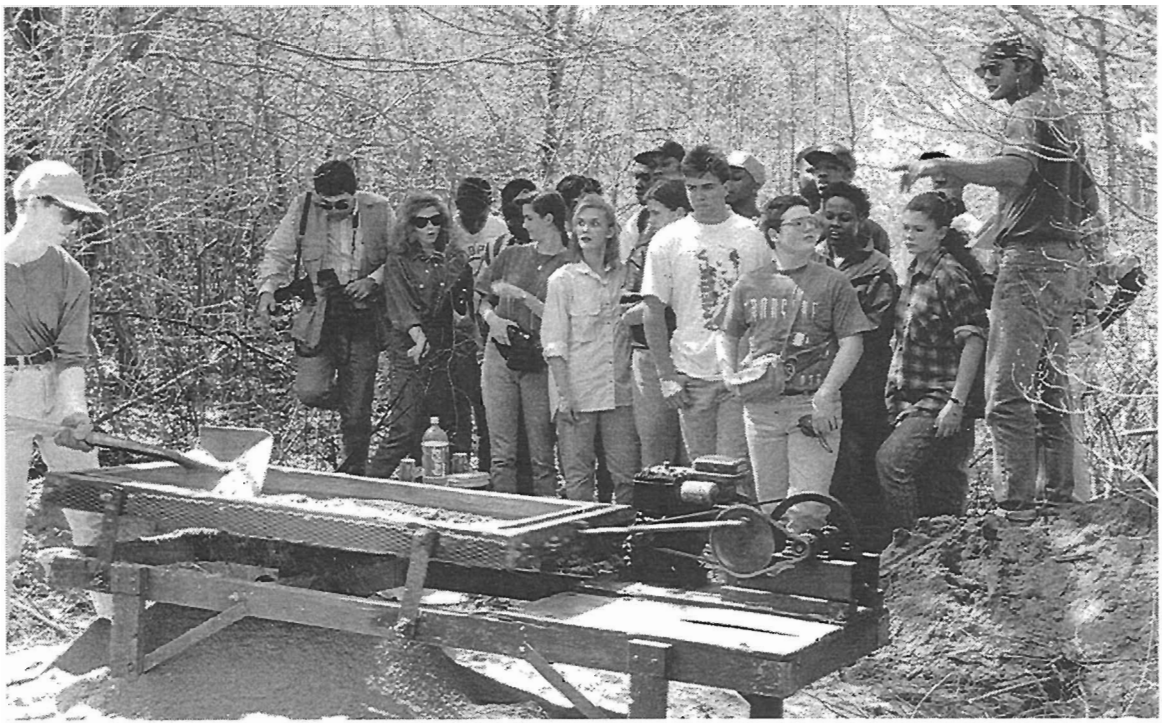


Figure 24. School group touring 38FL249 excavations.

Figure 25. School group looking at artifacts from 38FL240.

to foster a continued interest in heritage issues. The curricula materials provided to nearly 75 teachers and schools will have an estimated useful life of 4 years (an estimate of the time teachers tend to use "new" materials before looking for replacements). With each teacher having social studies or history classes four times a day and each class having an average size of 30 kids, this translates into the exposure of 36,000 kids to heritage preservation.

In retrospect this represents one of the most aggressive, carefully developed, and successful heritage-based educational programs ever undertaken in South Carolina. Chicora Foundation has been invited to participate in a national conference on historic site interpretation, using the Roche Carolina project as an example of how archaeological research can be successfully interpreted to the public. This underscores the significance of this project, since it demonstrates that "compliance" or "public" archaeology can, in fact, be made truly public.

Laboratory Methods and Analysis

In so far as possible the analyses have been presented in simple, straight-forward terms, with a minimum of jargon or specialized discussion. For some of the more technical analyses we have chosen to incorporate the methodological explanations here, where they will be available for those needing them, but will not otherwise interfere with the flow of the discussions. We do not, however, intend for this to be a compendium of analytical techniques -- we will not detail every step, just those which may be different, especially technical, open to different interpretations, or controversial.

Many of the artifacts received field cleaning during rain periods in at the Florence laboratory, although final cleaning and cataloging of the collections was conducted at Chicora's Columbia laboratories from May through July 1993, with the analysis conducted during this same period. Most artifacts were wet cleaned, except for brass, lead, ethnobotanical, and some bone specimens, which

were dry brushed. As previously discussed, the collections have been cataloged for curation at the South Carolina Institute of Archaeology and Anthropology.

On the Nature of Analysis

Analytic approaches tend to raise strong emotions in archaeologists. Colleagues tend to either strongly agree that an approach is the only appropriate one, or that its use will lead to such erroneous results that the entire project might better have never been undertaken. Some view analysis as the worst possible drudge work, only slightly better than washing artifacts. While others view each artifact as capable of unlocking the past, if only you know how to listen. And to others the key is not the artifact, but rather the quantification process. Into the midst of these different ways of looking at the world is thrown yet another variable -- project funding, whether it may be grant or compliance.

Often the role, perhaps even the goal, of "good analysis" will be simply "to set up signposts for future research" (Orton et al. 1993:34). In fact, for even exceptional analytical approaches to yield information on cultural behavior it will likely be necessary for a relatively large number of sites to be similarly investigated. This implies that a number of researchers must all agree to both fund and conduct their studies using virtually identical approaches. Of course new approaches will be added, and old ones will be refined, but there must be a consistency not often found. The underlying assumption here (or at least one assumption) is that work and conclusions should be constantly re-evaluated and re-examined. Returning to Orton et. al again, they remark that:

> in archaeology there are no last words, all is provisional, and if no-one ever improves on our work it is not because it is perfect but more likely because it is terminally boring (Orton et al. 1993:35).

Consequently, those looking here for the writing of Richard MacNeish's "Grand Synthesizer" will be disappointed. While we offer ideas and possible explanations, and while we have tried to reconstruct life as it most likely was at the two sites being considered, it seems foolish to suggest that the research has reached the stage of redundancy and we can now close the book. We have instead attempted to conduct our analyses with precision and with purpose, realizing that at the very least they will offer a "signpost" for others.

Prehistoric Pottery

While not much has been written about Yadkin pottery in the last decade, what has been produced is of exceptionally clear and concise quality. It was difficult, in looking over the studies, especially the type-variety approach offered by Anderson et al. (1982) and the detailed examination of the Sumter assemblage by Blanton et al. (1986), to conceive that anything could be added. But of course, as discussed above, there are new and different ways of looking at old data. This section briefly outlines one approach.

A good place to start is to understand exactly what one is looking for -- why is the pottery analysis being conducted? Based on previous research, the nature of the collection from 38FL249, and the ability of ceramic studies, the goals are relatively clear:

- to gather chronological evidence -- where does this assemblage fit with others thought to be of similar age and is there any evidence of change through the stratigraphic profile of the site?

- to gather evidence for the function of the pottery -- how was the pottery used at this particular site and does this use relate to any other evidence in the recovered

assemblage?

- to establish distributional control -- to better understand if this pottery is similar or identical to wares from other sites?

Related to this third topic is the need to explore the technology of the pottery since that work will help us characterize the pottery, understanding the idiosyncratic details typical of 38FL249.

Perhaps the most fundamental issue with pottery analysis is *quantification*. Without some way of measuring ceramic quantity it is impossible to move on to other issues, such as typology or seriation. Orton et al. (1993:4) suggest that archaeologists typically fail to examine the theoretical issues, instead asking whether the proposed quantification technique "is easy," or whether it will provide "the correct" answer. To these it seems appropriate to add that archaeologists tend to be a methodologically conservative bunch, sticking with the old, true, and tried (especially if it also happens to be easy). This is certainly the case with counting potsherds, the technique used by most (virtually all?) archaeologists working in South Carolina. In fact, we have even silently cursed one of our colleagues for using weights instead of counts, making their study unsuitable for comparison to our work. But curiously, there is mounting evidence that counts are the least accurate way to quantify prehistory pottery. Weight is actually a more accurate representation of the proportion of types present in the assemblage. But apparently the least biased, most accurate approximation of the proportion of the different types in an assemblage is derived from estimated vessel equivalents (eve). Orton explains that to calculate the eve:

> we have to find a part of the pot that can be measured as a fraction of some whole. The most obvious is the rim; by using a rim chart [the common vessel diameter chart to which is also added the ability to measure a rim sherd as a percentage of the whole] one can, unless a rim sherd is very small, abraded or not truly circular . . . measure it as a percentage of a complete rim. One can then let the rim stand representative of the whole pot and use this figure as the eve (Orton et al. 1993:172).

In analysis, eves are the only unbiased measure for measuring proportions within an assemblage and for comparing different assemblages. Eves, however, are not the same thing as minimum number of vessel counts (for a more extensive discussion, see Orton et al. 1993:171-175).

We have decided to integrate eves into our analysis of the pottery from 38FL249. However, to ensure that our efforts continue to be compatible with other researchers, we continue to present counts, as well. As part of our research we hope that others will explore this issue and consider alternative ways for quantifying their data.

Moving on to the actual analysis, we have chosen to concentrate on what Orton et al. (1993) term fabric (what Americanists term paste) analysis, coupled with detailed surface treatment analysis (i.e., the textile fabric itself), and form (i.e., the shape of the vessel). Each of these areas has been shown by Blanton et al. (1986) to be of particular importance in understanding the Yadkin pottery in Sumter County and we have every reason to believe them to be important at 38FL249. We have chosen these areas, which emphasize visual analysis, over petrological analysis and compositional (or chemical/elemental) analysis for two reasons. The first, and fundamental, is cost. For more advanced approaches to yield meaningful data would require studies beyond the funding level of this project. Related to the issue of cost is our second reason: such work requires an interdisciplinary approach and we have not been successful in identifying individuals in chemistry and geology with the background and interests to contribute to such a project. Undoubtedly they exist, it is simply a matter of having the funding and time to put together the necessary team and select the appropriate samples. Until that

time, we believe the studies undertaken are still contributing excellent data capable of helping us better under the ceramics being studied.

The paste studies will concentrate on those areas found by Blanton et al. (1986) to be most significant in the definition of Yadkin wares:

- Texture: based on a freshly broken section and defined as *fine*, having at most small, closely spaced irregularities, or *grainy*, defined as larger, more widely spaced irregularities ranging up to large and generally angular irregularities. This was judged using lower power (7 to 30x) magnification.

- Temper Size: based on the U.S.D.A. standard sizes for sand grains and are defined as:

  very fine - up to 0.1 mm
  fine - 0.1 to 0.25 mm
  medium - 0.25 to 0.5 mm
  coarse - 0.5 to 1.0 mm
  very coarse - 1.0 to 2.0 mm
  granule - 2.0 to 4.0 mm

  with the predominant size range given and ranges shown in brackets.

- Temper Size, also known as "rounding": with the inclusions defined as:

  angular - convex shape, sharp corners
  sub-angular - convex shape, rounded-off corners
  rounded: convex shape, no corners,

  typically estimated using Power's Scale of Roundness (see Barraclough 1992).

- Temper Sorting: defined under low power (7 to 30x) magnification using an inclusion sorting chart (Barraclough 1992) ranging from 1 (very poorly homogenized) to 5 (very good homogeneity in size of inclusions). This is also expressed as "well-sorted" or "poorly-sorted."

- Frequency of Inclusions: using a three point scale of abundant, moderate, or sparse. These can be estimated by reference to percentage inclusion estimation charts (see Mathew et al. 1991), with 30% or more being abundant, ranges of 10 to 20% being moderate, and 5% being sparse.

- Identification of inclusions: typically quartz (clear, white, red), clay tempering, and sherd tempering. We agree with Blanton et al. (1986:81) that the distinction between clay and sherd is very important and should not be dismissed by use of the term "grog."

- Core cross sections: consist of a visual observation of a freshly broken edge. There can be at least five different cross-sections for coarse tempered pottery: (1) oxidized with no core (organics may or may not have originally be present), (2) oxidized with diffuse core margins (organics originally present), (3) reduced with black or gray extending through the sherd, leaving little or no lighter colored core (organics not

originally present), (4) reduced, being dark throughout with no core (organics may or may not have been present originally), (5) reduced then cooled rapidly in air leaving very sharp margins on the interior dark core (see Rye 1981:Figure 104). In addition, Blanton et al. (1986) add a sixth core: exterior light, interior dark.

Other vessel studies, such as form, function, and decorative motif examinations will concentrate on a smaller constellation of essential features:

- Interior treatment/smoothing: using the definitions developed by Blanton et al. (1986:183): (1) no tool marks, (2) no tool marks, no visible temper, (3) no tool marks, some temper visible but not protruding, (4) no tool marks, temper protruding.

- Exterior smoothing: following Blanton et al. (1986:79) and rated as absent (when exterior stamping was clean and sharp or plain sherds had a rough, non-compacted surface), moderate (when exterior stamping slightly blurred and plain sherds had a regular, but not glossy surface) or high (when exterior stamping was almost totally obliterated and plain sherds had a semi-glossy finish).

- Overstamping of the exterior design was classified as either present or absent with no effort to quantify degree or nature of the overstamping.

- Rim diameter: measured in centimeters when a reliable arc was present. At the same time the eve was recorded as a percentage.

- Thickness: following Blanton et al. (1986:79) this measurement was taken 3 cm below the rim and expressed in mm. When this portion of the vessel was not present, no thickness measurement was taken. Clearly, much of the diversity in thickness found in the literature must be from measurements taken on body sherds, which may represent virtually any part of the vessel.

- Shoulder form: also following Blanton et al. (1986:79) and defined as (1) slightly flaring, (2) slightly restrictive at rim, (3) straight sided, (4) hemispherical, and (5) flaring on straight-sided.

- Cordage diameter: measured as mm and may include both warp and weft as appropriate.

- Angle of twist: designated as loose (not exceeding 10°), medium (11° to 25°) and tight (usually 26° to 45°).

- Twists per centimeter: also measured as twists per 0.5 cm and extrapolated when necessary.

- Direction of twist: a description of the slant of the segments, either sloping from upper right to lower left (Z twist) or from upper left to lower right (S twist). This is uniformly recorded not from the sherd, but from an impression of the sherd (i.e., it is based on the plasticine impression or positive image).

Lithics

There has been very little archaeological work from the Upper Coastal Plain of South Carolina to compare to site 38FL249. The only major investigation is the survey of the Pee Dee Electrical

Generating Station, located a considerable distance downriver from 38FL249. However, a number of other investigations in other geographic and environmental contexts are available for comparative study including the Mattassee Lake Sites on the Santee River (Anderson et al. 1982), 38SU83 in Sumter County (Blanton et al. (1986), and the Cal Smoak site on the Edisto River (Anderson et al. 1979). Although from different geographical areas of the state, they can assist in gaining an understanding of the uses of local and extralocal lithic raw material by prehistoric people.

Before the analysis was begun, several research goals were formulated. These goals were based primarily on the individual nature of the site and on previous research.

- to gather chronological evidence -- is there any evidence of change through the stratigraphic profile of the site?

- to examine changing use of the land through time. Do diagnostic artifacts from individual periods cluster at different site areas?

- to gather evidence for site activities -- what types of tools were used at the site and what kinds of activities does the recovered tool kit reflect?

- to examine changing preferences for raw materials and to understand how those preferences could indicate trade and reduction/procurement strategies.

Definitions for the Identification of Raw Materials.

Identified in the collection were quartz, rhyolite, tuff, argillite, orthoquartzite and a number of minor materials. The first task in analysis was sorting out the various types of lithic raw material. While a number of specimens were weathered, a large number of these had recent exposed breaks which allowed some degree of certainty about the type of raw material. In some instances where no clean surface was exposed, the patina and texture was compared to specimens which had exposed portions, allowing for a relatively reliable identification. The vast majority of weathered materials were recovered in the plowed field. Materials recovered from the wooded area exhibited little weathering. This may be due to the depth of deposition. The primary source for material identification was Lee Novick's (1978) work based on macroscopically observable characteristics (such as color, texture, and inclusions). In addition, the lithic type collection at the South Carolina Institute of Archaeology and Anthropology was used with the assistance of Mr. Keith Derting.

- Quartz: is usually translucent white but occasionally reddish, greyish, yellowish-brown or clear and is found throughout the Carolina Piedmont. While the quartz could be quarried from a vein, it is also found as cobbles in Piedmont river gravels.

- Flow Banded Rhyolite: is buff in color with thin grey to green bands. Conley (1962:9-10) defines the material as consisting of "kaolinite, sericite, and cryptocrystalline quartz. Interlocking unoriented lenticular masses of quartz occcur parallel to the flow banding." This material is found in the Carolina Slate Belt and, like all rhyolites, is most well known from the Morrow Mountain rhyolite quarry in North Carolina.

- Porphyritic Rhyolite: is dark to light gray with large, well formed phenocrysts. The presence of phenocrysts determines the name porphyritic. Like Flow Banded Rhyolite, it is found in the Carolina Slate Belt and is volcanic flow rock which can occur in dikes (Novick 1978).

- Plain Rhyolite: has no flow banding or phenocrysts. It is dark gray to green. Like other rhyolites it is found in the Carolina Slate Belt.

- Felsic Tuff: is normally highly weathered and is buff to tan with dark gray and white to buff phenocrysts. The number of phenocrysts probably restricted its knapping capabilities. Tuff was formed as ash was expelled from a volcano rather than being a volcanic flow such as rhyolite. Tuffs are found in the Carolina Slate Belt.

- Welded Vitric Tuff: often looks like a green chert at first glance. The primary difference between chert and vitric tuff is that the flake scars are not as clean cut. Howell et al. (1954:154 quoted in Novick 1978) have described welded tuffs as forming as the result of "escape of foaming magma through swarms of fissures as a mixture of incandescent spray, droplets, and larger clots enveloped in hot, expanding gas".

- Breccia Tuff (or Tuff Breccia): is generally medium to dark gray with large swirls of an embedded off-white material. According to Hatch et al. (1972:455) explosion breccias consist of "blocks of country rock (sedimentary, metamorphic or igneous) varying in size from an inch to several feet in diameter, embedded in a matrix consisting of finely comminuted rock- or mineral-fragments." Often other lithic materials can still be seen and sometimes, identified.

- Volcanic Slate/Argillite: is often referred to as slate since it is not as finely laminated and soft as argillites found in the Northeast. The material is light green and usually has a powdery, chalky texture. There are often purple and red bands on the surface. This material was originally deposited as clay or siltstone and subsequently metamorphosed (Novick 1978). This material originates in the Carolina Slate Belt.

- Orthoquartzite: is light brown to off white in appearance. It is composed of quartz sand grains and silica and is found in the Coastal Plain, outcropping in the Santee and Black River Basins (Anderson et al. 1982; Novick 1978).

Minor Materials

- Igneous/Metamorphic: material was unidentified material that could not be categorized as rhyolite, argillite, or tuff, but appeared to come from the same group and therefore the same geographic region. This material is dark gray in color and has a very grainy texture. It does not flake well and rarely exhibits a clear bulb of percussion or evidence of a percussion platform.

- Basalt: is dark black to a weathered purple. It is fine grained volcanic rock consisting primarily of plagioclase and pyroxene (Moorehouse 1950). While it is a common volcanic flow rock, it is found as dike intrusions. Although they are fine grained, they are susceptible to weathering which may have reduced its selection for use by prehistoric people (Novick 1978).

- Coastal Plain chert: is known best from the Allendale quarry sites in the lower Savannah River valley. The chert is usually light grey or grey-white although it is sometimes cream-colored, yellow or brown. While fossils are present in the material, it is not as fossiliferous as Coastal Plain cherts from Buyck's Bluff (38CL17) on the lower Congaree River in Calhoun County, South Carolina (House and Wagaman 1978). The Buyck's Bluff materials are part of the Black Mingo formation which consists of

interbedded sands and mudstones. The sands contain lenses of opalized coarse mollluscan grainstone and the clays may be opalized. Due to the large inclusions, this chert was not considered desirable for lithic tool manufacture (Upchurch 1984:132). Chert nodules are also found in the lower Pee Dee drainage, however, they are very rare (see Anderson et al. 1982; Upchurch 1984:130).

- Tan Fossiliferous chert: was a very minor constituent of the collection. The material was light brown to yellowish brown. Although no known quarries have been identified, Asreen (1974) reported finding weathered chunks of a whitish-tan chert at 38BK77 on the Santee River. Also, Mr. Tommy Charles has observed large chunks of this material on Jeffries Creek, just south of 38FL249. Nonetheless, no outcrops of this material have been located (Mr. Tommy Charles, personal communication 1993).

- Ridge and Valley chert: the one example recovered was very dark grey with wide lighter grey to grey brown bands running through it. While associating this specimen with the ridge and valley cherts of Eastern Tennessee should be done with caution, it is strikingly similar to the examples on file at the South Carolina Institute of Archaeology and Anthropology.

- Tan/olive green chert: was a minor constituent of the collection. The material was very siliceous and opaque, similar to calcedondies. This material may be a Piedmont silicate.

Debitage Categories

After separating materials into raw material types, they were then separated by debitage categories. These categories were defined to allow monitoring of lithic reduction strategies. These categories are defined below (see Blanton et al. 1984; Oliver et al. 1986).

- Primary debitage: debitage with 90% or more cortex.

- Secondary debitage: debitage with 90% to 1% cortex.

- Interior debitage: debitage with no cortex.

- Biface thinning flakes: these flakes are usually thin and flat to slightly curved in longitudinal cross section. The edges are feathered, and secondary flake scares are often present on the dorsal surface.

- Unspecialized flakes: these are early stage flakes which are relatively thick and usually very curved in longitudinal cross section. The platforms are normally large and simple, with no lip. The bulb of percussion is pronounced.

- Bipolar flakes: these flakes are often difficult to identify because the bulb of percussion is sheared and the platform is absence. However, an impact point is identifiable. The are usually linear and exhibit cortex (see Goodyear 1993).

- Flake fragments: these are non-diagnostic medial and distal portions of debitage.

- Blade flakes: these flakes are linear with dorsal ridges. These are generally produced from prepared cores.

- Shatter: shatter is angular, blocky debitage which have no evidence of platforms or bulbs of percussion.

- Pressure flakes: these flakes are some of the smallest in the assemblage. They are thin with small platforms and bulbs of percussion. Many pressure flakes are short and wide with distal ends that are as wide or wider than the medial portion of the flake.

Flake size

Once divided into categories the flakes were sized. Sizing has been found to be useful in understanding reduction and curation of stone tools. Each flake was sized using a series of 12 circles ranging from 3 mm to 70+ mm: 3 mm, 5 mm, 8 mm, 10 mm, 15 mm, 20 mm, 30 mm, 40 mm, 50 mm, 60 mm, 70 mm, and 70+ mm.

Historic Artifacts

The analyses of historic artifacts have followed relatively common procedures used by most other scholars. For example, ceramics have been identified (and dated) using Bartovics (1981), Price (1979), and South (1977); mean ceramic dating follows South (1977), as does traditional pattern analyses. Some modifications have been necessitated by the late date of the sites, but we have tried to follow a rational, easy to understand process of adapting South's technique. We have opted not to use Miller's ceramic indices since it is clear that the sites extend beyond 1880, well into the twentieth century.

Conservation

A number of the historic artifacts from these investigations have required some form of conservation by Chicora Foundation prior to curation. However, since the curatorial facility cannot store all of the collections in a stable environment[12], we have chosen to restrict our normal conservation practices, limiting treatments to essential or diagnostic specimens. Items which, without conservation treatments, would quickly deteriorate, have been drawn or otherwise recorded and discarded.

Brass items treated during this study were limited to those with active bronze disease. Such specimens were subjected to electrolytic reduction in a sodium carbonate solution with up to 4.5 volts for periods of up to 72 hours. Hand cleaning with soft brass brushes or fine-grade bronze wool followed the electrolysis. Afterwards the surface chlorides were removed with deionized water baths and the items were dried in two successive acetone baths. The conserved cuprous items were coated with a 20% (w/v) solution of acryloid B-72 in toluene. This is a rather concentrated solution which often leaves a glossy, and somewhat distracting coating, but it provides better protection for long-term storage than a more dilute concentration.

Only ferrous objects with sound core metal were treated for this project. These items were subjected to electrolytic reduction in a sodium carbonate solution with currents no greater than 5 volts for periods of 5 to 30 days (depending on the extent of the corrosion; typically artifacts were allowed to undergo electrolysis for at least a week past the removal of all visible corrosion). Upon removal from electrolysis the specimens were wire brushed and placed in a series of deionized water soaks to remove soluble chlorides. When the artifacts tested free of chlorides (at a level of less than 0.5 ppm

[12] Conservation treatments can only slow the deterioration process -- they cannot totally halt the process. This is particularly true when conserved artifacts cannot also receive ideal storage conditions, with carefully controlled relative humidity.

or ≤ 10 μmhos/cm), they were dewatered in acetone baths and a series of phosphoric (10% w/v) and tannic (20% w/v) acid solutions were applied. The artifacts were air dried for 24 hours under 45% RH and coated with a 10% solution of acryloid B-72 in toluene.

Leather objects retained in the study collection were first lightly brushed with camel hair brushes, using bamboo skewers to gently work entrapped sand and debris from thread holes. None of the treated fragments were washed or soaked. While there may be trapped chlorides, soaking tends to damage many leathers, breaking down the fibers, and causing additional problems in the treatment process. Afterwards the objects were placed in a neats foot oil bath and gently weighted for periods ranging up to two weeks (determined by the rate the leather relaxed, and how quickly and how completely flexibility returned). Once removed, excess neats foot oil was removed and the items were allowed to slowly air dry. Shrinkage rates averaged less than 2%.

Ethnobotanical Studies

Ethnobotanical materials from 38FL240 include both handpicked materials and a very small collection obtained from a 5 gallon (dry volume) soil sample collected from Feature 5 at Structure 3 (interpreted to be a hog pen) and water floated out of the field. Materials from 38FL249 include only hand picked materials (including those recovered through water screening Excavation Units 15-18).

Hand picked and water screened samples were examined under low magnification (7 to 30x). Wood charcoal specimens were broken in half to expose a fresh transverse surface for species identification. Identification, where possible, was made to the genus level using comparative samples, Panshin and de Zeeuw (1970), and Koehler (1917). The flotation sample was prepared in a manner similar to that described by Yarnell (1974:113-114) and was also examined under low magnification. Food remains and seeds were not broken, but were identified on the basis of gross morphological features or attributes. Seeds identification was assisted by the use of U.S.D.A. (1948, 1971), Montgomery (1977), and Martin and Barkley (1961).

Faunal Analyses

It is well understood that faunal collections that do not contain at least 200 individuals or 1400 bones are usually deemed too small to provide reliable interpretations (Grayson 1979, 1984; Wing and Brown 1979). In particular, the more sophisticated techniques, such as diversity, equitability, and biomass are very sensitive to sample size. It became clear even during the field work that the collections from 38FL240 and 38FL249 would be too small except for the most basic analytical approaches. Consequently, the bone material was sorted to class, suborder or species, and individual bone elements were identified. The bones of all taxa and other analytical categories were also weighed and counted. The Minimum Number of Individuals (MNI) for each animal category was computed using paired bone elements and age (mature/immature) as criteria. A minimum distinction method (Grayson 1973:438) was used to determine the MNI for each site. This method provides a conservative MNI estimate based on the total faunal assemblage from each site. The biomass calculations, used only for the larger faunal collection recovered from 38FL240, are based on the allometric values provided by Reitz (1985:44) and Quitmyer 1985:440).

The collection from 38FL249 is particularly difficult to interpret since the vast majority of the recovered material was calcined and highly fragmented. Borrowing from forensic anthropology and studies of human cremations (see, for example, Ubelaker 1978) it is possible to reconstruct some of the behavior associated with the 38FL249 faunal remains. Most of the materials have a white color,

indicative of a "firing" temperature of between 700 and 900°C[13]. The presence of primarily longitudinal splitting indicates that the bone was dry and not covered with flesh when burned. It seems likely that these remains were accidentally calcined as they came into contact with very hot fires being used for purposes other than cooking. Some of the materials, in contrast, exhibited transverse fracture lines and irregular lengthwise splitting, which is suggestive of firing while the bones were "green," or covered with flesh, such as the discards of roasting. Under these circumstances it is easy to understand why long bones, primarily of mammals, are the most likely to survive and find their way into the collected assemblage.

[13] The maximum temperature for a well-stoked wood fire is about 980° C or 1800° F.

PREHISTORIC ARCHAEOLOGY AT 38FL249

Stratigraphy and Findings

Eight 10-foot square excavation units were placed randomly in Locus 1 of the site to give adequate coverage of various areas of the site. An additional four units were later excavated on the basis of these initial eight units. As previously discussed, vegetation was extremely thick, and clearing grid lines to these units and sufficient room for excavation took 56 person hours. Each unit was tied into a series of control points following the field road bisecting the site. Vertical control was maintained through the use of an assumed elevation (A.E.) of 10.00 feet located at the southern-most point of the baseline, at the intersection of the remnant road and the field road. All site elevations are tied into this vertical control. Horizontal control of the individual units was maintained using a magnetic north grid (Figure 26).

The excavations throughout the site used a combination of arbitrary and natural stratigraphic zones. Zone 1 consisted of a dark brown (7.5YR3/2) loamy sand which had been plowed in some areas and is found at a maximum depth of 0.9 feet. It produced primarily prehistoric ceramics, some lithics, and some historic remains, particularly around the tenant house remains located kin the central portion of the site. Zone 2 consisted of a brown (7.5YR4/4) mottled sand which grades into a yellowish brown (10YR5/4) sand called Zone 3. Zone 2 contained both prehistoric pottery (primarily Yadkin and Badin, as discussed in a following section) and lithics. Zone 2 varies from 0.8 to 1.2 feet deep. Zone 3 grades into a light yellowish brown (10YR6/4) sand. There is a reddish yellow (5YR6/6) fine sand clay representing percolation lines in some areas. This zone produced almost exclusively lithics. Zone 3 varies from 1.0 to 1.3 feet. Zones 2 and 3 were excavated in arbitrary levels no greater than 0.5 feet. We do not doubt, given the unconsolidated nature of the soils, that there has been considerable vertical movement of artifacts. This movement is reflected in the following stratigraphic analysis of materials by zone and level.

While no cultural features[14] were encountered in these excavations, considerable information was obtained on stratigraphy and artifact density across the site. Table 11 presents information on stratigraphy at all excavations in Locus 1. In EUs 7-11 artifact density was relatively low in all levels, however, the upper levels of Zone 3 continued to produce a number of artifacts, declining considerably near the base of the zone. Excavation units 12-14 produced much higher quantities of artifacts than the other random tests. These three units were located within 100 feet of the landform edge where the small intermittent creek or spring begins. While EUs 12-14 produced more artifacts than other areas of the site, the test units excavated during the survey had produced a larger amount of artifacts, a wider range of lithic debitage with a significant amount of calcined bone and bits of charcoal. Based on those findings, four additional units were placed to better investigate this area. All of the units produced large quantities of small remains. The horizontal distribution of artifacts appears closely related to the spring head, and as units were placed further away from this area artifact density began to decline.

Six units were excavated in the plowed area of 38FL249, identified as Locus 2. Two units

[14] A number of tree and root stains, and rodent holes were identified during the excavations, but were not given feature numbers and are not further discussed in this study.

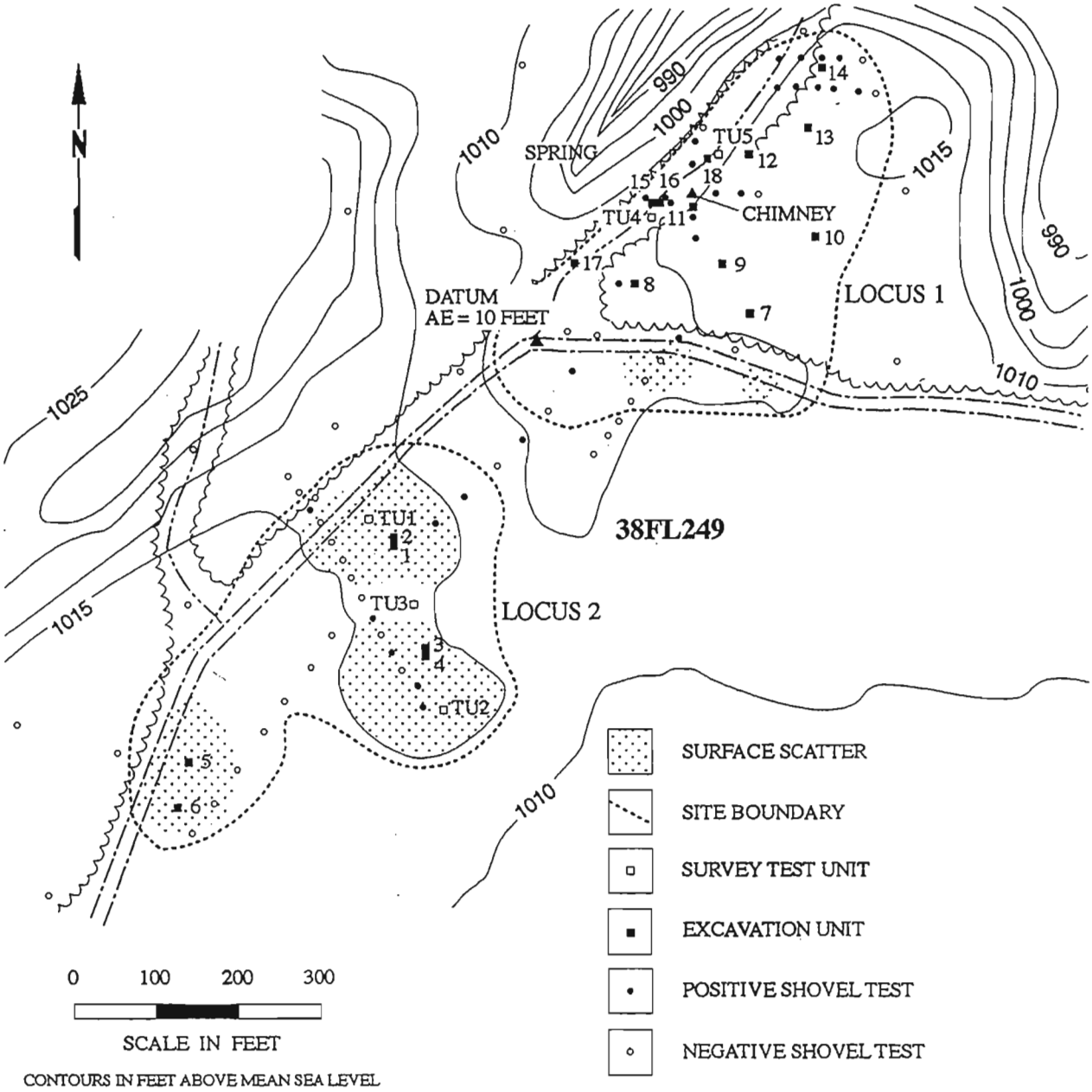


Figure 26. 38FL249 site map showing excavations.

Figure 27. Excavation Unit 7, south profile, showing typical soil development and stratigraphy.

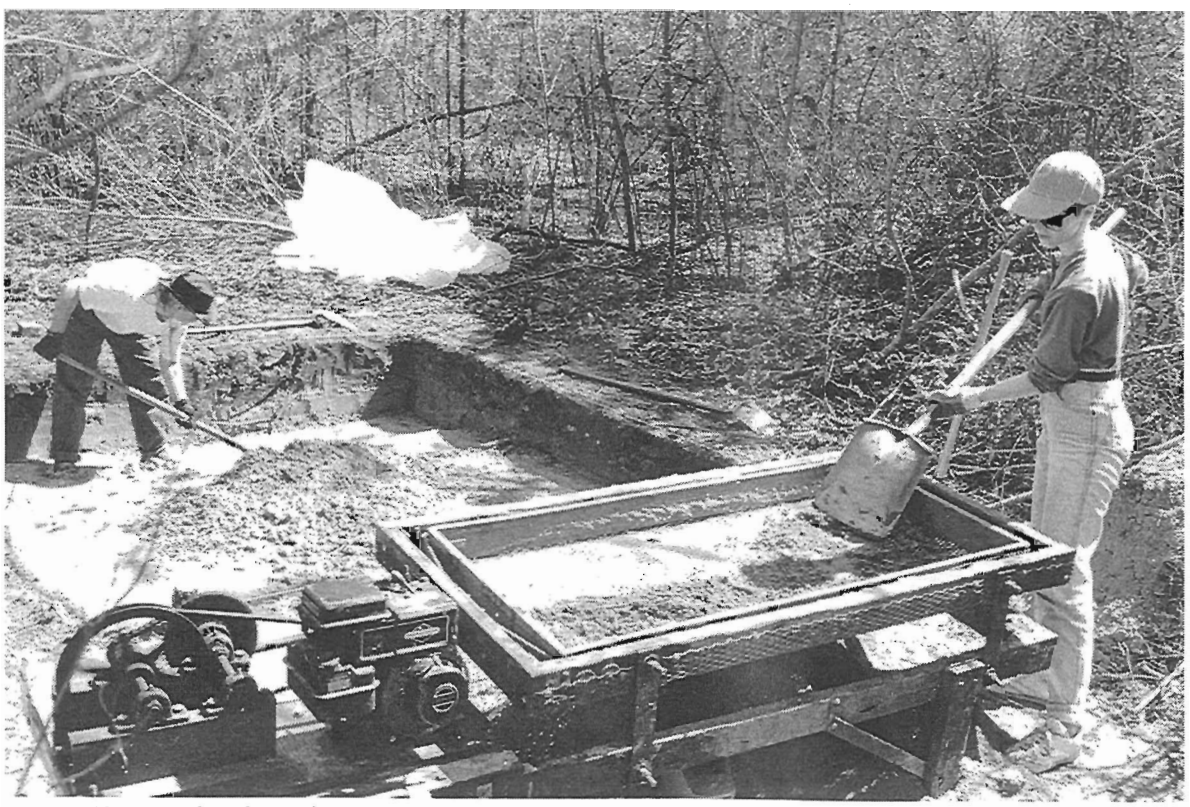


Figure 28. Excavation in unit 11.

Table 11.
Stratigraphic depths at Locus 1, EUs 7 through 18
(depths in feet)

Excavation Unit	Zone 1	Zone 2	Zone 3
7	0.3	0.4	1.7
8	0.8	0.5	1.0
9	0.6	0.7	1.3
10	0.4	1.6	0.5
11	0.5	0.7	0.6
12	0.8	1.0	.
13	0.6	0.9	.
14	0.7	0.5	0.6
15	0.6	1.0	.
16	0.8	0.8	.
17	0.8	0.5	.
18	0.6	0.6	.

were placed on each of the three knolls in the field. Stratigraphy here consisted of a dark brown (7.5YR3/2) sandy plowzone level which ranged from 0.4 to 0.6 feet in depth. Below the plowzone was brownish yellow (10YR7/6) subsoil (see Figure 29). The quantity of artifacts recovered was very low; probably the result of continued plowing and collection by locals. In fact, one individual was encountered collecting the field during our work and foot prints were observed after weekends, indicating that others were visiting the site. Most of the artifacts consisted of lithic debitage with a few pieces of prehistoric ceramics and historic remains. Based on these remains, it appears that this portion of the site was most intensively used during the Archaic Period.

Figure 29. Locus 2, Excavation Unit 5, base of plowzone, view to the west.

Pottery

A total of 2568 sherds were recovered from Locus 2 of 38FL249 (the major analytical unit under consideration this study). Of these, 465 (or about 18%) were over 1-inch in diameter and were considered of adequate size for further analysis (Table 12). Those under 1-inch take a long time to process and identify. Further, Orton et al. remark that "in most quantification methods [these sherds] will make little difference to the overall statistics of an assemblage" (Orton et al. 1993:47). The very large quantity of highly fragmented sherds (approximately 70% of those under 1-inch in diameter were also under ½-inch) suggests that there was considerable pedestrian traffic at the site and that broken ceramics continued to be reduced in size.

As the analysis proceeded, it became clear that there were at least three ceramic wares recovered from the site. In the most general terms, one consisted of a relatively fine, sandy past; the second was distinguished by a coarse, gritty paste; and the third was characterized as containing either crushed sherds or grog as temper. Other differences, such as the nature of the cord or fabric surface treatment were also noticed, although the paste is likely the most distinguishing feature of the three wares. In addition, small quantities of fiber tempered pottery (readily identified as Stallings Plain) and complicated stamped pottery (identified as the Pee Dee series) were also recovered. The fabric, surface treatment, and vessel form of each will be discussed in the following sections and the various wares will be compared to previously identified series in the archaeological literature. Additional discussions also consider the vertical and horizontal distribution of the pottery at the site.

Wilmington/Hanover

A total of 57 sherds (representing 12.3% of the total collection over 1 inch in diameter) were classified as Wilmington/Hanover. Surface treatments included plain (n=3, 5.2%), cord marked (n=16, 28.1%), and fabric impressed (n=38, 66.7%).

Perhaps the most notable aspect of this ware was its temper, which included both crushed sherds (2-6 mm in diameter; identified by the presence of at least one clearly flat surface) and what appeared to be clay or grog (no greater than 2 mm in diameter; typically appearing rounded and often blurring into the paste, making accurate measurement impossible). Of those sherds evidencing fabric impression, 60.5% were grog or clay tempered, while 39.5% were sherd tempered. The cord marked sherds evidenced a similar division, with 56% being clay or grog tempered and 44% being sherd tempered. While it could not be documented by this study, it is possible that what has been identified in this study as clay or grog may actually represent small sherd fragments which lack distinctly flat surfaces. Regardless, since the assemblages are otherwise very similar, they are being combined for these discussions.

The bulk of the collection (81.5%) exhibited a grainy or contorted paste texture, resulting from the large admixture of clay or grog (present even in those sherds which also exhibited sherd inclusions). One distinction between the clay and sherd tempers was the previously mentioned difference in the size of the respective inclusions. Regardless of the material used for tempering, however, there was a moderate amount of inclusions in the paste (approximated as about 10% using a percentage inclusion estimation chart) of most sherds (74.1%). The inclusions exceeded 10% of the paste in only 3.7% of the assemblage (regardless of surface treatment).

