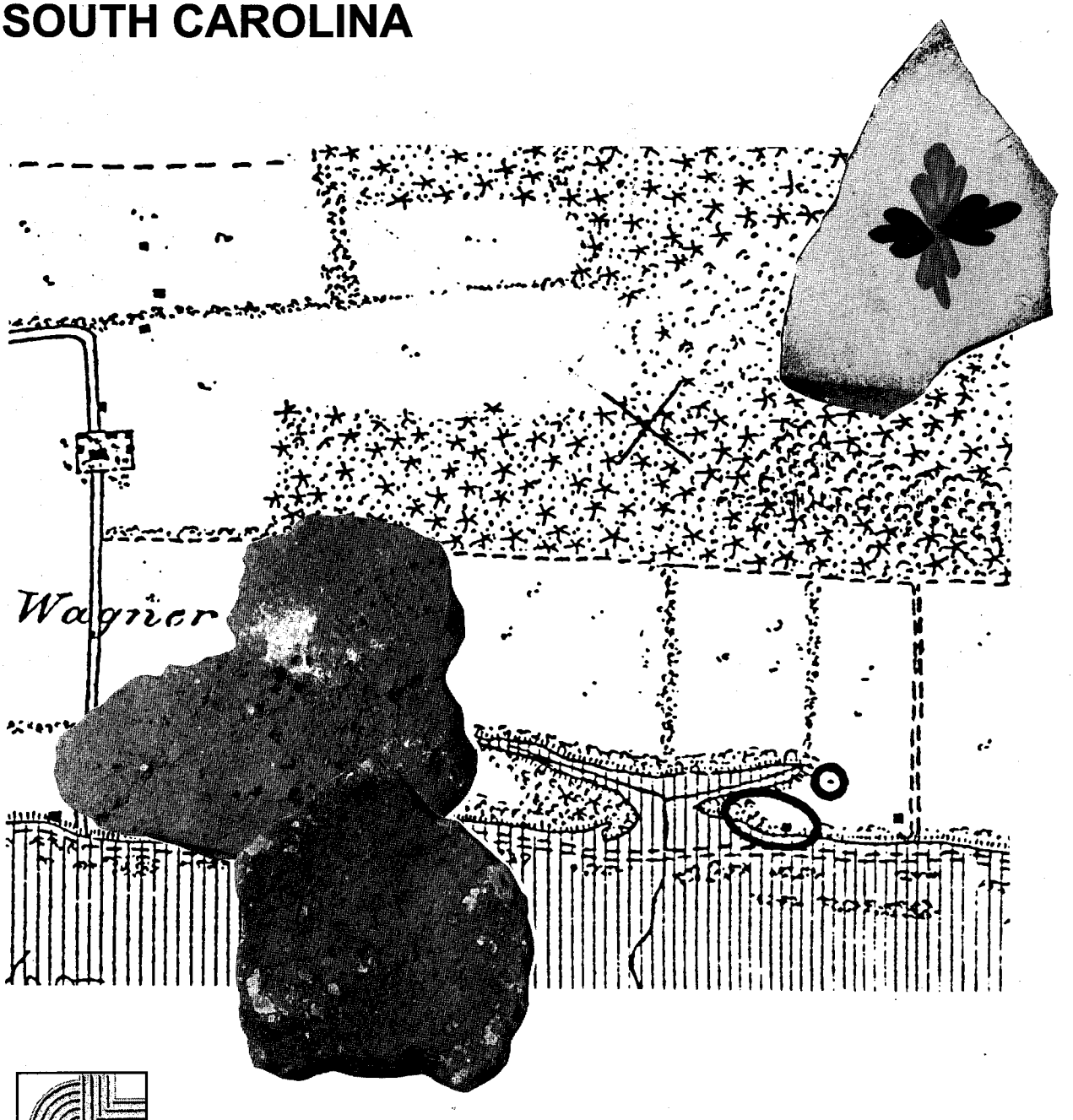
ARCHAEOLOGICAL INVESTIGATIONS OF INDIAN AND SLAVE AT THE MOSES WHITESIDES PLANTATION, CHRIST CHURCH PARISH, CHARLESTON COUNTY, SOUTH CAROLINA



CHICORA FOUNDATION RESEARCH SERIES 60

ARCHAEOLOGICAL INVESTIGATIONS OF INDIAN AND SLAVE AT THE MOSES WHITESIDES PLANTATION, CHRIST CHURCH PARISH, CHARLESTON COUNTY, SOUTH CAROLINA

Research Series 60

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Better is the end of a thing than the beginning thereof.
--Ecclesiastes 7:8

ABSTRACT

This study provides the results of archaeological study at two sites situated northeast of Charleston between the Atlantic Ocean to the south and the Wando River to the north and northwest. The investigations were conducted as a result of a Memorandum of Agreement between Centex Homes, the State Historic Preservation Office, and the Office of Ocean and Coastal Resource Management. This work is intended to help Centex Homes comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

Investigations at 38CH1466 revealed a prehistoric site which had been damaged by decades of plowing, commingling both prehistoric and historic remains. Nevertheless, the site produced a large quantity of Deptford pottery, along with a much smaller quantity of Wilmington wares. Also present was a small assemblage of a pottery previously identified as Wando and thought to include a limestone or marl aplastic temper. This study provides a detailed typological study of the different pottery present at the site.

Petrographic analysis reveals that the aplastic inclusions in the Wando pottery include both large crystal carbonates which are not consistent with marl and also clinozoisite or a claystone. We recommend that future investigation of the Wando series attempt to further distinguish these different inclusions macroscopically.

The investigations at 38CH1466 also yielded two AMS radiocarbon dates for the Wando Series, clustering between 700 and 1000 A.D.

The lithic assemblage from 38CH1466 includes a small quantity of flaked siltstone. While this material is found at other coastal sites it is usually blocky or angular and attempts to flake it were unsuccessful. At this site we have several tools made from the material, as well as a small collection of flakes.

The prehistoric site also provided two areas of dense historic remains. At one we found remains associated with a freedman's structure identified on an 1875 coastal chart. These materials exhibited an artifact pattern that is entirely consistent both with the previously defined Tenant/Yeoman Pattern and also the artifact pattern found at the freedmen's village of Mitchelville on Hilton Head Island. At the other area of historic remains we identified a wall trench structure consistent with those found at other coastal sites from the mid-eighteenth century. The remains associated with this structure, however, appear to date from the late eighteenth or early nineteenth century.

The historic site investigated by this study, 38CH1477, is a small slave settlement. It was originally associated with the Thomas Whitesides plantation and was subsequently used by his son, Moses Whitesides until just before the Civil War. Consequently, the site was under the control of one family from about 1762 through about 1856. We have identified Moses Whitesides as a "typical" small planter of Christ Church. This was an area characterized by infertile soils, large areas of sloughs with poor drainage, and marsh frontage. Although close to Charleston, and consequently settled early, the soils of Christ Church were generally not well suited to plantation agriculture and holdings were small. In the late eighteenth century, for example, Christ Church had the lowest value of estates of all the parishes and tied with Prince Frederick's Parish for the lowest average number of slaves held. Christ Church was an enclave of small planters — yeoman farmers by no means, but still far removed from the grand planters of St. George, St. James Goose Creek, and Prince William's parishes.

Our examination of the slave settlement reveals a mean date of 1813, clearly reflecting its very long history. Early ceramics, however, were not European, but were almost exclusively Colono wares — low fired clay pottery made by the African American slaves held on the plantation. Into the late eighteenth

and early nineteenth centuries the proportion of European wares increases with the occurrence of creamwares, pearlwares, and whitewares. While many of the creamwares may have been handed down to the slaves from the table of the master, most of the pearlwares and whitewares were probably purchased specifically for the use of the slaves.

The investigation found that the artifact patten at 38CH1477 is almost identical to that of the Carolina Slave Artifact Pattern, typically associated with eighteenth century sites having impermanent architecture. We believe that the pattern continued at this site, in spite of its occupation well into the mid-nineteenth century, because the planter was not wealthy and did not participate in the reform movement of the nineteenth century that improved the living conditions of African American slaves.

The faunal remains from the site also suggests that African American not only had limited opportunities to obtain supplements to their rations, but also that they received a disproportionate share of cheap, head cuts.

The investigation provides a glimpse of what slave life was like on an "average" slave settlement in a region of South Carolina dominated by small farmers, not the planter elite.

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ACKNOWLEDGMENTS

We want to thank Mr. Walt Martin for his support of Chicora Foundation and for allowing us to participate in this project. Centex Homes has been consistently concerned about doing the right thing and ensuring that the history of their development tracts is well documented. It is a pleasure to work with such a group.

Mr. Keith Derting of the S.C. Institute of Archaeology and Anthropology assisted us with the site numbering for the project. Ms. Sharon Pekrul provided assistance in the curation of the collection with the S.C. Institute of Archaeology and Anthropology. The staffs of a number of research institutions have provided exceptional support and assistance on very short notice, including the South Caroliniana Library and the South Carolina Department of Archives and History. We thank Dr. Homes Hogue for her thorough and speedy analysis of the faunal remains from these sites.

Finally, we appreciate the skilled and dedicated crew on this project, including Todd Hejlik, Rick Hill, Jennifer Dean, and Colleen Hanratty. Ms. Rachel Campo assisted in directing portions of the fieldwork, and we appreciate her competence and care during the project.

INTRODUCTION

Development of the Project

In late 1992 Chicora Foundation, Inc. conducted an intensive archaeological survey of what was then known as Seaside Farms (Adams and Trinkley 1993). Situated south of U.S. 17 and Rifle Range Road, just northeast of City of Charleston and the Town of Mount Pleasant, the project area incorporated about 400 acres (Figure 1). The property was being developed as single family home sites by The Beach Company and the investigations were conducted to satisfy the requirements of the South Carolina Coastal Council (now the Office of Ocean and Coastal Resource Management within the South Carolina Department of Health and Environmental Control).

The study found two prehistoric sites (38CH1466 and 38CH1474) and three historic sites (38CH1471, 38CH1473, and 38CH1477) eligible for inclusion on the National Register of Historic Places and one prehistoric site (38CH1475) potentially eligible for inclusion on the National Register. The historic sites included the main settlement for John Whitesides (38CH1471), the slave settlement for John Whitesides (38CH1473) and the slave settlement for Moses Whitesides (38CH1477).

The main settlement for Moses Whitesides, John's brother, was heavily damaged during the construction of the Isle of Palms Connector and no longer exhibited sufficient integrity to warrant its recommendation as eligible (Adams and Trinkley 1993:77) (Figure 2). These assessments were concurred with the South Carolina State Historic Preservation Office (SHPO)and the planning for the development continued.

Eventually a portion of the property containing one of the historic sites, 38CH1473 (the John Whitesides slave settlement), was subdivided off and sold to the Lutheran Homes of South Carolina. Consequently, this site was not covered in a Memorandum of Agreement between the SHPO, the Coastal Council, and The Beach Company. Meanwhile the first phase of the development was initiated and The Beach Company requested that Chicora Foundation conduct archaeological data recovery excavations at the John Whitesides main settlement, 38CH1471.

That study provided an exceptional view of a small planter's life. An assemblage dominated by kitchen items, a simple house, and a diet of pork and fish seems to characterize the Whitesides main settlement. The ceramic assemblage included primarily plain or simply decorated vessels, most of which were bowls. The study focused attention on the large number of small planters who made up the majority of free land holders in the eighteenth century. It revealed that our understanding of plantations and planters has been based on the wealthy elite of the eighteenth century and urged exploration of the more common planter (Trinkley and Hacker 1996).

Subsequently, we discovered that the Lutheran Home had effectively destroyed 38CH1473, the John Whitesides slave settlement, through construction activities. A small portion of another site, identified as 38CH1563, was discovered partially intact. Brockington and Associates eventually conducted some investigations at this second site (McMakin et al. 1997), perhaps representing one of the earliest of the Whitesides settlements. No additional work was conducted at 38CH1473. This left only three eligible sites (38CH1466, 38CH1474, and 38CH1477) and one potentially eligible site (38CH1475) covered by the MOA.

Chicora Foundation was contacted by Centex Homes as early as 1996 to develop a data recovery plan for 38CH1466 and 38CH1477, situated on a portion of the property they anticipated purchasing from The Beach Company.

Site 38CH1466 was initially reported to

Figure 1. Portion of the 1:100,000 James Island map showing the project area in Christ Church Parish.