About equal numbers of three basic cross-sections were observed for this ware. Those completely oxidized with no core most likely represent clays either with very low organic material or clays whose organic material was completely oxidized. Those which were reduced with diffuse core margins (30.4%) are of particular interest since they may represent either pottery fired in a reducing atmosphere or may indicate vessels used in cooking fires. There is no readily available way of

Table 12.
Pottery Recovered from Locus 1 Excavations

	Badin/Cape Fear					Yadkin					Wilmington				
Provenience	P	CM	FAB	CH	NET	P	CM	FAB	CH	UID	P	CM	FAB	OT	SMALL
EU 7, Z 2, L 1	-	1	-	2	-	-	-	1	-	-	-	-	-	-	34
EU 7, Z 3	1														1
EU 8, Z 1							3	1							
EU 8, Z 2, L 1							2								2
EU 8, Z 2, L 2	1	6				3	3								51
EU 8, Z 3						4									8
EU 8, Z 3, tree	2	2		1											10
EU 9, Z 1	1		1												9
EU 9, Z 2, L 1	1		2	2											4
EU 9, Z 2, L 2	4	1													18
EU 10, Z 1	2	3	1	1								1			42
EU 10, Z 2	6	2	2	2			1							1	88
EU 10, Z 3			1	1											9
EU 11, Z 1	1	6	16												98
EU 11, Z 2, L 1	3	3	2									2	1		43
EU 11, Z 2, L 2							1								7
EU 12, Z 1		10	1				9						2		198
EU 12, Z 2, L 1	6	6	2			9	6					1		1	79
EU 12, Z 2, L 2		1										1		1	9
EU 13, Z 1	1	9	2				1	1					1		138
EU 13, Z 2	1	15	3	1			3		2					5	132
EU 14, 1		2					3								81
EU 14, Z 2, L 1	1	2				1	1								21
EU 14, Z 2, L 2	1														6
EU 14, Z 3															1
EU 15, Z 1		8	1				9	1					5		120
EU 15, Z 2, L 1	6	50	12	1		1	20			1		2	18		356
EU 15, z 2, L 2		1					1					3	2		13
EU 16, Z 1	1	4	6			1	1					1	1	1	110
EU 16, Z 2	6	6	6		3	1	16				2	1	6		179
EU 17, Z 1							2					2		1	
EU 17, Z 2	1	2		14							1			1	105
EU 18, Z 1		5		1								2	2		71
EU 18, Z 2	4	2		1										3	60
Totals	50	147	58	27	3	20	82	4	2	1	3	16	38	14	2103
Percentage	17.5	51.6	20.4	9.5	1.0	18.3	75.2	7	1.8	1.0	5.2	28.1	66.7		

P = plain; CM = cord marked; FAB = fabric impressed; CH = check stamped; UID = unidentifiable surface treatment; OT = other, including unidentifiable, Stallings, and Pee Dee; SMALL = sherds under 1-inch in diameter

distinguishing the two possibilities[15]. Finally, about a third of the collection exhibited an oxidized exterior and reduced interior. This suggests that the vessels were inverted during the firing and that while the exterior was fully oxidized, the interior (with a reduced oxygen flow) was reduced).

Considerable variation was observed in the area of interior treatment. Nearly half of the collection (48.1%) evidenced no tooling marks or temper on the interior surface, while nearly a third of the collection (32.7%) evidenced temper particles protruding on the interior surface. On 17.3% of the sherds the temper was visible, but had been smoothed into the body of the vessel.[16] One fabric impressed sherd revealed fabric impressions on the interior, while a second fabric impressed sherd revealed unaltered coils on the interior. In all other respects this sherd appears to be from a completed and successfully fired vessel. Slightly over half (51.5%) of the collection exhibited moderate exterior smoothing, while nearly 20% exhibited heavy smoothing which significantly reduced the legibility of the exterior surface treatment. While only a quarter of the fabric impressed sherds exhibited overstamping, nearly half of the cord marked wares were overstamped (the significance of this difference is hard to assess given the small sample size of cord marked Hanover wares).

Rims tend to be flattened, at times with the same paddle used to apply the exterior surface treatment to produce stamping on the rim lip. A minority of the rims are rounded.

Fabric tempered vessels ranged from 22.5 cm to 45 cm in diameter, averaging 40 cm (only one cord marked vessel, 23 cm in diameter, could be identified). Vessel wall thickness ranged from 9.5 to 18 cm on the fabric impressed vessels, with the larger diameter pots also having thicker vessel walls. The average thickness was 7.3 mm. The dominant shoulder form was straight, indicating deep, straight sided vessels. Only one slightly flaring shoulder was found and it, too, suggested a relatively deep vessel.

Although the cordage samples for this collection are small, the bulk of the material (70.6) exhibits a Z or left-hand twist. The cord is typically tightly twisted with 5 to 6 twists per centimeter. The fabric for both the sherd and clay tempered wares is virtually identical. The scatter plot in Figure 30 compares the warp and weft size of these two wares (as well as the Badin pottery, which is strikingly distinct). Both exhibit weft fibers clustering at 1 mm in diameter (and ranging from about 0.75 to 1.6 mm) with much larger rigid warp fibers clustering from about 3.25 to 4.5 mm (and ranging from 2.4 to 6.2 mm). This provides the fabric impressed pottery with a very distinctive, and consistent, appearance throughout the collection.

Overall, the collection exhibits a fairly uniform appearance, with only minor differences seen

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[15] The domination of the collection by vessels with oxidized exterior surfaces suggests (but does not prove) that the vessels were fired in a reducing atmosphere. Otherwise, if they were used as cooking vessels it seems likely that more of the oxidized vessels would show clouding or exterior reduction.

[16] Poplin et al. (1993:31) suggest that one potentially significant sorting criteria for the sherd/clay/grog tempered wares may be the presence or degree of cracking around temper inclusions on the interior of sherds. They note that while the presence of these cracks is mentioned in the Hanover type description by South, no mention of cracking is made by DePratter for the Wilmington ware. Rye (1981:84-85) observes that these "star-shaped cracks" are typically found around large inclusions in the paste and, while often observable to the naked eye are most commonly visible in X-rays taken normal to the vessel surface. They are most often an indication of beating (as with a cord wrapped paddle) as a secondary forming technique. It seems likely (although not demonstrated) that these cracks are more common than would be suggested by the type descriptions.

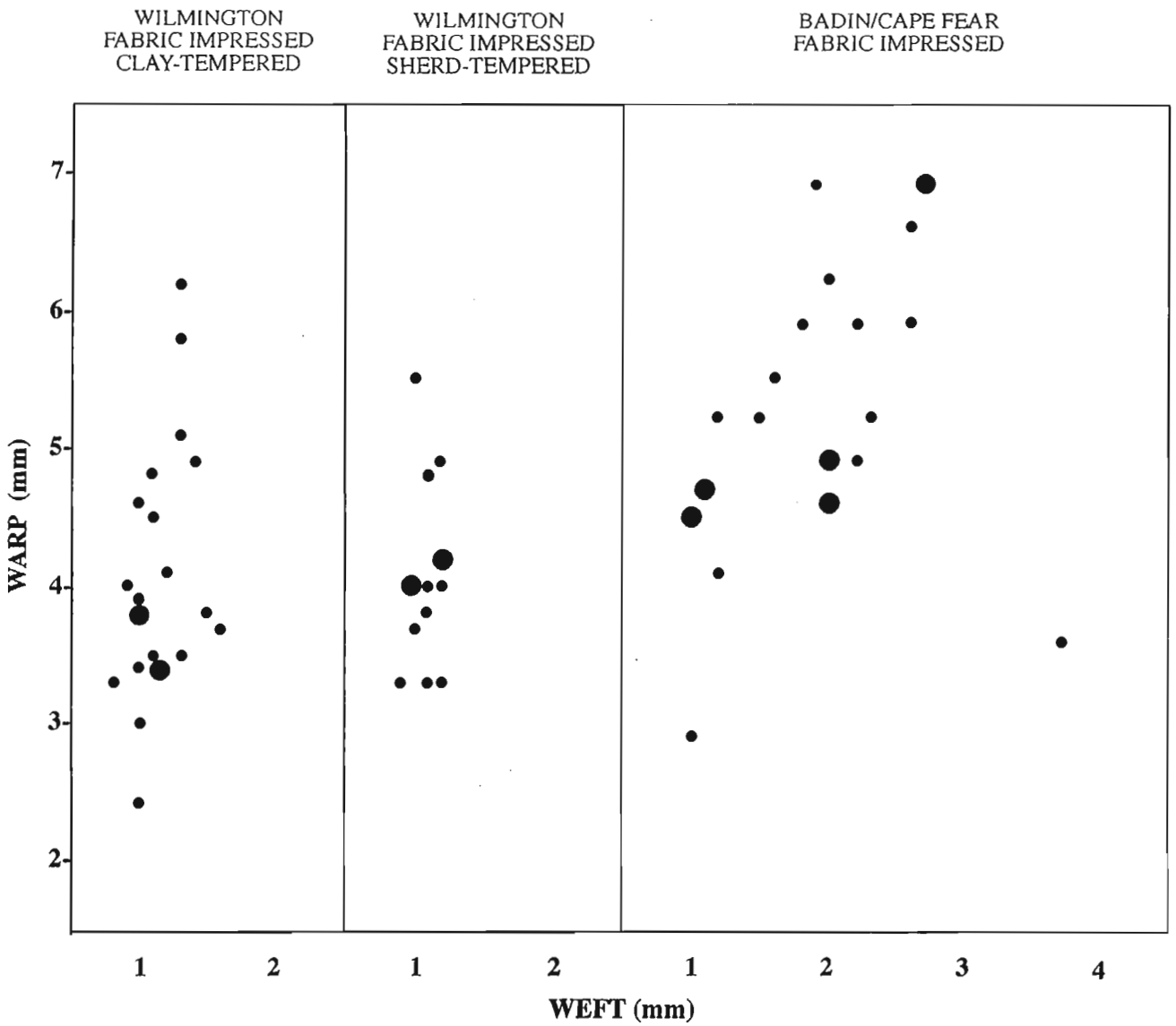

Figure 30. Comparison of the warp and weft size ranges for Wilmington, Yadkin, and Badin wares.

between the various surface treatments. When this collection is compared to others, such as the Wilmington (using the type definition of DePratter 1979:129-130), Hanover (using the type definition of South 1960), Wilmington, *var. Berkeley* (using the type definition of Anderson et al. 1982:271-275), and Carteret (using the type definition of Loftfield 1976:154-157) series, it tends to show greater similarity to the more northern assemblages. For example, Loftfield's description that "the pieces of aplastic tended in the construction process to begin to soften and lose definition in relation to the plastic portion of the past" (Loftfield 1976:154) more accurately describes the paste from 38FL249 than DePratter's observation that the inclusions in the Wilmington series range from 3 to 5 mm (DePratter 1979:129). Likewise, the Georgia Wilmington ware does not include a fabric impressedtype, while Loftfield's Carteret Series is predominately fabric impressed (and at least some of the pottery exhibits a fabric virtually identical to that found in Florence [see Loftfield 1976:Plate 2, bottom row, far right]).

Anderson recommends that:

> all post-Refuge clay/grog tempered ceramic types in the Georgia through North Carolina area be subsumed under the Wilmington series [being the first described], with varieties established as necessary to accommodate perceived variability in the ware (e.g., *vars. Hanover, Wilmington, St. Catherines*). This would reduce (or at least acknowledge) the ambiguity inherent in attempting to sort the various types now in use (i.e., Hanover Cord Marked from Wilmington Heavy Cord Marked, or Wilmington Plain from St. Catherines Plain), while simultaneously providing a realistic and accurate method for accommodating the variability that does exist. Such a procedure would greatly streamline local typology (by eliminating redundant ceramic series) and help establish a much needed regional analytical perspective (Anderson et al. 1982:273).

It doesn't seem that in the decade following Anderson's advice much consensus has been achieved and relatively few types have been abandoned. And certainly some argument could be given that St. Catherines is sufficiently distinct that it *shouldn't* be subsumed under a Wilmington type-variety series. Likewise, others may argue that Wilmington and Hanover should be seperated on the basis of the temporal and spatial patterning of the two types (e.g., Poplin et al. 1993)[17] Regardless, the wisdom of Anderson's advice becomes more obvious as research moves off the coast and into the interior where, typologically, there is even less known than on the coast.

When this ware is compared to the Wilmington, *var. Berkeley* from Mattassee Lake there is an exceptional degree of overlap. Anderson notes the same variety in temper inclusions, although he does not specifically note that any of the inclusions were identified as ground sherds. Vessel size and form are nearly identical, as are interior treatments. Perhaps the only significant difference is that less than a third of the fabric impressed sherds exhibited the same rigid warp found in the Florence collection[18]. This alone, however, does not seem adequate for the creation of a distinct variety, and

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[17] Although even they admit that "lacking large well dated samples of both types, it is not possible to determine if the proposed separation of Hanover and Wilmington will prove viable" (Poplin et al. 1993:31).

[18] A decade ago cordage and fabric analysis was largely conducted by archaeologists only in the Southwest and Northeast. Consequently, Anderson provides no extensive discussion of these features, although the plates provided indicate a general similarity to the materials found at 38FL249. Perhaps there will be an interest on the part of other researchers to review Anderson's type materials,

we have chosen to classify these materials as **Wilmington, *var. Berkeley***. This further defines the range of this variety, previously identified from the central South Carolina coastal plain, along the Santee River drainage, extending it into the Pee Dee drainage.

Anderson mentions that the chronological range of the ware is poorly known, although it appears to date from the Early and Middle Woodland Period (perhaps 600 B.C. to as late as A.D. 500). Unfortunately, as discussed in greater detail in a following section, the material is in a mixed context at 38FL249 and it seems unlikely that this site will help refine the chronological position of the ware. Instead, the site is better able to refine our technological and typological understanding of the pottery. Hopefully, the finding of clear links to Anderson's Mattassee Lake descriptions will encourage others to re-evaluate there use of the proposed type-variety system.

Yadkin

A total of 109 sherds of Yadkin-like pottery were identified during this analysis, primarily on the basis of the large quantity of grit inclusions in the paste. These sherds represent 23.4% of the collection over 1-inch in diameter. Cord marked pottery dominates the collection, accounting for 82 sherds (75.2%), followed by plain (n=20, 18.3%), fabric impressed (n=4, 3.7%), check stamped (n=2, 1.8%), and unidentifiable (n=1, 1.0%).

Unlike the Wilmington, *var. Berkeley*, the Yadkin wares include both plain body and rim sherds, making it more likely that there were undecorated Yadkin vessels. The only major difference between the plain and cord marked sherds is that the plain wares tend to contain primarily coarse sand (rather than the very coarse sand found dominating the cord marked collection) and they tend to slightly better smoothed on the interior (with 75% having visible temper, but only 15% having temper protruding on the interior surface, compared with 49.4% of the cord marked which have temper protruding). In sum, it seems that the clay selected (or prepared) for the plain vessels contained fewer large particles and was better smoothed during manufacture. Both actions would require additional steps (if not care) in the manufacturing process and may suggest differing functions.

The larger sample of cord marked sherds offers a better opportunity to explore the technological aspects of this type. The texture is overwhelmingly grainy (97.6%) and over two-thirds (67.8%) of the collection contains very course to granular sand. An additional 26.5% of the sherds evidence coarse sand. The bulk of these inclusions are white quartz, although occasional examples of rose quartz were noted[19]. Most (90.9%) were subangular and no angular examples were found (curiously several examples of crushed, angular quartz were found in plain, check stamped, and fabric impressed sherds). The extent of this temper evidenced considerable variability, although 54.7% of the sherds contained abundant temper (constituting over 20% of the paste). A few (16.9%) contained only sparse inclusions (accounting for less than 10% of the paste). Often the aplastic in the sherds was poorly to vary poorly sorted, incorporating a range of temper sizes. Usually, however, the inclusions were relatively homogenous in the paste.

Five distinct cross-sections were observed during the analysis. Most common, accounting for 51.8% of the sherds, is a black cross-section characteristic of a clay with organic materials fired in

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providing detailed cordage analysis.

[19] Several sherds also evidenced small quantities of clay or grog aplastic, as well as the quartz sand. This addition may be accidental or may indicate some cross-over of technology or social relationship between the makers of the Yadkin and the Wilmington wares.

a reducing atmosphere. The next most common (28.9%) are sherds with no core, indicative of firing in an oxidizing atmosphere. In combination with sherds exhibiting an oxidized exterior and reduced interior, and incomplete oxidation, this analysis points toward the use of clays containing upwards of 20% organic material. Typical firing resulted in a reducing atmosphere. Some cores indicate that vessels were fired inverted, with the exterior fully oxidized and the interior reduced. Other cores clearly reveal that some vessels were removed from the fire, allowing oxidation to progress on the interior and exterior wall margins as the vessel cooled. There was relatively little evidence, either positive or negative, which could be taken to suggest vessel function.

Nearly half (49.4%) of the collection evidences temper protruding from the interior wall of the vessel. Another 36% of the collection has temper visible, although not protruding. Nearly three-quarters (72.3%) of the exterior surfaces were at least moderately smoothed, evidencing some post-paddle smoothing. On the other hand, the collection is nearly evenly divided between those sherds evidencing no overstamping (46.9%) and those indicating multiple applications of a paddle stamp (53.1%).

Rim diameters range from 15 to 45 cm, with an average of 33 cm. The vessel wall thickness ranges from 6.2 to 10 mm, with an average of 8 mm. Three mending rim sherds reveal considerable range in thickness on one vessel -- 6.2 mm to 6.9 mm -- suggesting that the standard deviation of any one vessel might be plus or minus at least 1 mm. The shoulder form was overwhelming straight, indicating (when coupled with basal sherds) a large, straight-sided vessel with a conical base. It is estimated that vessels in the range of those identified from 38FL249 would contain upwards of 15 liters. Rims were typically flattened, although a small percentage were rounded or slightly angular. Occasionally the rim exhibits cord marking, suggesting that the paddle was used to shape the rim during the manufacturing process.

Interior rim treatment is uncommon, although several sherds evidenced light cord stamping. In cases where it was identifiable, the cord used on the interior appears identical to that on the exterior. In addition, it typically was almost completely smoothed over, suggesting that the same paddle used to stamp the exterior was also used to blend coils on the interior, with the stamping later smoothed over. In such a scenario it may be that a hand was used as the anvil against which the stamping took place, perhaps accounting for relatively extensive evidence of exterior smoothing observed in the collection.

The cord found in the collection is nearly evenly divided between Z or left final twist (42.6%) and S or right final twist (57.4%). The cord diameter ranges from 0.8 to 2.6 mm, with an average of 1.6 mm. The tightness of the twists ranges from loose (in 15.4% of the collection) to tight (34.6%). The fiber ranges from 2 to 8 twists per centimeter, with an average of 5. Stamping was typically perpendicular or slightly oblique to the rim, with the cord occasionally crossing.

Too few fabric impressed sherds were found to allow any meaningful analysis of this type. In general the fabric was very bunched, suggesting that the material being used was badly worn. The warp appears to be predominantly rigid, measuring around 3 mm, while the weft is around 1 mm (the one example with well preserved fabric revealed a weft of 1.0 mm and a warp of 3.6 mm).

When compared to other descriptions of Yadkin pottery, including the original type description by Coe (1964), the Mattassee Lake collection studied by Anderson et al. (1982), and the 38SU83 collection examined by Blanton et al. (1986) there are consistent, strong similarities. Likewise, when the type descriptions for Mount Pleasant (Phelps 1984:41-44) and Onslow (Loftfield 1976:166-168) are also considered the confusion is almost as great as that for Wilmington.

The one consistent feature throughout is the paste. For the Onslow series Loftfield remarks

that:

> the paste was tempered with crushed quartz which showed the sharp angular edges of newly crushed stone. The temper was of gravel size and was very much in evidence in the broken edges of the sherds (Loftfield 1976:166).

Phelps describes the temper of the Mount Pleasant series as consisting:

> of variable amount of fine to medium sand with frequent particles of coarse sand and pebbles (2-7 mm.), both rounded and angular. Apparently within the normal range of temper variation are some specimens with only fine to medium sand temper, and others which contain primarily coarse sand and pebbles. Also present in most coastal region sites are sherds that combine the classic sand and pebble temper with a small to moderate amount of fired clay lumps (Phelps 1084:41).

Coe describes the original Yadkin wares:

> crushed quart was use for the temper, and it was added in such quantities that it frequently would constitute 30 to 40 per cent of the body of the paste (Coe 1964:30).

At Mattassee Lake, Anderson noted that:

> the past is characterized by large amounts of rounded and subrounded quartz gravel; these inclusions are naturally weathered and not been crushed, a primary difference between the Mattassee Lake assemblage and the Doerschuk type site material (Anderson et al. 1982:300).

Moving up the Pee Dee drainage, Ward described an assemblage from the White's Creek area as:

> characterized by the inclusion of a great number of large particles of crushed quartz. These ranged in size from 3 mm. to 8 mm. in diameter and, in some instances, comprised as much as 30 percent of the paste. The particles were angular with relatively sharp edges. In addition to quarts, some crushed feldspar was also recognized (Ward 1978:30)[20].

Also included in this assemblage, but broken out for discussion, were sherds with "a gritty paste that included small lumps of clay temper," and "paste that contained a moderate amount of medium sized crushed quart particles" (Ward 1978:35, 38). At 38SU83 Blanton et al. (1986:90) found that the Yadkin temper consisted primarily of abundant medium to very course subangular quartz.

While there are occasional differences, all of these descriptions point toward a very similar ware with a wide distribution from at least the central South Carolina coast northward to the northeastern North Carolina coast and inland at least as far up the Pee Dee drainage as 38FL249. Just as Anderson found a broad similarity among sherd and clay tempered pottery, we find an equally strong similarity among the quartz tempered wares. Anderson noted that the differences between the Yadkin found at Mattassee Lake was sufficiently different from that typed by Coe from Doerschuk to warrant a different variety designation, hence the material was called Yadkin, *var. Marion.*

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[20] Ward was considerably ahead of his time. His description of these ceramics also provides information on both the fabric warp and weft, and the twist of the cordage (Ward 1978:35).

Likewise, there are differences between the Mattassee Lake sample and the material from 38FL249. This collection is dominated by subangular quartz inclusions rather than rounded. Rim form is predominately straight, not excurvate. Yet both samples are small and there is overlap. Consequently, we are inclined to apply the designation Yadkin, *var. Marion* to this collection of fabric impressed pottery, while slightly expanding its definitional features. Anderson typed his plain collection as Yadkin, *var. unspecified*, which also seems appropriate for the very small assemblage from 38FL249[21].

Anderson et al. (1982:300) suggest that Yadkin is found in Middle to Late Woodland period associations, perhaps spanning A.D. 200 to A.D. 700, and that it may be "coeval or slightly earlier than that for Cape Fear Fabric Impressed, *var. St. Stephens*." Coe only notes that his Yadkin assemblage post-dated the Badin Series, although typically the Yadkin Series is thought to originate about A.D. 500 in the North Carolina Piedmont (see Ward 1983a:61).

Badin/Cape Fear

This pottery presents an especially perplexing typological and chronological problem which will be discussed in more detail below. For the time being, however, we will refer to the wares under the rubric "Badin/Cape Fear," although this choice will certainly cause reasonable concern. The collection from 38FL249 includes 285 specimens, representing 61.3% of the sherds over 1-inch in diameter. Within this classification there were 147 (51.6%) cord marked, 58 (20.4%) fabric impressed, 50 (17.5%) plain, 27 (9.5%) check stamped, and 3 (1%) net impressed.

The collection is readily sorted from the other assemblages present on the basis of its paste. The vast bulk of the collection (95.7%) has a fine texture and temper dominated by fine to medium rounded sand inclusions (99.4%). Subangular grains are only occasionally noticed. All of the observed material was either clear or white quartz. These inclusions are very well sorted and distributed in the paste, suggesting that they are natural to the clay source and simply constitute the native inclusions. Occasionally a larger inclusion would be observed, usually in isolation suggesting poor paste preparation.

These sherds evidenced a tremendous variation in cross-section. The majority of the collection (68.1%) reveals a consistently black cross-section, indicating high organic content in the clay and firing in a reducing atmosphere. About equal numbers of sherds with a completely oxidized cross-section and a cross section with a light exterior and dark interior (11.4% and 12.9% respectively) were recovered. Likewise, there are about equal proportions of sherds evidencing organic clays fired in an oxidizing fire, leaving a dark core (3.3%) and sherds from vessels fired under reducing conditions which were removed from the fire to allow oxidization on the interior and exterior surfaces (3.8%). A very small collection (0.5%) reveal a diffuse oxidized core surrounded by reduced exterior and interior surfaces. This can be attributed to either firing conditions or use of vessels in cooking. Given the tremendous variation in firing, it seems more likely that it represents carbon deposition during firing.

Vessel interiors were typically well smoothed, with 82.8% of the sherds evidencing no temper inclusions. About 6.3% of the collection had small temper particles protruding from the interior wall,

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[21] No cord or check stamped Yadkin were found at Mattassee Lake, although both were identified by Coe (1960), Blanton et al. (1986), and Ward (1978). The designation Yadkin, *var. unspecified* seems appropriate for these minority wares at 38FL249 as well.

although this was often barely noticeable. Only a few of the sherds evidenced any form of interior treatment, although examples of cord marking, fabric impressing, and tooling were occasionally identified. It appears that these marks were usually obliterated by smoothing. Exterior smoothing on vessels with surface treatments was typically absent or very light, while on plain vessels the smoothing was moderate. Overstamping occurs on 60.2% of the sherds.

Rims are typically flattened and 73.3% of the recovered rim sherds evidence straight walled vessels. Small numbers of slightly flaring and hemispherical rims were also encountered. Vessel diameters range from 21 cm to 47.5 cm, and average 32.5 cm. Wall thickness ranges from 6.2 to 10.8 mm, with an average of 7.8 mm. One check stamped vessel exhibited wall thicknesses ranging from 6.5 to 8.2 mm (with all measurements taken 3 cm below the lip). This suggests that this pottery may have a greater variation from the mean than might be expected, reducing the interpretative value of vessel thickness.

The cordage impressions are about evenly split between S or right final twists (53.6%) and Z or left final twists (46.4%). Cords range from .8 to 2.8 mm and average 1.7 mm. The bulk (56.9%) of the cords evidence a tight twist, although both loose and medium twists are also encountered with some regularity. The number of twists per centimeter ranges from 2 to 12, with an average of 5 twists per centimeter.

The fabric, as previously discussed and shown in Figure 3, is clearly different from that associated with the Wilmington, *var. Berkeley*. The Badin/Cape Fear fabric has a rigid warp and loose weft, but the weft cords range from about 1 to 2 mm in diameter while the warp material ranged from about 4.5 to 7 mm in diameter. This gives a blockier appearance to the Badin/Cape Fear than was observed on either the Wilmington or Yadkin sherds (see Figure 30). Several of the sherds exhibit what appear to hard warp and weft elements, resulting in impressions resembling wicker more than fabric. Other sherds indicate wear in the fabric, with most of the weft elements bunched together, making the fabric difficult to interpret.

The only mend hole identified in the collection occurred on a fragment of cord marked Badin/Cape Fear. The hole was drilled from the exterior, where its diameter was 7 mm, and it tapered to 4 mm on the interior.

This ware is similar to a number of previously developed type descriptions. When compared to Coe's (1964:28-29) description of the Badin Series there is considerable overlap in terms of paste, cordage, fabric, vessel size, and form. The Adam's Creek Series (Loftfield 1976:164-166) is similar in paste, vessel size, and form, although the fabric may be different. When compared to Anderson's redefinition of the Cape Fear Series there are both strong similarities (especially in the constitution of the paste) and dissimilarities (such as in the nature of the fabric). There are even portions of Mount Pleasant assemblages (previously mentioned in discussions concerning Yadkin) which appear similar. While all of these slight differences can reasonably be handled by the type-variety system, the associated chronological issues are more troubling. Coe's Badin is found in good stratigraphic context pre-dating (although possibly coeval toward the end of its occurrence) with Yadkin, suggesting a pre-A.D. 500 time frame. Phelps' Mount Pleasant wares, while perhaps dating as early as 300 B.C., seem to cluster from about A.D. 200 to A.D. 800. Finally, Anderson's Cape Fear is suggested to have a post-A.D. 500 time frame, perhaps from about A.D. 520 to A.D. 710 (Anderson et al. 1982:299). Loftfield (1976:187) seriates the Adams Creek Series at the very end of his sequence, suggesting a Late Woodland or early protohistoric date. Anderson does, however, suggest that the Yadkin, Wilmington, and Cape Fear types all coexisted from his Deptford III phase (dating A.D. 200 to A.D. 500) to his McClellanville phase (dating from A.D. 500 to A.D. 700) (Anderson et al. 1982:250).

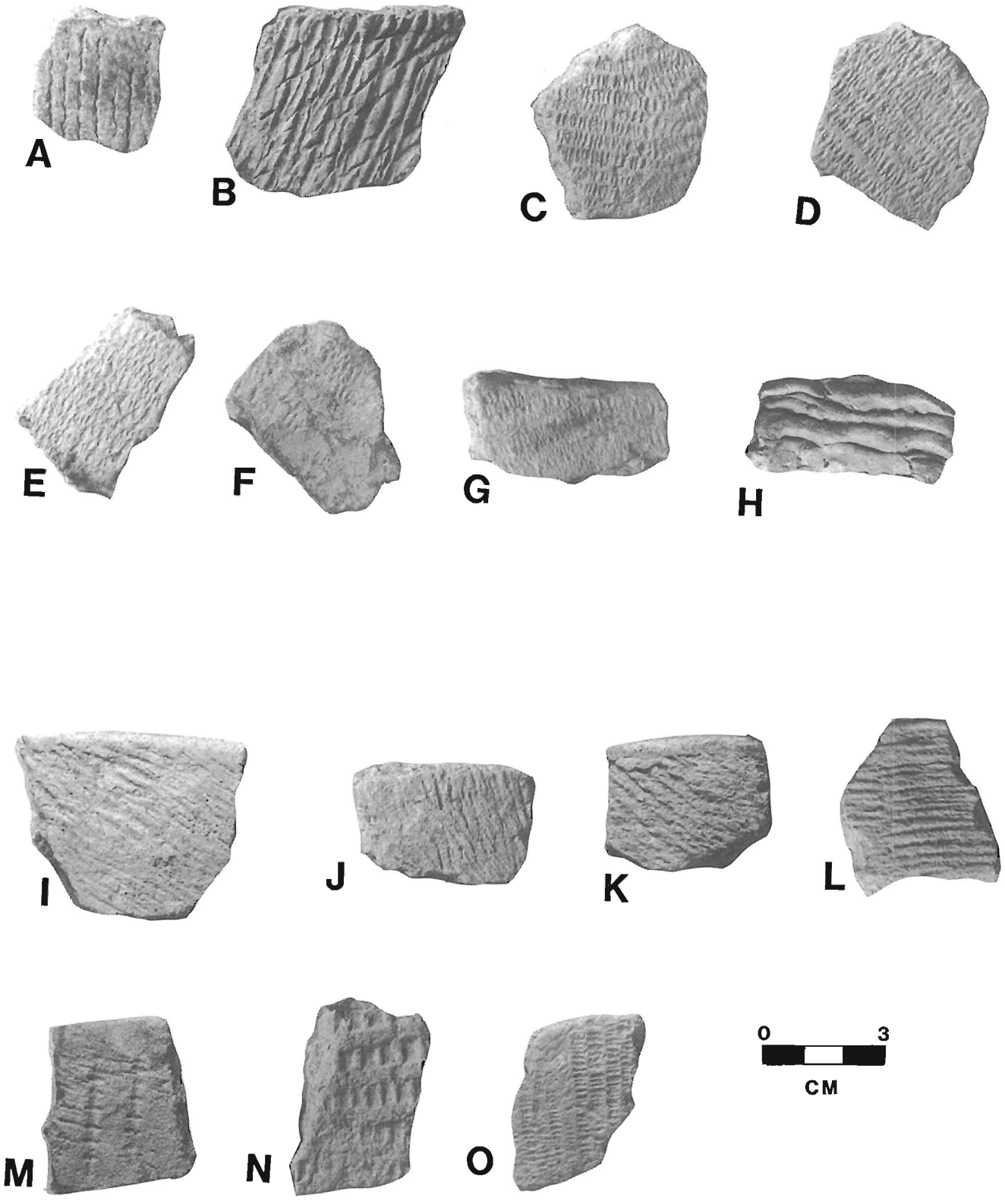

Figure 31. Wilmington and Yadkin series pottery. A-B, Wilmington, *var Berkeley* Cord Marked; C-G, Wilmington, *var Berkeley* Fabric Impressed; H, reverse of G showing intact coils; I-L, Yadkin, *var unspecified* Cord Marked; M-O, Yadkin, *var unspecified* Fabric Impressed.

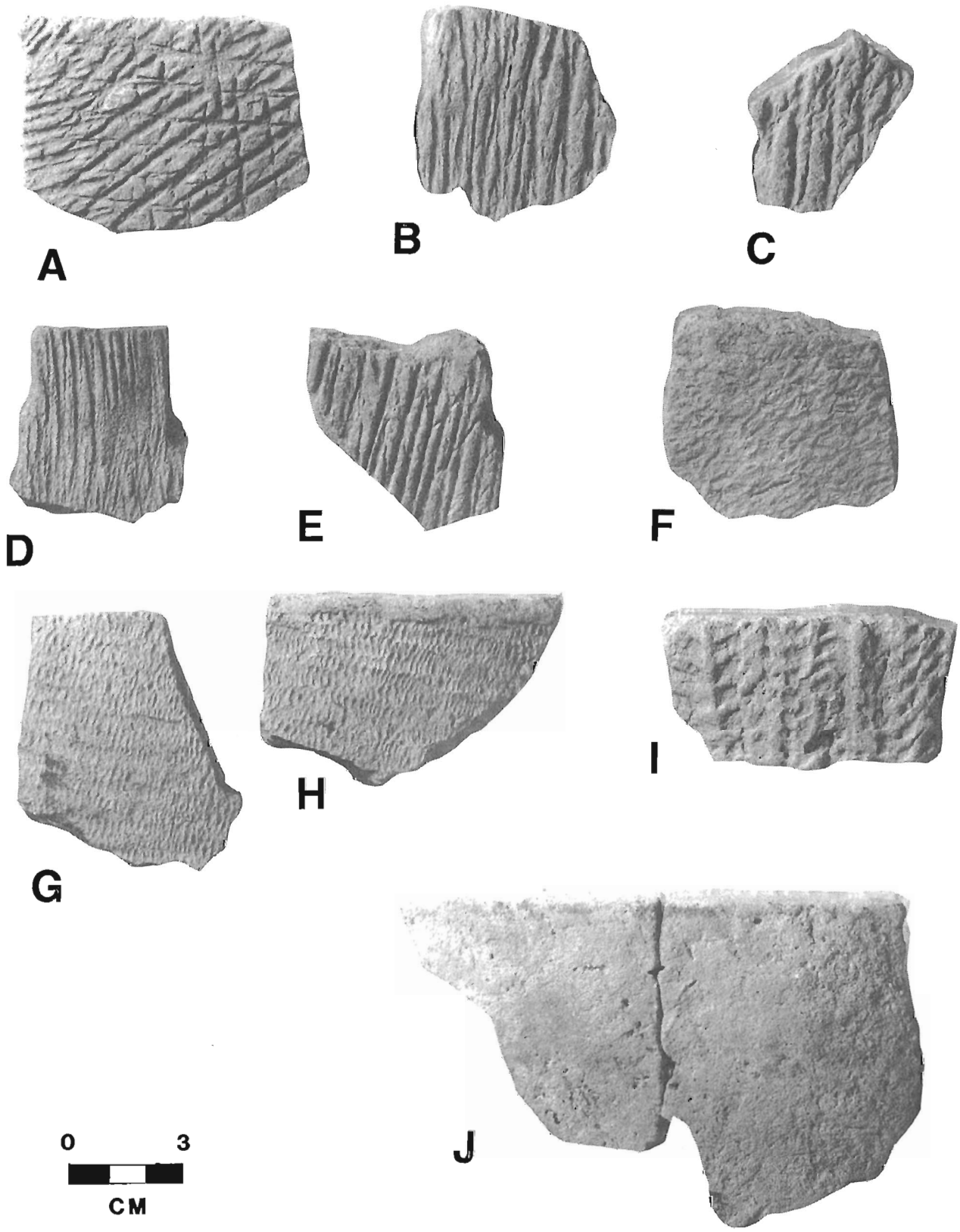

Figure 32. Badin/Cape Fear Series pottery. A-E, cord marked specimens; F-H, fabric impressed; I, cord marked variety; J, plain.

Consequently, it may be either unrealistic or premature to expect the three wares identified at 38FL249 to have some clear chronological relationship beyond their co-occurrence. With this in mind, it is difficult to understand why Cape Fear was adopted, rather than the pre-existing Badin terminology. While Badin has traditionally been applied only to Piedmont ceramics, so too has Yadkin (at least prior to the decade of the 1970s). In general, it seems that Badin has less "baggage" and could better serve as a unifying element. We are, however, stopping short of proposing a nomenclature change, since such proposals tend to met with skepticism. Instead, by offering this relatively detailed description of the ceramics at 38FL249 we hope to generate additional interest and arrive, eventually, at some consensus regarding the appropriate typological definition.

Minority Wares

Two minority wares are found in the Florence collection. Ten sherds of Stallings fiber tempered ware were found, as well as three sherds of pottery identified as the Pee Dee series. The Stallings materials have a uniformly fine texture, typically with a moderate amount of fiber inclusions. No other inclusions were present and the paste has an almost chalky feel resulting fromthe absence of sand incorporated in the paste. Most of the sherds exhibited thoroughly oxidized cross-sections. The interiors were well smoothed, although fiber tracks were commonly visible. The exterior of the vessels was compacted and the smoothing succeeded in eliminating evidence of the fiber. A single rim sherd suggests a straight sided vessel with an diameter of about 25 cm. The wall thickness is 10.1 mm, demonstrating the characteristically clunky nature of the Stallings ware. The small collection of Pee Dee pottery has a grainy texture, harkening back to Reid's original comments regarding it's "sugary appearance" (Reid 1967:42). Temper ranged from subangular medium to coarse quartz sand, typically in moderate amounts (representing about 10% of the paste). Vessel interiors and exteriors were well smoothed (largely obliterating the complicated stamped design found on one sherd). The two rim sherds were too small to determine vessel diameters, although they ranged in thickness from 6 to 8 mm. Rosettes occurred on both, and one also exhibited hollow reed punctations.

Comparing Counts and Estimated Vessel Equivalents

One goal of this research was to explore the use of estimated vessel equivalents (or EVEs) as an alternative, more accurate quantification technique. Table 13 lists the eves for the three series and compares that information with the count percentages. It is clear that there is general, proportionate correspondence -- there being a logical correspondence between the greater frequency of rim sherds in better represented types. It is not surprising that the correspondence is best with the largest collection and becomes less consistent with the smallest assemblage. It should be kept in mind that this procedure is thought to be a more accurate approach when the goal is to compare assemblages. That is, with counts just because there are more sherds of a particular type in an assemblage that doesn't necessarily mean that there were more pots of that type in the corresponding population -- we may simply be seeing the difference in how pots break. The eve avoids this problem -- when comparing assemblages.

Although there are no other collections to which this study can be compared, the use of eves is an appropriate supplement to strict counts. Table 13 suggests that there are significant differences between the various assemblages. For example, while the count of plain Badin/Cape Fear and plain Yadkin sherds represent about equal proportions of the two assemblages, the eves suggest that plain Badin/Cape Fear vessels are considerably more common in that assemblage then they are in the Yadkin. It also suggests, on an intra-assemblage basis, that the Badin/Cape Fear Cord Marked and Fabric Impressed vessels occurred in about the same numbers in the collection, contrary to the conclusion drawn from the counts. Obviously, the approach would have greater use if there were additional researchers offering comparable data. It would also be useful in the collections themselves were larger, so that the results from the Wilmington collection, in particular, could be considered

more trustworthy[22]. It is appropriate to encourage greater use of this methodology, especially since additional work by Orton has enabled the eves to be transformed into numbers which have the same statistical properties as counts (see Orton and Tyers 1992).

Table 13.
Comparison of Estimated Vessel Equivalents (EVE) and Counts

Pottery	EVE	% of Series	Count	% of Series
Badin/Cape Fear				
Plain	31	22.8	50	17.5
Cord Marked	53	39.0	147	51.6
Fabric Impressed	38	28.0	58	20.4
Check Stamped	14	10.3	27	9.5
Net Impressed	-	-	3	1.0
Yadkin				
Plain	5	7.5	20	18.3
Cord Marked	62	92.5	82	75.2
Fabric Impressed	-	-	4	3.7
Check Stamped	-	-	2	1.8
Wilmington				
Plain	-	-	3	5.2
Cord Marked	-	-	16	28.1
Fabric Impressed	33	100	38	66.7

Horizontal and Vertical Patterning

One goal of the ceramic analysis, beyond understanding the technological aspects of production and use, was to explore its ability to assist in dating the site, and better understanding site function through horizontal deposition. The ability of the pottery identified to contribute toward a better temporal placement has already been briefly explored. Based on work at Mattassee Lake a decade ago, there is evidence that the assemblage identified at 38FL249 dates from the late Middle Woodland or the early Late Woodland, spanning the period from about A.D. 200 to A.D. 900 and falling into what have been termed the Deptford III or McClellanville phases.

There is no evidence of stratigraphic separation of the three primary wares. In fact, only the Stallings and Pee Dee collections (as small as they are) tend to fall out in earlier and later levels, respectively. The Wilmington, Yadkin, and Badin/Cape Fear wares seem to be found consistently in

[22] Considering sample size, Orton et al. remark:

> Administrators would like to be told that there is a "minimum viable sample size" below which it is not worth quantifying any assemblage, since they could then decline to fund work below this threshold. For the same reason, archaeologists approach this fearfully . . . . for the time being, we do not recommend that assemblages should be rejected for quantification solely on the grounds of size. However, it sometimes happens that an assemblage is so very small that it cannot differ significantly from any other assemblage (Orton et al. 1993:175).

Table 14.
Stratigraphic Occurrence of Ceramics by Counts at 38FL249

	Cape Fear	Yadkin	Wilmington	Stallings	Pee Dee	Total
Zone 1 - count	86	31	17		2	136
%	63.2	22.8	12.5		1.5	100
Zone 2, Lv. 1 - count	186	71	34	9	1	301
%	61.8	23.6	11.3	3.0	0.3	100
Zone 2, Lv. 2 - count	8	2	6			16
%	50.0	12.5	37.5			100
Zone 3 - count	3	4				7
%	42.9	57.1				100

the same levels in the same proportions (see Table 14). While Woodland materials (especially when the lithic distribution is factored in) are largely confined to Zones 1 and 2, with a clear concentration in Zone 2, Level 1, there is no further type or ware specific stratigraphy. Even when the wares from EX 15 and 16 (the two units which produced 40.6% of the recovered pottery over 1-inch in diameter) are considered, there is no stratigraphic breakout (Table 15).

Table 15.
Stratigraphic Occurrence of Ceramics by Counts in EU 15 and 16

	Cape Fear	Yadkin	Wilmington	Stallings	Pee Dee	Total
Zone 1 - count	20	12	7		1	40
%	50.0	30.0	17.5		2.5	100
Zone 2, Lv. 1 - count	90	38	9			137
%	65.7	27.7	6.6			100
Zone 2, Lv. 2 - count	1	1	5			7
%	14.3	14.3	71.4			100

It is perhaps unreasonable to expect a sandy site such as 38FL249 to answer questions which require more sensitive stratigraphic separation, given the well documented cases of bioterbation or movement resulting from a wide range of geological, faunal, and floral actions. Alternatively, it is also possible, especially considering the ceramic sequence developed by Anderson from Mattassee Lake, that all of these wares are coeval at this particular site and that no stratigraphic separation is possible. This latter view is given additional credence when the horizontal position of the various wares is explored (see discussion below).

When eves, rather than counts, are used in the examination of dating, some clarification is provided. In this case we have used the estimated vessel equivalents in a seriation constrained by stratigraphic deposition. There is, of course, an underlying assumption that the wares went through a regular pattern of not being in use → gradually coming into use → being steadily used → gradually declining in popularity → no longer being used. If the pottery varies from this rise and fall (such as disappearing and then re-appearing) it can yield some very surprising interpretations. Nevertheless, in this particular situation the approach offers additional support for the conclusion that the three wares are largely contemporaneous, being found in greatest densities in Zone 2, Level 1 -- declining

in Zone 1 and in Zone 2, Level 2. It can be suggested that the Wilmington wares, which appear only in Zone 2, Level 1, have been introduced later in the site's history than either the Badin/Cape Fear or Yadkin wares, although this is highly speculative. It is just as likely that the sample size has precluded a better understanding.

More important is the relationship of the various wares suggested by Figure 33. During the occupation of the site, this chart suggests that the Badin was the dominant ceramic style during the period of site occupation (a conclusion which could also be drawn, through with less precision, from simply the count). It is not possible, given the small quantities of Yadkin and Wilmington wares, to know whether these series were just being introduced or if they were in the process of declining in popularity.

When Table 12 is examined for information on the horizontal distribution of the various types, it becomes clear that there is a rather uniform distribution across the point forming Locus 1. Although the Badin/Cape Fear wares are more diffusely spread out over the site, they are concentrated at the head of the spring, in the vicinity of EU 15 and 16. The Wilmington wares, while less well distributed over the site, are nonetheless concentrated in the same area, at the spring head.

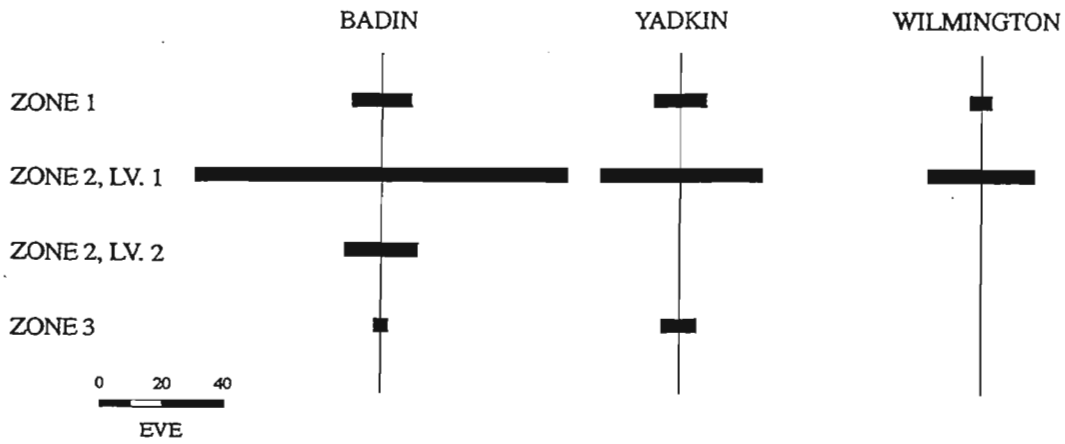

Figure 33. Seriation of Badin/Cape Fear, Yadkin, and Wilmington wares based on eves.

Likewise, the Yadkin ceramics are found at the spring head, although they are also slightly more common in the interior areas of EU 8 and EU 12.

There is a similar distribution when the pottery is examined on the basis of size. Large sherds (those over 1-inch in diameter) are clustered at spring head, just as are the small sherds (those under 1-inch in diameter). This suggests that while the density of occupation is not uniform across the site,

the site formation processes, and especially those factors which caused the fragmentation of the vessels, are relatively uniform. It is tempting to suggest archaeological homogeneity for the collection, based on these overlapping distributions of types, eves, and fragment sizes. That is, it appears that all of the various types have very similar post-depositional histories. This homogeneity is based on where and how the pot was used, and especially what happened to it after it was broken or discarded, it is tempting to suggest that the three wares are not only coeval, but were used in very similar fashions by the site occupants.

Functional Analysis

One of the most interesting functional analyses conducted at a site similar to 38FL249 is that by Blanton et al. 1986) at 38SU83, a Yadkin settlement several counties distant, although in a very similar ecological setting. At that site the vessels were found to be large (tightly clustering at 40 cm), deep, straight-sided jars. They suggest an 18 l. volume for the vessels and conclude that such vessels would most likely have been used for storage. This conclusion which draws on both negative evidence (the absence of sooting to indicate cooking), as well the depositional history of the recovered sherds (identified in concentrations suggestive of broken vessels which had been buried below the occupation zone).

There is much in common with the findings at 38FL249 where, although three different series are identified, all have nearly identical vessel form and size (those at 38FL249 are slightly smaller, clustering at 33 cm rather than 40). Likewise, none of the sherds evidence sooting or other accumulations of charcoal or carbonized food residues[23]. Further, no appreciable percentage of the collection evidences core cross-sections which are suggestive of use over fires. If cooking is eliminated, we are likewise forced to agree to the Blanton et al. that these large, unwieldy vessels are poor candidates for water collection. This leaves, as it did at 38SU83, the conclusion that the vessels were intended for storage, perhaps of water, although food storage seems more likely given the nature of the site. Unfortunately, we did not see the same concentrations of sherds at 38FL249 as observed at 38SU83. Regardless, this remains a viable interpretation, especially considering the results of the ethnobotanical analysis discussed below.

It seems that this study, like that at 38SU83, has taken functional analysis as far as it can be taken without more complex, and expensive, forms of analysis. It has recently become clear that various organic compounds, primarily fatty acids and glycedrides -- the building blocks of most foods -- can be absorbed and retained by the porous ceramic fabric, leaving no visible traces on the surface. These are detectable primarily through gas chromatography. Naturally, interpretation of the results can be quite complex since the organic compounds have no explicit one-to-one correspondence to particular foods. Perhaps of greatest importance, the presence of various organic compounds could be taken as evidence of cooking, but their absence could not be taken as evidence of a storage function. It may be that post-depositional alterations affected the recovery of the organic compounds which were once present.

The point is that while the presence of organic compounds in the clay is an important question, it will require the study of many sherds from many collections. Much of the work may be disappointing. While these are rather self-evident statements applicable to any research, archaeological studies conducted for compliance with various federal and state regulations is not "normal" research,

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[23] While Orton et al. (1993:222) caution that such evidence may be removed during post-excavation processing, we are confident that this was not in the case with this collection since laboratory processing, conducted in the field by a small number of individuals with considerable experience, was carefully controlled.

as evidenced by its conservative approach and disinclination to undertake new, and expensive, analytic techniques. Regardless, studies at 38SU83 and 38FL249 are pointing in very similar directions. To further refine our understanding of vessel function will require the application of new techniques, which also requires a rethinking of how and why the research at sites such as 38FL249 is being conducted.

Other Ceramic Artifacts

The only other ceramic material present at 38FL249 are 19 small fragments of daub (defined simply as fired clay). These were recovered from only two proveniences: EU 15, Zone 2, Level 1 and EU 16, Zone 2, Level 1. This distribution offers further evidence that the major occupation was horizontally concentrated adjacent to the spring head and vertically concentrated in Zone 2, Level 1. Fourteen of the daub fragments (weighing 7.90 g and representing 68.9% of the collection by weight) are classified as "chunks," meaning irregularly shaped fragments usually pea size and often exhibiting fiber impressions or inclusions. These do not, however, resemble the daub typically associated with a wattle and daub structure, but are more likely associated with fragmented puddled clay hearths. Alternatively, they may also represent small fragments of clay accidently fired during the use of a hearth. An additional 2 fragments (1.29 g or 11.2% by weight) measure between 1 and 2 cm in diameter and 5 to 8 mm in thickness. Fiber inclusions were not present in this sample. The function, or derivation, of these materials is not known, although there is no evidence that they are structural. Finally, 3 fragments (2.28 g or 19.9% of the collection by weight) are fragments of mud dauber nests[24]. These are very fragmentary and do not provide good evidence of attachment surfaces. What is present appears to be a relatively flat, smooth surface.

Lithics

Introduction

A total of 7826 lithic artifacts were recovered during the investigation of 38FL249. Of those artifacts 65 (or 0.83%) are projectile points or point fragments, 51 (or 0.65%) are other tools, 5 (or 0.06%) are raw material chunks, 765 (or 9.77%) are fire cracked rock, and the remaining 6175 (or 78.90%) are lithic debitage.

First, formal and informal tools are discussed, followed by an analysis of lithic debitage raw material. An examination of the horizontal and vertical patterning of raw materials will follow. Finally, lithic tool reduction at the site will be discussed as well as its implications for raw material procurement.

Biface and Tool Analysis

Hafted Biface Projectile Points

A total of 36 complete or nearly complete hafted biface specimens were recovered at 38FL249. They are summarized in Table 16. The following discussions are generally descriptive in

[24] Mud daubers (Family Sphecidae) are solitary predators which capture and sting insects for use in provisioning their nests. These nests are tube-like mud chambers usually attached to walls of structures. They are formed in the early summer and are preserved when the structure burns. Since they will last years, they cannot be used as an indication of a warm season fire, only that the structure was present during the summer months.

nature, due to limitations of time and sample sizes.

Of the 36 specimens 34 can be categorized as one of 11 types defined in the regional literature (Chapman 1975; Coe 1964; Oliver 1981; South 1959). These include Thelma, Yadkin, Small Savannah River, Gypsy, Guilford, Morrow Mountain II, Kirk, Stanly, St. Albans, Palmer, and Hardaway. These projectile points were categorized based on a combination of morpholigical atributes and measurements which are thought to be distinctive of the various types. The remaining two hafted bifaces could not be either solidly categorized or are not published in widely available regional literature. The first hafted biface is either a Stanly or a Morrow Mountain II, but could not be definitively categorized due to its fragmentary nature. The second type has been described by Charles (1981) as a "Type J" point. Charles (1981:31) describes this point as well made, thin, and symmetrical. The type is found throughout the state, but is not common. The greatest density of occurrence is in the Piedmont and the upper Pee Dee River area. It is usually made from rhyolite in the Piedmont or from Coastal Plain chert in the Pee Dee area. Charles believes that the point type dates to the Woodland Period although no radiocarbon dates have been obtained to securely date it. The example from 38FL249 is manufactured from a tan fossiliferous chert which is believed to outcrop in the Darlington and Florence County areas (Tommy Charles, personal communication 1993).

Thelma is described by South (1959) as a "small, stemmed, basically trianguloid shaped blade". This type is associated with the Vincent Series Ceramics. South (1959:152) believes that it may "represent a transition type from the stemmed, Archaic projectile points to the triangle Roanoke type arrowhead". Both Thelma points were manufactured from rhyolite.

Yadkin points in the collection from 38FL249 are all of the eared variety. Coe (1964:45-49) describes the Yadkin point as "large, symmetrical, and well-made triangular points." Eared varieties are narrower and sometimes longer, with a flat to concave base and low, shallow side notches. Blanton et al. (1986:107) suggest that both large and small triangular points were used at the same time, but for different tasks during the Yadkin Phase. However, Sassaman et al. (1990:164) believe that unless large triangular forms persisted long after about A.D. 500, or the estimate for small triangulars is exceedingly late, the co-occurrence of both forms may be "chiefly the result of assemblage conflation". The three examples are made from rhyolite, with one manufactured from cortical material.

Oliver (1981: 124) describes the small Savannah River Stemmed as a "small to medium-sized broad triangular bladed point with a square to rectangular stem and a straight or incurvate base". These are smaller in size than the Savannah River Stemmed, and the Gypsy Stemmed point is yet smaller. However, all three points are morphologically similar. These three types (Savannah River, Small Savannah River, and Gypsy) have been identified from the early portion of the Late Archaic to the latter portion of the Late Archaic, and into the Early Woodland Period (Oliver 1981). The three Small Savannah River points were manufactured from argillite (N=2) or rhyolite (N=1). The Gypsy points are both made from banded rhyolite.

Guilford Lanceolate points are described by Coe (1964:43) as long and slender, but with a thick blade. The base is either straight, rounded, or concave. He estimated a minimum date of 6000 B.P. for the phase based on stratigraphic relationships at the Gaston site. The examples from 38FL249 were manufactured from rhyolite (N=3) or orthoquartzite (N=1).

Morrow Mountain II projectile points are characterized by Coe (1964:37) as having a triangular blade with a tapered stem. Most of the absolute dates for Morrow Mountain come from sites in Tennessee and Alabama. Chapman (1985:146) gives the temporal range of ca. 7500-7000 B.P. However, later dates have been obtained from the Russell Cave site in northeast Alabama (Griffin 1974) and 38LX5 in central South Carolina (Anderson 1979). Both sites yielded dates around 5400 B.P.

As a result, it is possible that there is considerable overlap between the Guilford and Morrow Mountain phases in South Carolina (Sassaman et al. 1990:153). According to Coe (1964:37) the Morrow Mountain I type is morphologically similar to Morrow Mountain II, however, the stem is shorter and more pointed. It is likely that the two types are contemporeneous. Of the seven recovered Morrow Mountain II points, all but one were manufactured from rhyolite. The remaining point was made of quartz.

Coe (1964:35) describes the Stanly Stemmed point as "Christmas tree" shaped. It has a broad triangular blade with a small stem which is shallowly notched at the base. At the Doerschuck site several Kirk types were found in the Stanly level, suggesting an overlap in tradition. At 38FL249 Stanly points were manufactured from quartz (N=1), rhyolite (N=2), and argillite (N=1).

Table 16.
Hafted Biface Metric and Descriptive Data

TYPE	PROV	MXL	BL	BW	HW	TH	MAT
Thelma	EU15 Z2 L1	44.4	40.6	16.3	5.1	7.1	Pl Rhyolite
Thelma	EU10 Z2 L1	31.2	28.2	16.3	7.6	5.7	Pl Rhyolite
Type J	EU16 Z2 L1	71.7	65.7	22.4	11.6	6.7	Tan Foss Ch
Eared Yadkin	EU13 Z1	46.0?	39.0?	19.1	16.2	7.5	Po Rhyolite
Eared Yadkin	EU18 Z2 L1	28.4	26.8	17.6	17.4	5.4	Cortical
Eared Yadkin	EU13 Z2 L1	44.0?	37.0?	21.1	20.0	6.0	Pl Rhyolite
Sm. Savannah River	EU9 Z2 L2	52.4	43.6	33.7	22.8	9.2	Argillite
Sm. Savannah River	EU12 Z2 L1	51.0	39.3	38.0	20.8	7.5	Argillite
Sm. Savannah River	Locus 2 Surf.	57.0	45.0?	25.7	13.9	10.5	Po Rhyolite
Gypsy	Locus 2 Surf.	36.8	28.8	24.9	15.8	5.9	Bd Rhyolite
Gypsy (Reworked)	Locus 2 Surf.	22.2	14.8	21.3	15.8	7.0	Bd Rhyolite
Guilford	EU10 Z3 L1	56.6	–.-	19.3	–.-	9.8	Orthoquartz.
Guilford	EU15 Z2 L1	55.6?	–.-	22.9	–.-	11.2	Pl Rhyolite
Guilford	EU16 Z2 L1	67.8	–.-	17.3	–.-	9.3	Pl Rhyolite
Guilford	Locus 2 Surf.	70.7	–.-	23.3	–.-	11.2	Po Rhyolite
Morrow Mt. II	EU8 Z2 L2	31.5	21.0	21.3	11.9	8.3	Quartz
Morrow Mt. II	EU10 Z1	29.9	23.9	32.1?	9.4	5.7	Pl Rhyolite
Morrow Mt. II	EU14 Z2 L1	39.0?	26.0?	30.1	11.0	6.0	Po Rhyolite
MM II/Stanly	EU16 Z1	43.9?	36.8?	32.5	12.3	7.8	Po Rhyolite
Morrow Mt. II	EU18 Z1	34.6?	32.2?	25.5	9.6	7.1	Po Rhyolite
Morrow Mt. II	EU18 Z2 L1	38.2?	31.8?	26.5	-.-	4.9	Po Rhyolite
Morrow Mt. II	EU18 Z2 L1	38.8?	29.8?	27.6	11.7	8.1	Po Rhyolite
Morrow Mt. II	EU18 Z2 L1	46.1?	42.5?	35.0	22.9	9.3	Pl Rhyolite
Stanly	EU11 Z3 L1	41.0	31.9	23.8	12.5	10.9	Quartz
Stanly	EU15 Z1	48.6?	39.8?	35.8	17.5	9.7	Pl Rhyolite
Stanly	EU15 Z2 L1	47.5?	36.4?	33.4	15.2	8.1	Pl Rhyolite
Stanly	EU17 Z2 L1	54.9?	43.0?	37.0	15.7	9.4	Argillite
Kirk	EU7 Z3 L2	42.3?	30.3?	29.0	14.8	7.5	C Pl Chert
Kirk?	EU14 Z2 L1	40.0	33.1	20.0	13.2	8.0	Orthoquartz.
St. Albans/LeCroy	EU9 Z2 L2	31.2	24.4	19.9	15.5	6.0	Orthoquartz.
St. Albans/LeCroy	Locus 2 Surf.	26.1	19.7	20.1	18.5	5.0	Bd Rhyolite
St. Albans/LeCroy	Locus 2 EU1	26.5?	18.8?	18.5?	16.8	3.6	Pl Rhyolite
Palmer	EU9 Z3 L3	25.7	21.1	19.5	17.3	7.4	Orthoquartz.
Palmer	EU10 Z2 L1	26.0	20.5	17.1	11.6	5.1	Quartz
Palmer	EU17 Z2 L1	32.0	21.9	18.3	15.7	7.5	Bd Rhyolite
Hardaway	EU9 Z3 L3	26.0	16.4	21.0	19.5	5.7	Argillite

MXL = Maximum Length; BL = Blade Length; BW = Blade Width; HW = Haft Width; TH = Thickness; Po = Porphyritic; Pl = Plain; Bd = Banded; Orthoquartz = Orthoquartzite.

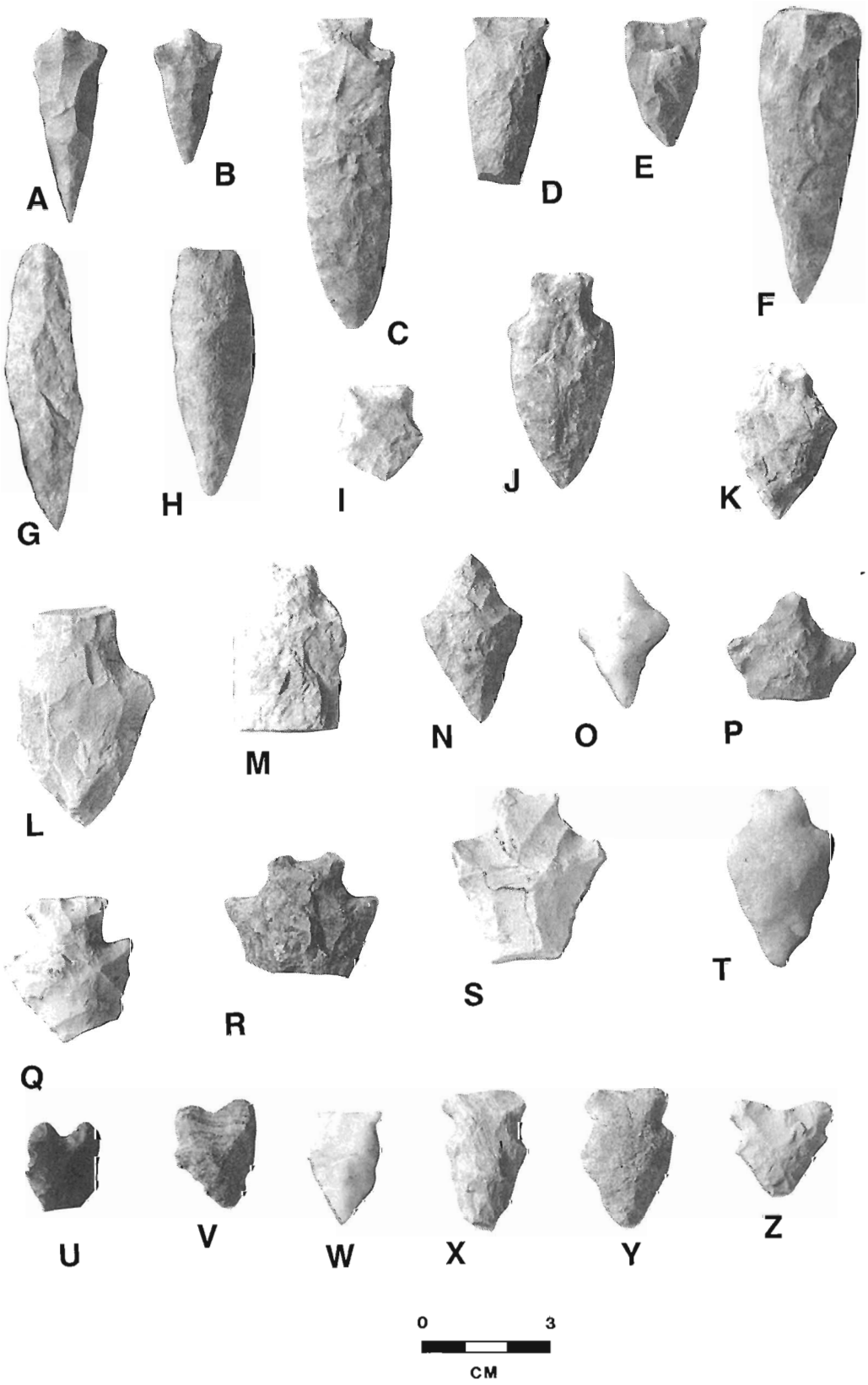

Figure 34. Hafted projectile points from 38FL249. A-B, Thelma; C, Type J (Charles 1981); D-E, Eared Yadkin; F-H, Guilford; I, Gypsy; J-M, Small Savannah River Stemmed; N-P, Morrow Mountain II; Q, Kirk; R-T, Stanly; U-V, St. Albans; W-Y, Palmer; Z, Hardaway.

Kirk Corner Notched points are characterized by a large triangular blade, corner notching, and a straight base (Coe 1964:69). Often the edges are serrated and occasionally they are beveled. Coe believed that this type evolved out of the earlier Palmer type and it is possible that the two types are contemporaneous (see Sassaman 1992: 52). Based on his work at the Hardaway site, Coe hypothesized that the Kirk Stemmed is a later expression of the Kirk point. At the Haw River site stemmed points were found in the same level as Kirk and bifurcate points (Cable 1982). Some of these stemmed points are consistent with type descriptions of Kirk and Stanly Stemmed points. However, no stemmed varieties were found in the older strata. This corresponds with the chronology of Kirk points established by Coe. At 38FL249 one orthoquartzite and one Coastal Plain chert Kirk point was recovered.

The St. Albans point tradition is best described by Chapman (1975). These points have small serrated blades, with side notching and a deeply notched base. While the point type is very similar to the LeCroy type, Broyles (1966:26-27) distinguished the two on stratigraphic grounds as well as morphological grounds. The LeCroy bifurcate is generally a little shorter, ranging 16.0 to 35.5 mm, whereas St. Albans ranges 19.0 to 34.5 mm. The LeCroy is also generally a little wider, ranging 17.5 to 26.0 mm, whereas St. Albans ranges 14.0 to 12.0 mm (Chapman 1975:106-110). At 38FL249 the bifurcate points averaged 27.9 mm and 19.5 mm in length and width. They were manufactured from either rhyolite (N=2) or orthoquartzite (N=1).

Palmer Corner Notched points are characterized by a small corner-notched blade with a straight, ground base. Research in North Carolina at the Haw River sites (e.g. Claggett and Cable 1982; Cable 1982) suggests that Kirk is an outgrowth of the Palmer tradition. Claggett and Cable (1982) found that some of the Kirk specimens were basally ground which was an attribute previously thought to be exclusive to Palmer. The Haw River data also suggest that there was a gradual process of increasingly larger corner notching, evolving Palmer into Kirk. However, research in the South Carolina Piedmont indicates that there is a much stronger morphological distinction between the two types, making them useful types (see Sassaman et al. 1990:149). The chronological separation of the two types has yet to be well demonstrated in South Carolina. The three Palmer points from 38FL249 were manufactured from quartz, rhyolite, and orthoquartzite.

Hardaway Side Notched points have small broad blades with narrow side notching as a recurved concave base (Coe 1964:67). At the Hardaway site, these points were found in the lowest stratum. Also in the lowest stratum were Hardaway points which were morphologically similar to Dalton points referred to as Hardaway-Dalton. The appearance of pronounced notching in bifaces generally marks the onset of the Early Archaic period at about 10,000 B.P. (Sassaman et al. 1990:147). Only one

Table 17.
Mean metric data for hafted bifaces

Type	length	width	thickness
Thelma	37.8	16.3	6.4
Yadkin	53.5	32.5	9.1
Savannah River	29.5	23.1	6.5
Gypsy	62.7	20.7	10.4
Guilford	36.9	29.6	7.1
Morrow Mt II	48.0	32.5	9.5
Stanly	41.2	24.5	7.7
Kirk	27.9	19.5	4.9
Palmer	27.9	18.3	6.7
Hardaway	26.0	21.0	5.7

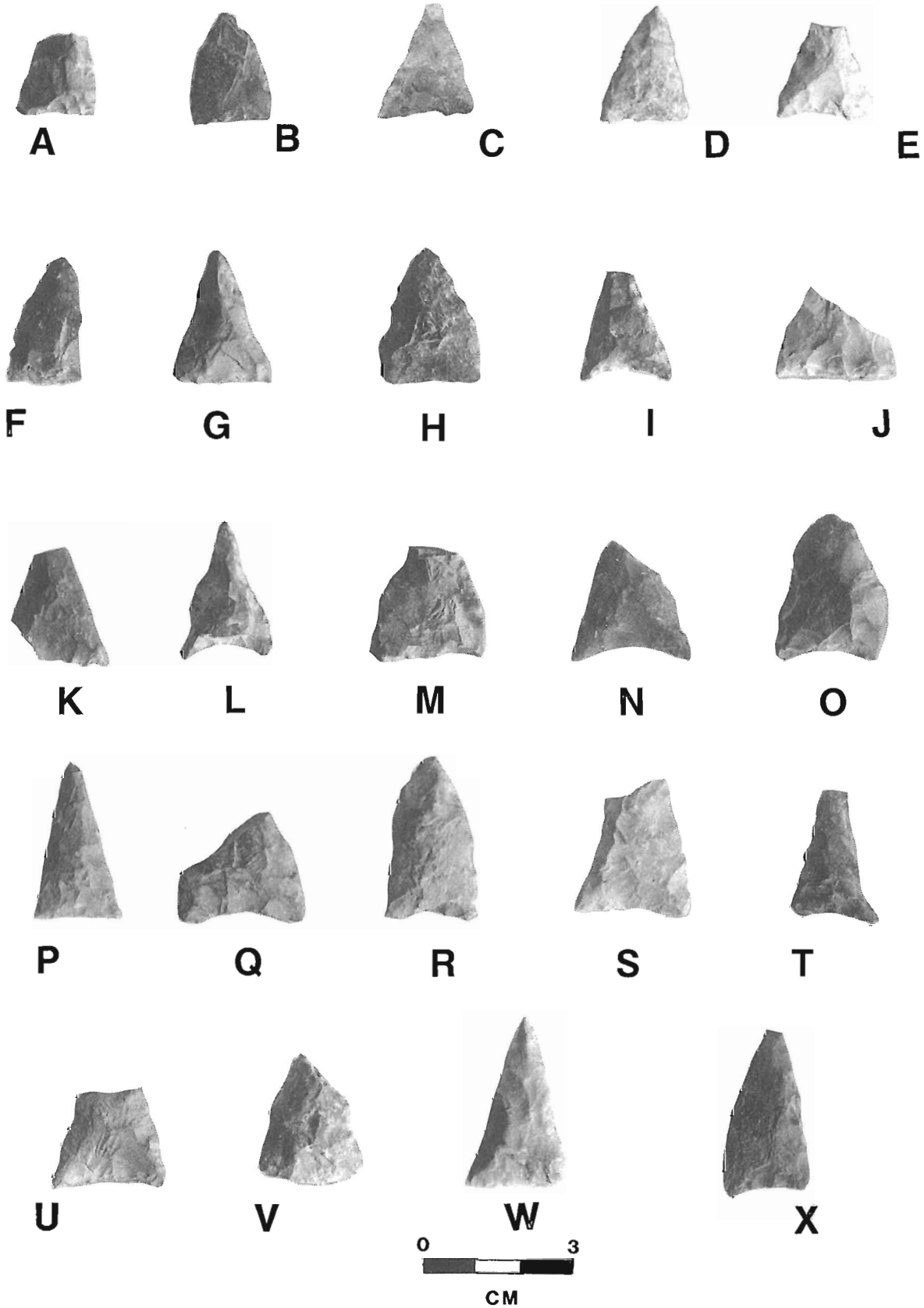

Figure 35. Triangular projectile points from 38FL249. A-B, Clarksville; C-X, Caraway (L is Caraway drill).

Hardaway point was recovered in the excavations at 38FL249. This specimen was manufactured from argillite and was found at the lowest level of excavations in Zone 3 Level 3.

Unfortunately, site 38FL249 lacked the clear stratigraphy needed to refine a projectile point chronology for this portion of the Pee Dee River drainage. While there have been questions about the validity of some projectile point as separate types, such as Kirk and Palmer corner notched points (see Tippett 1992), the site did not provide the data sets needed to approach this problem.

The basic metric and descriptive data listed in Table 16 fall within standard published ranges of variation for similar typed examples from the Pee Dee River Valley (Coe 1964). Table 17 presents the mean metric data on the most sensitive type indicators (length, width, and thickness) for the various hafted biface types.

Triangular Projectile Points

A total of 24 triangular points were recovered from excavations at 38FL249. All were found in the Locus 1 area. Table 18 summarizes the metric information, provenience, and raw material. Most of the points fall within the range published for the Caraway type, while two approximate the published range for Clarksville.

Clarksville triangular points are very small, usually equilateral although a few are isosceles. None contain incurvate sides, although some have excurvate sides (South 1959:145). Coe's (1964:112) published range for the type is 10.0 to 18.0 mm in length and 10.0 to 16.0 mm in width. The specimens from 38FL249 fall slightly outside of this range with the average length being 20.7 mm and the average width being 15.4 mm. Although the length is slightly outside of Coe's range, these points fit most closely with this type description. Both examples were manufactured from rhyolite.

Caraway points are normally straight-sided isosceles triangles that averaged 30 mm in length and 20 mm in width. Bases are either straight or slightly concave. This point type was first described by Coe (1937) on the basis of 665 specimens collected during the excavation of Keyauwee Town. While the remaining triangular points from 38FL249 did not all fit the morphological description provided by Coe (1964), they were all categorized as Caraway. Unfortunately, there has been little work in the way of providing solid typologies for the variety of small triangular points. However, table 18 provides a rough morphology of triangular blade types divided by equilateral and isosceles forms, straight, incurvate, or excuravate blade edges, and incurvate, straight, or excurvate bases. Of the 23 triangular points, the most common morphological type is an isosceles point with straight blades and a straight base (N=7 or 30.4%). Isosceles forms outnumbered equilateral forms, consisting of 87.0% of the collection.

While tables 16 and 18 provides stratigraphic information about the occurrences of projectile point types, Figures 36 through 39 provide information about changing use of the site area through time. Figure 36 indicates that the northwestern portion of the site was the concentration of Late and Middle Woodland Period activities. The lack of triangular points in Locus 2, further south, corresponds with ceramic information indicating that Locus 2 was not a focus of Late and Middle Woodland Period activities. Early Woodland and Late Archaic diagnostic points (ie. Small Savannah River, and Gypsy) only occur twice in the Locus 1 area, and the presence of Late Woodland/Early Archaic projectile points in Locus 2 indicates the probable time of initial use of this area (Figure 37). This corresponds with the finding of Stallings Phase pottery in the Locus 2 area. Middle Archaic (ie. Guilford, Morrow Mountain, Stanly, Kirk, St. Albans) diagnostic points are also found in both Locus 1 and Locus 2 (Figure 38). While still somewhat dispersed in Locus 1, there is a clustering in the west central portion of the locus. Although Paleoindian/Early Archaic (Palmer and Hardaway) diagnostic points were relatively few (N=4), they are found scattered across the Locus 1 area (Figure 39).

However, a Palmer point was found during the initial survey in Locus 2.

Other Hafted Bifaces

Several projectile point tips were recovered in the excavations. They include one porphyritic rhyolite, one unidentified material, one banded rhyolite, and one plain rhyolite. Also one plain rhyolite projectile point midsection was recovered. Because of their fragmentary nature, they could not be further analyzed. Breakage is not unexpected and probably results from a number of activities including use as a projectile, use as a multipurpose tool (for cutting, scraping, or perforating), or breakage during attempts to rejuvenate broken or warn tools (Frison and Bradley 1980). Another factor in breakage is the nature of the raw materials being used. Some materials contain stress lines or impurities which increase the risk of breakage.

Only three projectile points were found to be altered. One was a Caraway point reworked as a drill. Another drill was recovered made of porphyritic rhyolite. While it may have originally served as a hafted biface projectile, its original form is beyond recognition. The last is a hafted knife-type Coastal Plain chert bifacially worked tool similar in form to one found by Claggett and Cable (1982:325-Plate 2:2) at the Haw River sites, although they described it as a flake tool (Figure 40). Both

Table 18.
Triangular Point Metric and Descriptive Data

TYPE	PROV	MXL	BW	TH	MAT	FM	SD	BS
Caraway	EU8 Z1	33.0	20.5	4.0	Pl Rhyolite	IS	ST	ST
Clarksville	EU12 Z1	20.4	14.7	4.3	Pl Rhyolite	IS	ST	ST
Caraway	EU12 Z1	25.3?	18.1	4.1	Pl Rhyolite	IS	ST	IN
Caraway	EU12 Z1	25.6	20.0	5.9	Pl Rhyolite	IS	EX	ST
Caraway	EU12 Z1	22.1	17.6	5.2	Pl Rhyolite	IS	ST	ST
Caraway (drill)	EU12 Z2 L1	28.4	17.5	5.8	Pl Rhyolite	IS	IN	IN
Caraway	EU12 Z2 L1	24.9	19.5	5.2	Po Rhyolite	IS	EX	EX
Caraway	EU13 Z1	30.0?	23.0	5.0	Pl Rhyolite	IS	ST	IN
Clarksville	EU13 Z1	21.0	16.0	3.5	Pl Rhyolite	IS	EX	ST
Caraway	EU14 Z1	25.5	19.5	4.7	Pl Rhyolite	IS	ST	ST
Caraway	EU15 Z1	30.1	17.5	4.0	Pl Rhyolite	IS	ST	ST
Caraway	EU15 Z1	29.7?	23.5?	2.5	Pl Rhyolite	IS	ST	ST
Caraway	EU15 Z2 L1	22.0	19.4	3.4	Pl Rhyolite	EQ	ST	IN
Caraway	EU15 Z2 L1	31.9	17.6	6.6	Pl Rhyolite	IS	EX	IN
Caraway	EU15 Z2 L1	29.3	21.3	7.4	Pl Rhyolite	IS	EX	IN
Caraway	EU15 Z2 L1	34.7?	22.3	5.5	Pl Rhyolite	IS	ST	IN
Caraway	EU15 Z2 L1	28.1?	25.4	5.3	Pl Rhyolite	EQ	EX	IN
Caraway	EU16 Z2 L1	23.5?	18.9	3.6	Pl Rhyolite	IS	ST	ST
Caraway	EU16 Z1	31.8?	25.0	5.7	Pl Rhyolite	IS	IN	IN
Caraway	EU16 Z2 L1	27.2?	23.8	5.3	Bd Rhyolite	EQ	EX	ST
Caraway	EU17 Z1	28.4?	23.6	4.6	Pl Rhyolite	IS	ST	IN
Caraway	EU17 Z1	28.9?	23.5	5.5	Pl Rhyolite	IS	EX	IN
Caraway	EU17 Z1	25.4	14.6	5.5	Pl Rhyolite	IS	EX	ST
Caraway	EU18 Z1	32.6	17.5	4.8	Pl Rhyolite	IS	EX	IN

MXL = Maximum Length; BW = Blade Width; TH = Thickness; Po = Porphyritic; Pl = Plain; Bd = Banded; IS = Isosceles; EQ = Equilateral; IN = Incurvate; EX = Excurvate; ST = Straight.

Table 19.
Mean Metric Data for Triangular Points

Type	Length	Width	Thickness
Clarksville	20.7	15.4	3.9
Caraway	25.2	20.2	5.0

the example from 38FL249 and the Haw River specimen may have served similar functions. All were found in Zone 2, Level 1 excavations. The presence of a percussion platform along the "haft" may indicate that it was initially intended to be worked into a projectile point and the knapper was unable to get rid of the platform.

One hafted cutting implement was also recovered from excavations. It was a broken bifacially worked hafted knife (Figure 40) made of porphyritic rhyolite found in Zone 2 Level 1. Since the distal end is missing it is probable that this tool was broken either during reworking or use; most likely from twisting the blade.

Other Bifaces

In addition to the projectile point fragments discussed earlier, a number of biface fragments were found. While some of these fragments may have come from finished tools, most appeared to be unfinished. They are summarized in Table 20. Vertical distributions indicate that most biface production occurred during later occupations of the site. Zone 2 Level 1 contains by far the most bifaces and biface fragments.

Table 20.
Bifaces and Biface Fragments

TYPE	Z1	Z2 L1	Z2 L2	Z3 L1	Z3 L2	Z3 L3
Quartz biface tip		1				
Bd Rhyolite biface tip	1	1	1			
Bd Rhyolite biface		1		1		
Po Rhyolite biface tip		3				
Po Rhyolite biface		2				
Pl Rhyolite biface tip		2				
Pl Rhyolite biface midsection		1				
Pl Rhyolite biface	2					
Argillite biface tip		2				
Argillite biface		1				
Orthoquartzite biface tip			2			
Orthoquartzite biface		1				
Total	3	14	3	1	0	0

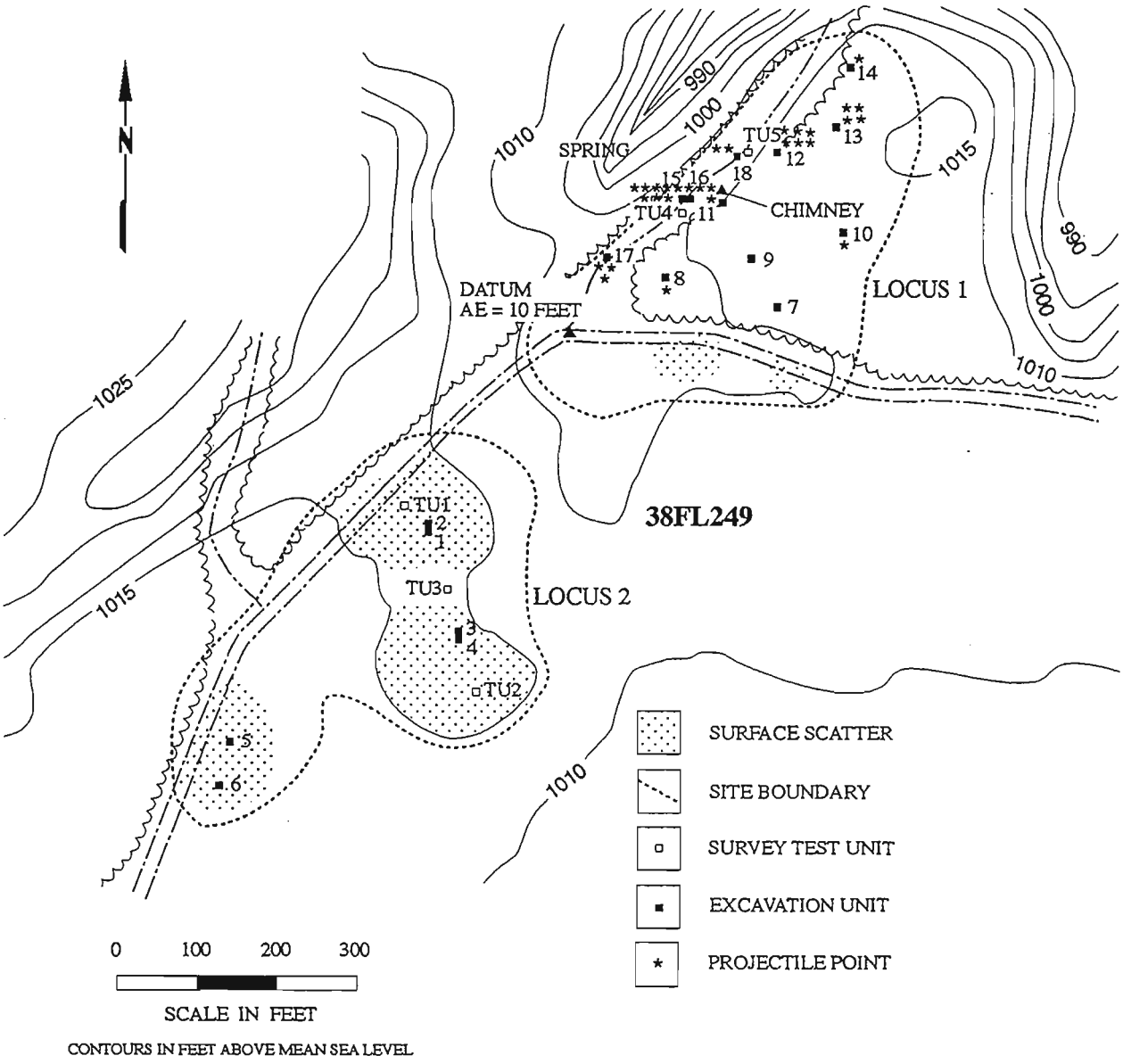

Figure 36. Locations of Middle and Late Woodland projectile points.