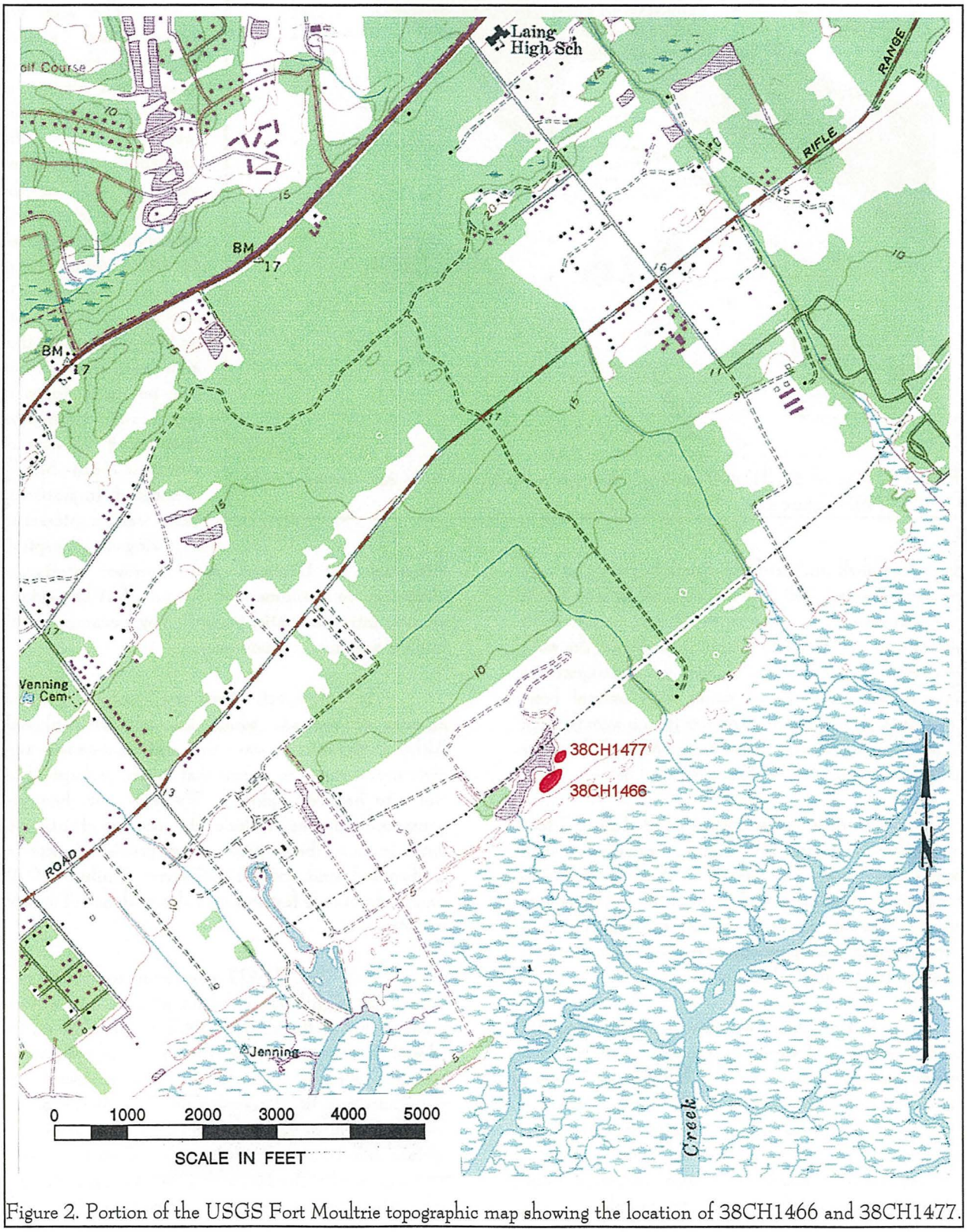

Figure 2. Portion of the USGS Fort Moultrie topographic map showing the location of 38CH1466 and 38CH1477.

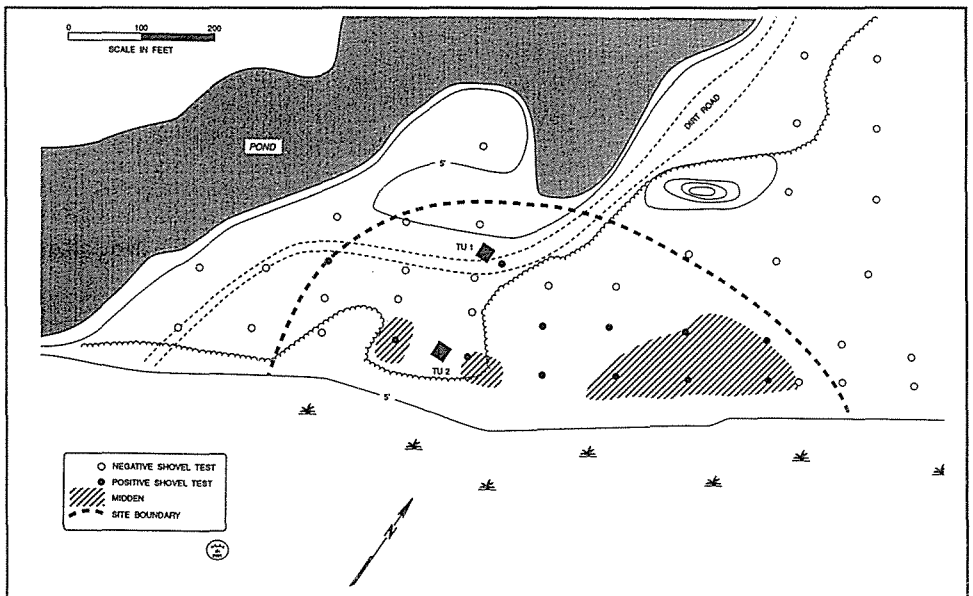

Figure 3. Map of 38CH1466 as originally reported (adapted from Adams and Trinkley 1993:Figure 16).

consist of shell and artifacts distributed over an area measuring about 250 feet north-south by about 600 feet east-west. The site was tested by a series of 36 shovel tests and two 4-foot units. Combined, the work recovered 252 prehistoric sherds, one orthoquartzite chunk, one fragment of daub, nine animal bone fragments, and 10 historic artifacts (which were thought to be likely associated with the nearby Moses Whitesides slave settlement, 38CH1477, discussed below).

The initial excavations revealed about 0.7 foot of black sand mixed with varying amounts of shell overlying a brown sand subsoil. A third of the shovel tests produced artifacts, while both of the test units were positive (the one closer to the dirt road in an area of dense surface shell producing far more than the unit adjacent to the marsh berm).

The artifacts recovered in the testing included primarily Deptford wares (accounting for 69% of the specimens larger than an inch), followed by Hanover (18.4%), Santee-McClellanville (8%), and a very small quantity of an unusual ware exhibiting what appeared to be limestone temper. In addition to the faunal material, ethnobotanical remains were also recovered from waterscreening a small portion of the sample.

The site was recommended eligible based on the limited information concerning Deptford sites, the presence of the limestone tempered ware, as well as the presence of faunal and ethnobotanical remains. In other words, there were a variety of data sets present at the site and it was thought that additional research had the potential to yield significant information concerning subsistence strategies for the Middle Woodland. In particular there was an interest in exploring any perceptible difference in Deptford and Hanover strategies. Moreover, we recommended that an effort be made to evaluate intra-site spatial patterning by focusing on both midden and non-midden areas.

In retrospect, there was concern over the amount of the site which has not been plowed. Although the midden was heavy and the data sets were extensive, it began to appear that much, perhaps all, of this site has been plowed. We were not, however, convinced that this precludes the recovery of intra-site data. In fact, the heavily plowed prehistoric site on Seabrook Island (38CH1257; see Trinkley 1999) produced not only features, but also evidence of at least one structure.

Site 38CH1477 was found to consist of a fairly small, tightly clustered concentration of historic materials just to the north of 38CH1466, again on the edge of the man-made pond. At the time of the original survey a portion of the site had been disced (the remainder was in underbrush adjacent to the pond), allowing excellent surface visibility. In this area a large surface collection was made. A series of 46 shovel tests were excavated at the site, with 17% yielding artifacts (a relatively low percentage, suggesting that any

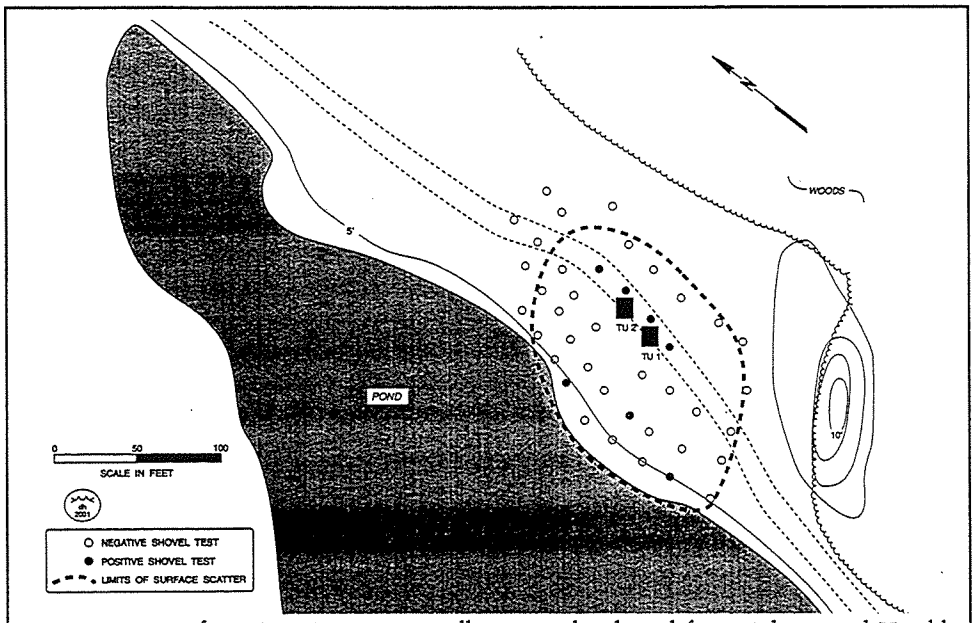

Figure 4. Map of 38CH1477 as originally reported (adapted from Adams and Trinkley 1993:Figure 22).

architectural remains at the site might be ephemeral). The site was estimated to cover an area measuring about 200 feet in diameter.