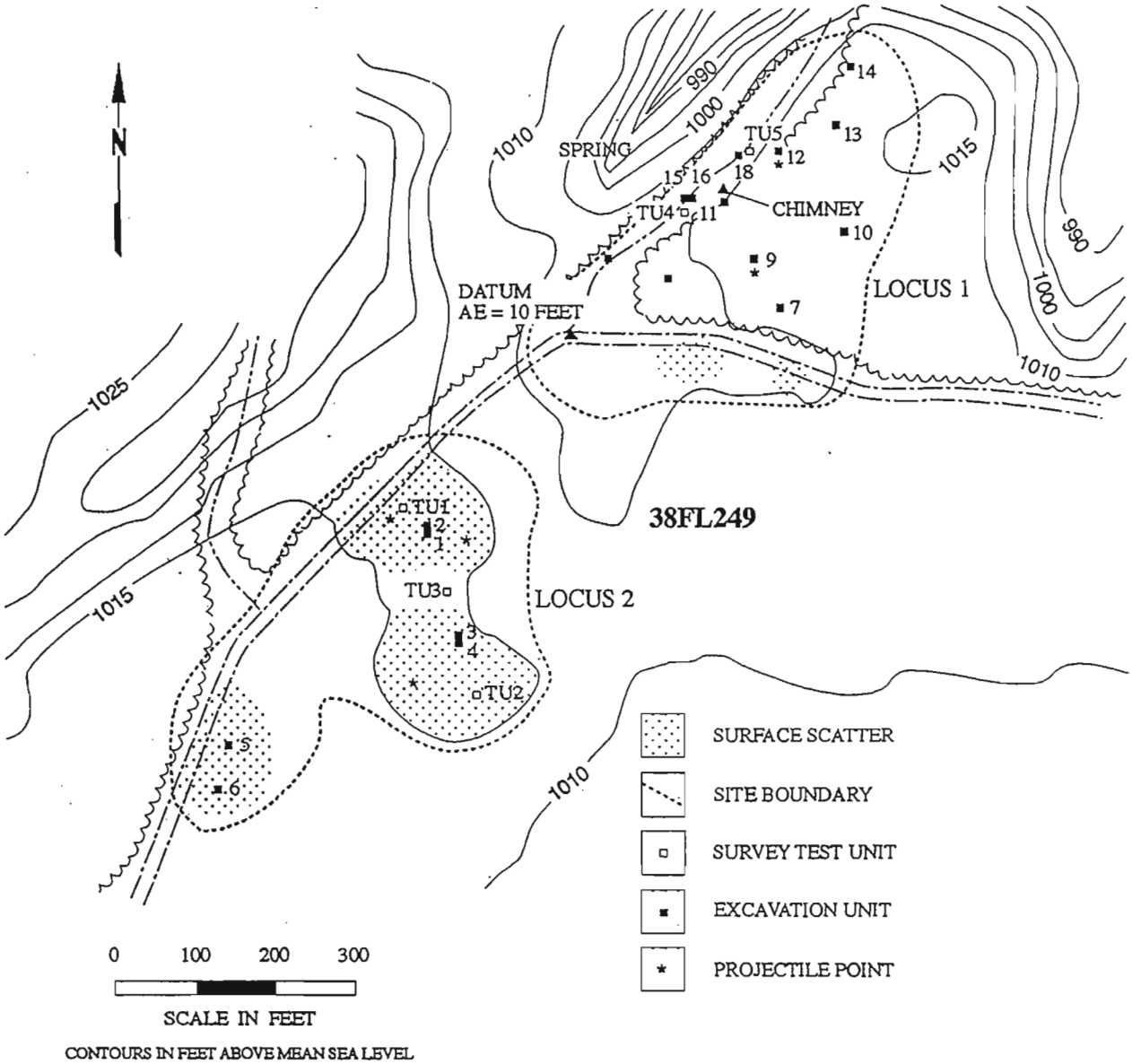

Figure 37. Locations of Late Archaic and Early Woodland projectile points.

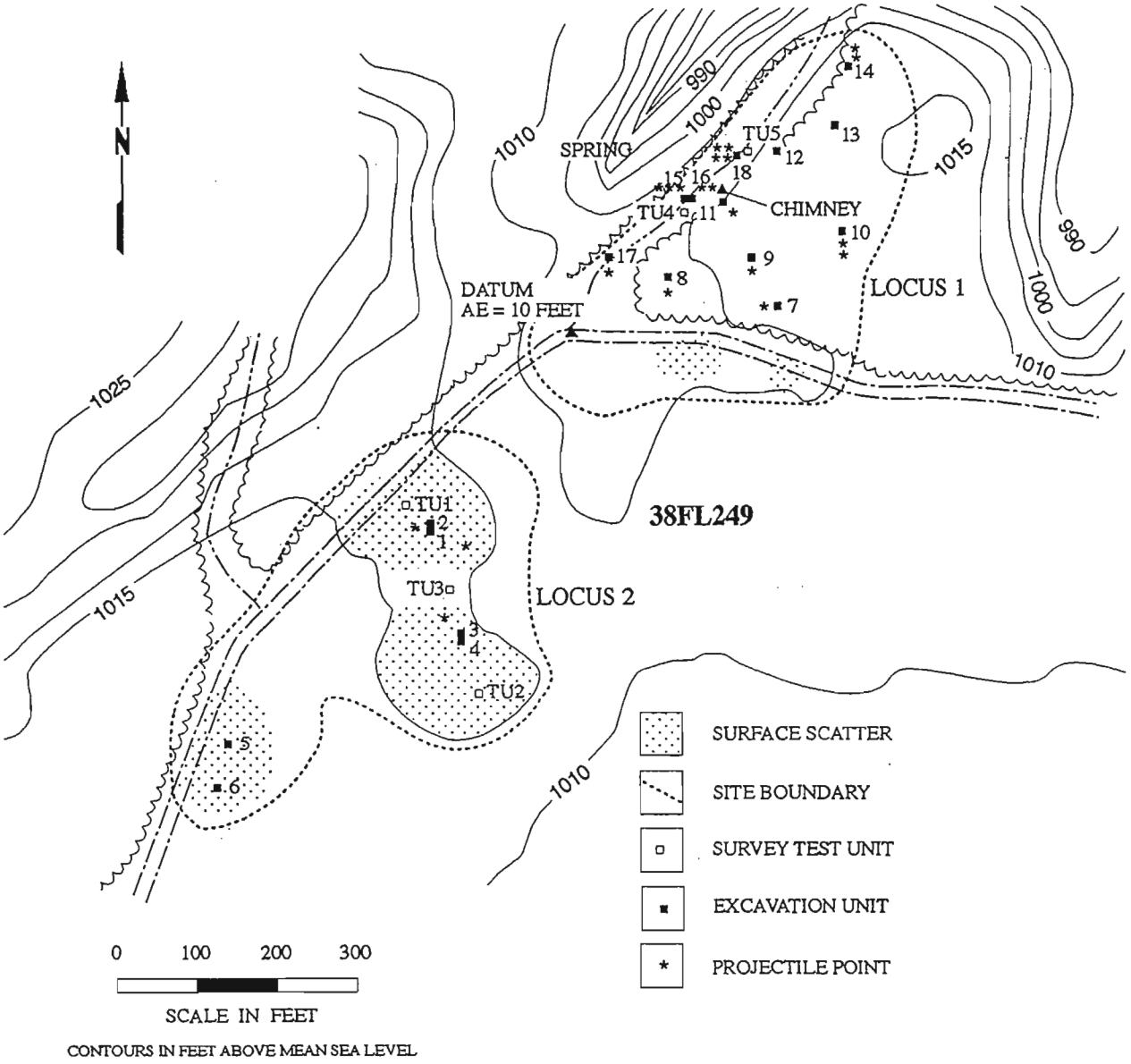

Figure 38. Locations of Middle Archaic projectile points

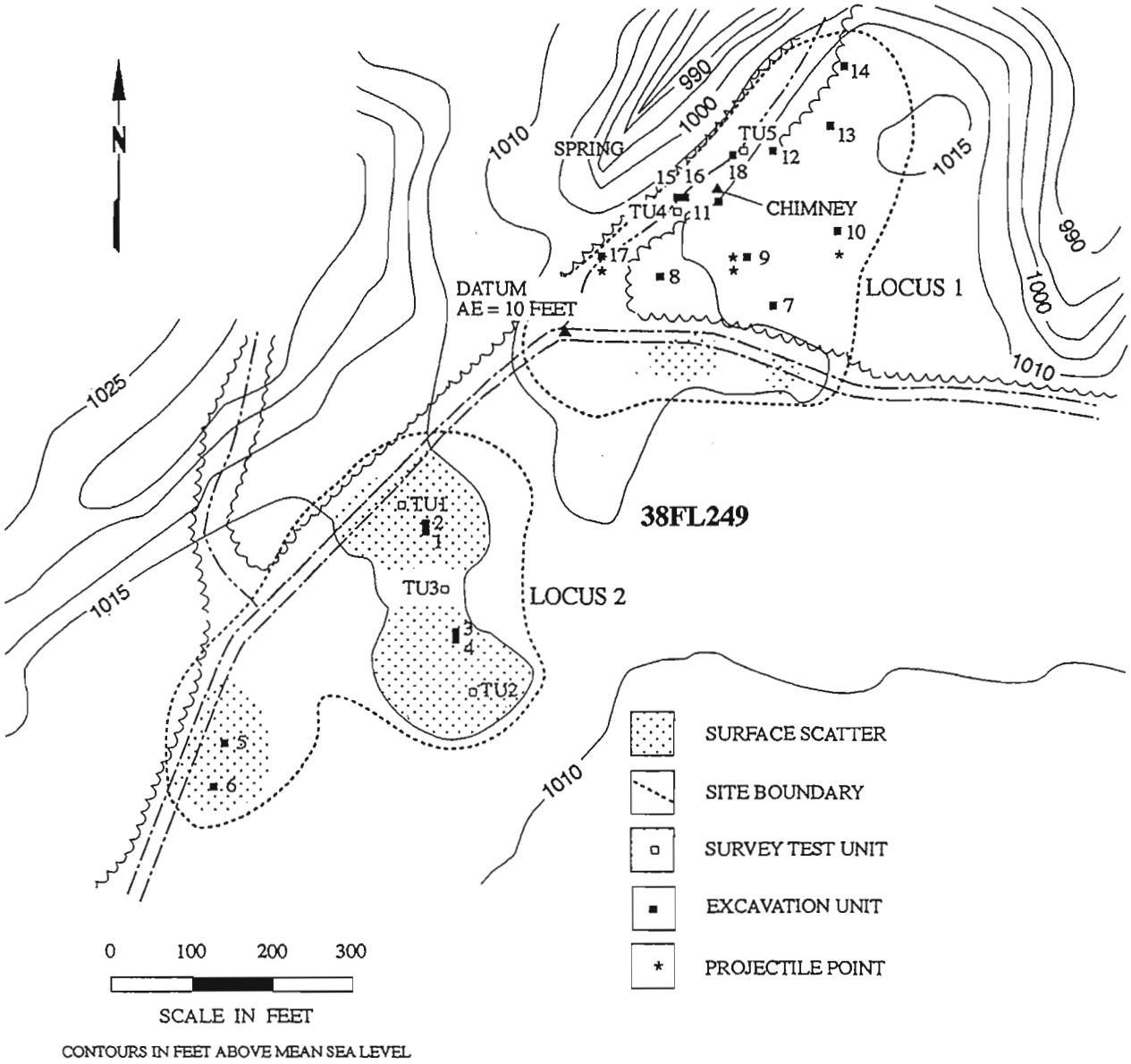

Figure 39. Locations of Paleoindian and Early Archaic projectile points.

Other Tools

Scrapers

Other finished chipped stone tools included two plain rhyolite end scrapers and three porphyritic rhyolite end scrapers. Two of these scrapers exhibit bulbs of percussion, while the remaining three were either manufactured on flake fragments or the proximal portion of the flake broke off after the tool was made. The working edges on four of the five examples exhibited some rounding and glossing which supports their scraping function. The last example was manufactured from a somewhat lamellar piece of rhyolite and did not exhibit possible use as well as the other scrapers. Scrapers appear to have been manufactured primarily during the early occupation of the site since they are located in Locus 2 (posited earlier area), Zone 2 Level 2, and Zone 3 Level 3.

Table 21.
Vertical Location of End Scrapers

Material	Locus 2	Z1	Z2 L1	Z2 L2	Z3 L1	Z3 L2	Z3 L3
Pl Rhyolite	1						1
Po Rhyolite	1			1			1
Total	2	0	0	1	0	0	2

Gravers

Two gravers were recovered from excavations in Locus 1. These consisted of a plain rhyolite graver and one graver manufactured from an unidentified material. Both were recovered in Zone 1 excavations (Figure 40). One graver had three small projecting points while the other had only one. These were most likely used for engraving or perforating.

Used Flakes

Informal tools include one argillite uniface (which was surface collected from Locus 2, three plain rhyolite used flakes, seven porphyritic rhyolite used flakes, two Felsic tuff used flakes, and one orthoquartzite used flake. Stratigraphic information shown in Table 22 indicates that the majority of used flakes were manufactured during the later period of site use. Of the 13 used flakes recovered, eight (or 61.5%) were located in Zone 2 Level 1 excavations.

Table 22.
Vertical Location of Used Flakes

Material	Z1	Z2 L1	Z2 L2	Z3 L1	Z3 L2	L3
Pl Rhyolite		1		2		
Po Rhyolite		4	1	1	1	
Felsic Tuff		2				
Orthoquartzite		1				
Total	0	8	1	3	1	0

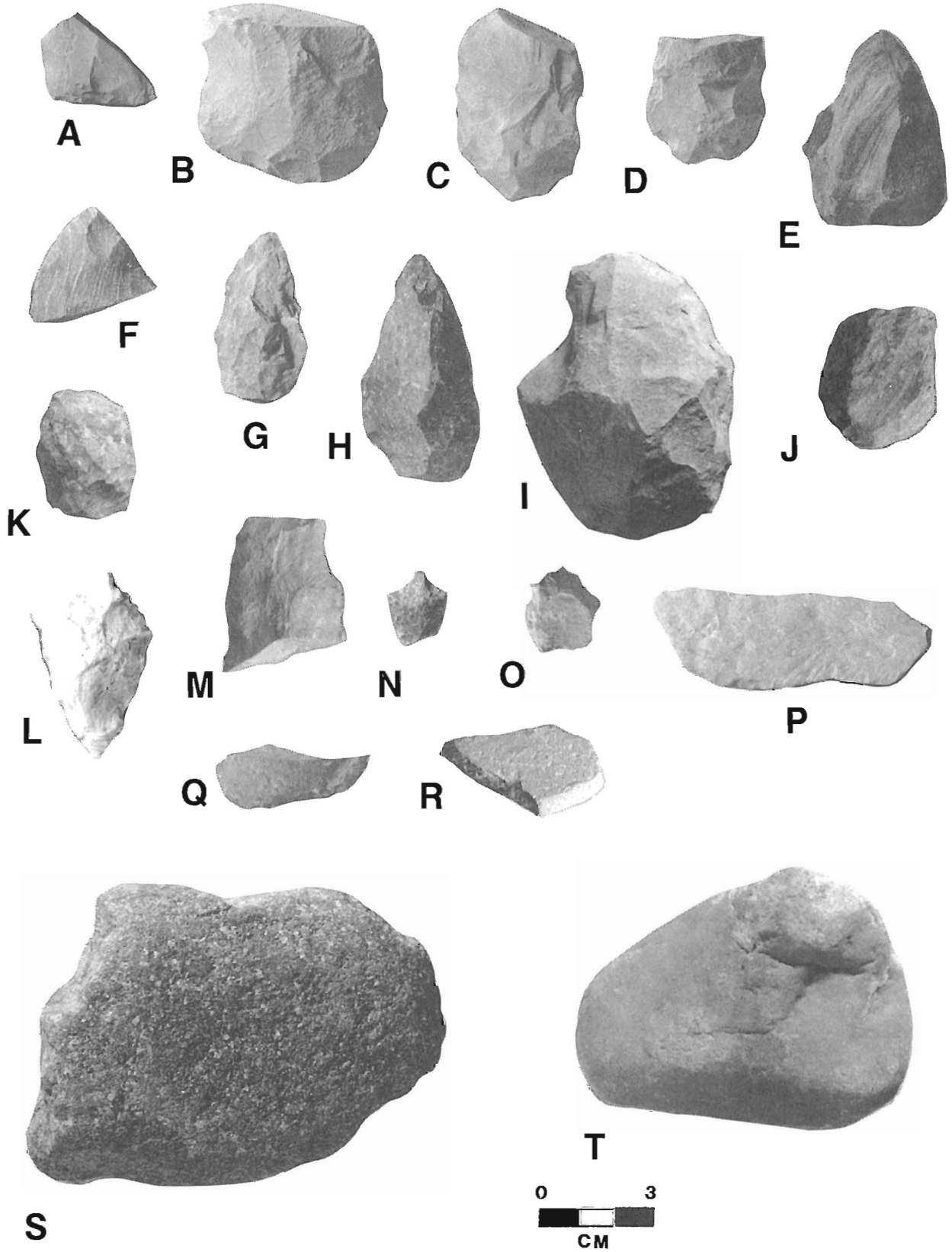

Figure 40. Other tools recovered from 38FL249. A-H, bifacially worked lithics; I-K, endscrapers; L, unfinished tool; M, hafted knife fragment; N-O, gravers; P-Q, used flakes; R, ground stone; S, ground stone chopper/axe; T, quartz hammerstone.

The used flake tools from 38FL249 are rather nondescript suggesting that they were meant to be expedient and meant to serve in relatively simple tasks.

Cores

Three cores were recovered including one porphyritic rhyolite, one plain rhyolite, and one orthoquartzite core. These cores were recovered from Zone 3 Level 1, Zone 1, and Zone 2 Level 1 respectively. The main function of these artifacts was to provide lithic material for flaked stone tools. While cores could have been used for hammering or chopping, none of these exhibited evidence of such use.

Ground Stone Tools

One chopper/axe was found in Zone 2 Level 2. It was made from a large cobble of either highly weathered porphyritic rhyolite or some other igneous/metamorphic material. The chopper is wedge shaped with some possible flaking near the blade. There are also some areas of glossing on all sides of the tool which suggests that it may have been purposefully ground (Figure 40). The chopper/axe is 103.6 mm long, 75.6 mm wide, and 44.3 mm thick and weighs 593 grams.

The other item is a small fragment of a flat well made object (5.6 mm thick) with a slightly rounded beveled edge (Figure 40). Although the fragment is small, it may be a portion of a gorget. The material is light green in color with tiny phenocrysts throughout, and appears to be similar to felsic tuff. This object was found in a tree stain of Zone 3 Level 1.

Hammerstones

Two quartz hammerstones were recovered in the excavations. Both examples contained battering marks along the edges. Since there is little battering on the faces of these stone, they were probably not used as a bipolar anvil. One hammerstone was recovered in Zone 2 level 1 excavations and the second was recovered in Locus 2 excavations.

Raw Material Chunks

Five pieces of lithic raw material were recovered in excavations. They consisted of three chunks of orthoquartzite and two chunks of argillite. All but one orthoquartzite chunk were recovered in Zone 2 Level 1 excavations. The remaining piece of orthoquartzite was recovered in Zone 1.

Fire Cracked Rock

Fire cracked rock was relatively ubiquitous across 38FL249 and 765 examples were recovered in excavations. Their locations are summarized in Table 23.

Lithic Debitage

Tables 24 and 25 are summaries of the lithic debitage at Locus 1 and Locus 2. As is clear from the discussion of projectile points and other tools, a variety of lithic raw materials were used for the manufacture of the stone tools recovered from 38FL249. These materials fall into four major categories: 1) quartz; 2) metavolcanic; 3) Coastal Plain chert; and 4) orthoquartzite. There are five major raw material types found at 38FL249. These include quartz, rhyolite, tuff, argillite, and orthoquartzite. Other minor materials include Coastal Plain cherts, chalcedony, basalt, igneous/metamorphic material, and ridge and valley chert.

Table 23.
Fire Cracked Rock from 38FL249

	Surface	Excavation Units											
	Locus 2	7	8	9	10	11	12	13	14	15	16	17	18
Plowzone	35												
Z1		3	0	0	1	1	10	0	2	1	0	0	0
Z2 L1		14	0	0	14	2	22	13	7	23	278	13	47
Z2 L2		–	–	5	–	0	8	7	–	52	–	–	–
Z3 L1		131	5	11	19	8	–	–	1	–	–	–	–
Z3 L2		8	0	9	10	–	–	–	–	–	–	–	–
Z3 L3		1	–	4	–	–	–	–	–	–	–	–	–

Probably the most important aspect to consider when examining the raw materials associated with a lithic assemblage is the proximity of exploitable raw material sources to the site. Lithic raw materials were often constrained by natural or social limitations. The resulting patterns of procurement and use are widely recognized as the possible signatures of a technological, settlement, or possibly, social system (e.g. Gould 1980; Gould and Saggers 1985; Binford and Stone 1985). Anderson et al. (1982) have provided a map showing the location of various lithic sources (Figure 4). This map shows that in the vicinity of 38FL249 chert nodules may have been available and orthoquartzite outcrops could be found about 40 miles to the south. Metavolocanics (eg. tuff, rhyolite, basalt and argillite) are located about 50 miles northwest of the site. Quartz would have been found further away in the Piedmont region. Unlike the relatively ubiquitous quartz in the Piedmont, Coastal Plain raw material sources are localized, usually appearing as isolated outcrops (Blanton et al. 1985).

Horizontal and Vertical Patterning

Table 26 summarizes the frequencies of major raw materials found in Locus 1 excavations. The most commonly used material at Locus 1 was porphyritic rhyolite (N = 1889 or 33.4%), followed by plain rhyolite (N = 1231 or 21.8%), orthoquartzite (N = 1000 or 17.7%), argillite (N = 520 or 9.2%), quartz (N = 267 or 4.7%), welded vitric tuff (N = 262 or 4.6%), felsic tuff (N = 205 or 3.6%), flow banded rhyolite (N = 180 or 3.2%), and breccia tuff (N = 94 or 1.7%). Other materials include 38 chert flakes and 21 basalt flakes. Of those chert flakes 31 are categorized as Coastal Plain chert of the Allendale quarries variety. Other chert debitage includes two pieces of grayish/black Black Mingo fossiliferous chert, four pieces of tan/gray chert (or possibly chalcedony), and one piece of ridge and valley chert.

Interestingly, at Locus 2 the pattern is somewhat different with orthoquartzite (N = 82 or 20.3%) being the most used material, followed by argillite (N =74 or 18.4%), plain rhyolite (N = 73 or 18.1%), banded rhyolite (N = 56 or 13.9%), UID igneous/metamorphic (N = 46 or 11.4%), porphyritic rhyolite (N = 21 or 5.2%), basalt (N =18 or 4.5%), quartz (N =12 or 3.0%), and felsic tuff (N = 1 or 0.2%). This is most comparable to Zone 3 raw material proportions and corresponds with diagnostic lithic information indicating that Locus 2 was most heavily used during the earlier periods.

A more careful examination of the stratigraphy at 38FL249 indicates that the three zones excavated are legitimate units of study (Table 27). By dividing the zones into levels, it is clear that the bulk of lithic debitage was recovered from Zone 2 Level 1. The debitage drops off significantly in Zone 2 Level 2. Several categories of lithic raw materials slightly increase in number in Zone 3 Level 1, suggesting that it may represent an earlier living floor. Materials that increase slightly include quartz, flow banded rhyolite, and cherts. Argillite and orthoquartzite increase somewhat significantly. This "living surface" is also reflected in the concentration of fire cracked rock at the top of Zone 3 (see Table 23)

Table 24.
Major Types of Debitage Recovered from Locus 1 Excavations

	QUARTZ			RHYOLITE			TUFF			ARGILLITE			ORTHOQUARTZITE		
Provenience	PR	SC	IN	PR	SC	IN	PR	SC	IN	PR	SC	IN	PR	SC	IN
EU7, Z 1					1										2
EU 7, Z 2			1		1	48			7		1	5			2
EU 7, Z 3, L 1			6		1	81					2	49			64
EU 7, Z 3, L 2			5		5	44			3		5	24			29
EU 7, Z 3, L 3					2	11						5			2
EU 8, Z 1						11						4			1
EU 8, Z 2						1			1						
EU 8, Z 3, L 1		3	2		1	14						6			19
EU 8, Z 3, L 2			1		1	10					1	1			11
EU 9, Z 1		1				3						1			2
EU 9, Z 2, L 1						2						1			3
EU 9, Z 2, L 2		1	4	1	2	11						6			15
EU 9, Z 3, L 1	1	1	2			18						4		1	12
EU 9, Z 3, L 2	1		8		1	16					1	7			5
EU 9, Z 3, L 3			1		2	4					5	7			2
EU 10, Z 1			2			6			1						1
EU 10, Z 2		2	14	1	2	30		2	14	1	3	9			21
EU 10, Z 3, L 1		1	5	3	4	39		5		2	2	25			32
EU 10, Z 3, L 2			4			48			1		2	13			3
EU 11, Z 1						8									3
EU 11, Z 2, L 1				1	1	9									9
EU 11, Z 2, L 2	1	1	6	2	3	14						1			4
EU 11, Z 3			8		2	25				1		2			15
EU 12, Z 1				2	8	46			37						3
EU 12, Z 2, L 1			6	1	1	57			8	1	4	15			34
EU 12, Z 2, L 2			6		5	38				1	1	10			10
EU 13, Z 1			3		1	13			7			1			
EU 13, Z 2, L 1			5		5	32			6	1		8			20
EU 12, Z 2, L 2					2	27			1	1		10			16
EU 14, Z 1			1			13		3	6			1			8
EU 14, Z 2	5	14	31		4	48		3	13	1	3	12		5	116
EU 14, Z 3	2	1	6		1	9					2	2			16
EU 15, Z 1			1		1	32		1	16			2			6
EU 15, Z 2, L 1			14		28	506		6	111		3	42			80
EU 15, Z 2, L 2		2	15		4	241		1	27		2	26			52
EU 16, Z 1			8		5	63		6	45			4			6
EU 16, Z 2			11		15	1297		7	75		6	40			110
EU 17, Z 1			1		5	12			5			1			8
EU 17, Z 2			40	1	19	256		14	94		5	46			226
EU 18, Z 1					3	16			42		1	2			6
EU 18, Z 2		1	10		5	314			36		8	61			26
Totals	10	28	227	12	141	3473	0	48	556	9	56	453	0	6	860
Percentage	3.8	10.6	85.6	0.3	3.9	95.8	0.0	7.9	92.1	1.7	10.8	87.5	0.0	0.7	99.3

PR = Primary; SC = Secondary; IN = Interior

Table 25.
Major Types of Debitage Recovered from Locus 2 Excavations

	QUARTZ			RHYOLITE			TUFF			ARGILLITE			ORTHOQUARTZITE		
Provenience	PR	SC	IN	PR	SC	IN	PR	SC	IN	PR	SC	IN	PR	SC	IN
EU 1			2		1	13			1	1	2	10		2	21
EU 2	1	1		1	2	48	1		4			18			28
EU 3			3		1	21			2		1	2			7
EU 4			4		2	9	1					15			8
EU 5						5					1	1			
EU 6						1						1			
Surface			3			23			10		3	13			3
Totals	1	1	12	1	6	120	2	0	17	1	7	60	0	2	67
Percentage	7.1	7.1	85.8	0.8	4.7	94.5	10.5	0.0	89.5	1.5	10.3	88.2	0.0	2.9	97.1

PR = Primary; SC = Secondary; IN = Interior

Table 26.
Occurrences of major raw material debitage in Locus 1

	Zone 1		Zone 2		Zone 3		Total	
	#	%	#	%	#	%	#	%
Quartz	20	4.4	197	4.3	50	6.5	267	4.6
Flow Banded Rhyolite	19	4.2	135	2.9	59	7.7	213	3.7
Porphyritic Rhyolite	106	23.2	1934	42.3	125	16.3	2165	37.4
Plain Rhyolite	118	25.8	882	19.3	142	18.5	1142	19.7
Felsic Tuff	28	4.4	107	2.3	15	2.0	150	2.6
Vitric Tuff	104	22.8	135	2.9	3	0.4	242	4.2
Breccia Tuff	0	0.0	92	2.0	0	0.0	92	1.6
Argillite	18	3.9	340	7.4	162	21.1	520	9.0
Orthoquartzite	44	9.6	747	16.3	210	27.4	1001	17.3
Total	457		4569		766		5792	

Table 27 indicates several trends as well as continuities in the use of lithic raw materials. Both porphyritic and plain rhyolite are important materials throughout the site's time span. Although quartz is not well represented in any level, there is a slight decrease in its use through time. Both felsic and vitric tuffs were important during the latest period of site occupation, with a sharp and continued decrease in use at Zone 2 Level 1. Breccia Tuff is a minor constituent of Zone 2 Level 2. Argillite is most often used during the early period and is abundant throughout Zone 3. Orthoquartzite, while not the most "popular" lithic material at 38FL249, was found in respectable amounts in all levels. However, it is most abundant in Zone 3 Level 1 and Zone 3 Level 2. Cherts remain constantly low through time while basalt is most common in Zone 1.

Table 27.
Lithic Debitage by Zone and Level

Material	Z1		Z2 L1		Z2 L2		Z3 L1		Z3 L2		Z3 L3	
		%		%		%		%		%		%
Quartz	17	3.3	154	3.6	36	5.9	38	7.5	19	7.6	1	2.1
FBR	14	2.7	223	5.3	35	5.7	36	7.2	16	6.4	2	4.2
PRR	109	21.5	1767	42.0	175	28.7	75	14.9	42	16.7	5	10.6
PLR	119	23.4	720	17.1	169	27.7	88	17.5	67	26.7	8	17.0
FT	69	13.6	145	3.4	20	3.3	0	0.0	3	1.2	0	0.0
VT	100	19.7	162	3.8	9	1.5	5	1.0	1	0.4	0	0.0
BT	0	0.0	94	2.2	0	0.0	0	0.0	0	0.0	0	0.0
AG	17	3.3	282	6.7	58	9.5	97	19.3	54	21.5	17	36.2
OR	46	9.1	647	15.4	97	15.9	159	31.6	48	19.1	4	8.5
CH	3	0.6	15	0.4	3	0.5	5	1.0	1	0.4	0	0.0
BA	14	2.7	0	0.0	7	1.1	0	0.0	0	0.0	0	0.0
Total	508		4209		609		503		251		47	

FBR = flow banded rhyolite; PRR = porphyritic rhyolite; PLR = plain rhyolite; FT = felsic tuff; VT = vitric tuff; BT = breccia tuff; AG = argillite; OR = orthoquartzite; CH = cherts; BA = basalt

The general trend appears to be continued use of rhyolite, adoption of tuffs during the later period, and a decreased use of argillite and orthoquartzite. Diagnostic points also reflect this trend (Table 28). Rhyolites are used and preferred throughout time, and at the transition from Woodland to Archaic through the Archaic and into the Paleoindian period, argillite and orthoquartzites are being found as finished tools.

Table 28.
Projectile Point Raw Materials

Point Type	Quartz	FBR	PRR	PLR	AR	OR	CH	CT
Thelma				2				
Triangular Points		1	1	22				
Other Woodland Points							1	
Yadkin			1	1				1
SRS/Gypsy		2	4		1			
Guilford			2	2		1		
Morrow Mt. II	1	1	3	1				
Kirk						1	1	
Stanly	1			3	1			
St. Albans		2		1		1		
Palmer	1	1				1		
Hardaway					1			

FBR = flow banded rhyolite; PRR = porphyritic rhyolite; PLR = plain rhyolite; AR = argillite; OR = orthoquartzite; CH = chert; CT = cortical material

As was suggested from the mapping of diagnostic points shown in Figures 36 through 39, the western edge of Locus 1, adjacent to the drainage, is the focus of Woodland Period activities. Through time, site use is more dispersed. Given the changing preferences for lithic materials, interior and edge units (ie. EUs 7, 8, 9, 10 and 14) should exhibit "earlier" lithic profiles. Table 29 shows the distribution of lithic material across site. While clearly the site core is along the western site edge (EUs 15, 16, and 18), significant percentages of argillite and orthoquartzite were recovered EUs 7 and/or 10 and 14. The large quantity of fire cracked rock in Zone 3 of EUs 7, 8, 9, and 10 echo the argument for early use of interior units.

Table 29.
Percentages of lithic material across Locus 1

Unit	QU	FBR	PRR	PLR	FT	VT	BT	AG	OR
EU7	4.5	14.5	2.1	8.9	4.2	0.0	0.0	17.8	9.8
EU8	2.3	1.6	0.6	1.6	0.4	0.0	0.0	2.3	3.1
EU9	7.2	1.0	1.0	3.1	0.0	0.0	0.0	6.3	4.0
EU10	10.6	2.0	1.9	6.6	1.7	6.4	0.0	9.4	5.7
EU11	6.1	2.3	1.6	2.0	0.0	0.3	0.0	0.8	3.1
EU12	4.5	5.3	2.4	8.2	8.4	9.7	0.0	6.3	4.7
EU13	3.0	3.3	2.4	1.5	0.0	4.7	0.0	4.1	3.6
EU14	22.7	5.6	1.4	3.3	2.5	6.4	0.0	4.1	14.5
EU15	12.1	8.6	18.6	32.8	35.9	25.8	0.0	14.7	13.8
EU16	7.2	39.5	54.5	7.2	9.7	36.9	0.0	9.8	11.6
EU17	15.5	12.5	7.2	8.5	21.9	3.0	100.0	10.0	23.4
EU18	4.2	3.9	6.3	16.2	3.1	0.0	0.0	13.5	3.2

Lithic Reduction

As stated in the methodology section, sizing has been found to be useful in understanding reduction and curation of stone tools. As well, examining the stage of reduction of lithic debitage indicates the availability of the materials near the site. Quarrying behavior is likely to produce larger flakes reflecting initial reduction of stone tools, while at the other end of the spectrum, exotic materials are likely to be found as small flakes reflecting the reworking of existing tools. Flakes averaged 15 mm (size 5) with a median size of 5.

Site 38FL249 is not located near any known lithic quarry (see Figure 4), and the nearest known source of lithic material is probably fossiliferous cherts found as river cobbles in the Pee Dee and its tributaries. Interestingly, very little fossiliferous chert was recovered. Of the 38 Coastal Plain cherts only six were "fossiliferous" as opposed to Allendale or Ridge and Valley chert. As a result, some travel was necessary to obtain lithic raw materials. The vast majority of the materials were metamorphic rock from the "Carolina Slate Belt" located at least 40 miles up the Pee Dee. However, it is likely that some materials were obtained as river cobbles which had been transported down the Pee Dee River by water action from the Uwharrie Mountain region. Orthoquartzite was also a prominent material, with outcrops located along the Santee River equally as far from the site. Quartz, although primarily a Piedmont material, can be found as river cobbles even into the Coastal Plain. The examples of quartz from 38Fl249 suggest that local cobbles were worked as opposed to "terrestrial" Piedmont materials. Table 30 indicates relatively high percentages of primary and secondary quartz flakes, suggesting that they were brought to the site as cobbles.

The only materials at 38FL249 that might be considered "extralocal" are the Allendale cherts from the lower Savannah River Valley and the one example of Ridge and Valley chert located in eastern Tennessee and western Virginia. The Ridge and Valley specimen is relatively small (20 mm or size 6) and is a thinning flake. The 31 Allendale chert flakes consist of one secondary flake and 30 interior flakes. The secondary flake is a bifacial thinning flake. Of the 30 interior examples, there are 13 bifacial thinning, 15 flake fragments (one heat treated), one blade flake, and one pressure flake. The mean flake size if five (or 15 mm) and the median flake size is also five.

Tables 30 through 38 provide information on debitage types and their stage of reduction. By looking at debitage as a whole by reduction stages (Table 39) there is a relative consistency through Zones 1 through 3. Biface thinning flakes outnumber unspecialized flakes by far, as do flake fragments over shatter. However, in Zone 3 shatter increases somewhat dramatically which may be due to the use of more quartz, argillite, and orthoquartzite in the earlier period. These materials do not flake as well as rhyolites and shatter more easily.

The ratio of biface thinning flakes to unspecialized flakes is quite high throughout. The ratios are 15.5, 20.4, and 7.4 respectively. This suggests that the majority of primary lithic working activities took place elsewhere (probably at the source), and the materials came back to the site either as bifaces or finished tools. With the decrease in ratio in Zone 3, it is probable that more early stage production took place in the Archaic Period. This is supported by the higher frequency of shatter in the lower levels. It is also supported by the slightly higher percentage of primary flakes in Zone 3.

Individual raw material reduction stage analysis (Tables 30 through 37) show that materials flaked differently due to raw material characteristics. The flaking qualities of raw materials strongly affect the ratio of biface thinning and unspecialized flakes to fragment and shatter flakes. This is clearly shown in Table 40. Both rhyolites and tuffs were worked with great result, whereas quartz, argillite, and orthoquartzite shattered and fragmented much easier. It may also indicate bipolar reduction of these materials. Bipolar reduction often shears the bulb of percussion and does not exhibit a clearly distinguishable platform (Flenniken 1981). This makes bipolar flakes very difficult to recognize. They are often confused with unspecialized flakes during analysis. At 38SU83 Blanton et al. (1986:127) found that bipolar reduction was the most common way in which quartz was reduced.

Synthesis

It is appropriate here to briefly review the research goals. These goals were based primarily on the individual nature of the site and on previous research.

- to gather chronological evidence -- is there any evidence of change through the stratigraphic profile of the site?

- to examine changing use of the land through time. Do diagnostic artifacts from individual periods cluster at different site areas?

- to gather evidence for site activities -- what types of tools were used at the site and what kinds of activities does the recovered tool kit reflect?

- to examine changing preferences for raw materials and to understand how those preferences could indicate trade and reduction/procurement strategies.

The stratigraphy at 38FL249 was relatively rough, with no clear divisions for cultural periods. However, triangular points were exclusively found in the top two excavation levels (Zone 1 and Zone 2 Level 1). Hafted bifaces were found throughout the stratigraphy. This is probably a result of

Table 30.
Reduction Stages of Locus 1 Quartz Debitage

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning			4	4	23.5
Unspecialized					
Bipolar					
Blade					
Pressure					
Fragment			9	9	53.0
Shatter		1	3	4	23.5
Total		1	16	17	100.0
%		5.9	94.1	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		10	37	47	24.7
Unspecialized			1	1	0.5
Bipolar					
Blade			1	1	0.5
Pressure					
Fragment		3	98	102	53.7
Shatter	6	8	26	40	20.6
Total	6	21	163	190	100.0
%	3.2	11.0	85.8	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		1	5	6	12.0
Unspecialized			2	2	4.0
Bipolar					
Blade					
Pressure					
Fragment		5	24	25	50.0
Shatter	4		15	17	34.0
Total	4	6	46	56	100.0
%	7.1	10.7	82.2	100.0	

Table 31.
Reduction Stages of Locus 1 Flow Banded Rhyolite

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning			9	9	47.4
Unspecialized			1	1	5.3
Bipolar					
Blade					
Pressure					
Fragment			8	8	42.1
Shatter			1	1	5.3
Total			19	19	100.0
%			100.0	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		4	47	51	45.2
Unspecialized			3	3	3.0
Bipolar					
Blade			1	1	0.7
Pressure			3	3	3.0
Fragment			54	54	47.4
Shatter	1			1	0.7
Total	1	4	108	113	100.0
%	0.9	3.5	95.6	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		1	18	19	40.7
Unspecialized			2	2	3.4
Bipolar					
Blade			3	3	5.1
Pressure			2	2	3.4
Fragment			22	22	45.8
Shatter			1	1	1.6
Total		1	48	49	100.0
%		2.0	98.0	100.0	

Table 32.
Reduction Stages of Locus 1 Porphyritic Rhyolite

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning		7	38	45	47.9
Unspecialized			2	2	2.1
Bipolar					
Blade		1	2	3	3.2
Pressure					
Fragment		6	28	34	36.2
Shatter	2	2	6	10	10.6
Total	2	16	76	94	100.0
%	2.1	17.0	80.9	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		25	574	599	34.5
Unspecialized			18	18	1.0
Bipolar			10	10	0.6
Blade		5	17	22	1.3
Pressure			47	47	2.7
Fragment		23	931	954	55.0
Shatter	4	14	66	84	4.8
Total	4	67	1663	1734	100.0
%	0.2	3.9	95.9	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		5	33	38	33.9
Unspecialized			4	4	3.6
Bipolar					
Blade			1	1	0.9
Pressure			1	1	0.9
Fragment		7	44	51	45.5
Shatter	1	2	14	17	15.2
Total	1	14	97	112	100.0
%	0.9	12.5	86.6	100.0	

Table 33.
Reduction Stages of Locus 1 Plain Rhyolite

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning		2	51	53	41.1
Unspecialized			3	3	2.3
Bipolar					
Blade			4	4	3.1
Pressure			3	3	2.3
Fragment		1	58	59	45.7
Shatter		2	5	7	5.4
Total		5	124	129	100.0
%		3.9	96.1	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		11	318	329	34.3
Unspecialized			21	21	2.2
Bipolar					
Blade		1	5	6	0.6
Pressure			47	47	4.9
Fragment		12	523	535	55.8
Shatter	1	6	14	21	2.2
Total	1	30	928	959	100.0
%	0.1	3.41	96.8	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		3	35	38	25.5
Unspecialized			2	2	1.3
Bipolar					
Blade			2	2	1.3
Pressure			8	8	5.4
Fragment	2		87	89	59.7
Shatter	1	1	8	10	6.7
Total	3	4	142	149	100.0
%	2.0	2.7	95.3	100.0	

Table 34.
Reduction Stages of Locus 1 Felsic Tuff

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning		1	8	9	40.9
Unspecialized					
Bipolar					
Blade					
Pressure					
Fragment		1	12	13	579.1
Shatter					
Total		2	20	22	100.0
%		9.1	90.9	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		3	59	62	37.3
Unspecialized			4	4	2.4
Bipolar					
Blade			4	4	2.4
Pressure			4	4	2.4
Fragment		3	81	84	50.6
Shatter		4	4	8	4.8
Total		10	156	166	100.0
%		6.0	94.0	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		1	4	5	29.4
Unspecialized					
Bipolar					
Blade					
Pressure					
Fragment		1	10	11	64.7
Shatter			1	1	5.9
Total		2	15	17	100.0
%		11.8	88.2	100.0	

Table 35.
Reduction Stages of Welded Vitric Tuff

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning		3	30	33	47.1
Unspecialized			2	2	2.8
Bipolar					
Blade			2	2	2.8
Pressure			3	3	4.3
Fragment		5	20	25	35.7
Shatter	1	2	2	5	7.1
Total	1	10	59	70	100.0
%	1.4	14.3	84.3	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		8	84	92	49.5
Unspecialized			4	4	2.1
Bipolar			2	2	1.1
Blade					
Pressure			15	15	8.1
Fragment		4	64	68	36.6
Shatter			5	5	2.7
Total		12	174	186	100.0
%		6.4	93.6	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		2	2	4	66.66
Unspecialized			1	1	16.66
Bipolar					
Blade					
Pressure					
Fragment					
Shatter		1		1	16.66
Total		3	3	6	100.0
%		50.0	50.0	100.0	

Table 36.
Reduction Stages of Locus 1 Argillite

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning			1	1	5.9
Unspecialized					
Bipolar					
Blade					
Pressure			1	1	5.9
Fragment			11	11	64.7
Shatter		1	3	4	28.5
Total		1	16	17	100.0
%		5.9	94.1	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning	1	4	89	94	27.8
Unspecialized			2	2	0.6
Bipolar					
Blade					
Pressure					
Fragment	2	10	180	192	56.8
Shatter	3	22	25	50	14.8
Total	6	36	296	338	100.0
%	1.8	10.6	87.6	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		6	35	41	25.0
Unspecialized			7	7	4.3
Bipolar					
Blade			2	2	1.2
Pressure			4	4	2.4
Fragment		8	73	81	49.4
Shatter	3	2	24	29	17.7
Total	3	16	145	164	100.0
%	1.8	9.8	88.4	100.0	

Table 37.
Reduction Stages of Locus 1 Orthoquartzite

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning			16	16	34.8
Unspecialized			3	3	6.5
Bipolar					
Blade			1	1	2.2
Pressure					
Fragment			18	18	39.1
Shatter			8	8	17.4
Total			46	46	100.0
%			100.0	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning			196	196	26.2
Unspecialized			14	14	1.9
Bipolar					
Blade			3	3	0.4
Pressure					
Fragment			382	382	51.3
Shatter		5	144	149	20.0
Total		5	739	744	100.0
%		0.7	99.3	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning			40	40	19.0
Unspecialized			5	5	2.4
Bipolar					
Blade					
Pressure			1	1	0.5
Fragment			51	51	24.3
Shatter		1	112	113	53.8
Total		1	209	210	100.0
%		0.5	99.5	100.0	

Table 38.
Reduction Stages of Locus 1 Breccia Tuff

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning		4	48	52	55.3
Unspecialized			4	4	4.2
Bipolar					
Blade					
Pressure					
Fragment		3	31	34	36.2
Shatter		3	1	4	4.3
Total		10	84	94	100.0
%		10.6	89.4	100.0	

digging pits which would move earlier artifacts up, particularly in the area near the spring where Middle and Late Woodland activities concentrate. Although any features that may have existed have been leached out, it is clear that digging activities along the spring affected the distribution of artifacts, bringing many of the Archaic Period diagnostic artifacts to the upper two levels. Archaic Period diagnostic artifacts located away from the disturbed spring area are found below these upper two levels, suggesting that they are "in situ" (Figure 41). At the Doerschuk site, Coe (1964:26) found the same phenomenon. Later stratification was obscured by pits into lower levels which brought earlier materials to the surface. He stated that:

> [t]he belief that intrusions tend to average out and that distribution measured by the rule is alone sufficient has led to some interesting, if questionable, interpretations in southeastern archaeology (Coe 1964:26)[25].

Based on the stratigraphic frequencies of the various lithic raw materials, rhyolites were the preferred material throughout time. However, Archaic Period people were using much larger amounts of argillite and orthoquartzite than Woodland Period people. This is reflected in the raw materials of Archaic Period projectile points.

The raw materials present at 38FL249 indicate that locally available cherts were rarely used. Rather, non-local raw materials were highly preferred, possibly because of the variety of material available within a 50 mile radius of the site. These materials could have been obtained during their seasonal rounds which extended inland, at least to the Fall Line, and south to the where orthoquartzite outcrops on the Black River. Extra-local raw materials, including Allendale chert and Ridge and Valley chert were gathered on rare, or possibly one time, occasions. This material could also have been

[25] Coe cites the similar observations by Phillips et al. (1951:291) from their work at a large number of sites in the Lower Mississippi alluvial valley, probably intending the reader to pay particular attention to their caution that mixing is particularly troublesome in "questions having to do with continuity or discontinuity of deposits."

Table 39.
Reduction Stages for Locus 1 Overall

Zone 1

	Primary	Secondary	Interior	Total	%
Biface Thinning		13	157	170	39.6
Unspecialized			11	11	2.6
Bipolar					
Blade		1	10	11	2.6
Pressure			7	7	1.6
Fragment		7	174	181	42.2
Shatter	3	8	38	49	11.4
Total	3	29	397	429	100.0
%	0.7	6.7	92.5	100.0	

Zone 2

	Primary	Secondary	Interior	Total	%
Biface Thinning	1	69	1452	1522	33.5
Unspecialized			71	71	1.6
Bipolar			16	16	0.3
Blade		6	29	35	0.8
Pressure			116	116	2.6
Fragment	2	54	2364	2420	53.3
Shatter	15	61	285	361	7.9
Total	18	190	4333	4541	100.0
%	0.4	4.2	95.4	100.0	

Zone 3

	Primary	Secondary	Interior	Total	%
Biface Thinning		19	172	191	25.1
Unspecialized			23	23	3.1
Bipolar					
Blade			8	8	1.0
Pressure			16	16	2.1
Fragment	2	21	311	334	43.8
Shatter	9	6	175	190	24.9
Total	11	46	705	762	100.0
%	1.4	6.0	92.5	100.0	

Table 40.
Ratio of Bifacial Thinning and Unspecialized Flakes to
Flake Fragments and Shatter

Quartz	1:3.3
Rhyolites	1:1.5
Tuffs	1:1.1
Argillite	1:3.9
Orthoquartzite	1:2.6

obtained if, for instance, they encountered a group whose seasonal rounds overlapped with theirs and who obtained Allendale chert regularly.

Woodland Period projectile points are concentrated near the spring whereas Archaic Period projectile points are more diffusely scattered, indicating that areas further away from the spring will reflect an earlier lithic profile. Percentages of raw material by excavation unit reveal that while argillite and orthoquartzite are abundant near the spring, EU 7 also contained a large amount of these materials. This area may indicate a small Archaic Period campsite as is suggested by a relatively large quantity of firecracked rock in Zone 3.

The quantity of materials stratigraphically and across the site suggest that the most intensive use of the land was by Woodland Period people in the area of the spring. It is likely that it served as seasonally permanent settlement during this period. During the Archaic Period, the area probably served as a camp which was revisited by a number of different groups. This would explain the diffuseness of Archaic materials.

Because of disturbances the site received during the Woodland Period it is somewhat difficult to securely discuss tool assemblages for Woodland and Archaic people. It is most likely that tools found at Locus 2, or in lower level and in units away from the spring in Locus 1, reflect the types of implements used by Archaic Period people. These include one rhyolite biface, two rhyolite scrapers, four used flakes, one ground stone axe, one ground stone unidentified object, and one quartz hammerstone. This suggests a number of activities including the probable reduction of bifaces into finished stone tools, a number of simple tasks needing expedient tools, chopping, and scraping hides. It is possible that other tools found close to the spring in upper zone also date to the Archaic Period. These additional tools include hafted knives and gravers.

The upper two levels contained 14 bifaces which suggest that less early stage lithic reduction took place in the Woodland Period than in the Archaic Period. In addition to activities represented in the Archaic Period, gravers suggest that bone and or wood was being worked. The hafted knives would probably have been used primarily for cutting meats or sawing small pieces of wood or bone.

Lithic assemblages from other prehistoric sites indicate that when located immediately adjacent to a quarry or an outcrop of material, it was the major contributor to the lithic assemblage (e.g. Anderson et al. 1979; House and Wogaman 1978). The Cal Smoak site (38BM4) and 38SU83 are both located in environmental settings similar to 38FL249. The closest lithic materials varied, however, but in both cases it is the major contributor to the assemblage. Allendale Chert, found within 30 miles of the Cal Smoak site, accounted for roughly 95% of the total assemblage (Anderson et al. 1979). At 38SU83, located roughly 30 miles from the Fall Line, quartz was the major lithic contributor accounting for 81.7% of the debitage. Interestingly, metavolcanics accounted for very little of the collection. However, Blanton et al. (1986) explain that egg-size quartz pebbles were available at the spring head at the center of the site. While fossiliferous cherts are believed to have outcropped in the

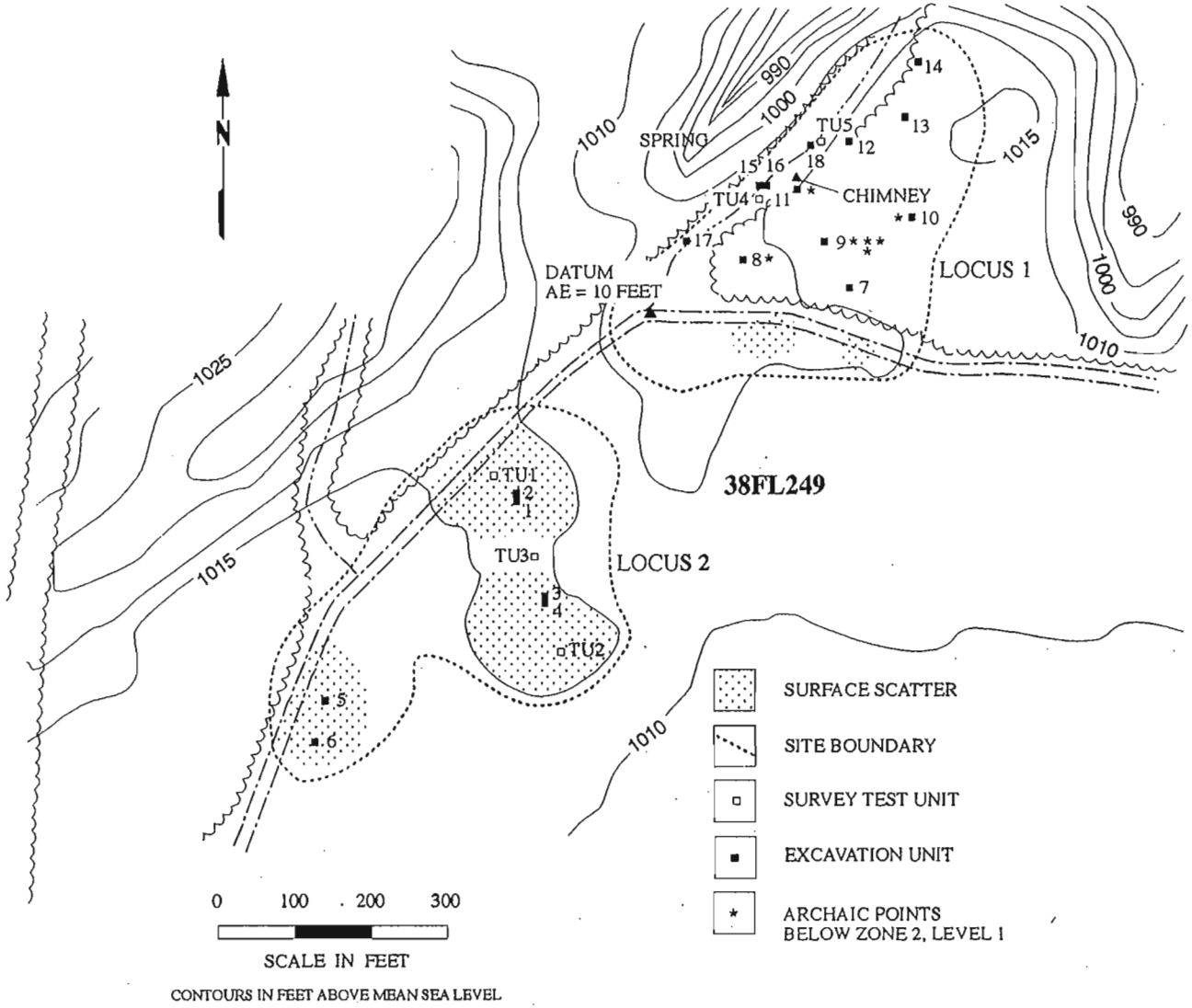

Figure 41. Location of Archaic Period points below Zone 2 Level 1.

vicinity of 38FL249 (Mr. Tommy Charles, personal communication 1993), it may have not existed in large enough quantities to provide for the inhabitants or may have been difficult to obtain, requiring more work than the group was willing to do. Apparently, no large amounts of immediately available material existed at 38FL249.

The analysis of lithic artifact from 38FL249 indicated that no major early stage lithic reduction took place at the site. Most of the lithic materials probably came to the site in the form of bifaces or preforms. Distributional patterns indicate that Archaic Period occupation was diffuse and probably consisted of small groups of different people occasionally camping at the site. Woodland Period activities were concentrated near the spring and probably functioned as a seasonally permanent settlement.

Radiocarbon Dating

One radiocarbon date was obtained from 38FL249. A sample of the hickory nutshell collected from waterscreening EU 16, Zone 2, Level 1 was submitted to Beta Analytic, Inc. The resulting uncorrected date is 1,450 ± 70 years B.P.: A.D. 500 (Beta-68894). The ceramic materials associated with this provenience include near equal amounts of Badin/Cape Fear and Yadkin, with a notable amount of Wilmington.

This date would place the occupation at the interface between Anderson et al.'s (1982:250) Deptford III and McClellanville Phases, spanning the Middle and Late Woodland periods. Toward the end of the Deptford III Phase the various Deptford wares began to drop out. In the following McClellanville Phase Wilmington, Yadkin, and Cape Fear wares dominate --resulting in an assemblage almost identical to that found in the investigations found at 38FL249. This dating, therefore, adds additional credence to the cultural sequence established by the Mattassee Lake research and suggests that should be extended further into the Upper Coastal Plain, at least on a provisional basis.

Subsistence

The investigations at 38FL249 produced three direct lines for subsistence reconstruction -- faunal materials, ethnobotanical remains, and shellfish remains. In addition, the pottery and lithics offer indirect evidence for subsistence techniques and strategies. Each will be discussed in this section.

Ethnobotanical Remains

Ethnobotanical remains were recovered from four units (Units 15-18) and seven proveniences. Table 41 lists these proveniences and the remains identified in this study. In each sample wood charcoal is dominant, representing between 100% and 55.3% of the total recovered materials from each provenience. Since these are hand picked samples this will not be surprising to many researchers; however, since several of these samples were collected from waterscreening the potential for the recovery of other materials was enhanced. No flotation was undertaken since there were no features encountered which were evaluated as likely producers of floral material.

Samples of wood charcoal (typically 10 pieces where sufficient materials existed) were identified. In EU 15, Zone 2, Level 1 and EU 17, Zone 2, Level 1 all examined fragments were pine (*Pinus* spp.). The single fragment from EU 15, Zone 2, Level 2, troweling was maple (*Acer* sp.). EU 16, Zone 2, Level 1 was evenly divided between pine and oak (*Quercus* sp.). While at first glance the

Table 41.
Weight (in g) of Ethnobotanical Remains Recovered from 38FL249

Provenience	Wood Charcoal	Hickory Nutshell	Walnut Nutshell	Acorn
EU 15, Z. 2, L. 1	54.79	16.85		
EU 15, Z. 2, L. 1, trow.	2.61	0.23		0.17
EU 15, Z. 2, L. 2	15.45	12.48		
EU 15, Z. 2, L. 2, trow.	0.08			
EU 16, Z. 2, L. 1	196.54	18.86	0.31	
EU 17, Z. 2, L. 1	4.37	1.62		
EU 18, Z. 2, L. 1	32.94	6.12		

assemblage appears to be dominated by pine (and technically it is), this does not necessarily translate into an environmental reconstruction with a similar configuration. Assuming that the bulk of this wood charcoal represents fuel wood there are many factors which may bias the collection, including access, ease of collection, and need.[26] Pine, for example, is a better self-pruner than either maple or oak, resulting in more pine being more easily accessible to Native American foragers. In addition, pine is an easier wood to light than either maple or oak, although it does not produce quite as hot a fire. Likewise, pine being a soft wood, it would be easier to cut down (if that was the approach being taken) than either maple or oak. All three woods are commonly available today, although they do tend to occur in slightly different environmental zones. The pine dominates second growth and disturbed areas, the oak tends to be found on the more xeric sand ridges, and the maple is often found on the lower side slopes toward the Pee Dee swamp.

Perhaps of more interest are the three species of hard mast remains: hickory (*Carya* spp.), walnut (*Juglans* sp.), and oak (*Quercus* spp.). Hickory, the most common with a ubiquity index[27] of 85.7%, is found as nutshells. Walnut, much less common with a ubiquity of 14.3%, is also found as nutshells. A single oak acorn is also present, although it may represent an accidental inclusion in the archaeological record. Of course, the apparent ratio of these resources is skewed by the collection techniques which would select for the denser, less fragile hickory and walnut shells over the less dense and more fragile acorn. While these data offer little toward the resolution of the debate over acorn/hickory use during the Woodland (see Caddell 1982; Moore 1984; Yarnell and Black n.d.), they do clearly suggest that walnut was much less used than at least hickory. Gardner (1984:5) provides a reasonable explanation when he points out that walnut trees, unlike either hickories or oaks, do not occur in stands. Consequently, walnut gathering would be labor intensive and more likely to occur in the course of other activities.

The use of both the hickory and acorn as, minimally, a supplemental food source by various Carolina Indian groups is well documented (Lefler 1967:34-35, 99, 105; Waddell 1980:39-40, 53).

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[26] One reviewer has suggested that the charcoal present is more likely reflective of agricultural and/or silvicultural activities than cultural selection. We reject this interpretation based on the stratigraphic location of the charcoal, its close association with hickory nutshell, and the lack of fire evidence on other artifacts, such as the lithics (which are susceptible to fire cracking).

[27] Species ubiquity is simply the percentage of proveniences in which a particular species is present. It provides information on how widespread a species is within the archaeological record and offers a convenient approach to inter-site comparisons.

Hickories and oaks would have been common in the Florence vicinity, although as Moore (1984) suggests, clearing and second growth succession would tend to limit hickory and encourage oak. The extent to which Native American groups would have destroyed, or attempted to preserve, what appears to be a significant food resource is not known. Hickories tend to produce an abundant crop every one to five years, usually with light crops in the intervening years (Fowells 1965; Schopmeyer 1974). Oak trees will produce a good crop every one to 10 years, with the yield also highly variable (200 to 2000 acorns per tree) (Fowells 1965). The presence of these nut resources indicates that the site was occupied in the fall as the fruits ripen and fall from the trees. These resources, however, may be stored for later use. Thomas Ashe noted that:

> the Wild Wallnut or Hiquery-Tree, gives the Indians by boyling its Kernal, a wholesome Oyl. . . . Whilst new it has a pleasant Taste; but after six months, it decays and grows acid (quoted in Waddell 1980:53).

Several researchers have described the complementary nutritional nature of hickories and acorns (Asch et al. 1972; Caddell 1982:34) and it is probably unnecessary to repeat these discussions (especially for evidence which consists of only one acorn). Hickories and walnuts are similar in their nutritional composition and present a distinct nutritional profile when compared to acorns. Hickories and walnuts have a higher caloric yield than acorns, which are more similar to corn. While the acorns have relatively high quantities of carbohydrates, they are low in protein and fats. Hickories and walnuts are high and protein and fat, but low in carbohydrates.

Faunal Remains

Sixteen proveniences have yielded small assemblages of faunal materials. As previously discussed, many (although not all) of these remains were calcined and this burning was a factor in their preservation. The collection, through the effects of acidic soils, rapid leaching, and depositional factors (such as those which resulted in so many fragments being burned), likely represents only a small proportion of the faunal materials originally present during the time of occupation. Consequently, like the ethnobotanical materials, it is impossible to provide more than a glimpse of the original subsistence system.

Table 42 lists the faunal materials recovered from the site by provenience. We have chosen not to incorporate either allometric biomass data or minimum number of individuals given the dispersion of the collection units, the highly fragmentary nature of the collection, and the limited recovery opportunities. The table does, however, indicate bone counts and weights which is an appropriate level of documentation for the materials present. In fact, this may be more documentation than is often offered for assemblages of this sort. We feel that this is a minimal level of information necessary to offer general comments concerning the subsistence pattern observed.

Mammal remains dominate the collection, at least partially because their larger and denser bones are more likely to survive than the bones of fish, reptiles, amphibians, or birds. In spite of this, small quantities of snake, turtle, and bird remains are present. The materials identified cluster in the units closest to the spring head, although small quantities are found throughout the site. Likewise, materials are found throughout the stratigraphic profile, although Zone 2, Level 1 deposits appear to represent the depositional "core."

Although the collection fails to offer very refined seasonal activities, the collection from EU 16, Zone 2, Level 1 did include 2 fragments (3.95 g) of deer antler. It is unlikely that this would have been picked up as shed antler (shed antlers being quickly consumed by rodents). Instead, this is taken as evidence of deer killed between September (when the velvet antlers harden) and March (when the

Table 42.
Faunal Materials Recovered from 38FL249

	Mammal		Snake		Turtle		Bird		UID	
Provenience	#	wt.	#	wt.	#	wt.	#	wt.	#	wt.
EU 7, Z. 2									1	0.53
EU 10, Z. 2	13	8.21							18	4.47
EU 10, Z. 3, L. 1									5	2.71
EU 10, Z. 3, L. 2									4	0.84
EU 12, Z. 1									1	0.42
EU 12, Z. 2, L. 1	11	5.04								
EU 13, Z. 1	1	0.52	1	0.29						
EU 13, Z. 2, L. 1	2	2.28							2	0.21
EU 15, Z. 1	1	0.51								
EU 15, Z. 2, L. 1	38	21.25			2	0.40	3	0.60	149	27.49
EU 15, Z. 2, L. 2	18	6.81							55	8.15
EU 15, Z. 2, L. 2, trow	1	0.61							3	0.55
EU 16, Z. 1	3	1.62							3	1.02
EU 16, Z. 2, L. 1	62	28.86			13	3.49	3	0.25	232	30.28
EU 17, Z. 2, L. 1	20	11.24			1	0.16	1	0.27	23	3.99
EU 18, Z. 2, L. 1	13	5.99							49	9.57
Totals	183	92.94	1	0.29	16	4.05	7	1.12	545	90.23

weight in grams

antlers are shed). All of the resources identified would have been locally available and would have been attracted to the near site area by the water source.

Of all the mammals found archaeologically the white-tailed deer is virtually ubiquitous; Shelford (1963:28) supports this characterization by stating, "whitetailed deer was originally a dominant or major influence because of its abundance" and archaeologists fall back on deer as a primary subsistence resource. In fact Smith (1974:37-39) presents evidence that, at least theoretically, the Archaic and Early Woodland populations could have achieved almost the same densities as later agriculturists, just through minimum exploitation of deer[28]. At least some other mammals, especially the nocturnal and solitary species such as opossum and raccoon, were likely captured using traps, representing an almost opportunistic strategy.

Reptiles, such as turtles and snakes, were probably not a significant food source, but likely represent chance encounters while in the process of other activities (see Larson 1969:203). The turtles commonly hibernate by burying themselves in the ground, under leaves, or in mud, from December through February, and are most common from March through May. They are therefore weak indicators of a spring, summer, or fall collection. Many birds may be represented by the few bone elements identified from this research. While turkey is a reasonable guess, it is just that -- a guess. The remains, based on gross morphological characteristics, may also represent migratory birds attracted to the Pee Dee swamp area because of its water resources[29]. Regardless, they occur in such

[28] It is estimated that Robeson County, North Carolina, in a similar ecological setting as Florence County, contains over 410,000 deer (U.S. Department of Agriculture 1980:Table 1).

[29] These include wood ducks, mallards, and black ducks, although wood ducks are most common, being found along small creeks and large rivers, ponds, lakes, marshes, and swamps.

low frequencies that it is likely that they too represent opportunisticly collected resources.

Shellfish

Two proveniences produced very small quantities of shellfish remains. EU 9, Zone 3, Level 3 yielded a fragment (3.55 g) of fossilized oyster not related to the Native American occupation at the site. EU 16, Zone 2, Level 1, however, produced 0.47 g (5 fragments) of what appears to be freshwater mussel based on macroscopic examination (the presence of a thin, very friable, powdery shell; a pearly and iridescent interior; and having a lamellar appearance). Factors limiting the occurrence and distribution of freshwater shellfish include current velocity, water temperature (including seasonal differences), substrate type (including vegetation and degree of siltation), drought and flood potential, food sources, shade, interspecific competition, and zoogeography.

We have been unable to immediately identify research pointing the past distribution of shellfish resources in the Pee Dee. It is therefore unwise to speculate on the local versus extralocal nature of this material, or whether the debris represents food remains or specialized resources such as blanks for bead manufacture. Claassen (1986) reports that freshwater shellfish in the Southeast were most often collected in the fall, but not the winter -- providing a weak seasonal indicator. The importance of the finding is that it demonstrates the existence of the materials and their recoverability using generally accepted archaeological techniques.

Archaeological Remains

The pottery itself offers some clues to the subsistence base of the occupants at 38FL240. Like studies at other sites, we were unable to identify any carbonized residue on either the interior or exterior of the sherds (large or small) examined, in spite of both cautious excavation and cleaning strategies. Given the generally insoluble nature of most carbonized residues, it seems likely that they simply did not exist at this site -- suggesting that the identified vessels were used for a purpose other than cooking[30]. Other researchers (see Blanton et al. 1986) have suggested that the pottery was used for storage. The only item identified in this collection which conceivably might be stored in pots are the hard masts recovered as carbonized shell.

Likewise, the projectile points, both in finished form and breakage patterns, offer evidence that hunting was a routine activity at 38FL240. The abundance of materials characterized as "personal gear," including finished bifaces and other formal tools, especially when contrasted with "situational gear," such as informal flake tools, and "site furniture," such as nutting stones, also suggests a specialized assemblage developed primarily for faunal exploitation. The abundance of lithic materials from 50 to 75 miles of the site suggests a relatively small range for normal activities (although clearly unusual, unanticipated, or unrecognized events might have taken the group out of this normal round).

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[30] This of course assumes that use of the vessels for cooking over an open fire would result in deposition of carbonized soot. For example, a very hot fire would be less likely to cause sooting than a less hot fire, although such a hot fire would also be more likely to cause secondary oxidation of pottery vessels -- a feature not observed in any significant proportion of the collection. In addition, the abundance of pine thought to have been used for cooking fires would encourage the build-up of resins and soot on the pottery. Consequently, while this argument does require some acceptance of untested (and perhaps untestable) ideas, it is based on a *convergence* of evidence.

Summary

The evidence gathered at 38FL240 is suggested of a relatively diffuse subsistence economy. The lithics and faunal remains suggest exploitation of (at least) mammals, reptiles, and birds, with a strong orientation to mammals, perhaps deer. The ethnobotanical remains indicate the potential for gathering at least hickory and walnut, while the evidence for the use of acorn is equivocal. Some researchers have suggested that the presence of large vessels documents storage of food materials, such as nuts. It is possible that the occupants also collected freshwater shellfish from the nearby rivers, opening up the possibility that fish were also being exploited (but not surviving the harsh soil conditions of the site). All of these resources would likely have been concentrated within a few miles of the site.

Seasonality inferences based on the identified subsistence remains are not exceptionally strong. The deer antler and bird remains are suggestive of a fall occupation. The presence of turtles and snakes suggests a spring, summer, or fall collection. Likewise, the hard masts would have been available in the fall, but could have been stored allowing occupation into the winter. The shellfish may indicate collection in the fall. The reader will certainly have noticed the liberal use of "suggests." Unfortunately, none of the species found *preclude* a warm season occupation or rule out a year-round occupation.

Taken at face value, however, there is evidence to place the site in a framework of seasonal mobility focusing on changing settlement and subsistence patterns often described as an aggregation and dispersal pattern (see Hanson et al. 1981; Sassaman 1983). Such models usually predict social aggregation and seasonal household dispersion. Sites such as 38FL249 would be characterized as representing dispersion into smaller, perhaps family, groups during the fall and winter. The sites would be used for deer hunting and nut gathering, perhaps with the storage of the latter for use later in the season. This model is certainly an appropriate explanation for the survey data generated by studies at localities such as White's Creek (Ward 1978), although it leaves unresolved the location of social aggregation. It is likely, however, that more thorough analysis of Lower Coastal Plain settlements will reveal these aggregations.

HISTORIC ARCHAEOLOGY AT 38FL240

Archaeology, Stratigraphy and Features

The archaeology at 38FL240 was directed toward the exploration of three structures, numbered 1 through 3 from the northwest to the southeast (Figure 42). The section on Excavations in **Research Strategy and Methods** provides additional information on the grids and general excavation techniques. This discussion will be limited to a general discussion of the horizontal and vertical stratigraphy, and the archaeological and architectural features encountered during Chicora's investigations.

The excavations found fairly uniform natural stratigraphic zones were present throughout the site area. Zone 1 consisted of a dark brown (7.5YR3/2) loamy sand. In some areas of the site, the brown loamy sand graded into a slightly lighter brown (7.5YR4/4) loamy sand. In these instances they were divided into Zones 1A and 1B. Zone 1 varied in depth from about 0.4 to 1.1 feet and overlaid a brownish yellow (10YR6/6) subsoil. Excavations at all three structures indicated that portions of the ridge which the site occupies were once under cultivation, apparently before the houses were constructed, suggestive of an earlier antebellum period of cultivation prior to the establishment of the slave settlement.

Structure 1

Excavations at Structure 1 consist of two 10 by 10 foot units, four 5 by 10 foot units, and six 5 by 5 foot units, totalling 550 square feet. Above ground remains consisted of a double chimney with hearths opening roughly east and west. Four units (100R100, 105R105, 115R100, and 115R110; totalling 300 square feet) were excavated within the vicinity of the structure and uncovered three foundation piers (Features 1-3) each constructed of machine made brick measuring approximately 8 by 3½ by 2-3/16 inches and mortared using a portland cement. These piers serve to outline the east bay of the structure, which measures about 15 feet in width and 14 feet in length. The west bay is probably a mirror image. In addition to the piers, two post holes, each measuring 1.0 to 1.5 feet in diameter and 0.6 to 0.7 foot in depth, were identified on the north elevation, about four feet out from the wall. These most likely represent remnant log piers for a north facing porch (Figure 43).

Zone 1A artifacts appear to be more recent than Zone 1B artifacts. Whereas wire nails predominate Zone 1A, Zone 1B was typically found to contain more machine cut nails. This distinction may reflect the transition from slave settlement in the late antebellum to tenant site in the late nineteenth and early twentieth centuries.

Yard excavations (which incorporated eight units totalling 250 square feet -- 20R105, 50R105, 85R105, 110R120, 120R120, 105R130, 115R130, and 120R145) indicated that the east side contained relatively dense remains which became much sparser about 30 feet away from the house. Remains were also dense south of the house, down slope. While this may be due to erosion, the Zone 1 soils were not appreciably deeper. Based on historic maps, another row of structures was located closer to the plowed fields, and the remains from 20R105 may be associated with those other, possibly earlier, houses.

Unit 50R105 was excavated within the road separating the northern row of houses (to which

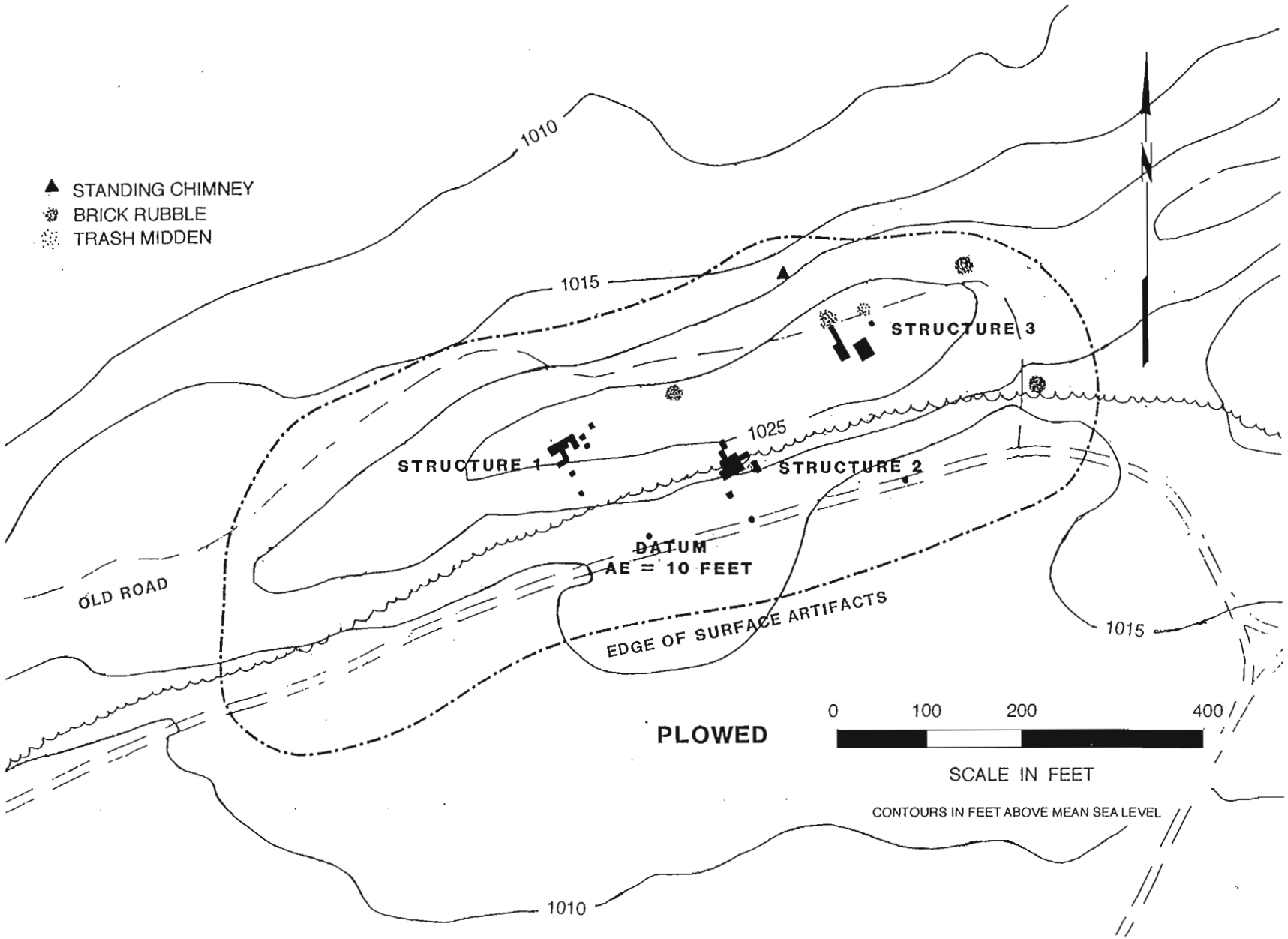

Figure 42. 38FL240, showing location of Structures 1-3.

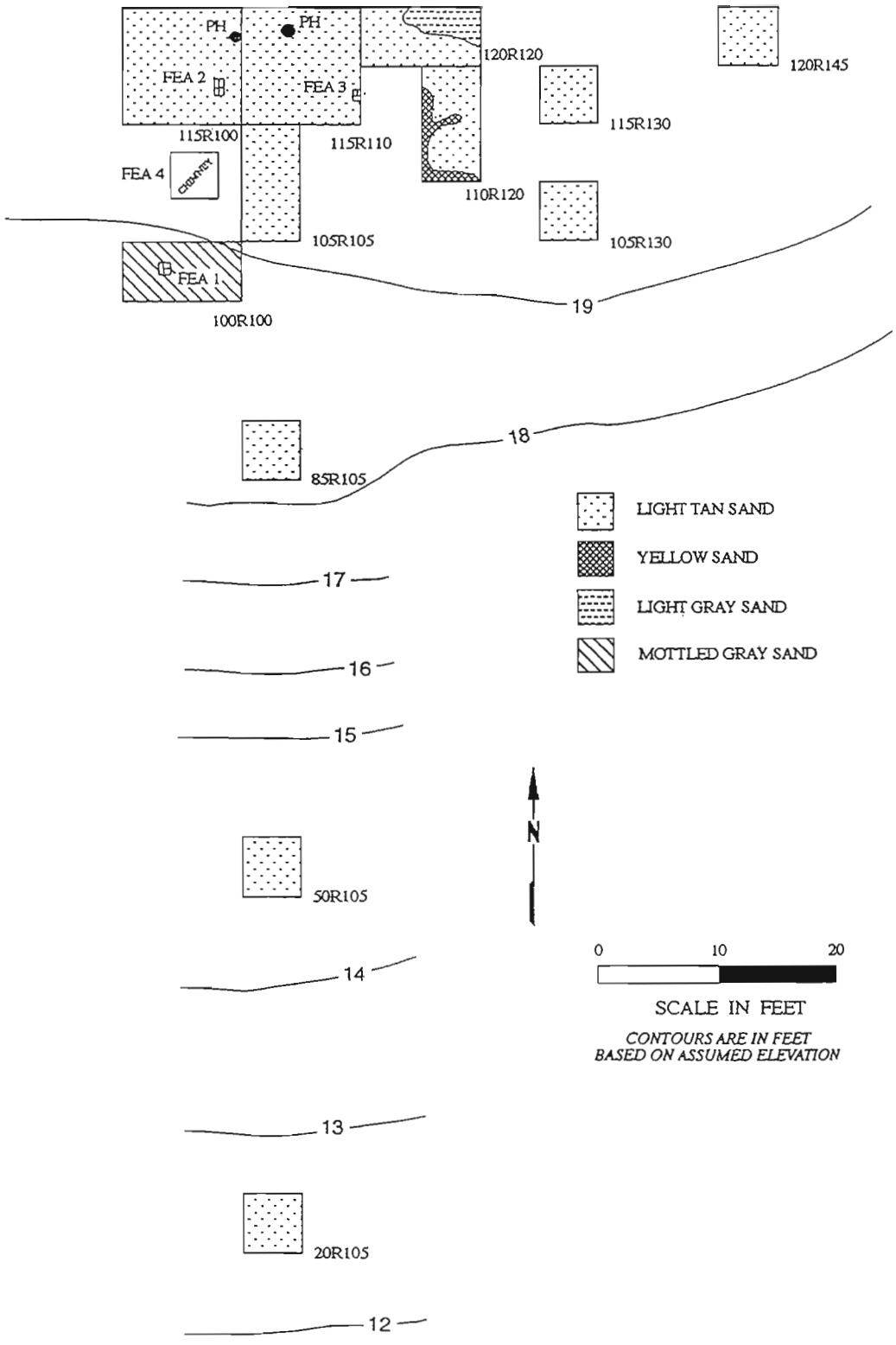

Figure 43. Plan view of Structure 1 excavations.

Figure 44. View of excavations at Structure 1.

Structure 1 belongs) and the southern row (to which Structure 2 belongs). Today this road is barely visible, having almost completely grown up in pine and undergrowth. It is most clearly recognized as a level, almost terraced area, on the side slope of the sand ridge. Apparently the northern structures were built on top of the ridge, while the southern row was constructed at the base of the ridge, just north of the area today under cultivation. The unit produced both a Zone 1A and 1B, with Zone 1A evidencing more recent deposits. Zone 1B appears to be the original road surface and artifacts, while earlier, are also more fragmented, suggestive of damage by traffic.

Structure 2

Structure 2 excavations consist of four 10 by 10 foot units, four 5 by 10 foot units, and two 5 by 5 foot units, totalling 650 square feet (Figure 45) . No above ground remains exist, although a firebox was located through shovel testing during the initial survey and a 5 by 10 foot test unit had been placed to expose a portion of the feature (see Trinkley and Adams 1992). The chimney base measures 4.2 feet north-south along the back wall, with the east-west arms extending 4 feet (Figure 46). The opening measured 2.6 feet in width and 2.8 feet in depth. The bricks, in contrast to those of Structure 1, are hand made, very soft and friable, and measure $8\frac{1}{4}$ by $4\frac{1}{4}$ by 3 inches.

Data recovery excavations concentrated on determining the size of the structure, its construction date, and the location of yard trash or associated middens. Five units are interpreted to represent "structural" excavations -- 200R190-210, 210R200-210 and six (totalling 250 square feet) were placed in various yard areas. These excavations discovered that Structure 2 represents a single pen house with the firebox opening to the east. A foundation pier was located south of the firebox in 200R190, suggesting that the structure was about eight feet wide. No matching pier was found to

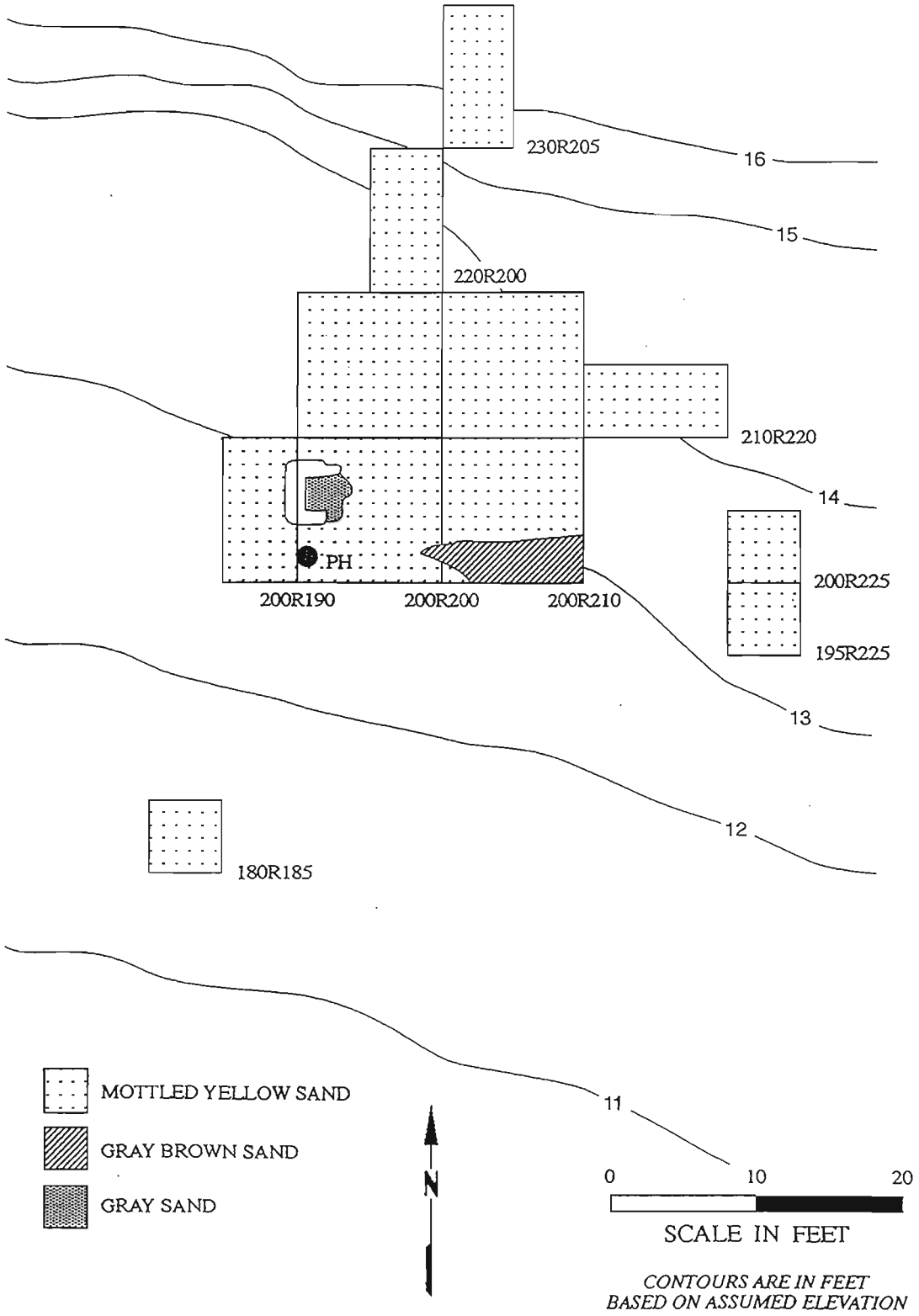

Figure 45. Plan view of Structure 2.