In an effort to explore the disparity between the extensive quantity of surface material and the low density of remains in the shovel tests, two 4-foot units were also excavated at this site. Both were situated in the central core of the site and both found about 0.5 foot of very dark grayish brown Ap soil overlying a grayish brown subsoil. Test Pit 2 revealed a large, shallow pit feature, indicating that in spite of plowing at least some features were still present.

The artifacts collected from the site span the eighteenth and nineteenth centuries. In addition, a small quantity of animal bone was also identified, as well as some colonoware — a low fired earthenware made by African-American slaves. The mean ceramic date for the collection was about 1809. This corresponds well with the historic data (discussed in a following section of this study).

The collection also revealed the dominance of kitchen artifacts. While this may represent a bias caused by the large surface collection, it may also reflect a very low architectural assemblage, common to eighteenth century slave settlement (and perhaps to some slave sites well into the nineteenth century).

The site was recommended eligible not only because the data sets indicated a range of materials (ceramics, glass, pipe stems, gun flints, beads, buttons, and faunal remains) were present, but also because the site produced an intact feature. A range of questions were posed for the site, including the investigation of potential architectural remains and an investigation of slave dietary patterns. But the single question of greatest interest was how slaves of a small owner might have lived in the late eighteenth and early nineteenth century. This would have been a time when many slave holders were implementing reforms. Would the "masters of small worlds" have implemented similar reforms?

Investigations began at the two sites on February 1, 1999 and a total of 934.5 person hours were devoted to field investigations over six weeks. An additional 22.5 hours of field lab time was devoted to the project during rain periods.

Research Orientation

These two sites present radically different research topics. At 38CH1466 we anticipated that the research would center around Middle Woodland prehistoric occupation, while at 38CH1477 we envisioned research to be focused on the slaves of a small landowner at the turn of the century. As will be discussed in following sections, these expectations, while seemingly reasonable at the time, were to affected by both time and circumstances.

38CH1466

The research previously proposed for this site focused on rather standard questions of chronology, typology, and environmental setting. While these remain important, we believed that the work proposed for the site should be adjusted to take into account even more recent research.

For example, at 38BU861 research focused on intrasite patterning, midden component research, artifact analyses, and exploration of ecofacts. In the summary we comment that:

> the study at Old House Creek suggests there is still information which can be wrung from shell middens. Larger numbers of pollen samples may yield greater information on site environs and their changes. Use of water screening may provide heretofore unavailable information on the diversity of faunal remains. Use of fabric and paste analysis may help us understand intrasite community patterning. The presence of small potsherds may help us to understand pedestrian traffic and the site formation process (Trinkley and Adams 1994:120).

At 38CH1219 a somewhat different approach was used, since there appeared to be only one midden, rather the number of different middens known to be present at Old House. Consequently a very close interval auger survey was used to obtain information on artifact density, shell density, and below grade midden deposits. This almost immediately revealed the complexity of the site, helping to identify at least three discrete middens. This was further refined through the hand excavation of a 20 foot block and the collection of very large samples of data from the three middens. This allowed extraordinary data collection for the individual middens and the site as a whole. Tools, other than pottery, are limited. But this site again produced both Deptford and St. Catherines sherds in association with one another. Very detailed analyses of the prehistoric diet were conducted, with biomass calculations carefully conducted for both vertebrate and non-vertebrate remains. Of considerable interest, while the site revealed low diversity, there was evidence of high equitability, with a number of different resources, from a number of different environmental zones, incorporated into the prehistoric diet. The study of the Kiawah midden concludes:

> The site is, however, different in many respects from larger sites like 38BU861. Whether this difference is simply one of scale (i.e., this location on Kiawah was not visited as often) or of social complexity (i.e., the 38BU861 site may represent a base camp from which smaller family or extended family units dispersed) is not yet understood. The investigations at 38CH1219, however, illustrate the purpose and importance of continuing a broad range of studies at coastal shell middens, *as long as the questions and techniques continue to be refined and perfected* (Trinkley et al. 1995:70).

Very recent research at 38CH1257, a prehistoric site on Seabrook Island just southwest of Kiawah, found few artifacts were present on the surface and even excavation revealed relatively small assemblages that had been heavily plowed. However, when the site was mechanically stripped, a number of features became visible, including at least one structure. In addition, the features found at this site were far different from those found at other small shell midden sites. Although this leaves us with more questions than answers, it does point out that, when conditions are appropriate, and formal excavation has been completed, mechanical stripping may provide a different perspective of the site.

We initially felt that the site at Seaside Plantation had two important features in common with the Seabrook site — both had been plowed and (as a result) both were free of trees and therefore suited to mechanical stripping. As a result, we suggested a somewhat similar research strategy.

We believed that additional formal excavations at 38CH1466 were appropriate, if to only better document the nature of the prehistoric assemblage. We also anticipated that these excavations would be designed to maximize the recovery of faunal remains through water screening. In addition, we anticipated using techniques that would refine and perfect previous efforts, in an effort to see if previous results can be replicated at a range of similar sites. Afterwards, we sought to focus on the stripping of portions of the site area in order to expose and plot any features that might be present.

We discovered, however, that the site was no longer open. Instead, over the past six years the site had grown into a fairly dense pine thicket, making any sort of mechanical stripping problematical. To further complicate the matter, Centex Homes was not building the houses on the property (and consequently conducting landscaping). Instead, they were selling the lots for the home owners to be responsible for construction. It would be very difficult to sell stripped lots. Finally, Centex Homes did not possess permits to allow for this level of land disturbance. As a result, a letter was sent to the SHPO, on February 12, indicating a change in the data recovery plan was recommended.

What became clear only once we were well into the excavations, was that the prehistoric remains were thoroughly mixed with historic artifacts. In fact, at the base of what appeared to be the best preserved prehistoric middens, we found evidence of a historic wall trench structure likely associated with the slave occupation of 31CH1466. Besides plow disturbance from the twentieth century, the site had been extensively damaged by late eighteenth and early nineteenth century occupation — making it difficult to impossible to tease apart some aspects of the two assemblages.

38CH1477

At this site we were fortunate to have the previous experience of research at John Whitesides settlement (38CH1471; Trinkley and Hacker 1996). That work helped us to begin to understand the archaeological assemblage we might expect for small planters.