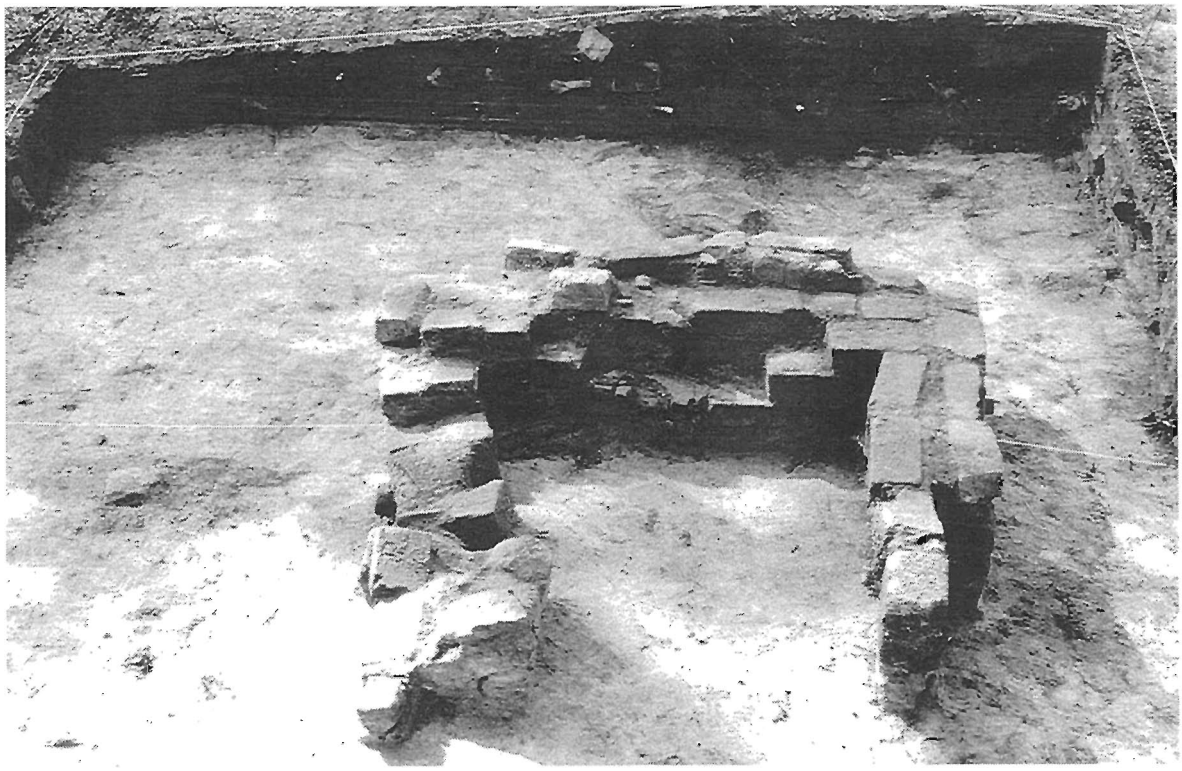

Figure 46. View of the fireplace base at Structure 2.

the north and no piers could be identified to the east. Based on the one pier remain found, as well as the piers found at other structures, it appears that all were shallowly placed. In the east yard area of the structure a large "feature" was located containing brown sand. Upon excavation it was discovered that the feature gradually slopes up to the north. It appears to represent a sharp drop that gradually was filled or leveled by erosion from uphill. A similar erosional area was identified immediately south of the house which appears to have been originally associated with the drip line of the gable roof. The erosional area was largely filled with yard soils which brought with them sheet midden refuse, although there is no evidence that the area was intentionally used for trash deposits.

Structure 3

Excavations at Structure 3 consisted of four 10 by 10 foot units, four 5 by 10 foot units, and two 5 by 5 foot units, totalling 650 square feet. Above ground remains consist of a chimney firebox and chimney fall, brick piers, foundation beams, and framing (Figures 47 and 48). This above ground information revealed that the house was a double pen central chimney structure measuring 24 feet east-west by 12 feet north-south with a porch on the south side measuring about seven feet deep and a lean-to addition on the north measuring about eight feet deep. All of the structural timbers are sawn and wire nails were abundant in the wood beams. While brick piers were most common, the structure's southeastern corner was supported by a pine post or log, measuring about 2 feet in diameter. Although the exterior soft wood was rotted, the heart wood was still sound. Roofing material was corrugated tin.

A trash dump was noted about 30 feet northwest of the structure across an old road bed. This

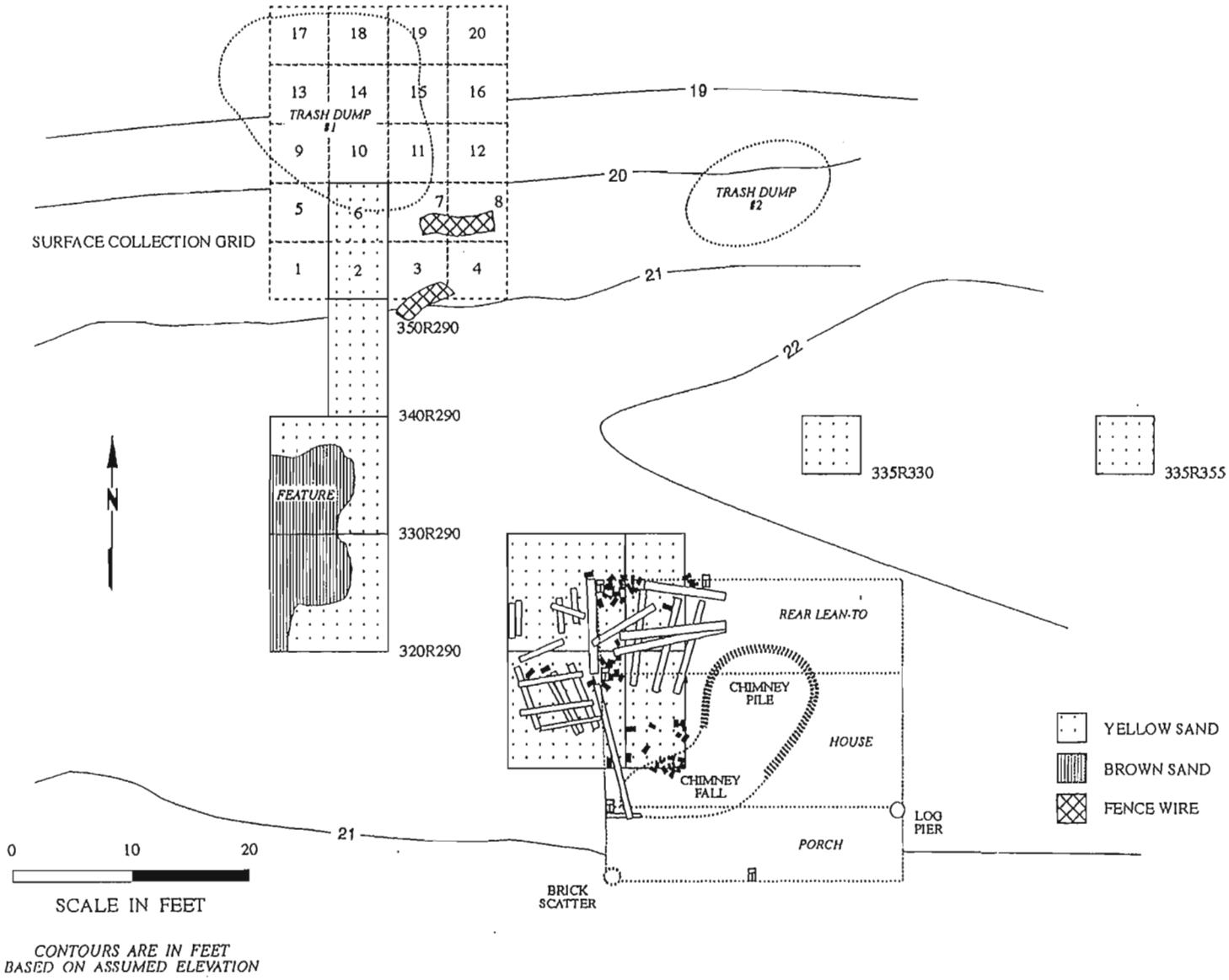

Figure 47. Plan view of excavations at Structure 3.

Figure 48. Exposing Structure 3 prior to excavation.

dump was surface collected in five foot units in a 20 foot by 25 foot area with remains noted and discarded. A portion of this dump was examined through the excavation of a 5 by 10 foot unit, 350R290. A second, smaller dump was identified about 40 feet north of the structure, also on the far side of the road, but was not further examined. Table 43 lists the materials recovered from the surface collection of the dump area.

Since many structural details were available above ground, only 100 square feet (units 310-320R315) were excavated underneath the house. The additional 550 square feet (representing eight units -- 320-350R290, 310-320R310, 335R330, 335R355) were placed in various yard areas, including the area of the trash dump as previously mentioned (to compare above and below ground artifact density, diversity, and preservation).

One feature was located in these units. The portion exposed measured 8.5 feet east-west by 18 feet north-south, was rectangular in shape and had a maximum depth of 0.7 feet. The north half of the feature was excavated (Figures 49 and 50) revealing an artifact and soil content similar to Zone 1 excavations except that the soils were somewhat swirled. The base of the feature undulated considerably. Based on the rectangular shape and the undulating base, this feature may represent a "hog wallow" in a penned area near the house[31].

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[31] Westmacott (1992:35, 42) found even today that such hog pens are a common part of the yard area. He explains that, "in a self-sufficient system, chickens and pigs mean far more than eggs and bacon. They are symbols of an integrated system where scraps and crop residues are turned into manure and returned to the land" (Westmacott 1992:92).

Figure 49. Excavation of Feature 5 at Structure 3.

Figure 50. Northern half of Feature 5 at Structure 3 excavated.

Structure 3 revealed the clearest evidence of plow disturbance, apparently occurring before the structure was built. Plow scars occur below the house and in the yard area. This demonstrates a more complex site history than previously supposed, with portions of the ridge on which the site is located being used for cultivation when not being used for structures. While it is possible that the cultivation may be associated with a garden plot belonging to another of the structures, the extent and depth suggests that the use was more intensive and represents cotton cultivation. When this was discovered the other excavations were re-examined and fugitive indications of plowing, previously overlooked or discounted, were recognized. More intensive examination of the north face of the sand ridge revealed further evidence of spotty cultivation and use, including still visible plow furrows and occasional remnant fencing. These are most likely related to the late nineteenth or early twentieth century cotton cultivation which took place. It was a common practice to maximize the amount of land planted in cotton, and often the crop would be planted up to the door of tenant houses. Apparently similar practices existed at 38FL240, at times with property being taken out of cultivation for the construction of a new house.

Table 43.
Artifacts Identified from Structure 3 Dump

Material	Collection Unit 2		3	4	5	6		7	8	9	10	11	12	13	14	15	16	17	18	T#
	EX	SC				EX	SC													
Small food cans	2																			1
Medium food cans	14				2	19		4	2	6	5	6	1	3	5		1		3	71
Large food cans	1																		1	
Condensed milk cans	15		1		8	15	3	2	7	8	1	5		1	9				3	78
Other food cans	1					2														3
Food can lids	14					15														29
Spice cans	1																			1
Tobacco/snuff cans	1					1														2
Paint can/fragments		1	1																	2
Can fragments	114					148														262
Enamelled pots								1	1	1		1								4
Shoe leather				1	2															3
Condiment bottles/jars					1		1	2		3	1	1		1		5		1		16
Clear narrow mouth bottles					3			4			1									8
Clear wide mouth bottles														1						1
Clear gallon jugs										1	1	1								3
Quart canning jars											1					2	1	1	2	7
Amber bottles						1					1									2
Soda bottles												1								1
Patent medicine bottles													1							1
Medicine bottles							2					1								3
Alcohol bottles							1			2										3

T# = total number
SC = surface collected EX = excavated (south and north halves of 350R290)
other food cans = canned meat products
condiment bottles/jars = hot pepper sauces, catsup, mustard
clear narrow mouth bottles = most likely vinegar
amber bottles = most likely Clorox™ bleach
medicine bottles = clear, measurements molded in sides of oval bottle
alcohol bottles = half-pint and pint flasks only

Landscape Features

The predominant landscape features present at 38FL240 are the location of the structures and other yard areas, the distribution of yard trash, and the alteration of natural plants made in the yard areas by the tenant farmers. These combine to help explain how these African Americans perceived the world around them, and how they made modifications in that world to fit a pattern which some suggest has West African roots. While archaeologists have typically studied the location of buildings and features, and the distribution of yard trash, Richard Westmacott (1992) has recently added another dimension -- that of plants and garden arrangement -- and combined it with the other concerns to provide a greater depth of understanding concerning African American yards. He notes that beyond yards and gardens being the location where all sorts of mundane tasks are performed, they also reflect the "expression of ideals, beliefs, and aesthetic values," an area from which a philosophy of life may be discerned. Clearly the organization of yards and gardens can tell us much about the blacks at 38FL240.

Given the harsh existence of tenancy, especially when combined with the various Jim Crow laws directed at blacks, it is surprising to see the flowers and shrubs in bloom around abandoned tenant houses, even after 50 or 60 years of neglect. It is also perhaps surprising to some that these tenants were so similar to us -- they were children playing games, women washing clothes and preparing food, men repairing farm implements. And for the most part all of these activities took place in the yard and garden[32]. Westmacott notes three primary contributions of the yard/garden: subsistence, an extension of the kitchen for household chores, and display.

Although we have not identified oral informants to document the existence of vegetable gardens, there is indirect, but convincing, evidence in the archaeological record for their existence. Perhaps the most compelling evidence is the presence, at times in significant quantities, of canning jars. While these can be used for other functions, they are best associated with the "putting by" of excess produce. Of course, it is not possible to estimate the contribution that either fresh or canned vegetables made to the diet (see Subsistence Reconstructions discussion).

For the use of yard areas for household chores there is more direct evidence, including the existence of "activities areas" and sheet midden in the yard. While there is a common practice among archaeologists to disassociate the presence of sheet middens with the behavior which created them, it seems likely that sheet midden, in primary context, might be the result of yard use. The presence of kitchen items, broken tools, and lost toys might be taken to indicate the importance of the yard (historically realized to offer a cooler and more spacious work area than the house). At the same time, we must balance this view against the prevailing habit of yard sweeping -- a nearly ubiquitous habit among rural African Americans, at least prior to the "modern" period. Likely having its origins in Africa, the swept yard has a clear function:

> this smooth yard is functional on the Sea Island as well as in Africa: keeping it grassless helps to eliminate insects and provides a place where children can play and elders can congregate (Jones-Jackson 1987:8).

One of Westmacott's informants even mentioned sweeping under the house to keep that area clean (Westmacott 1992:80). While not discussed, it seems likely that large trash and debris would be

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[32] Westmacott (1992:1-2) notes that in the South, the term garden is usually used for the place where vegetables are grown, while the "yard," incorporates two distinct divisions -- that place where flowers are grown and leisure activities take place, and that area where household cores take place. Sometimes, but not always, the place where livestock is kept may be included in the term "yard."

removed by the sweeping, but the smaller items, especially in yards with sand, would be quickly incorporated with the upper few inches of soil (adding to the sheet midden).

Examination of artifact density (calculated per square foot) surrounding the structures at 38FL240 reveals considerable consistency, both in proportions and raw numbers. When the "under house" units are examined as either center or edge, each structure exhibits greatly reduced artifact density in the center (where it is most difficult for artifacts to be deposited) increasing toward the edges of the structures (where trash may be thrown or even swept to remove it from the yard). At all three structures the densities range from 1 to 5 and 6 to 15 respectively. The yard area near the structure has an artifact density very similar to the edge under the house, ranging from 4 to 11 artifacts per square foot. Units from the far yard have artifact densities ranging from about 15 to 25 specimens per square foot. At Structure 1 several units were excavated in what appear to be between yard areas, where the artifact density declines to between 5 and 7 items per square foot, perhaps reflecting a general "background noise" level for such sites[33].

This distribution of trash reflects an inverse "bulls-eye," with the quantity of trash generally declining toward the house and becoming almost non-existent under the central portion of the structure (Figure 51). The density of far yard trash is likely caused by both sweeping debris further away from the house, as well as carrying it to either dumps or hog pens (as in the case of Structure 3). Regardless, there seems to be good evidence that the occupants of 38FL240 tried to maintain their yards -- affecting the patterning of the trash available for archaeological analysis.

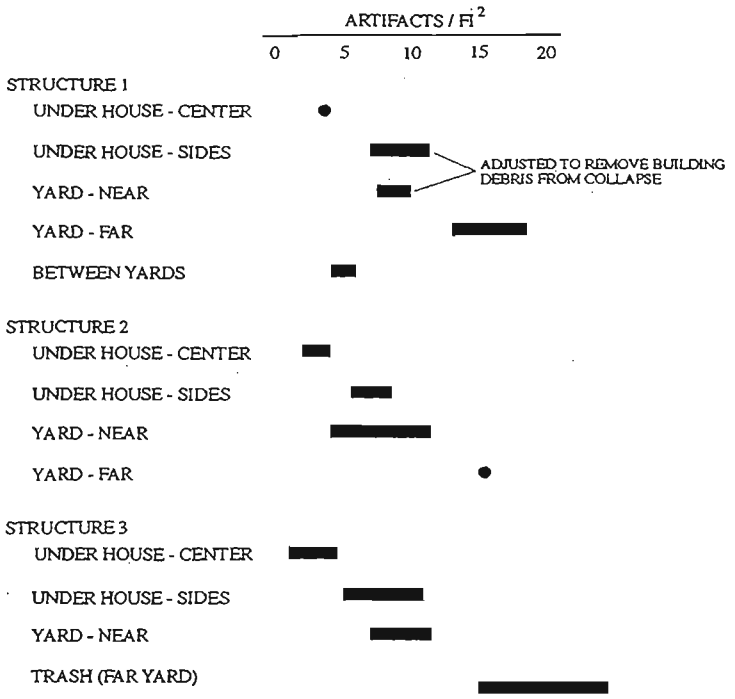

Figure 51. Comparison of artifact distribution at Structures 1 - 3.

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[33] Yard artifact densities at Structure 1 were also affected by the large quantity of metal and asphalt roofing collected and incorporated in the raw counts. This decay process greatly inflated near yard counts. When the counts were adjusted by removing materials clearly associated with building decay the artifacts per square foot fall into line with those found at Structures 2 and 3.

Westmacott (1992:38) notes that there is little evidence pointing toward the origin of flower use among African Americans. There are few descriptions of produce gardens around slave dwellings, and even fewer accounts of flowers. Likewise, there is little evidence that flowers were particularly important to plantation owners; in fact one overseer remarked, "rice and cotton crops were the only ornamental gardening principally admired by the planters" (quoted in Westmacott 1992:18). It is clear, however, that the front yard was of special importance, since it was the first view as one approached from the road. It was the front of the house which would most commonly be used for relaxation, visiting, and display. From the earliest photographs of slave houses on, it is the front where blacks are shown, either formally or informally. The importance of the front is recounted by one of Westmacott's oral informants who remarked:

> we grew cotton then . . . and every other little spot you could get, you put cotton on it instead of flowers. But right in front they always had a little flowers (Westmacott 1992:34).

At 38FL240 both Structures 1 and 3 evidenced a small array of ornamental plants. Identified during the survey were day lilies, iris, daffodils, and a rambling rose. In addition, Structure 3 evidenced several small red cedars, which may originally have been planted as ornamental shrubs. These were found exclusively in the south yard of Structure 1 and in the south and east yards of Structure 3. No plants were identified at Structure 2, thought to be the oldest of the three.

The types of plants are not surprising since they represent showy perennials and reliable evergreens. The perennials such as day lilies and daffodils propagate well by division and naturalize easily. The locations of the plants are perhaps more interesting, tending to emphasize the approach to the house from the road known to exist just south of Structures 1 and 3. The presence of additional flowers east, but not west, of Structure 3 lends support to the west side of the yard being reserved for utilitarian uses and livestock. The absence of flowers at Structure 2 may be indicative of its earlier date -- the flowers either not surviving past a certain point, or alternatively not being planted during this earlier period.

The very presence of these flowers tells us something about the belief systems held by the black tenant farmers who lived at 38FL240. While never owning the land on which they lived, they still maintained an interest and pride which led not simply to technological "improvements," such as animal pens (which can be explained by necessity), but also to ornamental "improvements" -- an interest in making their world a little brighter and a little more their own.

Subsistence Reconstruction

Background Studies

While sources such as Hilliard (1972) provide a general reconstruction of "southern" foodways, they often fail to offer much assistance better understanding the daily diet of tenant farmers in the late nineteenth and early twentieth centuries. Two studies from the last decade of the nineteenth century -- one from Alabama and the other from Virginia -- provide an essential base of understanding. One of the most significant findings in the Alabama study was the very low level of protein intake among farming families "on plantations." In fact the ratio of protein to carbohydrates varied from 1:7 to 1:16, with an average of 1:12.

One family, composed of two adults and five children, may be taken as typical. The discussions revealed that:

> there was no churn, as the family had no cow. In the cupboard were a piece of salt

> pork and a jug of molasses, and near by a sack of corn meal. The provisions were purchased each week, and toward the close there was very little left in the house. Fried pork and corn pone, cooked in the fireplace, composed the daily diet. A mule, an ox, and a pig made up the live stock. The farm was planted chiefly to cotton. . . . There was no garden, and the cotton was cultivated close up to the cabin door (Atwater and Woods 1897:28).

The diet, over a two week period, consisted of 3 kg unsmoked side bacon and lard (total value 49¢), 31 kg of wheat flour, corn meal, and rice (total value $1.29), and 0.2 kg of collards (total value 1¢). Of this diet, corn meal stands out as the single greatest bulk item.

Another family, composed of two adults and four children, evidenced a somewhat better (although still impoverished) diet. The study found:

> the live stock consisted of a mule, two cows, and some hens. Milk and eggs were used, and occasionally the family indulged in the luxury of sugar and coffee. The provisions were purchased by the week. The cooking was done with a stove (Atwater and Woods 1897:30).

The family diet, over a one week period, consisted of nearly 3 kg of bacon and a kilogram of lard (total value .67¢), 0.6 kg of eggs (valued at .13¢), 0.6 kg of butter (valued at .26¢), 17 kg of milk and buttermilk (valued at.73¢), 16 kg of wheat flour and cornmeal in nearly equal proportions (valued at .79¢), and 1 kg of sugar (.10¢).

The stable foods were fat salt pork, unbolted[34] corn meal, and molasses. Only occasionally were garden items such as greens, sweet potatoes, or turnips grown in gardens. Likewise, only rarely was small game, such as rabbit or opossum, hunted. The pork which was so pervasive was almost consistently salted fat sides. Hams and shoulders were not seen. Likewise, while swine were present, they were not common. Beef, sheep, or other meats were totally absent from all but the white households studied. Cooking was likewise monotonous:

> The daily fare is prepared in very simply ways. Corn meal is mixed with water and baked on the flat surface of a hoe or griddle. The salt pork is sliced thin and fried until very brown and much of the grease is tried out. Molasses from cane or sorghum is added to the fat, making what is known as "sap," which is eaten with the corn bread. Hot water sweetened with molasses is used as a beverage. This is the bill of fare of most of the cabins on the plantations of the "black belt," three times a day during the year. It is, however, varied at times; thus, collards and turnips are boiled with the bacon, the latter being used with vegetables to supply fat "to make it rich." The corn meal bread is sometimes made into so-called "crackling bread" and is prepared as follows: A piece of fat bacon is fried until it is brittle; it is then crushed and mixed with the corn meal, water, soda, and salt and baked in an oven over the fireplace. Occasionally the negroes may have an opossum. To prepare this for eating it is first put in hot water to help in removing a part of the hair, then covered with hot ashes until the rest of the hair is removed; thereupon it is put in a large pot surrounded with sweet potatoes, seasoned with red pepper, and baked. One characteristic of the cooking is that all meats are fried or otherwise cooked until they are crisp (quoted in Atwater and Woods 1897:21).

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[34] Meaning unsifted, leaving in a very large amount of the bran.

Finally, Atwater and Woods also remark that, the houses being raised above the ground, the open space "was generally occupied by dogs, with which but few families were not supplied" (Atwater and Woods 1897:16).

Dietary patterns observed by Frissell and Bevier (1899) in eastern Virginia were not remarkedly different from the Alabama studies, evidencing only minor environmental variations. Corn meal and salted fat pork were still the mainstays. Access to the nearby Chesapeake, however, increased the use of fish in the diet and "frogs, turtles, and even snakes were not infrequently eaten by some of the families at certain seasons of the year" (Frissell and Bevier 1899:8). This resulted in a relatively higher protein intake among the Virginia farmers. While fat pork was invariably fried, when pork shoulder or hams were available,[35] they tended to be boiled. The Virginia study added an interesting feature, calculating food waste which was "usually fed to the dogs, cats, hens, or pigs" (Frissell and Bevier 1899:9)[36]. The bulk of this waste was corn meal, indicating that the presence of hams, shoulders, fish, or similar meats with bone was uncommon.

It seems that the dietary situation changed relatively little into the twentieth century. For example, Johnson et al. (1935:18) remarks that the rations system was still widely employed, with employers providing their tenants with two pecks of meal and four pounds of "fat back pork" every two weeks. Further, Woofter (1936:102) reveals that flour, lard, and meat continued to constitute the largest purchases by tenants into the 1930s, reflecting a very uniform pattern across the entire southeast. Since the earlier studies, cowpeas seem to have been a noticeable addition, as were condiments. Woofter verifies our suspicions that farm produced pork was quickly consumed on a seasonal basis -- large amounts were often available for short periods in the late fall and early winter, but otherwise unavailable the remainder of the year. In addition, Woofter found gardens poorly tended, contributing little to the diets of most tenants and providing little for canning. He notes that "since the garden is not a shared operation, the only interest which the landlord has in the tenant's garden is the extent to which the production of foodstuffs will reduce the amount which he must lend [or sell] the tenant for subsistence" (Woofter 1936:102). Woofter also makes the important point that croppers, on the bottom of the social and financial hierarchy, tended to have fewer subsistence resources, such as gardens and livestock.

This overview of floral and faunal use illustrates the difficulties facing analysis of the subsistence remains present at 38FL240. We would expect, based on the limited use of fresh meat, limited use of wild resources, and the aggressive nature of domestic, communal, and wild scavengers, that faunal material will be uncommon to absent. Likewise, given the food preparation techniques and the nature of the foods being prepared, that ethnobotanical remains will be likewise scarce. While seasonality is not a significant issue at tenant sites, as it is with prehistoric groups, the research suggests that the presence of pig bones is a likely indicator of late fall or early winter use. More importantly, it is an indicator that the family had the resources to keep livestock and were likely more well-to-do (at least in a relative sense).

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[35] Hogs are typically slaughtered in the winter. It was not clear from the studies if this meat was salted by the farmers, immediately consumed, or sold for other provisions. Since the studies were conducted in the warmer months, it is not surprising that so little fresh meat was observed.

[36] Westmacott (1992:85) notes there is a long tradition of using food scraps, vegetable trimming, and crop residues to feed the hogs of chickens and the practice continues today among rural people.

Faunal Materials

Two animal species, cow (*Bos taurus*) and pig (*Sus scrofa*), are the only domestic mammals identified in the collection which were likely used as food resources. Pigs are one of the most important domestic mammals used for food in the Southeastern United States (see Hilliard 1972:92-111). Pigs require little care, as they can be allowed to roam free, or they can be penned (as suggested by the findings at Structure 3). Their diet can consist of a variety of food resources, including seeds, roots, fruits, nuts, mushrooms, snakes, larvae, worms, eggs, carrion, mice, small mammals, kitchen refuse, feces, and grain. Pigs store about 35% of the calories they consume, and can gain about 2 pounds for every 15 to 25 pounds of feed (Towne and Wentworth 1950:7-8). Within 18 months, a pig can gain up to 200 pounds, of which about 120 pounds can be consumed. Dressed, a pig carcass can yield between 65% and 80% meat. An idea of the possible size of the pigs that were available to the inhabitants of the slave row and tenant settlement can be gained from the average weight of 140 pounds for 4,000 southern pigs slaughtered in 1860 (Fogel 1965:206 in Reitz and Scarry 1985:70). Pork preserves very well, is satisfying due to its high fat content, and is a good source of thiamine (Towne and Wentworth 1950:249).

Although cattle have been an important meat source during the history of the Southeastern United States, they are in many ways a more burdensome meat resource to raise than pigs (Hilliard 1972:112-140; Rouse 1973; Towne and Wentworth 1950, 1955). Cows provide less of a return for the energy input provided to raise them (Towne and Wentworth 1950:7-8). Cows feed on grain and grasses, and will not produce good weight gains without quality and quantity sources for either. Also, cattle store only 11% of the calories they consume and yield only 50% to 60% of their weight in dressed meat. Balanced against the greater labor to raise cattle above that required for swine and the fact that beef does not preserve as well as pork (Tomhave 1925:275), there was a demand for fresh beef, cattle hides, cattle horn, tallow, and a number of other foods made from milk products, such as whole milk, buttermilk, cheese, and butter, that can be obtained from cattle (see Hilliard 1972:119-135; Rouse 1973; Towne and Wentworth 1955).

Also identified from the collection are a small number of turtle bones. The only species positively identified is the cooter (probably *Chrysemys floridana*). This turtle can be found primarily in and around bodies of freshwater, such as ponds, lakes, rivers, and canals (Obst 1986:109-111). These turtles use the land to lay their eggs at some distance from the water, to sun themselves, and occasionally to feed. During the nineteenth century in the south, the cooter was used as a food source (Hilliard 1972:89).

Commensal species are animals such as pests, vermin, animals which pray on pests and vermin, and pets that are commonly found in the vicinity of human occupations. These animals would include the dog, rats, mice, mole, snakes, and toads present in the five faunal collections. The only commensal identified is the hispid cotton rat (*Sigmoden hispidus*). This rat species is a major crop pest that has been called the most abundant mammal in Georgia (Golly 1962:134) and is commonly found in bushes around structures.

There are in addition to these species listed, a number of small, unidentifiable bone fragments. Surprisingly absent from the collection are domestic birds, such as the chicken and turkey; fish; and wild mammals, such as the racoon and opossum. It is likely that small, lightweight bones associated with birds would be less likely to be preserved in the assemblage, while the absence of wild mammals in the collection may indicate their *relative* infrequency.

The faunal materials identified are shown by structure in Tables 44 - 46, below. Several observations are immediately apparent. First, faunal materials are uncommon and small, fragmentary

materials (identifiable only as mammal bone) are numerically common. Since much of the work at each structure incorporated yard areas, it seems unlikely that the low numbers are the result of sampling. More likely, the low incidence of faunal material reflects both the nature of the diet and

Table 44.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Structure 1

	MNI		# of	Wt.	Biomass	
Species	#	%	Bones	gm	kg	%
Pig (*Sus scrofa*)	2	40	17	60.43	1.055	21.14
Cow (*Bos taurus*)	1	20	2	210.83	3.247	65.07
Unidentified Mammal	-	--	28	33.98	0.628	12.59
Unidentified Turtle	1	20	1	0.42	0.018	0.36
Rat (*Sigmoden hispidus*)	1	20	1	1.66	0.042	0.84
TOTALS	5	100	50	307.32	4.990	100

Table 45.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Structure 2

	MNI		# of	Wt.	Biomass	
Species	#	%	Bones	gm	kg	%
Pig (*Sus scrofa*)	1	50	9	36.21	0.665	30.83
Cow (*Bos taurus*)	1	50	5	37.87	0.693	32.13
Unidentified Mammal	-	--	15	44.40	0.799	37.04
TOTALS	2	100	29	147.48	2.157	100

Table 46.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Structure 3

	MNI		# of	Wt.	Biomass	
Species	#	%	Bones	gm	kg	%
Pig (*Sus scrofa*)	2	50	10	30.86	0.576	72.36
Unidentified Mammal	-	--	8	5.76	0.127	15.96
Unidentified Turtle	2	50	4	5.01	0.093	11.68
TOTALS	4	100	22	41.63	0.796	100

the abundant scavengers present on-site. This is further supported by the relatively large proportion of small, unidentifiable bone remains at each structure.

Pig is found in all three collections, dominating the samples in terms of the number of bones found (excluding the unidentified mammal bones). This certainly supports the ethnographic accounts, and also documents the presence of home slaughtering of pigs. Yet, further examination of the elements identified reveals that the pig meat present typically reflects low status cuts. For example, at Structures 1 and 3 almost all of the bones were teeth or mandible fragments, indicating jaw/jowl cuts. While there is greater diversity at Structure 2, it is still clear that prime cuts, such as the shoulder, ribs, and ham are not present. Instead, less desirable cuts dominate the collection. The beef remains document a similar distribution, although the sample at Structure 1 is overwhelmed by the single humerus fragment.

Table 47.
Bone Element Distribution for Pig and Cow Remains

	Pig						Cow			
	Structure 1		Structure 2		Structure 3		Structure 1		Structure 2	
Bone Element Group	wt.	%	wt.	%	wt.	%	wt.	%	wt.	%
Skull, 1st & 2nd cervical vertebrae	47.71	79.0	5.75	15.9	23.09	74.8	12.83	6.0	37.87	100.0
Vertebrae & ribs	-	-	9.51	26.3	-	-	-	-	-	-
Forelimbs	-	-	9.62	26.6	-	-	198.00	94.0	-	-
Forefeet	-	-	-	-	-	-	-	-	-	-
Hindlimbs	-	-	-	-	-	-	-	-	-	-
Hindfeet	12.72	21.0	7.86	21.7	7.77	25.2	-	-	-	-
Feet	-	-	3.47	9.5	-	-	-	-	-	-

The composition of the skull bone element category for 38FL240 contrasts with that noted for the faunal collection from the Mitchelville site, a postbellum freedman's village on Hilton Head Island in Beaufort County. In the Mitchelville collection (which is much larger than that from the Florence site), there is a more uniform distribution of bone elements, including skull elements (40.3%), vertebrae and ribs (25.5%), forelimbs (5.1%), forefeet (1.0%), hindlimbs (10.7%), hindfeet (1.0%), and feet (16.3%). The importance of the Mitchelville pig bone element distribution is that the majority of the pig assemblage is thought to have been raised by the freedmen for their own consumption (Wilson and Wilson 1986:303). The distribution of the bone elements at 38FL240 certainly contrasts with that found at Mitchelville, although it is very similar to that identified at the late antebellum South Tabby slave settlement at Daufuskie Island's Haig Point Plantation (Wilson 1989:186).

While the historic accounts suggest that the assemblage should be spartan, the collection is similar to faunal collections found at slave sites. There is no evidence for sawed or cut modifications on any of the pork or beef. All of the material appears chopped. This, coupled with the limited cuts, suggests that both were raised on the plantation. It may be that the cuts were provided as rations, with the better cuts being reserved for the owner. Alternatively, it may be that the pork was homegrown and the better cuts were sold by the tenant farmers, removing them from the settlement. The presence of turtle suggests the use of opportunisticly gathered resources, while the absence of wild mammals suggests that the tenants had little opportunity to supplement their diet through hunting.

Ethnobotanical Collections

Ethnobotanical materials at the sites are very uncommon. The flotation sample obtained from

the hog pen feature at Structure 3 produced minute fragments of carbonized wood, probably representing hearth cleaning debris, but no evidence of any carbonized foods or food remains.

A series of four hand picked samples were also examined from Structure 3. In two samples pine (*Pinus* sp.) was the only wood identified. In a third sample pine dominated, although oak (*Quercus* sp.) and maple (*Acer* sp.) were also found; in the fourth sample pine and oak were equally represented. Given the context of these samples, and the absence of any structural fire, it is likely that these represent fuel woods used by the occupants. All would have been locally available -- the pine from second growth areas, the oak from the sandy ridge in the vicinity of the site, and the maple from the nearby lower terraces. It is unlikely that all three would be found in close proximity to one another, suggesting that the sources of fire wood were scattered across the plantation. The abundance of pine, which burns quickly while producing large amounts of tar, suggests that wood was selected on the basis of availability and ease and procurement, rather than on the basis of fuel efficiency[37].

Processed Foods

The dump at Structure 3 offers an opportunity to study the contribution of various processed foods to the diet during the late period of site occupation. The majority of the identifiable cans represent the hole-in-top can introduced in 1900 by Carnation for evaporated milk, continuing the earlier, and very successful, tradition of Gail Borden (Clark 1977:17; Rock 1984:104). The widespread availability of canned milk in the last quarter of the nineteenth century is credited with significantly lowering the infant mortality rate. By the twentieth century it was commonly used by those without access to fresh milk. The number of these cans in the Structure 3 dump, dating from perhaps the 1920s and 1930s, indicates that fresh milk was not only unavailable, but that there was likely an infant in the household who required milk.

The next most common identifiable cans are the number 2 or 2½ sanitary cans commercially available after 1889. Like the milk cans, they apparently date from the first third of the twentieth century. These cans may have contained vegetables, meats, or other foods[38]. Curiously, small (Number 1) cans and large (Number 3) cans are both uncommon. Also uncommon are "other" cans, representing rectangular meat tins (similar to the Spam® tins today). Glass jars and bottles are not as common as cans (representing an approximate ratio of 4.4:1) and canning jars, indicative of home canning, while present, are represented by only seven examples.

The quantity of cans, and even bottles, indicates that the occupants of Structure 3 were participating in the consumer economy of the early twentieth century, in spite of their meager income as tenants. The data suggests that a wide variety of canned goods were routinely procured, especially including canned milk. Small quantities of condiments, most typically catsup and various sauces, are represented. Home canning, however, is only marginally represented, suggesting that the produce available for canning was limited.

Summary

The archaeological record demonstrates a variety of resources, including domesticated animals

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[37] A cord of post oak offers 92% of the heat value of a short-ton of coal, red maple offers 73%, and shortleaf pine 77% (see Graves 1919).

[38] A wide variety of canned foods were available in the early twentieth century, ranging from Merrell and Soule's "Non-Such Mincemeat" and "Pumpkin-Squash" to Van Camp's "Pork and Beans."

such as the pig and cow, as well as occasional wild resources, such as turtles. Not surprising for a slave settlement, but somewhat more unexpected for a tenant settlement, the majority of the fresh meat present represented poor, low-status cuts, such as from the jaw and jowl. It is possible that the meat was issued as rations by the plantation owner, continuing a tradition of white domination from the antebellum. Alternatively, the choice cuts may have been sold by the tenants to the plantation owner as a means of reducing their debt load. Regardless, the fresh meat diet suggests monotony and marginal nutrition. There is a surprising lack of wild food resources given the richness of the Florence environment. Although some faunal material, such as fish, may simply not be recognizable in the archaeological collection (either through disposal practices or scavenging), other wild resources, such as raccoon and opossum, should be preserved but are absent. The assemblage is more similar to antebellum slave sites than to freedmen sites, such as Mitchelville.

Combined with the speculated low incidence of garden produce canning, it seems that the tenants at 38FL240 had little opportunity, or inclination, to take advance of local resources. While processed foods appear common at Structure 3, it is difficult to translate the container counts into any meaningful appraisement of their contribution to the diet. What is perhaps more revealing is that only this one structure reveals this reliance on processed foods, indicative of either a higher income or, perhaps more likely, the greater availability of these resources later in the twentieth century.

When compared to the historical accounts of tenant foodways, 38FL240 appears representative. It is likely that most of the foods -- corn meal and "fatback" -- have left no archaeological evidence. The ethnobotanical studies are inconclusive at best, identifying only fuel woods used to heat the structures and cook the food. This is one case, however, where negative evidence can be taken at face value.

Artifacts

The three structures investigated at 38FL240 yielded a large and varied assemblage of nineteenth and early twentieth century historic remains useful not only for better understanding life at this particular site, but also useful in comparative research at other similar occupations. These remains will be briefly discussed in this section[39], by structure, using South's (1977) artifact groups (e.g., kitchen, architectural, etc.) since such an approach allows quantification and discussion to be undertaken within a broad functional framework more easily understood by lay persons and professionals alike. Those familiar with South's artifact groups will realize that occasionally some modifications have been necessary given the late date of many materials. While some of the decisions could be argued, for the most part they have not substantively altered the basic patterns presented in a following section[40].

A total of 6501 artifacts were recovered from Structure 1, 5028 (77.3%) of which were found in units associated with the house (100R100, 105R105, 110R120, 115R100, 115R110, and 120R120), rather than the yard. At Structure 2, 4011 artifacts were recovered, 2673 of which (66.6%) were

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[39] The goal of this discussion is primarily to point out general trends, unusual artifacts, specific findings, and areas needing further research. It is, frankly, rather particularistic since it deals very intimately with the artifacts from the three structures with little effort to synthesize, generalize, compare, or contrast. Those desiring only an overview considering these major research issues may wish to skip this section and turn to **Dating, Patterns, and Status.**

[40] For example, we have included a brass Dick Tracy badge in the personal category, since it was intended to be worn, rather than in the sub-category of toys in the activities group. Changing either by one count will not noticeably affect the pattern analysis

recovered from the house excavations (200R190-210, 210R200-220). At Structure 3, 7163 artifacts were recovered, with 1903 or 26.6% collected from house excavations (310R310-315, 320R310-315).