Much of the historical, and archaeological, research has focused on the wealthy planters. In general, historical research has explored the gentry, or planter elite — those with estates of over (and frequently well over) £1000.

Perhaps the most notable example of this historiography is *A New World Gentry: The Making of a Merchant and Planter Class in South Carolina, 1670-1770* by Richard Waterhouse (1989), while Peter Coclanis' (1989) *The Shadow of a Dream: Economic Life and Death in the South Carolina Low Country, 1670-1920* explores how illusionary much of this wealth actually was. Kevin Sweeny explores the complex inter-relationships which formed the genteel lifeways of the elite:

> Their houses became embodiments of power, and goods that had once been exotic and unavailable became essential parts of genteel lifestyles and reinforced the claims of social status and political leadership of the colonies' essentially bourgeois upper classes (Sweeny 1994:2).

Only recently have the yeoman farmers of the low country been examined in any detail. Stephanie McCurry (1995) begins this process with *Masters of Small Worlds*, which explores the ties which bound both gentry and yeomanry together. But, in general, these small farmers are very hard to see historically — they left little record of their existence. Nearly three decades ago Aubrey Land (1969) remarked:

> By any standards their lives were drab. Their houses more nearly resembled shacks than the mansion of tradition, and almost all of them have disappeared. Their stocks of worldly goods comprised the bare essentials of daily living . . . . The drama of marketplace and political forum passed them by (Land 1969:3).

Between these two worlds, however, lies that of the small planter. Land suggests the most obvious

distinction might be the value of property with these small planters having estates ranging from perhaps £100 to £1,000. Neither poor nor rich, he notes they were, "families of substance — a description that carried definite meaning to the eighteenth century mind" (Land 1969:3). At the same time he warns us not to think of these three broadly defined groups as "classes," since indeed they were not. Richard Bushman (1992) insists that this new gentility most often was adopted as bits and pieces. He notes that, "gentility flecked lives without coloring them." Perhaps even more to the point is Sweeny's observation that competitive consumption and the rise of consumer goods in the late eighteenth century "could blur rather than strengthen class distinctions" as previously expensive, rare, and specialized goods became more readily available to all classes (Sweeny 1994: 29).

Table 1.
Wealth of Colonial Assemblymen
(adapted from Waterhouse1989:Table 11)

Parish	average value of estate £ sterling	average slaveholding
St. Phillip's & St. Michaels	8883	79
St. Paul's	4910	106
Christ Church	*2009*	*37*
St. John's Berkeley	5299	84
St. James' Goose Creek	6737	107
St. George's	8691	137
St. Andrew's	4208	93
St. James' Santee	4209	80
St. Thomas & St. Dennis	4101	71
St. Bartholomew's	3605	76
St. Helena's	3216	73
Prince George's	2713	66
St. John's Colleton	4468	56
Prince Frederick's	2153	37
Prince William's	5045	104

Waterhouse uses data concerning colonial assemblymen (Table 1) to reveal the stark differences between the various parishes. St. George's and St. John's Berkeley elected assemblymen with estates valued at £8691 to £6737 sterling, and average slave holdings of 137 and 107, respectively. In contrast, Christ Church Parish elected assemblymen with an average wealth of only £2009 and owning only 37 slaves.

These economic differences can be seen in the politics of the parishes, even as late as the 1832 nullification vote. While nullifiers easily won in parishes such as St. Bartholomew's, St. Paul's, St. Andrew's, St. John's Berkeley, and St. Stephen's, Christ Church voted overwhelmingly for the Union (60.9% to 39.1%) (McCurry 1995:273).

As Waterhouse (1989:176) observes, Christ Church was never a political stronghold for the planter elite. He attributes this to the "inferior soil and general poverty" of the area. Indeed there is support for such an observation (South Carolina Department of Archives and History, B.P.R.O. Transcripts of Records Relating to South Carolina, vol. ix, pp. 22-23).

Even into the 1850s and 1860s Christ Church exhibited stunted economic growth, never fully participating in either rice or cotton cultivation. Instead, as Michael Scardaville observes (Brockington et al. 1985:35) Christ Church Parish created its own niche by supplying nearby Charleston with beef, vegetables, and orchard products — an early effort at truck farming.

The planters in Christ Church were therefore different — politically, economically, and socially. They were masters of smaller acreage, owners of fewer slaves, and less focused on the cash crops of monoculture. As a result, they were less wealthy and participated less aggressively in both colonial and antebellum politics. Nevertheless, they were still bound together by the web of social interaction and marriage. The resulting small planter society — its people, its goods, and its way of life — is reflected in Christ Church.

Within this setting we felt it would be very informative to have the opportunity to explore what the slave settlement of such a small owner might look like. Making it even more significant was the loss of

38CH1473, which would have provided an exceptional basis of comparison.

Just as our view of planters is largely developed from historical sources that focus on the wealthy and elite, we believe that our understanding of African American slaves is dominated by a similar pre-occupation with those of larger planters. The investigations at the Moses Whitesides settlement would provide a unique opportunity to examine a small slave settlement and better understand the lives of the vast majority of Carolina slaves.

Our research focus was anticipated to be very similar to that previously outlined in the John Whitesides study. In addition, we hoped to identify evidence of structural remains.

We again thought that the open fields would promote this aspect of the research. In addition, we anticipated that it will be possible to further increase our typological exploration of colonoware pottery, complementing research already completed at John Whitesides plantation and Broom Hall Plantation, and ongoing at Crowfield Plantation and Crawl Plantation.

Like at 38CH1466, we discovered that the site was no longer suitable for stripping. More significantly, we found at the original portion of the site investigated in 1993 had been impacted by its use as a construction staging area. Fortunately, our auger survey identified a second site area to the southeast and our investigations shifted to this portion of the site. It is regrettable, however, that the initial area — with a known mean ceramic date and comparative assemblage — had been lost prior to this investigation.

The Natural Setting

Physiography

Charleston County is located in the lower Atlantic Coastal Plain of South Carolina and is bounded to the east by the Atlantic Ocean and a series of marsh, barrier, and sea islands (Mathews et al. 1980:133). Elevations in the County range from sea level to about 70 feet above mean sea level (AMSL). The mainland topography, which consists of subtle ridge and bay undulations, is characteristic of beach ridge plains.

Seven major drainages are found in Charleston County. Four of these, the Wando, Ashley, Stono, and North Edisto, are dominated by tidal flows and are saline. The Wando forms a portion of the County's the interior boundary northeast of Charleston, while the Ashley flows west of the peninsular city of Charleston. The three with significant freshwater flow are the Santee, which forms the northern boundary of the County; the South Edisto, which forms the southern boundary; and the Cooper, which bisects the County.

Because of the low topography, many broad, low gradient interior drains are present as either extensions of the tidal rivers or as flooded bays and swales. Extensions include Hobcaw, Rathall, Foster, Horlbeck, Boone Hall, Wagner, Toomer, and Allston creeks which flow west, north, or northeast into the Wando (see Figure 1). Flooded bays and swales are equally common in the project area, typically being shown on historic plats as "galls" or "swamps." While these area often exhibit productive soil, they must be drained and the drains kept open — both were laborious and unhealthy tasks assigned to African American slaves.

The project area is situated just 8 miles from Charleston in what historically was known as Christ Church Parish. It is protected from the Atlantic Ocean by Dewees Island, the Isle of Palms, as well as a host of small marsh islands and large bays. Behind this marsh fringe is what has been called the "Sea Shore" — an area of mud and sand beaches which gradually rise to relatively poorly drained interior "high lands."

Elevations in the project area range from about 5 to 15 feet AMSL, with most of the property falling at or below 10 feet AMSL. There is a gradual slope toward the marsh on the southern edge of the property, while elsewhere the tract is nearly flat with numerous wetlands and low, swampy areas. During the survey of the Seaside Farms tract numerous ditches were encountered and many were likely antebellum in origin — evidence of efforts to drain and make productive the otherwise low, unhealthy "sea shore" lands.

Flooding, however, was not limited to ground water and rain water on the interior portions of the plantation. Coastal flooding was also a serious concern. A berm or dike found along the marsh front dates from at least the late eighteenth century, based on its presence on early plats, and was almost certainly designed to protect the fields and buildings from excessively high tides and the occasional northeastern storm.

Geology and Soils

Coastal Plain geological formations are unconsolidated sedimentary deposits of very recent age, primarily Pleistocene and Holocene. They are found lying unconformably on more ancient crystalline rocks which are rarely exposed by nature (Cooke 1936; Miller 1971:74).

The soils formed from these Holocene and Pleistocene soils were typically deposited in various stages of coastal submergence. Soil formation is affected by the parent material (primarily sands and clays), the temperate climate (discussed later), the various soil organisms, the flat topography of the area, and time.

Mainland soils are primarily Pleistocene in age and tend to have more distinct horizons and greater diversity than the younger soils found on the sea and barrier islands. Sandy to loamy soils predominate in the level to gently sloping mainland areas. The adjacent tidal marsh soils are Holocene in age and consist of fine sands, clay, and organic matter deposited over older Pleistocene sands. These soils are frequently covered by up to 2 feet of saltwater during high tides. Historically marsh soils have been used as compost or fertilizer for a variety of crops, including cotton (Hammond 1884:510), and Allston mentions that the sandy soil of the coastal region, "bears well the admixture of salt and marsh mud with the compost" (Allston 1854:13).

As the colony was being settled and promoted, the soils were described simply. John Norris told his readers in 1712:

> the Soil is generally Sandy, but of differing Colours, under which, Two or Three Foot Deep, is Clay of which good Bricks are made (Greene 1989:89).

In the last quarter of the eighteenth century, William DeBrahm's *Report* provides little more information, stating only that, "the Land near the Sea Coast is in general of a very sandy Soil" and noting that this soil "along the Coast has as yet not been able to invite the industrious to reap Benefit of its Capacity" (DeVorsey 1971:72).

By the nineteenth century, Robert Mills in his *Statistics of South Carolina* provides slightly more information concerning the current understanding of the soils:

> Lands here [in Charleston District] may be viewed under six divisions in respect to quality; 1st, Tide swamp; 2d, Inland swamp; 3d, High river swamp (or low ground, commonly called second low grounds); 4th, Salt Marsh; 5th, Oak and hickory high lands; and 6th, Pine barren. The tide and inland swamps are peculiarly adapted to the culture of rice and hemp; they are very valuable, and will frequently sell for $100 an acre; in some instances for more. The high river swamps are well calculated for raising hemp, indigo, corn, and cotton; and where secured from freshets, are equally valuable with the tide lands. The oak and hickory highlands are well suited for corn and provisions, also for indigo and cotton. The value of these may be stated at from ten to twenty dollars per acre. The pine barrens are not worth more than one dollar an acre (Mills 1972:442-443 [1826]).

Even the detail of this account, however, fails to provide a very clear picture of the soils in Christ Church where the sands were low and commonly interspersed with galls or small inland swamps. Here the property, even the supposedly good hickory and oak lands, were poorly drained.

A number of period accounts discuss the importance of soil drainage. Seabrook, for example, explained in 1848:

> subsoil so close as to be impervious to water; so that the excess of the rains of winter cannot sink. Nor can it flow off, because of the level surface . . . . The land thereby is kept thoroughly water-soaked until late in the spring. The long continued wetness is favorable only to growth of coarse and sour grasses and broom sedge . . . acid and antiseptic qualities of the soil . . . sponge-like power to absorb and retain water . . . is barren, (for useful crops) from two causes — excessive wetness and great acidity. The remedies required are also two; and neither alone will be of the least useful effect, with the other also. Draining must remove the wetness — calcareous manures the acidity (Seabrook 1848:37).

A somewhat similar account was still be provided by Hammond in the postbellum:

> drainage . . . has of necessity always been practiced to some extent. The remarkably high beds on which cotton is planted here, being from 18 inches to 2 feet high, subserve this purpose. The best planters have long had open drains through their fields. These were generally made by running two furrows with a plow and afterward hauling out the loose dirt with a hoe, thus leaving an open ditch, if it be so termed, a foot or more in depth (Hammond 1884:509).

The number of drainages still found on the Seaside Farms tract in the late twentieth century offers mute testimony to the problems planters encountered on these soils and their efforts to make the land productive. These problems have also been briefly mentioned by Hilliard, who comments that soils in the region were, "seldom well enough drained for most crops" (Hilliard 1984:11).

If the soils from the John and Moses Whitesides tracts are examined (see Figure 2), only two series are encountered: Rutlege soils at 38CH1477 and Scranton soils at 38CH1466.

The Rutlege soils are found in nearly level to depressional areas. They are poorly drained to very poorly drained and the seasonal high water table is frequently within a foot of the surface. The typical profile reveals a black to very dark brown loamy fine sand to about 1.8 feet, providing clear evidence of chemical reduction. Surface runoff is very slow and water is frequently ponded on these soils (Miller 1971:24, 56). Historically they were associated with the galls or sloughs which ran through the tract and were used for the cultivation of interior swamp rice.

The most common soils, accounting for 79.0% of the Whitesides' plantations are Scranton soils. These consist of somewhat poorly drained soils which are sandy throughout. The typical profile reveals about 0.8 foot of black loamy fine sand overlying a dark grayish-brown loamy fine sand to a depth of about 2 feet. Like the Rutledge soils, the Scranton Series may have a seasonal high water table within 1 to 2 feet of the surface, although they are not as prone to flooding and poor drainage is most notable during heavy rains. Regardless, the inherent fertility is low and the soils must be drained for productive agriculture (Miller 1971:26, 56).

If the plats of the Whitesides plantations are examined (see the following section), numerous references will be found to bushy or open ponds and galls. Trees were noted as pines, water oaks, gum, bay, and red cedar. Only occasional references are made to trees found on drier soils, such as live oak or magnolia. Tracts or sub-parcels on the plantations are noted as "mixed flat land," "flat land in places low, mixed timber," and "pine land."

Taken together, the current information and the historical documentation reveal low, poorly drained soils with only limited agricultural productivity. The

impact of this on the agriculture and wealth of the Whitesides will be discussed in greater detail in the following section.

Climate

The weather was all important in Colonial society, affecting the crops which in turn affected trade and wealth. Just as importantly, the Carolina climate affected, usually for the worse, the planter's health. Greene notes that:

> the prospects of obtaining wealth with ease . . . meant little in a menacing environment, and both Nairne and Norris took pains to minimize the unpleasant and dangerous features that already had combined to give South Carolina an ambiguous reputation. They had to admit that throughout the summer temperatures were "indeed troublesome to Strangers." But they contended that settlers had quickly found satisfactory remedies in the form of "open airy Rooms, Arbours and Summer-houses" constructed in shady groves and frequent cool baths and insisted the discomfitures of the summers were more than offset by the agreeableness of the rest of the seasons. [They also suggested] that ill-heath was largely limited to newcomers before they were seasoned to the climate, to people who insisted in living in low marshy ground, and to those who were excessive and careless in their eating, drinking, and personal habits. "If temperate," they asserted, those who lived on "dry healthy Land," were "generally very healthful" (Greene 1989:16).