Kitchen Artifact Group

The excavations at Structure 1 produced a total of 2788 kitchen group artifacts, representing 42.9% of the collection. At Structure 2 there are 2934 kitchen group artifacts (73.1% of the total collection from that structure) and at Structure 3 there are 4584 specimens (representing 64.0% of the total collection). Included are 661 ceramics (23.7%) at Structure 1, 634 (21.6%) at Structure 3, and 533 (11.6%) at Structure 3. The ceramics are dominated by earthenwares and at Structure 1 83.7% of the collection consists of whitewares[41]. Pearlwares, characterized by a cream colored paste and a blue to white glaze, form a small proportion of the collection (accounting for 3.6% of the total collection or 4.1% of the earthenwares). At Structure 2 the dominant earthenware is again whiteware (91.4% of the earthenware collection), although pearlwares account for 4.6% and creamwares, recognized by an off-white (cream colored) paste and a distinctive yellowish lead glaze which exhibits a greenish color where thickly puddled (Brown 1982:15-16), account for an additional 2.8% of the collection. It is this structure, which exhibits the greatest number of pearlware and creamware ceramics, which is thought to be the best candidate for a late antebellum slave dwelling used into the postbellum. At Structure 3 whitewares account for 95.2% of the collection, followed by pearlware (2.4% of the earthenwares) and creamware (0.6%). Small quantities of white porcelain and various salt and slip glazed stonewares form the remainder of the collection (alkaline glazed specimens are noticeably absent).

The most abundant artifact class, however, is glass, with 1893 glass items (67.9%) recovered from Structure 1, 2037 (or 69.4% of the kitchen group) at Structure 2, and 3604 (representing 78.6% of the kitchen group) at Structure 3. At Structure 1 the glass collection consists almost entirely of container glass. Over half of the assemblage (56.3%) is clear glass, followed by light green (12.6%), manganese (11.0%), and brown (7.1%). Dark green or "black" glass accounts for only 1.7% of the collection from Structure 1. Like Structure 1, container glass dominates the collection at Structure 2, with 41.2% of the container glass collection being clear, followed by manganese (21.9%), and light green (12.9%). Brown glass is less common, accounting for only 5.5% of the container glass collection, while "black" glass is more common, representing 4.2% of the collection. At Structure 3, thought to be the most recent of the three, 63.4% of the container glass is clear, while only 1.5% is "black," or dark green. Manganese glass represents 13.5% of the collection. Several of the structures also have small quantities of cobalt blue, blue-green, light blue, green, aqua, purple, and milk glass.

The tableware collection at all three structures is dominated by fragments of drinking containers (accounting for 61.5% of the tableware at Structure 1, 68.5% at Structure 2, and 49.4% at Structure 3), followed by decorative glass items (bowls, vases, pitchers, and other items). Utensil fragments, typically iron, account for the remaining 14.4% of the collection at Structure 1, 6.8% at Structure 2, and 8.9% at Structure 3. Kitchenware items, not surprisingly, include primarily tin can fragments (representing 80.0% of the collection at Structure 1, 89.5% at Structure 2, and 88.9% at Structure 3). The next most common item at all three structures, stove parts, contributes only 10% to the assemblage at Structure 1, 5.8% at Structure 2, and 3.0% at Structure 3. The diversity of other

[41] The difficulty distinguishing between whiteware and ironstone has been discussed by South (1974:247-248), who uses an ironstone-whiteware category, and Price (1979:11), who uses a "whiteware" category which includes ironstone. Both researchers point out that differentiating between whiteware and ironstone using vessel hardness (or degree of vitrification) is an uncertain or even invalid approach (cf. Worthy 1982). For the purpose of this study, whiteware will encompass both categories of ceramics. In general, we found very few examples of highly vitrified pottery, although the "ironstone" designation was occasionally found on maker's marks.

items is greatest at Structures 1 and 3, where small numbers of canning jar lids, screw jar or cap lids, crown caps, kettle fragments and other fragments were recovered. The presence of stove parts might suggest that there was no need for kettles, but this is not in case. Kettles, typically bulbous pot forms, were a common feature found in rural yards. They were used for everything from making soap to removing the hair from slaughtered hogs. The importance of kettles, however, appears to decline from Structure 2, where they account for 2.1% of the kitchenware collection to Structure 3, where they represent only 0.5% of the collection. This indicates the rising dominance of the stove during the late nineteenth and early twentieth centuries.

The kitchenware collection from Structure 3 also revealed that the household, at one time, had at least one infant. While this was suggested by the abundance of milk cans in the nearby dump, it is more clearly revealed by the presence of a plastic seal from a glass baby bottle.

Architectural Artifact Group

At Structure 1 a total of 3377, or 52.0%, of the artifacts recovered are classified as architectural. The most common items are nails, accounting for 90.7% of the group. At Structure 2 architectural remains are less common (894 specimens), accounting for only 22.3% of the collection. But nails continue to be the most common item, consisting of 97.2% of the architectural group (n=869). Structure 3 is midway between the other two, with the 2249 architectural items representing 31.4% of the total assemblage. Nails, however, make up 96.8% of the specimens

A wide variety of nail forms are present, although overall the most common are machine cut and wire styles. "Modern" machine cut nails account for 26.1% of the collection at Structure 1, although less than a third are sufficiently intact to allow penny weight measures. These nails were first manufactured in the late 1830s although there is general agreement that they reached rural areas later than more urbanized trade centers. They have uniform heads and shanks with burrs on the edges (Nelson 1968:7; Priess 1971:33-340). Wire nails account for 58.0% of the nail collection at Structure 1 and nearly four-fifths of these were intact and suitable for more detailed study. These nails are manufactured from steel wire. While available in small sizes as early as the 1850s, it wasn't until the last quarter of the nineteenth century that they became widely used in the building construction trades (Nelson 1968:7)[42]. One hand wrought nail, peaking in popularity during the eighteenth century, but being used well into the first half of the nineteenth century, was identified in the collection. Other nail types include five spikes, 273 unidentifiable nail fragments, 205 roofing nails, and two sheet metal nails with lead caps. At Structure 2 the hand wrought nails (n=10) account for 1.1% of the collection, followed by cut nails (53.5%) and wire nails (12.8%). At Structure 3 wire nails are the most common, accounting for 48.1% of the collection, followed by cut nails (33.0%), and hand wrought (0.4%). Other nails, like at Structure 1, include roofing nails and nails with lead washers used for tin roofing.

Because different size nails served different self-limiting functions, it is possible to use the relative frequencies of nail sizes to indicate building construction details. Nails were early designated by their penny weight, which compared the weight of a nail to that of a silver penny. Gradually the term came to designate length rather than weight, but the equivalence varied over time and it was not until the late 1890s that penny weights were thoroughly standardized (Orser et al. 1982:675). To avoid confusion, Table 48 lists both the penny weight size and the Standard Average European (SAE) size

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[42] Howard (1989:55) notes that as late as 1886, more than 90% of the nails manufactured in the United States were cut nails. Just five years later the ratio of cut to wire nails was 1:1. This suggests that wire nails, at sites such as 38FL240, may be relatively time sensitive, although their proportion will be artificially inflated by the numerous repairs which tenant houses almost certainly underwent.

Figure 52. Kitchen Group Artifacts. A, plain whiteware plate rim; B, annular whiteware; C-D, polychrome hand painted whiteware; E, blue transfer printed whiteware; F-G, sponge decorated whiteware; H, molded whiteware handle; I, clear glass stopper; J, pressed glass vase; K, "patent" medicine panel bottle; L, silver plated spoon; M, machine-soldered side seam hole-in-cap can, ca. 1883; N, hole-in-top can with "match-stick" filler hole (evaporated milk can), post-1900.

Table 48.
Intact Nails from Structures 1 - 3

		Structure 1			Structure 2			Structure 3		
Penny Weight	SAE (inches)	HW	C	W	HW	C	W	HW	C	W
3d	1 1/4		3	2	1		1			1
4d	1 1/2		12	20	1	3	10	1	9	21
5d	1 3/4		20	13	2	9	5		18	14
6d	2		43	96		30	4	1	49	62
7d	2 1/4		17	11	2	13		1	9	12
8d	2 1/2	1	44	737	2	31	21		101	240
9d	2 3/4		20	79		17	5		17	61
10d	3		43	169		34	8	2	38	180
12d	3 1/4		29	83		28	21		23	114
16d	3 1/2		11	26		6	4	1	10	35
20d	4		5	125		2	7	1	1	139
30d	4 1/2		1	29			3		2	5
40d	5		3	1		1	1		2	14
50d	5 1/2			3			1			5
60d	6			2			1			4

HW = hand wrought nails, C = machine cut nails, W = wire nails

for the nails which were sufficiently complete for analysis at the three structures. Table 48, however, provides only limited information, revealing various peaks such as between 8d and 10d at Structure 1, between 6d and 12d at Structure 2, and 6d and 20d at Structure 3. It also indicates that the hand wrought nails present at Structure 2 are all 8d or smaller, suggesting that in the original construction they may have served a special function. Table 49 helps to translate these specific findings into terms which are more understandable, and useful, in our effort to reconstruction the three buildings. The table is based on the premise that, within certain broad parameters, nail size is related to intended function. Structures 1 and 3 offer very similar patterns

Table 49.
Probable Function of Intact Nails from Structures 1 - 3

	Structure 1		Structure 2		Structure 3	
Function	#	%	#	%	#	%
Small timber, shingles (2-5d)	70	4.2	32	11.7	64	5.4
Sheathing, siding (6-8d)	949	57.6	103	37.6	475	39.8
Framing (9-12d)	423	25.7	113	41.2	435	36.5
Heavy framing (16-50d)	206	12.5	26	9.5	219	18.3

of nail use. The numbers for shingles are very low primarily because both sites contained a number of roofing nails which performed that specific function. The presence of a relatively large number of framing and sheathing nails is consistent with balloon framing where timbers are noticeably absent and the entire structure consists of smaller, stick-like members th't are generally no thicker than about $2\frac{1}{2}$ inches. Rigidity is promoted by the exterior sheathing. Heavy framing nails (16d to 50d) took the place of mortise and tenon construction joints held together with pegs. The nail pattern seen at Structures 1 and 3 seems to be consistent with construction techniques which began to be used in the 1850s and was widely accepted by the 1880s. Structure 2, however, presents a slightly different

pattern, perhaps consistent with its posited earlier age. Heavy framing nails are less common, suggesting that while balloon framing was being used, it was being incorporated with more traditional joinery techniques. The proportion of small shingle nails is greater, probably because this structure was the only one which was not roofed in tin, but probably used wood shakes during its lifetime.

Other architectural remains recovered include 107 fragments of window glass from Structure 1 (representing 3.2% of the architectural collection), 21 (2.3%) from Structure 2, and 20 (0.9%) from Structure 3. The low incidence of window glass from Structure 3 is probably the result of so few units being excavated in the immediate vicinity of the structure. This suggests that glass, unlike nails, tends to remain more clustered around the structure and is less likely to become dispersed in the yard. Door lock parts and other construction hardware account for 8 specimens at Structure 1 and 52 specimens at Structure 3, while only four construction hardware items (including 2 hinges, one door hasp, and one shutter catch), and no door lock parts, were recovered from Structure 2. Items from Structure 3 include fragments of window screen, three butt hinges, a strap hinge, 2 small butt hinges (possibly non-architectural), one insulator fragment, a keyhole escutcheon, lock parts, and two shutter pintles.

These architectural remains suggest that both Structures 2 and 3, at one time, were not glassed, but instead had shutters. In addition, the presence of the insulator at Structure 3 suggests that it may have had rudimentary electrical service, available in this area during the late 1930s. The longevity of Structure 3 is also suggested by the presence of both tin roofing and asphalt shingles, representing at least two different episodes of re-roofing.

Furniture Artifact Group

Structure 1 yielded 21 furniture artifacts, comprising 0.3% of the total collection from the site. while Structure 2 produced 18 specimens (0.4%). Structure 3, the house used until most recently, produced only five furniture related artifacts, accounting for 0.1% of the collection.

Lamp related materials (primarily glass from the chimneys and, in one case, a lamp part) are significant furniture items at all three sites, comprising 77.8% of the furniture collection at Structure 2, 57.1% of the collection at Structure 1, but only 40% of the collection at Structure 3 (which may have been equipped for electric lights). Other furniture items at Structures 1 and 2 include a fairly normal assortment of drawer pulls and handles, keyhole surrounds, and decorative elements. At Structure 3, while the proportion of items is high, the materials themselves are more meager, including an andiron, a drawer handle, and a fragment of mirror glass (the only one found at the site). The low incidence may reflect sampling bias or, alternatively, the social status of those living at the structure.

Arms Artifact Group

It is difficult at late sites such as 38FL240 to distinguish arms material deposited over the course of occupation from materials deposited more recently, through unrelated hunting activity. Consequently, it seems likely that the Arms Artifact Group at all three structures is artificially inflated above what was contributed by those actually living at the structures. Regardless, the percentage of arms related materials is uniformly low. At Structure 1 these artifacts comprise 0.3% of the assemblage (n=18) and include primarily shotgun shells with very few brass casings from low caliber rim fire rifles. The shotgun shells include both plastic and paper varieties. At Structure 2 the arms group accounts for 0.4% of the collection (n=15). Again, shotgun shells account for the majority of the items, although one gray gunflint was also recovered. This is a small flint and was likely used in a mid-nineteenth century sporting rifle. At Structure 3 arms related items are uncommon, representing only 0.1% of the collection (n=3), although again plastic and paper shotgun shells are the most numerous items, followed by brass low caliber rim fire shell casings and a single lead bullet.

Few direct conclusions can be drawn from these remains, although it seems unlikely that the arms would have been used in such close proximity to the dwellings, suggesting that most of the remains are intrusive at the site. Only the gun flint, found at Structure 2, is likely in "primary" context and was deposited by those living at the settlement.

Tobacco Artifact Group

Tobacco artifacts constitute 0.1% of the collection at each of the three structures, although the materials in each assemblage are slightly different. At Structure 1 half of the collection consists of tobacco tins (n=4), followed by two fragments of kaolin tobacco bowls, one kaolin tobacco stem, and one fragment of a plastic tobacco pipe stem. A very similar assemblage is found at Structure 3, where three tobacco tins were recovered wit one brown clay pipe bowl, one buff clay tobacco pipe bowl, and one kaolin clay pipe stem. At Structure 3 one kaolin pipe bowl and one pipe stem were recovered.

But just as arms are likely over-represented, these collections probably under-represent the importance of tobacco. Several events took place in the last quarter of the nineteenth century to increase tobacco consumption by reducing prices. First, a cigarette rolling machine was introduced in 1882, making manufactured cigarettes affordable and attractive to the public. These new machines could produce 200 cigarettes per minute -- dramatically increasing the demand. In addition, the federal government reduced the excise tax on cigarettes from $1.75 per thousand to a mere 50¢ per thousand. In addition, an increasing number of tobacco companies, which always offered compressed "plug" tobacco began offering scraps as loose chewing tobacco in the late nineteenth and early twentieth century.

While the use of pipe tobacco is still evidenced by the pipes themselves, and increasingly the pocket tins[43] in which the tobacco was sold, neither cigarettes nor chewing tobacco have produced recognizable archaeological evidence.

Clothing Artifact Group

Clothing artifacts at Structure 1 consist of 0.9% of the assemblage, while at Structure 3 they consist of 1.7%. At Structure 2, thought to be the oldest of the three, clothing items represent the lowest proportion, only 0.6% (Table 50). Of all the items present, buttons (including suspender or overall buttons) are the most temporally sensitive and these are detailed in Table 51.

Table 50.
Clothing Items from Structures 1 - 3

Item	Structure 1	Structure 2	Structure 3
Buttons	29	10	19
Suspender/Overall Buttons	7	3	9
Shoe Parts	3	7	55
Other Clothing Items	17	5	37

The recovered buttons span at least the nineteenth and early twentieth centuries and at least one button from each structure (Types 7, 9, and 18) may date from the late eighteenth century. Most

[43] Besides the standard pocket tin, other tobacco containers include a flat rectangular box, round tins or canisters which also held cigars, and even tobacco lunch boxes, produced in the first quarter of the twentieth century (see Clark 1977:90-102).

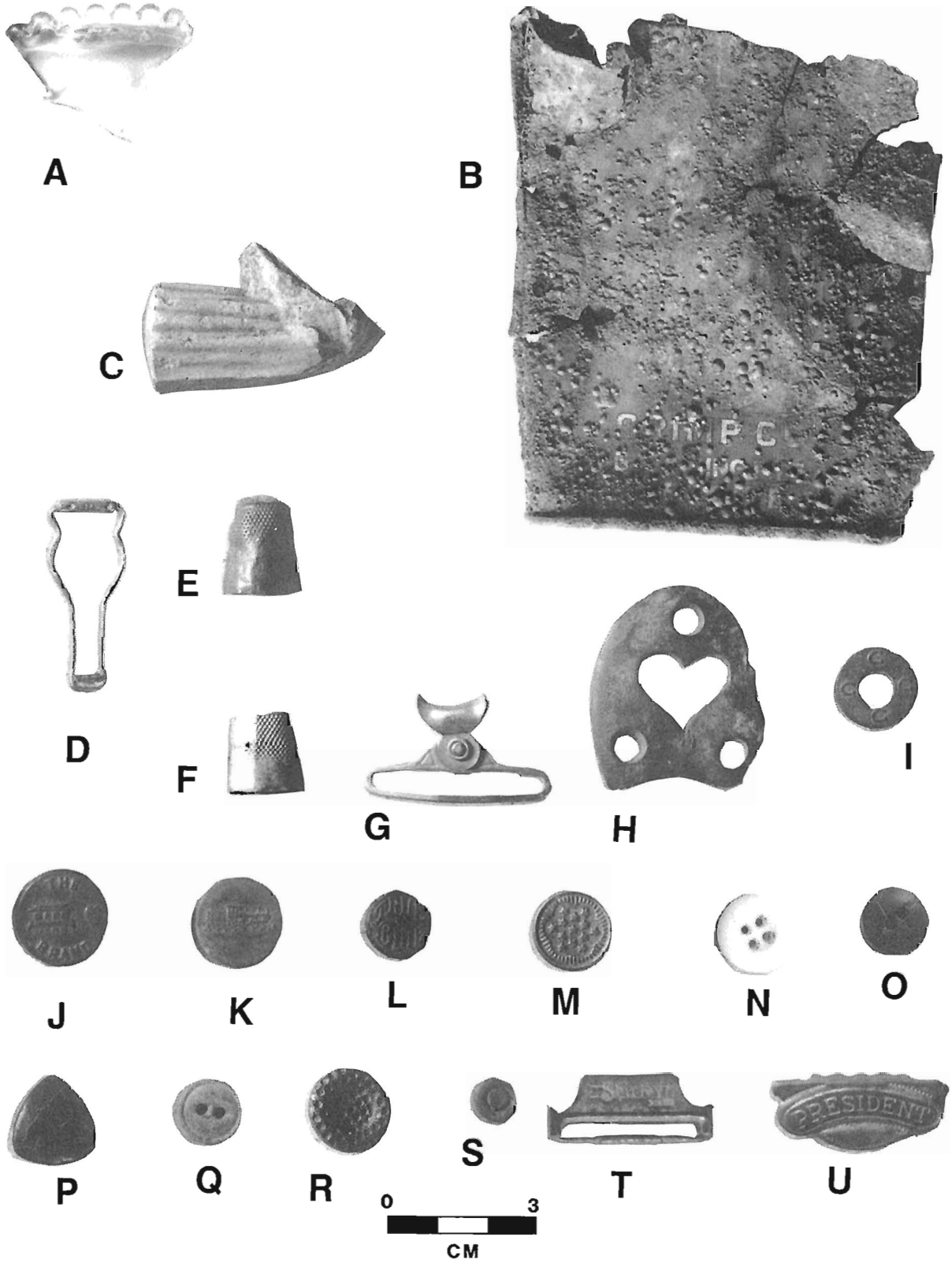


Figure 53. Furniture, Tobacco, and Clothing Group artifacts. A, chimney lamp glass rim decorated with a template; B, Prince Albert pipe tobacco pocket tin; C, stub-stem pipe bowl fragment; D, garter clip; E-F, brass thimbles; G, suspender clip; H, heel tap for shoe; I-M, examples of brass buttons; N, porcelain "Proser" button; O-R, plastic buttons; S, small snap; T-U, suspender clips.

Table 51.
Buttons from Structures 1 - 3

Type	Description	#	Other (meas. in cm)
	Structure 1		
9	brass, stamped star	1	3.2
21	iron, 4-hole	1	1.5
22	shell, 4-hole	1	1.4
23	porcelain, 4-hole	7	2-1.0, 2 1.1,1-1.2, 1-1.3, 1-1.7
24	iron, eye in place	1	1.9
25	iron back and eye	3	2-1.7, 1-1.8
25	brass face only, machine stamped with train engine	1	1.8
25	brass face only, machine stamped with train and heart	1	2.0
25	brass face, iron back, machine stamped with train engine	1	1.7
25	brass face, iron back, machine stamped with train	1	1.6
32	brass	1	1.7
-	brass/iron, brass back stamped "DEFIANCE/24"	1	1.5
-	iron, 2-hole	1	2.4
-	brass, 2-hole	1	1.2
-	porcelain, 2-hole	1	2.0
-	porcelain, "mushroom-shape"	1	0.8
-	shell, 2-hole	2	1-1.4, 1-2.6
-	plastic, 2-hole, brown	1	1.5
-	plastic, triangular, black	1	2.0 by 2.0
OB	iron	2	1-1.6, 1-1.9
OB	iron/brass	1	1.4, triangle/circle
OB	iron/brass, face stamped "ALLEN/OVERALL"	1	2.0
OB	iron/brass, face stamped "TRUE/BLUE"	1	1.4
OB	iron/brass	1	1.7, stars and rays
OB	iron/brass, face stamped "UNION/N&W/MADE"	1	1.6
	Structure 2		
18	stamped brass	1	2.0
21	iron, 4-hole	2	1-1.3, 1-1.4
23	porcelain, 4-hole	3	2-1.5, 1-1.7
-	iron, 1-hole	1	1.1
-	iron, 2-hole	1	1.3
-	porcelain, 2-hole	1	1.3
-	black glass, brass eye (missing)	1	1.9
OB	iron/brass	2	1-1.1, 1-1.6
OB	iron/brass, face stamped "ARAGON/A.M.R.C.O."	1	1.6
	Structure 3		
7	brass, cast with eye in place	1	2.5
18	brass	1	2.1 "DOUBLE GILT"
21	iron, 4-hole	1	1.4
23	porcelain, 4-hole, brown edge, rays	1	1.4
23	porcelain, 4-hole	1	1.1
25	brass, stamped floral design	1	1.5
31	brass, cast, "I" on front (Confederate Infantry)	1	2.3
-	iron, eye on back	1	2.5
-	brass, eye in center, face stamped with 4 horseshoes	1	1.6
-	bone, 2-hole	1	1.3
-	shell, 2-hole	1	0.9
-	black glass, pattern of indented dots	1	1.7
-	plastic, white with eye	3	3-1.5
-	plastic, 2-hole, white	1	1.5
-	plastic, 2-hole, brown	2	1-1.3, 1-1.8
-	plastic, 2 hole, mock leather, olive green	1	1.4
OB	iron	4	2-1.7, 1-1.9, 1-2.0
OB	iron, face with train	1	1.7
OB	brass/iron	1	1.6
OB	brass/iron, face stamped "BLUE/BELL"	1	1.4, "SCOVILL"
OB	brass/iron, face stamped "BLUE/SANFORIZED/SHRUNK/BELL"	1	1.6
OB	brass/iron, face stamped "Sanforized"	1	1.5

of the buttons date from the late antebellum period, although their use continued into the early postbellum (types 24-32 in particular). Bib overalls were gradually introduced between the Civil War and the First World War. By 0902 the Sears, Roebuck and Company catalog was offering a range of overalls, advising customers that "when ordering other goods you cannot afford to omit at least a year's supply of overalls" from their selection (Sears, Roebuck and Company 1967:1154). Consequently, these items represent the period of postbellum tenancy at 38FL240. The ancestor of plastic buttons are those made of Parkensine (developed in 1866) or celluloid (developed in 1869) and further refined with the introduction of Bakalite around 1907. The industry saw noticeable expansion around 1930 and it is likely that the bulk of the plastic buttons found at 38FL240 date from the end of the first quarter or beginning of the second quarter of the twentieth century (Luscomb 1967:154; Robertson 1974:131).

Other clothing items identified from the structures represents a range of items, primarily including buckles, overall slides, suspender fasteners, and grommets. Occasional snaps, garter clasps, and similar items are also recovered, although the bulk of the collection seems to represent male work clothing. Shoe remains include both leather uppers and soles, as well as rubber sole fragments.

Personal Artifact Group

Personal items comprise only between 0.1% (at Structures 2 and 3) and 0.2% (at Structure 1) of the collections, although they represent great diversity (see Table 52).

Table 52.
Personal Items Recovered from Structures 1 - 3

Item	Structure 1	Structure 2	Structure 3
Jewelry			
Bar pin, brass with diamonds	1		
Earring, brass/glass clip-on	1		
Inset, hexagon milk glass fragment	1		
Pin or hair clip, plastic bird	1		
Stamped brass, heart shape			1
Beads	3		
Coins			
US penny, 1878	1		
US penny ≈ 1908	1		
US penny, 1918		1	
US penny, 1934	1		
US penny, 1945	1		
US penny, 1977			1
Toiletry Items			
Tube of "Colgate Dental Creme"			1
Ointment tube, folded			2
Other			
Pocket watch fragment	1		3
Key fragment	1	1	1
Condom tin lid	1		
Aluminum game/vender token	1		
Pocket knife fragment	1	2	
UID brass decorative object	1		
Black plastic comb fragment			1

These remains provide a more intimate glimpse of the occupants at 38FL240, revealing their interest in both clean teeth and "safe sex." The condom lid is made of a light gauge tin and is stamped "3/MERRY WIDOWS/PRICE $1.00/SELECTED BEST." Rubber (latex) condoms, frequently marketed in these tins, appeared at least by 1888 and probably a decade earlier (Robertson 1974:25).

Predominantly (although not exclusively) male objects include pocket knives and pocket watches, while more feminine objects are represented by the inexpensive jewelry items. The only coins found are pennies, testifying to either the poverty of the occupants or their thriftiness. The three beads from Structure 1 may form a thread of continuity between the tenant farmers and their slave ancestors, who frequently wore blue faceted beads.

Activities Artifact Group

Artifacts in this group represent items thought by South (1977:99-100) to display special variability which may point to a specific activity or site function, although often the class becomes a "catch-all" for artifacts which either do not fit elsewhere or which represent unidentifiable fragments. South originally defined a series 12 classes, including such items as tools, toys, storage items, stable and barn items, and miscellaneous hardware. Given the nature of tenancy, it might be reasonable to expect relatively large numbers of activity items, and this seems to be the case at 38FL240. The group comprises 3.3% of the assemblage at Structure 1, 3.0% at Structure 2, and 2.4% at Structure 3. The range of these items is shown in Table 53.

One of the most interesting artifacts in the Activities Group is the small, stamped brass "circus medallion," which is illustrated on the cover this study. The disk shows the profile of an elephant, surrounded by the announcement that the "GREAT EASTERN MENAGERIE MUSEUM AVIARY CIRCUS AND BALLOON SHOW IS COMING." The disk has a hole punched through it near the bottom for suspension. Information on the nature of the medallion was provided by the Circus World Museum in Baraboo, Wisconsin. The Great Eastern Circus was in operation from 1872 through 1874, under the direction of Andrew Haight, known to his contemporaries as "Slippery Elm" Haight. Haight had a long career in circus productions, often promising much more than was delivered. The Great Eastern Circus was formed around the remains of Col. C.T. Ames' show out of New Orleans. It featured a young elephant named "Bismark" -- the very elephant shown on the stamped disk recovered at Structure 1.

The menagerie included two cages of run-of-the mill wild animals, a performing den of lions, a couple of camels and, of course, the little elephant Bismark. Traveling by train, the Great Eastern Circus used 20 cars -- far fewer than either Barnum's or Forepaugh's. But that didn't stop Haight from advertising a "Big Twelve Tent Circus" with "herds" of elephants, "scores" of dens of wild animals, and "droves" of wild camels. He bought half and full page ads in all of the local newspapers, using much more publicity than any of the larger shows. Visiting one small town after another, his show was constantly able to stay a step ahead of disappointed reviews, enticing yet more locals to part with their money.

The demise of the Great Eastern Circus was probably the result of the tremendous competition during this early period of circus performances. Eventually the animals and property were auctioned off. Little Bismark was purchased by the Cincinnati Zoo, and was walked to his new home from Hamilton, Ohio by his cage boy. The cage boy, Sol Stephen, eventually became the zoo's most respected manager.

In February 1872 the Great Eastern Circus visited Union, Spartanburg, Greenville, Anderson, Newberry, Camden, and Orangeburg, before leaving for Augusta and other towns in Georgia. Later that year the circus again toured parts of South Carolina, with stops in Marion, Sumter, Columbia, and Charleston during September. In 1873, however, the circus actually came to Florence, stopping for only two days -- October 18 and 19 -- on its round from Marion to Sumter. It is likely that the cheap stamped brass token was used as another of Haight's promotional items. In this case it was preserved, probably by the child of a tenant farmer, and worn as a constant reminder of Bismark and a truly unusual event for the small, sleepy town of Florence.

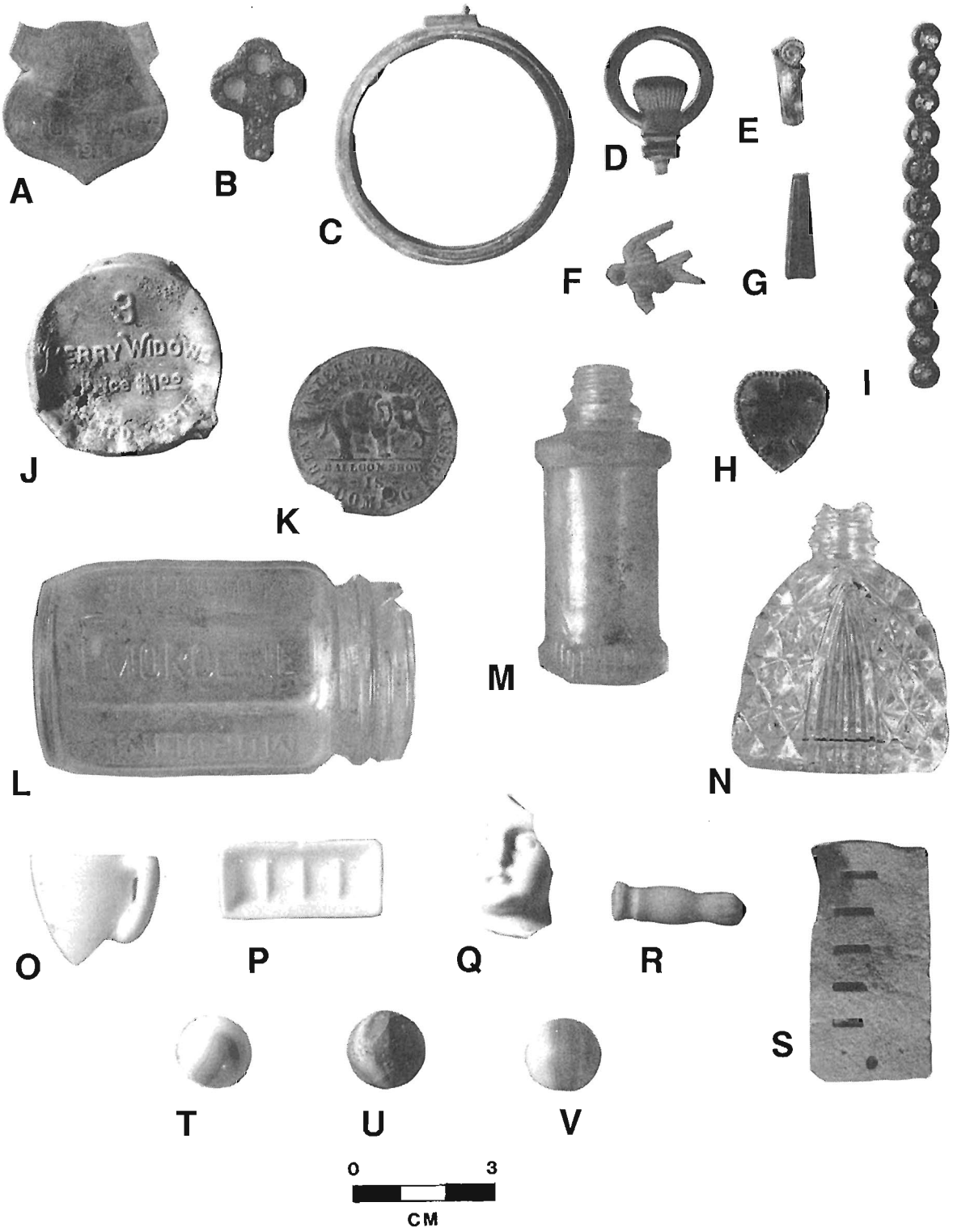


Figure 54. Personal and Activities Group artifacts. A, Dick Tracy toy badge; B, key stem fragment; C, pocket watch rim; D, pocket watch winding stem; E, clip-on earring with glass inset; F, plastic bird from pin or hair clip; G, decorative "bangle"; H, brass heart-shaped jewelry item; I, bar pin; J, condom tin; K, brass circus token; L, Moroline hair ointment jar; M -N, perfume or cologne bottles; O, toy tea cup; P, toy soap dish; Q-R, porcelain doll parts; S, harmonica reed; T-V, glass marbles.

Table 53.
Activity Group Artifacts at Structures 1 - 3

Item	Structure 1	Structure 2	Structure 3
Tools (Farm and Construction)			
Plow part	1	1	1
Ax head	1		
File	2	2	
Drill bit	2		
Wrench		1	
Other tools		1	1
Toys			
Porcelain doll parts	13	4	4
Porcelain toys soap dish	3		
Harmonica reed	3	1	
Glass marbles	8		5
Clay marbles		1	
Circus medallion	1		
Storage Items			
Strap fragments	9	21	3
Bucket/tub handles/lugs	3	1	7
Padlock part	1	1	
Stable and Barn Items			
Barbed wire/fence wire		1	14
Miscellaneous Hardware			
Wire fragments	16	7	38
Bolts/nuts/washers	10	5	13
S hook	1		
Chain link	2	2	2
Staple	1	7	9
Plumbing pipe	2		
Rivet	1		1
Spring	1		2
Screw		4	3
Other hardware	3	1	7
Other			
Spark plug	1		
Tire air valve	1		
D-cell batteries	4		7
Radio battery connector/9 volt batteries	1		5
Glass insulator	2		
Gear/machine parts	2	1	
Railroad spike	5	10	7
UID plastic/rubber	1	1	3
UID brass	9	2	4
UID iron	97	35	31
UID lead	1	1	4
Other	1	1	6

Dating, Patterns, and Status

Dating Synthesis

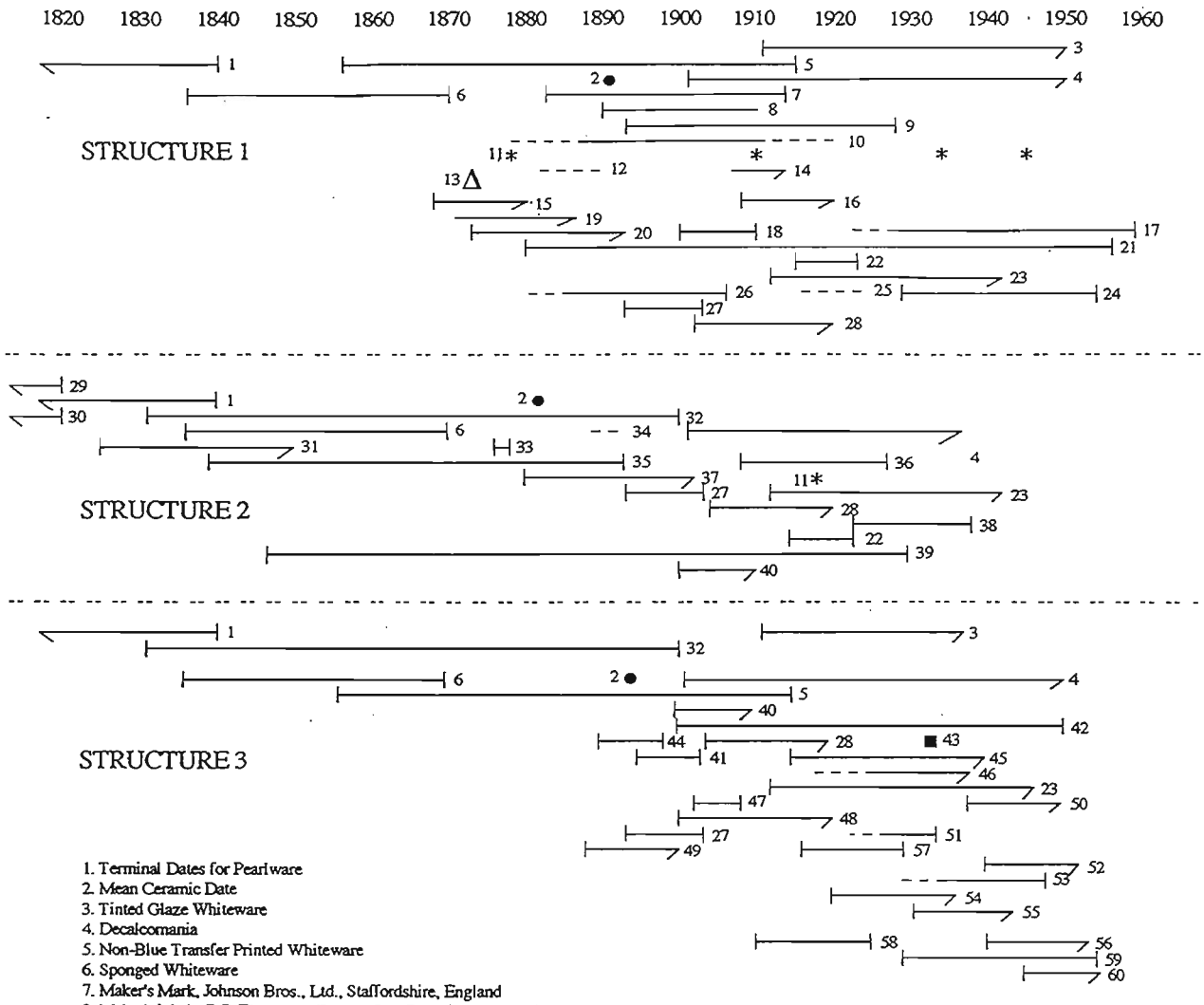
Ceramics, in particular, have been shown to be useful for obtaining mean occupation dates (Bartovics 1981; South 1977), although perhaps less so in the twentieth century than earlier. Other artifacts, while useful, are often not found in sufficient numbers to provide confidence in their associations. Some artifacts are useful for providing terminus post quem (TPQ) dates, or a date after

which the assemblage was deposited. Many artifacts, however, provide only a general time frame, such as "typical of the nineteenth century." On low status sites, especially sites which may have an earlier slave assemblage, extra caution is required since there can be considerable curation, or re-use, of objects with late eighteenth century materials finding their way into early or mid-nineteenth century deposits. Occasional references in the previous discussions have revealed that the artifacts at 38FL240 date primarily from the last half of the nineteenth century and first third of the twentieth. Based on architectural remains there is also some indication that the Structure 2 is the oldest, followed by Structure 1 and then Structure 3. These brief discussions will review the probable temporal parameters of materials recovered from the three structures.

Table 54 provides the mean ceramic dates for the three Structures -- 1891 for Structure 1, 1888 for Structure 2, and 1894 for Structure 3 -- although these dates are not likely as accurate as they could be given the long period of whiteware use and difficulty in establishing appropriate mean dates for many of the ceramics present at the sites. Structure 2 does yield an earlier date, albeit by only a few years (suggesting that it, too, was occupied well into the postbellum). More significantly, Structure 2 produced the largest proportion of pre-whiteware ceramics, with 6.9% of the datable collection consisting of eighteenth or early nineteenth century wares. In contrast, only 3.8% of Structure 1's ceramics pre-dated the mid-nineteenth century and only 2.7% of Structure 3's wares

Table 54.
Mean Ceramic Dates for Structures 1 - 3

		Structure 1		Structure 2		Structure 3	
Ceramic	(xi)	(fi)	fi x xi	(fi)	fi x xi	(fi)	fi x xi
Gilded white porcelain	1883	1	1883				
Undecorated white porcelain	1883	32	60256	39	73437	15	28245
Black Basalt	1785			1	1785		
Creamware, annular	1798			4	7192		
undecorated	1791			12	21492	3	5373
Pearlware, poly hand painted	1805	3	5415	2	3610		
blue hand painted	1800	3	5400			1	1800
blue trans printed	1818	4	7272	1	1818	3	5454
edged	1805	6	10830	2	3610	1	1805
annular/cable	1805	3	5415	2	3610		
undecorated	1805	5	9025	17	30685	6	10830
Whiteware, green edged	1828	1	1828				
blue edged	1853	5	9265	7	12971	9	16677
poly hand painted	1848			1	1848	9	16632
blue trans printed	1848	4	7392	4	7392	4	7392
non-blue trans printed	1886	15	28290	7	13202	3	5658
poly decalcomania	1926	9	17334	8	15408	15	28890
annular	1866	7	13062	12	22392	17	31722
sponge	1853	27	50031	5	9265	7	12971
tinted glaze	1941	11	21351			31	60171
undecorated	1898	469	890162	466	884468	380	721240
Yellow ware	1853	7	12971	5	9265	510	965978
Totals		612	1157182	595	1123450	510	965978
		1157182 ÷ 612 =		1123450 ÷ 595 =		965978 ÷ 510 =	
		1890.8		1888.2		1894.1	



1. Terminal Dates for Pearlware
2. Mean Ceramic Date
3. Tinted Glaze Whiteware
4. Decalcomania
5. Non-Blue Transfer Printed Whiteware
6. Sponged Whiteware
7. Maker's Mark, Johnson Bros., Ltd., Staffordshire, England
8. Maker's Mark, C.C. Thompson Pottery Co., East Liverpool, Ohio, USA
9. Maker's Mark, Baker & Co., Ltd., Staffordshire, England
10. Condom Tin Lid
11. Coins
12. Rogers & Bros. Spoon, Bloomingdale's Catalog
13. Circus Medallion
14. Prince Albert Tobacco Tin, Post 1907
15. Dry Cell Storage Batteries
16. Vaseline Jars, Threaded Lip
17. Nehi Cola
18. Boyd's Preserve Jar Cap
19. Hoyt's Nickel Cologne
20. Philip's Milk of Magnesia
21. Chesebrough Mfg. Co.
22. Coca-Cola Bottle
23. Chero Cola Bottle
24. Bottle Mark
25. Preserve Jar Mark
26. Mrs. Winslow's Soothing Syrup
27. SC Dispensary Bottles
28. Sanitary Seam Can
29. Black Basalt
30. Terminal Date for Creamware
31. Whitewares
32. Annular Whiteware
33. Maker's Mark, Powel & Bishop, Staffordshire, England
34. Maker's Mark, Harker Pottery Co., East Liverpool, Ohio, USA
35. Maker's Mark, W. Baker & Co., Trenton, England
36. Maker's Mark, Anchor Pottery Co., Trenton, New Jersey, USA
37. Vaseline Jar
38. Coca-Cola Bottle
39. Dr. H.F. Perry's Dead Shot Vermifuge
40. Hole-in-Top Can
41. Maker's Mark, Johnson Bros., Staffordshire, Engalnd
42. Maker's Mark, Edwin Knowles China Co., East Liverpool, Ohio, USA
43. Maker's Mark, Homer Laughlin, East Liverpool, Ohio, USA
44. Maker's Mark, Harker Pottery Co., East Liverpool, Ohio, USA
45. Coca-Cola Bottle
46. Crown Caps
47. Maker's Mark, Busch Bottling
48. Maker's Mark, Alloa Glass Works, Scotland
49. Double Side Seam Can
50. Maker's Mark, Bottle
51. Grove's Tasteless Chill Tonic
52. Duraglass
53. Moroline
54. Wright's Silver Polish
55. Vick's Vaporub
56. Maker's Mark, Tygart Valley Glass
57. Maker's Mark, Illinois Glass Co.
58. Maker's Mark, Tygart Valley Glass
59. Maker's Mark, Owens-Illinois
60. Bottle

Figure 55. Date ranges for artifacts recovered from Structures 1 - 3.

were early. It seems plausible that the low numbers of creamware and pearlware ceramics at these two other structures may reflect a general "smear" of early material across the site, deriving from other, but unidentified, slave structures thought to pre-date those currently identified. This analysis is supported by previously discussed yard density findings which suggest that there is a low density of remains scattered across the site, forming a general "background level" of artifacts.