While making for good public relations, the reality was far different. Roy Merrens and George Terry (1989) found that in Christ Church Parish, 86% of all those whose births and deaths are recorded in the parish register died before the age of twenty. Equally frightening statistics have been compiled by John Duffy (1952), who found that the average European could expect to live to the age of about 30 in South Carolina during the first quarter of the eighteenth century. Yellow fever, smallpox, diphtheria, scarlet fever, malaria, dysentery all were at home in Carolina. Using the Society for the Propagation of the Gospel (SPG) records, Duffy found that from 1700 to 1750, 38% of the missionaries either died or were compelled to resign because of serious illness within the first five years of their arrival. Within 10 years of their arrival, 52% had died or resigned because of their health. After 15 years in the colony, the combined death toll and resignations from sickness reached 68% — two out of every three missionaries.

African Americans fared no better. Frank Klingberg (1941:154), using SPG records found that in a single four month period over 400 slaves died of "distemper." William Dusinberre, exploring rice plantations along the Carolina coast, entitled one of his chapters "The Charnel House" — a reference to the extraordinary morbidity of African Americans on rice plantations. He reports that on some plantations the child mortality rate (to age sixteen) was a horrific 90% (Dusinberre 1996:51), while the probable average for rice plantations was around 60% (Dusinberre 1996:239). Cotton plantations were healthier, but even there fully a third of all slave children did not live to see their sixteenth birthday.

Beginning in the last third of the eighteenth century the life expectancy began to increase. Merrens and Terry suggest that this was the result of the occupants beginning to understand the cause of malaria:

> During the middle of the eighteenth century South Carolinian's perception of the wholesome environment of the lowcountry swamps began to change. People no longer preferred these areas on the score of health as a place of summer residence. Instead, residents began to view the lowcountry as fostering both mosquitoes and death (Merrens and Terry 1989:547).

The Charleston climate, with its moderate winters and long, hot summers, affected not only the health of the population and the crops grown, it also influenced the politics of Carolina. The summer climate of Carolina, while causing the Barbadian immigrants to feel that they had resettled in the tropics, also convinced most that slavery was inevitable. Not only was slavery the accepted order to the planters from Barbados, Jamaica, Antiqua, and St. Kitts, it seemed impossible for white Englishmen to work in the torrid heat — making African American slaves that much more essential (Donnan 1928). Even in Christ Church parish, which in 1720 had a very low settlement compared to other parishes (Table 2), slaves comprised 85.6% of the population.

Table 2.
White and Slave Population of South Carolina in 1720 (adapted from B.P.R.O. Transcripts, vol. 9, page 23)

Parish	Whites	Black Slaves	% Slaves
St. Phillip's Charles Town	283	1390	83.1
Christ Church	107	637	85.6
St. Thomas & St. Denis	113	942	89.3
St. John's	97	1439	93.7
St. James' Goose Creek	107	2027	95.0
St. Andrew's	210	2493	88.9
St. George's	68	536	88.7
St. Paul's	201	1634	89.0
St. Bartholomew's	47	144	75.4
St. James' Santee	42	584	71.5
St. Helena	30	42	58.3

Vegetation

Just as the early explorers described the climate as healthful, the Carolina vegetation was usually described as bountiful and fruitful. Catesby described the swamp lands, typical of many areas in Christ Church, in the first decade of the eighteenth century:

> before they are prepared for rice, are thick, over-grown with underwood and lofty trees of mighty bulk, which by excluding the sun's beams, and preventing the exhalation of these stagnating waters, occasions the lands to be always wet, but by cutting down the wood is partly evaporated, and the earth better adapted to the culture of rice (Catesby, quoted in Merrens 1977:93).

He also mentions that these swamps, filled with "a profusion of flagrant and beautiful plants give a most pleasing entertainment to the senses, therein excelling other parts of the country, and by their closeness and warmth in winter are a recess to many of the wading and water-fowls" (Catesby, quoted in Merrens 1977:93).

The Whitesides' plantations on the "sea shore" of Christ Church, while being low and generally unfavorable to agriculture, incorporated a number of distinctly different ecotones, many of which are actually very productive. Along the southern edge of the property, for example, would have been the salt marsh and its border zonation. The upper marsh would have been dominated by marsh elder, sea myrtle or groundsel, and marshhay cordgrass. Slightly lower marsh areas might be dominated by glasswort, smooth cordgrass, and sea oxeye. Regardless, these communities are almost entirely dependent on the duration of flooding and the salinity of the water.

Just behind the marsh, and only slightly further inland, would be the maritime forest, where the salt spray is enough to influence the development of the climax vegetation (Barry 1980:178). Here live oaks, palmettoes, and slash pines are most frequently found. Other species might include the loblolly pine, turkey oak, red bay, and wax myrtle. Principal lianas, the curse of coastal archaeological surveys even today, might include yellow jessamine, greenbrier, Virginia creeper, and poison ivy.

Further inland there would likely be a mixture of different communities, many influenced by the action of humans — earlier by the Native Americans and later by the English planters. Areas of mesic mixed hardwood and pine might be found on the better drained soils. The dominant species would be white oak, often in

combination with loblolly pine. Found as occasional overstory trees would be sweetgum, beech, southern red oak, post oak, maple, and hickory. Understory plants would include dogwood, redbud, and holly.

While classic cypress-tupelo swamps are found in some areas along the coast, the study tract does not exhibit areas of alluvial soil with an open circulation of water. Instead, what are called upland swamps are present. While still having acid conditions and wet soils, the vegetation is often very different. The upland swamps are dominated by pond cypress, pond pine, and slash pine (Barry 1980:150-151).

Also present would be old growth pine communities, created by disturbances such as fire or clear cutting the hardwoods. In these areas longleaf pine culminates in a closed canopy with a very sparsely populated understory. Hardwood introductions are exceedingly uncommon, but where present may include sweetgum, persimmon, and hickory (Barry 1980:172-173). These areas presented the pine flat woods shown on many plats and mentioned by many early accounts as being unproductive (even along the coast being called "pine barrens"). These are closely related, biologically, to the pine savannahs which might best be described as longleaf pine pyric climax forests.

While Christ Church has historically presented a challenge to planters, it is clear from even this general account of its vegetation, that there is tremendous diversity. Unfortunately, it was that diversity, engendered by the soils and climate, which made the area seem so unproductive. Although planters could fathom draining huge acreage of river swamps for rice, there was little interest in draining the seemingly infertile pine barrens which dominated Christ Church. Consequently, the unique combination of physiography, soils, climate, and vegetation dramatically affected the development of the area.

Curation

Updated archaeological site forms for 38CH1466 and 38CH1477 have been filed with the South Carolina Institute of Archaeology and Anthropology (SCIAA). The field notes, photographic materials, and artifacts resulting from these investigations have been curated at that institution under the site numbers 38CH1466 and 38CH1477. The collections have been cleaned and/or conserved as necessary. Further information on conservation treatments may be found in a following section. 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 standards.