There are a variety of other datable artifacts from the structures which help bracket the dates of occupation. Major sources for these dates include Bartovics (1981), Fike (1987), Godden (1964), Hudgins (1971), Jeter (1987), Rock (1989), and Toulouse (1971, 1977). Rather than belabor the findings with extensive verbal description, Figure 55 reveals the date ranges for a variety of artifacts recovered from the three structures.

Examining Structure 1, only the very small quantity of pearlware present at the site predates 1860 and this, given the remainder of the assemblage, is likely intrusive from other occupations. And although there are materials post-dating ca. 1925, they represent items such as bottles which could have become incorporated with the site through disposal from other dwellings. Based on these data it appears that occupation at Structure 1 began in the 1860s (perhaps postbellum, although this is unclear) and continued in the 1920s with abandonment probably by 1930.

In contrast, Structure 2 produced a much larger assemblage of early ceramics, suggesting that occupation began at least by the 1830s or 1840s, if it is assumed that some items were either curated or were given to the slaves as out-of-style "cast-offs." If late items, such as bottles and coins, which could have been accidently incorporated in the assemblage are removed from consideration (a reasonable precaution considering that the site appears to have been abandoned and then robbed), the terminal date appears to be in the first or second decade of the twentieth century[44].

Again assuming that the very earliest ceramics may represent inclusions from other, nearby structures, Structure 3 was occupied by about 1870, the latest date the sponged whiteware could have been deposited. Occupation at this structure, however, likely continued at least into the 1950s, based on the large numbers of late materials found in the excavations and the associated dumps.

Consequently, the dating supports our initial assessments, based on architectural remains and very small collections of ceramics, that Structure 2 was the oldest, originating during the site's use as a slave settlement, while Structure 1 was intermediate in age, and Structure 3 was the most recent.

Patterns

Up to this point South's artifact groups and classes have been used simply as convenient and logical means of ordering data, clearly recognizing that other methods are available (e.g., Sprague 1981, which is actually better suited for late nineteenth and early twentieth century data, although it has never been widely accepted). In this section these functional categories will be used for an "artifact pattern analysis" developed by South (1977) who believes that the patterns identified in the archaeological record will reflect cultural process and will assist in delimiting distinct site types. The recognition of patterns in historical archaeology is not an end in itself, but rather should be one of a series of techniques useful for comparing different sites with the ultimate goal of distinguishing cultural processes at work in the archaeological record (South 1989).

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[44] Structure 2 can also be dated by what is absent. For example, late materials such as plastic buttons and tinted glaze whitewares are noticeably absent, further supporting the described chronological position.

There can be no denying that the technique has problems (see, for example, Joseph 1989), some of which are very serious, but most of which are the result of either inappropriate use, small samples, or the effort to derive patterns from inadequate data. In fact, Joseph states:

> [w]hatever its flaws, the value of artifact patterning lies in the fact that it is a universally recognized method for organizing large collections of artifactual data in a manner which can be easily understood and which can be used for comparative purposes (Joseph 1989:65).

Even at the level of a fairly simple heuristic device, pattern analysis has revealed a number of "archaeological signatures" such as the Revised Carolina Artifact Pattern (Garrow 1982; Jackson 1986:75-76; South 1977) and the Georgia Slave Artifact Pattern (Singleton 1980). Other, less well developed and tested patterns include the Tenant/Yeoman Artifact Pattern (Drucker et al. 1984). And finally, there are patterns derived from studies such as at the freedman village of Mitchelville which have not been "codified" as formal patterns, but which offer trends, loosely clustering midway between the patterns of the Georgia Slave Artifact Pattern and the Tenant/Yeoman Artifact Pattern (Trinkley 1986). Several of these patterns are summarized in Table 55. A careful inspection of these patterns surprisingly reveals little or no overlap in the major categories of Kitchen and Architecture, which suggests that these two categories are particularly sensitive indicators of either site function (including intra-site functional differences) or "cultural" differences (see Garrow 1982:4; Joseph 1989:60; South 1977:146-154).

Table 55.
Comparison of Archaeological Patterns, by percent

Artifact Group	Revised Carolina[a]	Georgia Slave[b]	Carolina Slave[c]	Freedmen[d]	Piedmont Tenant/Yeoman[e]
Kitchen	58.4	22.9	77.6	36.8	45.6
Architectural	28.3	70.6	18.3	57.0	50.0
Furniture	0.4	0.1	0.1	0.7	0.4
Arms	0.2	0.1	0.2	0.3	-
Tobacco	7.9	5.0	3.9	0.7	-
Clothing	3.0	1.0	0.6	1.2	1.8
Personal	0.4	0.2	0.1	0.2	0.4
Activities	1.3	0.3	0.6	3.1	1.8

[a]Garrow 1982
[b]Singlton 1980
[c]Garrow 1982
[d]Trinkley 1986
[e]Drucker et al. 1984

When these patterns are compared to those derived for the remains at 38FL240 (Table 56) there is considerable overlap. Structure 2, previously discussed as being first occupied during the antebellum and abandoned by the second decade of the twentieth century, bears a close resemblance to the Carolina Slave Artifact Pattern. Typically associated with eighteenth century slave sites, it is perhaps more appropriate to describe this pattern as one associated with slave settlements with ephemeral architectural remains (as opposed to slave settlements with more substantial construction). There are several possible explanations for the similarity with Structure 2. It may be that the slave settlement at 38FL240 was poorly constructed and, in fact, ephemeral in nature. There is certainly circumstantial evidence to support this view, including operation by an absentee owner and the

reduced economic importance of plantations in this part of South Carolina. Further support is offered by our architectural reconstruction -- poorly laid firebox, shallow piers, and small floor area. Alternatively, the kitchen remains may have been inflated by the scavenging of architectural materials after abandonment and the sudden "wealth" of kitchen related materials obtained shortly after the Civil War. In other words, the pattern at Structure 2 may reflect a merging or blurring of several patterns, given that the dwelling was likely occupied both during slavery and immediately afterwards (the Mitchelville pattern reflects a settlement begun immediately after freedom and is not influenced by pre-freedom deposits).

Structure 1, which was used from the 1860s to the 1920s, reflects a pattern which is more similar to that observed at Mitchelville, likely because it contains no significant slave deposits. The pattern analysis from this site is also similar to other freedmen sites, such as those investigated by Kennedy et al. (1991:132) on Hilton Head Island, Beaufort County. In particular, the Activities Group typically is relatively high, especially in relationship to the other patterns.

Finally, Structure 3, the latest dwelling at 38FL240, appears as an anomaly. The site was initially occupied in the late postbellum and continued in use until the middle of the twentieth century. It seems reasonable that the site should reflect the Piedmont Tenant/Yeoman Pattern, although it bears greater resemblance to the Revised Carolina Artifact Pattern. When sites exhibiting a similar pattern are sought, there is a small cluster of late nineteenth and early twentieth century tenant and subsistence farms from the Coastal Plain which are clearly similar. For example, in work at the Parish Butler site (38SU81) kitchen artifacts accounted for 77.8% of the collection, compared to the 10.1% which were architectural remains. Activities group artifacts are also high, accounting for 10% of the assemblage (Trinkley et al. 1985). A nearly identical pattern was found at 38SU74, where 77.7% of the assemblage was kitchen related, 19.3% was architectural, and 2.2% were activities artifacts (Trinkley and Caballero 1983c). Since these sites were plowed it is not surprising that architectural remains are less common than at 38FL240. If it was possible to adjust for loss of architectural remains through plowing it seems likely that the patterns would be very similar, suggesting that another tenant pattern exists besides that developed by Drucker et al. (1984) for the piedmont.

Table 56 also shows the difference in the house and yard pattern for a representative structure (Structure 1). There are noticeable differences in the proportions of kitchen and architectural material in the house and yard excavations. As might be expected, the architectural items are less numerous in the yard excavations, while the kitchen artifacts decline in house or structural excavations. The proportions of other artifacts, however, remain stable between the two areas, suggesting a rather uniform distribution of refuse. This graphically demonstrates what most archaeologists already know -- that patterns generated on the basis of excavations which fail to take into account the full range of activity areas at a site will be biased toward one form of activity or another. What is perhaps not so well documented is that while these differences are clearly recognizable in the major categories of kitchen and architectural remains, they are difficult to distinguish in the other artifact groups.

Status

The term "status" is full of implications, and often used in the context of either social or economic status. Joyce (1993:158-159) critiques the use of social status by archaeologists, persuasively arguing that status is a value judgement assigned by society and perhaps not reflected in the ascribed values used by archaeologists. She also argues that what she calls "the status approach" substitutes things (items of material culture) for people (as she puts it, "living, breathing people of the past"). Further, she complains that the approach can be taken to an extreme where status is extended to

Table 56.
Artifact Patterns at Structures 1 - 3

	Structure 1				
	House	Yard	Combined	Structure 2	Structure 3
Kitchen Group	38.8%	56.7%	42.9%	73.1%	64.0%
Ceramics	464	197	661	634	533
Glass	1339	554	1893	2037	3604
Tableware	90	14	104	73	79
Kitchenware	60	70	130	190	368
	1953	835	2788	2934	4584
Architectural Group	55.9%	38.6%	52.0%	22.3%	31.4%
Window Glass	72	35	107	21	20
Door Lock Parts	2		2		3
Construction Hardware	6		6	4	49
Nails	2527	532	3059	865	2167
Roofing Material	198		198		
Spikes	4	1	5	4	10
	2809	568	3377	894	2249
Furniture Group	0.3%	0.3%	0.3%	0.4%	0.1%
Furniture Hardware	16	5	21	18	5
	16	5	21	18	5
Arms Group	0.3%	0.2%	0.3%	0.4%	0.1%
Shells/Casings	15	3	18	14	8
Flints				1	
	15	3	18	15	8
Tobacco Group	0.1%	0.1%	0.1%	0.1%	0.1%
Clay Pipe Stems	1		1	1	1
Clay Pipe Bowls	2		2	1	2
Other Pipe Stems	1		1		
Other Tobacco Items	3	1	4		3
	7	1	8	2	6
Clothing Group	0.9%	1.0%	0.9%	0.6%	1.7%
Buttons	27	9	36	13	28
Other Clothing	14	4	18	12	40
Shoe Frags	2	1	3		52
	43	14	57	25	120
Personal Group	0.3%	0.1%	0.2%	0.1%	0.1%
Jewelry	4		4		
Coins	3	1	4	1	
Other Personal Items	9		9	3	10
	16	1	17	4	10
Activities	3.4%	3.1%	3.3%	3.0%	2.5%
Tools	4	2	6	9	6
Toys	14	14	28	7	9
Storage Items	6	7	13	23	10
Stable and Barn	1		1		14
Misc. Hardware	36	8	44	27	86
Other	108	15	123	53	56
	169	46	215	119	181

reflect the quality of life. There can be little disagreement with Joyce's fundamental issues: status ***is*** given to individuals by society, not artifacts; material reflections of status ***can*** be confusing, especially when viewed out of context; and changes in status as perceived in the archaeological record do not ***necessarily*** reflect any improvement in the quality of life. Unfortunately, while offering a very valid critique, Joyce fails to devise any approach to order data that is more appropriate. She is correct that archaeological research perhaps creates a world that is too ordered, too rational, but until an approach is offered that better reflects how status was ascribed, using only archaeological data without the benefit of oral history (see Geismar 1982), we are faced with the task of adapting traditional approaches the best we can without falling into too many of the traps highlighted.

Otto (1984) explored status on the coastal Georgia Cannon's Point Plantation by comparing the different vessel forms from the owner's kitchen, the overseer's house, and the slave settlement, finding that flatware tended to dominate the planter's tableware, while hollow ware tended to dominate the slave assemblage. Otto explained this by suggesting the slaves were more prone to eat one-dish stews, while the owner participated in a more ritualize dining experience requiring flatware. Otto's original observations have been confirmed at numerous additional plantation settlements, although the effect of freedom and tenancy are not as well documented. At Mitchelville the assemblage was evenly split between flatware (31.3%) and hollow ware (31.3%). Serving pieces accounted for 6.0% of the assemblage and utilitarian wares another 9.0%. The remainder, 22.4%, consisted of tea and coffeewares (Trinkley 1986). Mitchelville documents the gradual movement away from slave reliance on one-pot meals toward the incorporation of a greater variety of tablewares, especially flatware. Table 57 reveals a continuation of this shift at Structures 1 - 3. There seems to

Table 57.
Shape and Function of Ceramic Vessels from Structures 1 - 3

	Structure 1		Structure 2		Structure 3	
Shapes	#	%	#	%	#	%
Tablewares						
Plates/saucers	82	56.1	63	50.4	75	56.8
Bowls	34	23.3	31	24.8	35	26.5
Serving	7	4.8	-	-	-	
Tea and Coffeeware	15	10.3	25	20.0	16	12.1
Utilitarian	8	5.5	6	4.8	6	4.6

be little, beyond this continuation, which sets the forms of vessels used by tenants apart from those used either by slaves or freedmen. Serving vessels, not common in slavery, continue to be rare items. This, however, is consistent with our understanding of the tenant diet and food preparation methods. Utilitarian vessels, primarily storage containers, continue in the assemblage at about the same proportion as during slavery. What is perhaps more telling is that none of the vessels identified at 38FL240 represent items which might be churns -- indicating that fresh milk was not commonly enough available to warrant having a churn on hand to make butter.[45] The proportion of tea and

[45] One reviewer has questioned whether there might be a biocultural explanation for this absence. There is a substantial literature reviewing the effect of milk intolerance on the consumption of milk by African American slaves (see, for example, Cardell and Hopkins 1978; Kiple and King 1981:84-85, 90). There is clear evidence that many blacks have a lactase deficiency which can be traced into slavery and which is more or less obvious in the historical records. While it seems unlikely

coffeeware declines from slavery, although glass tumblers replace ceramic cups and mugs in the assemblage, so when both ceramics and glassware are considered the numbers of drinking vessels actually increases.

Another potentially revealing analysis concerns the surface decoration of ceramics at the various structures. Otto (1984:64-67) found that the late antebellum Cannon's Point slaves tended to use considerably more banded, edged, and hand painted wares than the plantation owner, who tended to use transfer printed wares. The overseer was intermediate in this scale, although the proportions of decorative motifs were generally more similar to the slaves' than to the owner's. Part of the explanation, of course, involves the cost of the various motifs, with plain, edged, and painted wares costing less than transfer printed pieces. Research at Mitchelville revealed little change -- freedmen still used predominantly plain wares (which accounted for 67.2%, n=41 vessels), followed by hand painted (11.5%, n=7 vessels), and transfer printed (9.8%, n=6 vessels). Annular ware and edged vessels, often associated with slavery, together account for only 11.5% (n=7 vessels). In simple terms, the Mitchelville data suggests the African Americans at that site turned their backs on the wares they were most often provided as slaves and began using either plain wares (which were easily affordable) or a greater variety of decorative wares (such as transfer printed or hand painted).

Table 58 shows the proportion of decorative elements found at 38FL240. Plain wares consistently account for about two-thirds of each assemblage. The remaining one-third is divided among a wide range of decorative motifs available at the time the site was occupied. At Structure 2, the earliest of the three and expected to date from the late antebellum as part of the original slave settlement, annular and edged wares account for 15% of the assemblage (or 43% of the wares which are not plain). A similar pattern is seen at Structure 1, where 46% of the decorated ceramics are either annular or edged. At Structure 3 these wares account for only 20% of the decorated assemblage.

Table 58.
Decoration of Ceramic Vessels from Structures 1 - 3

	Structure 1		Structure 2		Structure 3	
Types	#	%	#	%	#	%
Undecorated	81	66.4	71	66.4	69	67.0
Annular	8	6.6	10	9.4	-	-
Edged	11	9.0	6	5.6	7	6.8
Hand painted	9	7.4	7	6.5	9	8.7
Transfer Printed	9	7.4	6	5.6	4	3.9
Decalcomania	2	1.6	5	4.7	6	5.8
Tinted	2	1.6	-	-	8	7.8

In one respect the efforts to perceive status at 38FL240 have been successful -- there seems to be an indication of a uniformly low status, exactly what might be expected within a "culture of poverty." What has been less successful is seeing as clear a distinction between slave, freedman, and tenant in the late nineteenth century as can be seen between slave and owner in the early nineteenth. Mitchelville continues to stand out as a unique assemblage. It reflects the beginnings of African

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that this intolerance is directly evidenced by the absence of stoneware butter churns (since both butter and buttermilk are more readily digestible than milk) it is possible that the intolerance lead to a disinclination to keep milk cows, which in turn lead to a reduced need for kitchenwares related to milk and milk by-products.

American freedom largely unencumbered or unrestrained by the Black Codes and other repressive measures designed to ensure that blacks were maintained in a system close to political and social slavery. Perhaps it is not surprising that the artifacts of tenancy bear a closer resemblance to slavery than they do to the freedmen's village of Mitchelville.

Lifeways from Slavery to Tenancy

As alluded to in the previous discussions, the examination of the collection from 38FL240 does not allow a "grand synthesis" of the gradual, but steady, progression from slavery to freedom. Instead, what we see is an assemblage that is as meager in some respects as that of any slave site. Of course, as Joyce (1993) warns us, we should not judge the importance of freedom on the basis of material goods. As the Bible warns, what good does it do to have wealth, if one loses his or her soul. In postbellum South Carolina African Americans were "free," although many still had few social, political, or economic options. Life continued for many, perhaps most, with relatively few changes -- blacks were still tied to the land, still tied to a system of white rule, and still poor. But, they were free and that alone was the cause for celebration and jubilation.

In terms of architecture, there were clear changes from the antebellum to the postbellum, both in terms of size and substance. The one structure explored from the period of about 1830 or 1840 is very small, perhaps only 8 feet in width. The brick fire box is poorly constructed, held together with little more than clay for mortar. The bricks themselves are hand made and poorly fired. Piers were shallowly placed and may have consisted of logs or, at best, flimsy brick columns. It seems unlikely that there were door locks, leaving the slaves prey to any marauder. The initial slave housing had no glassed windows, only shutters. The roof was likely covered with wood boards, or less likely, shingles. The slave housing at the Gibson Plantation bears no resemblance to the "improved" housing which dominated the late antebellum literature of "progressive" slave owners. Instead, it gives the impression of extreme poverty. But in spite of this appearance, construction materials, especially nails, indicate that the house combined traditional craft techniques with the new style of balloon framing. By the postbellum the housing at 38FL240 became larger and more complex. At Structure 1, for example, the chimney was well constructed mixing the old hand-made bricks with newer machine made ones. It was held together with hard cement mortar rather than a mixture of clay and a little lime. The house had glassed windows, lockable doors, and measured 15 by 14 feet[46]. It even had a 4-foot wide porch, offering the occupants some respite from the southern heat. Still of frame construction, the remains indicate complete reliance on balloon framing techniques and total abandonment of earlier craft traditions. But perhaps of most interest is that while the slave dwelling housed a single family, the "new" style of architecture on the Gibson Plantation was a double pen house, intended to be used by two families. Whether this change was the result of the post-war economy (reducing the number of chimneys and hence bricks and labor), was an effort to exercise greater control by the plantation operator, or was a conscious choice by the tenants themselves (perhaps reflecting the importance of kin relations on the plantation) is unknown. In retrospect, it would have been useful to excavate both sides of the one structure to compare artifact patterns, evidence of status, and even explore mends and matches among ceramics and glassware -- but this must be a research goal for future projects. By the twentieth century housing had become even more complex, as evidenced by Structure 3. The size continues to increase to 12 by 24 feet, not counting a 7 by 24 porch or an 8 foot lean-to addition. The chimney is totally constructed of machine made brick, although in an effort to economize the mortar is very sandy and friable. There is also evidence of repair and refurbishing, as attempts were made to keep the structure habitable. By this time some effort had been made to provide the benefits

[46] Curiously the "standard" in late antebellum slave housing appears to have arrived at the Gibson Plantation only after freedom, with antebellum slaves living in housing that more closely approximates that typical during the late eighteenth and early nineteenth centuries.

of rural electrification to the tenants, and this structure was probably equipped with at least one or two overhead lights. The structure was also a single pen dwelling. It is difficult to determine whether this represents a shift away from the more communal living implied by double pen houses or a break down of kinship patterns at the Gibson Plantation. Regardless, this small sample suggests a pattern that deserves additional investigation at future projects.

Moving from the houses themselves to the surrounding landscape, there were equal changes from slavery to tenancy. At Structure 2 there are no signs of intentional landscape improvement, although perhaps such improvements would be difficult to see after all these years. What is visible, however, is severe erosion just feet away from the house with no obvious effort to stem the problem or restore the landscape. This absence of interest speaks volumes. During the postbellum there was obvious interest in controlling nature around the houses through the planting hardy flowering perennials. Landscape control is also evidenced to some degree in refuse disposal. Throughout occupation at the site there was a consistent pattern of trash disposal, suggesting that the yards were swept or otherwise kept clean of large trash. It wasn't, however, until late in tenancy that trash middens begin to be seen at the edge of the yard. Prior to that time there either was insufficient trash to worry with or it was removed off-site. The trash dumps seem to follow a relatively well established pattern which determines contents, distance from the house, and form. It was also only late in tenancy at the Gibson Plantation that we found any evidence for homegrown hogs, although it may be that we simply did not explore sufficient yard area to identify the relatively small area used for this function. Obviously, the questions of yard related activities and their occurrence at different types of sites are very important and deserve future research.

The nature of the artifacts themselves has been discussed at length, but it is appropriate to mention that some changes from slavery to freedom were observed. Annular and edged ceramics are slightly more common at Structure 2 then elsewhere on the site. Plain wares, likely because they were inexpensive, dominate the collection. Unfortunately, structural evidence and landscape alterations tend to remain as discrete indicators of past lifeways long after the pattern of ceramic usage has been blurred by change. This was the case at Structure 2, where no clear evidence of slavery could be seen in the ceramics. All three structures evidenced a reliance on plates over bowls, suggesting a conventional diet well described by social scientists studying tenancy at the time. Utilitarian vessels, while present, reflect primarily storage containers. We found, for example, no evidence that any of the three structures had a churn, leading us to believe that there was no sufficiently dependable source of milk to warrant making butter, even occasionally.

The artifacts do allow us to glimpse the lives of those who lived and worked at the Gibson Plantation. We can see, with some exceptions, that in terms of material objects there was relatively little difference between slavery and freedom. The ceramics were similar, the clothes were similar, the toys were similar. These similarities tend to promote only a one-dimensional view of the site, its occupants, and the past, while the exceptions permit a multi-dimensional view. While this may be criticized by some colleagues as offering a very particularistic, Noel Hume-type view, we are also reminded that Ivor Noel Hume's books are sought out by the public who want to understand what the past was like, while "more scholarly" tomes gather dust.

The assemblage at Structure 2, especially when compared to either Structure 1 or 3, is rather sparse. There are almost no personal artifacts, such as the watches, pocket knives, jewelry, or coins found at the other dwellings. Clothing artifacts, while proportionally comparable, evidence very little variety, representing simple items from very plain clothes. The only medicinal bottle found at the site was "Dr. H.F. Peery's Dead Shot Vermifuge" for worms, a common problem among nineteenth century rural populations. Relatively few of the bottles contained alcohol; most were soda water. All three structures had a number of doll parts, indicating the presence of female children. What is perhaps more interesting is that while black dolls were available, although more expensive, all of the dolls

were white. The impact of this subtle form of racism is difficult for most of us to understand, although it certainly had an impact on the children of these freedmen. Even seemingly simple artifacts, like kettle fragments, can assume some degree of interpretative significance. We found the numbers declining after slavery, indicating that previous patterns of rural life were beginning to change.

Structure 1 is richer in "unusual" artifacts. The presence of face cream and other toiletry items, including a number of empty Hoyt's Nickel Cologne bottles, relatively fancy (although inexpensive) jewelry such as a diamond bar pin and glass earrings, and a pressed glass vase help us understand the less harsh side of these tenants' lives. But the other side was always in plain view. The ratio of soda water to alcohol bottles increases from 1:0.7 at Structure 2 to 1:2.4. The number of canning jars nearly doubles. Medicinal containers increase from the one at Structure 2 to nine at Structure 1. Included are patent medicines such as Mrs. Winslows Soothing Syrup for teething babies to milk of magnesia for diarrhea and stomach complaints. In addition, at least one veterinary medicine bottle is present, suggesting that the tenant had some form of livestock. Work related items are relatively abundant and include a plow part, several drill bit fragments, file fragments, and miscellaneous bits of hardware. Also recovered was an aluminum token stamped, "L. Rankin Lumber Co./ 25¢ Token," probably given to wage laborers as part of their pay and intended to be used in the company store. This one artifact suggests that the individual living at Structure 2 may have not only farmed, but also worked in a lumber mill, perhaps during the off-season. It is likely that sufficient income was present in the household to permit at least one child to visit the Great Eastern Circus, keeping the promotional token as a remembrance of that visit.

The assemblage at Structure 3 is equal to, or slightly larger than, that found at Structure 1. A similar assortment of toiletry items, including perfume bottles, talcum powder, and Moroline Hair Tonic bottles were found. The variety of clothing items is exceptional, with almost every type of clothing represented, from shoes to work pants and overalls, to a woman's garter clip -- revealing the same pride of appearance seen in Structure 1. The presence of a thimble at this structure is the only evidence of what must have been the need for constant repairs and refurbishments to make clothes last longer or fit a smaller child. The ratio of alcohol to soda water levels off at 1:1, perhaps reflecting the increasing availability of different "soft drinks" during the early twentieth century. The number of medicinal bottles, however, continues to climb. At Structure 3 there are several examples of "Groves Tasteless Chill Tonic," extract bottles which contained a variety of medicinal herbs, pharmaceutical bottles reflecting purchased medicines and proprietary medicines such as Vicks Vapo-Rub. Also present were several lead ointment tubes, which may have been either toiletry or medicinal items. Doll parts and marbles continue to provide clear evidence of children, as does a tap plate for a child's shoe, and a plastic nipple seal for a glass baby bottle.

Typically tenant sites produce few faunal materials and the impoverished assemblage is typically explained by food preparation, consumption, and disposal habits, as well as the presence of scavengers. All of this is true at 38FL240 -- at least at one level. Faunal material is scarce and floral material is almost non-existent. Historical accounts do confirm that the foods eaten, the ways they were prepared, and the way refuse was disposed of all will affect the recovery of dietary information through archaeological studies. Yet, at 38FL240 we were able to make some progress in better understanding what slaves, freedmen, and tenants ate.

Although much of the bone was highly fragmented, enough was identifiable to document the, not unexpected, importance of pork. While we anticipated a range of meat cuts, characteristic of homegrown meat, virtually all of the cuts were jaw and jowl. Such low status cuts (i.e., reflecting a relatively low meat to bone ratio) are common at slave sites where the better meat was reserved for the plantation owner, but were unexpected at Structures 1 and 3. Where the better cuts went is not clear -- they may have been sold to the general store as a source of ready income, or alternatively the

meat may represent rations given to tenants rather than homegrown livestock. It was also surprising that greater variety was seen at Structure 2 than at either of the two sites representing only freedmen or tenant settlements. The near absence of wild resources in the diet indicates that slaves, freedmen and tenants had few opportunities to supplement their diet through hunting, fishing, or opportunistic trapping. This may indicate a very harsh work load.

When broad patterns at 38FL240 are examined in light of our knowledge of freedmen occupation from sites such as Mitchelville, there are perhaps some continuities. For example, even at Mitchelville annualar and edged wares were uncommon -- having been abandoned almost immediately by the freed blacks as symbols of their previous slavery. It is perhaps not surprising that even at Structure 2 (which continued to be occupied into the early postbellum) there is a very low incidence of these motifs. Likewise, Mitchelville reveals that blacks very quickly changed their dietary pattern, adopting plates at the expense of bowls. Perhaps this, too, is an effort to change cultural patterns perceived to be associated with slavery. Once changed, it is easy to understand the continuity on the new dietary patterns into the postbellum. Mitchelville also revealed an almost immediate and unsatiable desire for "white" fashions, with "negro cloth," and similar symbols of slavery also rejected. This is perhaps seen in the diversity of clothing items from Structure 1 when compared to Structure 2. Just as the presence of blue faceted beads continued at Mitchelville, so too are they found in Structure 1, nearly a generation after slavery. While the low incidence of tobacco related items at 38FL240 has been explained as related to the surge in cigarettes and chewing tobacco during the late postbellum, this may be a freedmen pattern. The incidence of tobacco declined from upwards of 9% or 10% at many coastal slave sites to under 1% at Mitchelville. This cannot be explained by a lack of funds, since the black wage laborers were active consumers. It may be that blacks also associated tobacco with slavery[47] -- it having been provided by the slave owner as subtle means of exercising control over his slaves. Consequently, the low incidence of tobacco artifacts at 38FL240 may represent a continuation of a freedmen pattern previously unrecognized.

These comments hopefully open a new field of discussion. What were the symbols of racism and control on the Southern plantation? While whites may have seen watches and canes as their symbols of power (see Joyce 1993:157), blacks may have seen ceramics and tobacco as symbols of their repression. Having been liberated from slavery, what baggage did the freedmen take with them and what was left behind? Why were some items perceived of so negatively? These questions have been posed and briefly explored by this study, but obviously await further research.

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[47] Although Genovese (1972:644) comments on the heavy use of tobacco by slaves, remarking that "keeping the slaves reasonably quiet meant keeping them in tobacco," he also quotes an oral history of an elderly black woman explaining tobacco smoking to her daughter: "Tain't no fun, chile. But it's a pow'ful lot o' easement. Some away trouble, darter. Blow ole trouble an' worry 'way in smoke."

CONCLUSIONS

38FL249

The excavations at 38FL249 provided the opportunity to explore Archaic and Woodland period settlement and resource exploitation at a level not previously examined in the Pee Dee basin area. Anderson and Sassaman (1992:337) note that future Paleoindian and Early Archaic research should target the Coastal Plain counties, a view earlier voiced by Blanton and Sassaman (1989:68) for the Middle Archaic. Likewise, our understanding of the Woodland Period is largely based on either research conducted on the Lower Coastal Plain, or in the North Carolina Piedmont. Consequently, these investigations contribute an important body of data toward our understanding of prehistoric occupation in the Upper Coastal Plain.

At a site specific level, it seems that proximity to the spring head was a dominant factor in the settlement decision only for the Woodland groups. Earlier Archaic groups appear to be more diffusely settled on the sandy ridges, without the close orientation to the spring found during later periods. This may be explained by the exploitation of a broad resource base using a generalized foraging strategy during the Archaic, with considerable residential mobility, compared to the more focused resource exploitation and reduced mobility during the succeeding Woodland period. A further distinction between the Archaic assemblage and the later Woodland assemblage is the dominance of what Binford (1979:262-264) has termed "situational gear" or quickly made, opportunistic tools in the Archaic, while the Woodland occupation was dominated by the more formalized tools of "personalized gear." The broad range of lithic resources utilized by both Archaic and Woodland groups is suggestive of a large seasonal round territory which incorporated quarry sites for the bulk of the materials on a regular basis.

The presence of abundant fire cracked rock in the Archaic assemblages and pottery in the Woodland, suggests that the site served as a periodically revisited camp. Blanton et al. (1986) have previously suggested that the vessels dominating such sites were used for storage, perhaps of collected resources. During the Woodland Period preservation is such that it is possible to document the collection of hickory nutshells, deer, and occasional small mammals and turtles -- an assemblage generally reflective of a fall occupation. While no structures were identified, there is such clear horizontal clustering of pottery and other artifacts that it is possible to speculate that some type of structures may once have been present.

The Woodland pottery has been carefully examined with particular attention to a detailed analysis of the paste and also the fabric and cordage impressions. The research identified three distinct, but possibly contemporaneous or at least overlapping, assemblages. After examination of the site specific characteristics and comparison with other assemblages, these have been identified as Wilmington, Yadkin, and either Badin or Cape Fear (depending on the terminology employed). The Wilmington wares exhibit both clay grog and sherd temper, with no other identified differences between the two "sub-wares." In addition to the paste, the Wilmington and Badin/Cape Fear assemblages also exhibit noticeable differences in the fabrics used for surface treatments. Otherwise, the study was unable to identify any clear correlation between ware and twist.

The assemblage was dated to A.D. 500, falling between the Middle Wooldand Deptford III and McClellanville Phases as proposed on the basis of the Mattassee Lake study (Anderson et al. 1982).

The assemblage of Wilmington, Yadkin, and Badin/Cape Fear wares recovered from 38FL249 has been projected for the McClellanville Phase by Anderson, and the relatively rare occurrence of Deptford wares at the site is appropriate for a post-A.D. 500 time period.

Lithic research at the site focussed on vertical and horizontal patterning with specific interest in changing preferences for raw materials. The site exhibited evidence that Woodland Period features, now leached, once existed adjacent to the spring head. Archaic Period artifacts in this area were found in every level, whereas ridge units located away from the spring contained the bulk of early diagnostic material in the lower levels of excavations. Archaic and Woodland lithic debitage profiles indicate that while rhyolites were the preferred material through time, Archaic Period people were using a significantly larger amount of argillite and orthoquartzite, which suggests a more diffuse seasonal round pattern. The majority of primary lithic working activities took place elsewhere (probably at the source), and the materials came back to the site either as bifaces or finished tools. Based on the lithic reduction profile, it is probable that more early stage production took place in the Archaic Period.

Given the sparsity of work in the Coastal Plain, investigations at 38FL249 offer a contribution to the data base begun with investigations at 38SU83 (Blanton et al. 1986) and similar sites. Research at 38FL249 is also important for documenting that significant, stratified prehistoric remains can be identified and isolated in the upper coastal plain of South Carolina. Too often typical shovel testing in cultural resource management studies makes little effort to determine the depth of deposits, suggesting that sites with several feet of deposition may be missed if there isn't a concerted effort to identify their existence. The close association between the stratified deposits and the spring head suggests that it may be useful to develop survey strategies which pay special attention to similar wetland areas.

The research at Locus 2 revealed that the surface assemblage was much more impressive than that found below ground. While there were several feet of stratigraphy at Locus 1, Locus 2 in the plowed field yielded only 0.7 to 0.9 foot of truncated site, exhibiting everything from Early Archaic projectile points to Middle Woodland ceramics. The assemblage was so small that the pottery recovered could not even be incorporated into the analysis and the lithics are primarily useful as temporal markers. In the depressions between the sandy ridges, where we hoped to find some remnant stratigraphy, we found instead nearly sterile soils.

The investigations, however, are also significant for what they have also taught us about excavation methodology and strategies. While the employed strategy of random units was useful in better understanding intra-site variability and distribution of different materials, it also revealed that the investigation and resolution of activity areas within such sites will require the intensive hand excavation of large site areas. While the current work provides a glimpse of intra-site patterning and the density of remains which can be expected in the vicinity of the spring, it failed to allow the exposure necessary to fully understand how the site was used. What this means, in simple terms, is that future investigation should incorporate a period of intensive site testing to accomplish the study of intra-site variation, but it should be followed by a longer period of intensive excavation of the site core. This areally broad excavation should be conducted using refined stratigraphic levels and waterscreening of deposits for improved recovery of floral and faunal remains.

The investigations at 38FL249 have demonstrated that Coastal Plain sites are not totally leached and bioturbated -- they can provide an essential understanding of past lifeways, but only if we are willing to conduct the detailed, and costly, excavations that the nature of the data requires. To answer new questions, or refine the answers to old questions, will require new approaches, more time, and greater levels of funding. Maintaining current levels of funding at these sites will maintain the current level of research methodologies which will likely lead to relatively little new information

and the loss of many significant sites.

38FL240

Research at 38FL240 provided the opportunity to explore slavery and freedom at an Upper Coastal Plain plantation during the late antebellum into the early twentieth century. Through the excavation of three structures it was possible to better understand the architectural features, yard patterning, landscape, and material culture of the African Americans who lived on the Gibson Plantation. While most of our previous research on slave lifeways has come from the Sea Islands, there is a growing interest in, and awareness of, slavery in the upper reaches of the coastal plain (see, for example, Drago 1991). In comparison with low country slave sites, the Gibson Plantation shows no improvement -- the artifacts are sparse and the assemblage is impoverished; the dwelling investigated is even more cramped than those on the coast; the diet reflects the same monotonous regimen of pork probably supplemented with corn meal. Since there seems to be good evidence that the effects of slavery were at least slightly ameliorated by the wealth and success of the master, it seems likely that slavery was even more overpowering at interior plantations since wealth was concentrated on the coast.

While each of the three structures explored evidence overlapping dates (we were not fortunate enough to find, for example, a structure used only by slaves and another used only by freedmen, and a third used only by 1920s tenants), through detailed examinations of the artifacts it was possible to begin sorting out the lives of those at the plantation. We were able to determine that the diet of the freedmen on the plantation did not dramatically improve and, in fact, it appeared to get more monotonous, with less diversity in the foods present. There still was little opportunity, even in freedom, to supplement the diet with the range of wild plant and animal foods present near the site. While the diversity and quantity of artifacts slowly increased, what was most noticeable is how many of the artifacts of slavery seem to quickly drop out of the assemblage as the freedmen turned their backs on them. Consequently, edged and annular wares are a small percentage of the assemblage, bowls are quickly replaced by plates, more elaborate clothing and personal items are found. Other signs of freedom include a greater effect on the landscape and a gradually increasing diversity in housing forms and features. One of the most interesting features is the low incidence of tobacco related items on the sites, even when the effects of cigarettes and chewing tobacco are factored in. It is suggested that tobacco might also have been strongly associated with slavery and may be another symbol of the past rejected by the freedmen.

One of the major research goals, however, was not directly achieved. We had hoped to compare and contrast the assemblage present at 38FL240, a nucleated or linear settlement, with the assemblage collected from relatively extensive excavations at several isolated tenant houses on the plantation dating from the same period. This was not possible since the determination was made that these other structures are not eligible for inclusion on the National Register. The small assemblages present are probably not appropriate for comparison to the broader exposures present at 38FL240.

As more studies are conducted and more data is synthesized, it may be possible to begin peeling back the layers of irrelevant data which mask a clearer understanding of the transition from slavery to freedom. This, however, will only be possible if additional sites such as 38FL240 are targeted and investigated. Relying on one site to reflect the diversity of cultural experiences is obviously inappropriate, reflecting what Joyce (1993) refers to as "intellectual elitism." We have, albeit imperfectly, shown that by careful analysis of entire assemblages, it is possible to make sense even of those which were deposited by slaves and later freedmen. That a site contains such a mixed assemblage is no more a rationale for ignoring it then is the fact that it may be plowed. Both are almost natural conditions in South Carolina.

Certain methodological questions were also addressed by the research. For example, at the suggestion of the State Historic Preservation Office we subdivided our 10-foot excavation units into 5-foot quadrants for additional analytical precision in the hope that we could identify specific activity areas. This was not possible and it seems unreasonable to duplicate this endeavor at future sites. It seems that for most activities the 10-foot unit provides adequate precision (although clearly this will vary with the questions being posed). We are pleased that the nearly equal attention devoted to both yard and house areas were able to address questions related to both the nature of refuse disposal (yard sweeping, for example) as well as the nature of the architecture present. The work, however, could have been improved by expanding the extent of yard excavations. The research suggests that it will be possible to define at least some of the known yard activity areas at sites such as 38FL240, if there is adequate excavation. This research is essential to explore the use of space and incorporate landscape issues into our studies.

An area of research regrettably not included in the current study, but which should be incorporated as possible, is the comparison of social status offered by double pen housing. It would have been useful at Structure 1 to compare the assemblages from the east and west halves of the structure. This approach would allow spatial, temporal, and other variables to be held constant, while examining differences in ceramics, artifact patterns, and assemblage wealth.

Investigations at 38FL235 and 38FL269 are also useful at better understanding the ability of traditional cultural resource management practices to appropriately manage tenant sites. The limited research revealed that cruciform shovel testing, even at close intervals, may fail to accurately determine site boundaries, leaving sites open to damage even once green spaced. The studies found that controlled surface collection produced a very different pattern than controlled excavations, with the surface collection over-selecting for kitchen related items (primarily ceramics and glass), while under-selecting for architectural materials (such as nails). Curiously, the other artifact groups are proportionally very similar, suggesting that they are not greatly affected by collection strategy. Research also suggests that it is the number of artifacts collected, not necessarily how they are collected, which will lead to the most reliable conclusions and that researchers should strive to ensure they achieve the largest practical collections in the course of their studies. Investigations at 38FL269 revealed that initial compliance related shovel tests may also misjudge or fail to identify some site components. Research questions may become apparent during the course of investigations or even the analysis after the conclusion of the field work. For example, at 38FL269 a previously unrecognized early to middle nineteenth century assemblage was identified, but could not be further explored.

Finally, these investigations illustrate the need for additional research on late historic sites in South Carolina -- we found few assemblages suitable for comparative studies. Even a cursory review of compliance literature will reveal a relatively large number of "tenant" sites being recommended as not eligible for inclusion on the National Register. There is certainly no shortage of research questions, especially for tenant sites which can be clearly tied to one discrete plantation, such as on the Gibson tract. Just as recommended for the prehistoric sites, it is likely that future research will require the excavation of larger areas to explore a greater diversity of research questions.

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