PREHISTORIC AND HISTORIC OVERVIEW

Previous Prehistoric Shell Midden Research

There have been a number of shell midden studies along the South Carolina coast. This synopsis is not intended to be inclusive, but only to provide a generalized background in an effort to place the current study in a somewhat wider context. Each of the cited studies can be consulted for a wider, and more extensive list of studies.

Some of the earliest research on Middle Woodland or later shell middens is that by South and Widmer (1976) at Fort Johnson in Charleston County. This site (38CH275) consisted of shell midden and other occupational debris associated with two sand ridges paralleling the Parrot Point Creek marsh. The bulk of the material came from the A horizon and it appears that no stratigraphy existed at the site (South and Widmer 1976:38). All of the pottery was typed as Hanover Fabric Impressed, although the detailed tabulations suggested at least modest amounts of Deptford pottery were also found. Two radiocarbon dates from the site suggested occupation between 280 and 80 B.C. (South and Widmer 1976:45-46).

Beyond the pottery, South and Widmer propose possible use of clam, based on worn edges, and whelks, based on battered knob projections. While use cannot be disproved, it should be accepted cautiously, especially since similar results have not been identified at other sites. It is also very difficult to eliminate accidental, or incidental, damage from the collection.

Subsistence data from the Fort Johnson site indicate 90% of the shellfish recovered were oyster, while only a small quantity of bone (largely deer) was present. The researchers observed that the "vertebrate faunal assemblage represents a very diverse, and sparse utilization of these resources" (South and Widmer 1976:56). Ethnobotanical remains included seven species, including three nuts, one grass, and three herbaceous plants.

Two phases of excavations were undertaken at the Pinckney Island shell midden (38BU67), first in 1978-1979 and again in 1980. In 1980 work was also conducted at the nearby Mackay Creek shell midden (38BU168) and limited testing was conducted at a shell midden on Victoria Bluff (38BU347) (Trinkley 1980, 1981). While the investigations found a near continuous sequence from the Late Archaic-Early Woodland Stallings pottery up to South Appalachian Mississippian complicated stamped wares, perhaps the most significant contributions focused on the St. Catherines pottery (at that time attributed to the Middle Woodland).

The study found no evidence of a sharp occupational break or cultural discontinuity between the Deptford and St. Catherines phases, although the abrupt shift from heavy grit tempering to clay particle tempering was clear. Just as Milanich (1971:148-149) and Caldwell (1971:91) saw St. Catherines as a gradual progression from Deptford to Wilmington to St. Catherines to Savannah, the research at these sites suggested an untyped sandy paste ware might represent a transition between Deptford and St. Catherines.

During the St. Catherines phase there appeared to be an elaboration of the cultural pattern begun in the Early Woodland Deptford phase. The economy was based on shellfish collection and there was evidence of a winter-early spring occupation. The subsistence base became more focused than was evidenced by the Late Archaic Thom's Creek phase.

The creation of the shell middens was found to have been a slow process beginning with a scatter of shell pits. These oyster steaming pits were used once, then abandoned, filled in with the refuse from the meal and general midden refuse (Figure 5). Shell piles, about 10 to 20 feet in diameter, began to form as the occupants piled their season's garbage adjacent to a living area. Some evidence of possible "lean-to"

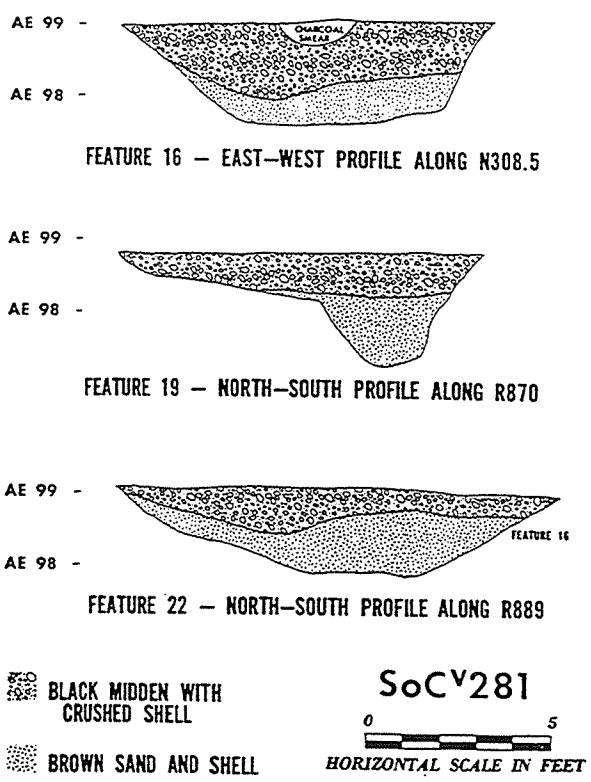

Figure 5. Profiles of Middle Woodland pits from 38BU67 (from Trinkley 1980:Figure 8).

structures was found, although the major finding was a lack of intensive occupation on the middens themselves, as evidenced by the absence of banding or crushing.

A nearby conical sand burial mound possibly associated with 38BU347 may provide evidence of a more permanent, interior settlement. Unfortunately, testing at the site was limited to one area.

This study suggested that the traditional chronology of the Middle and Late Woodland seemed to break down on a regional basis. The Savannah and Irene phases that DePratter (1979) reports for the period from about A.D. 1200 to 1500 were not found in the Victoria Bluff and Pinckney Island area. Instead, the St. Catherines pottery was dated into the fourteenth century on Victoria Bluff and even later on Pinckney Island, suggesting the continuation of essentially a Middle to Late Woodland lifestyle much later than previously anticipated (Trinkley 1980:92).[1]

In 1990 excavations were undertaken at five shell midden sites on Callawassie Island in Beaufort County (38BU19, 38BU464, 38BU1214, 38BU1249, and 38BU1262) (Trinkley 1991). Pottery, spanning the Middle and Late Woodland periods, was the most abundant artifact. While there is little indication that Deptford potters were intentionally selecting particular clays or modifying those clays, by the Savannah phase there is a consistency which suggests the manufacturing process had been refined. Significantly, it was suggested that "the existing typological constructs represents a continuum of indigenous change along the South Carolina coast" (Trinkley 1991:210).

A detailed examination of the cordage found that the Deptford, St. Catherines, and Savannah fabrics were more alike than different, further supporting the paste analysis. Only simple twisted cordage was found, with the Z or left twist consistently more common than the S or right twist.

Given the similarity in paste and fabrics, it should not be surprising that the study found considerable overlap in the radiocarbon dates. Deptford wares appear to extend to as late as A.D. 930, while St. Catherines dates at the sites ranged from A.D. 750 to 930.

Lithics, while rare, included projectile points typed as the Roanoke Large Triangular (Trinkley

[1] This is not a unique situation. Ward and Davis (1999:155-157) suggest that the Middle Woodland Connestee phase in the North Carolina mountains may extend into the Late Woodland.

1991:212) and flakes of relatively local materials. The only other artifacts identified were drilled oyster shells, perhaps representing ornamental objects.

The five sites suggested a diffuse faunal subsistence base, with some indication of an increasing focus on fish resources through time. Plant foods, while likely used, were poorly represented. Shellfish, specifically oyster, however represent the greatest contributor of biomass to the diet at the various sites.

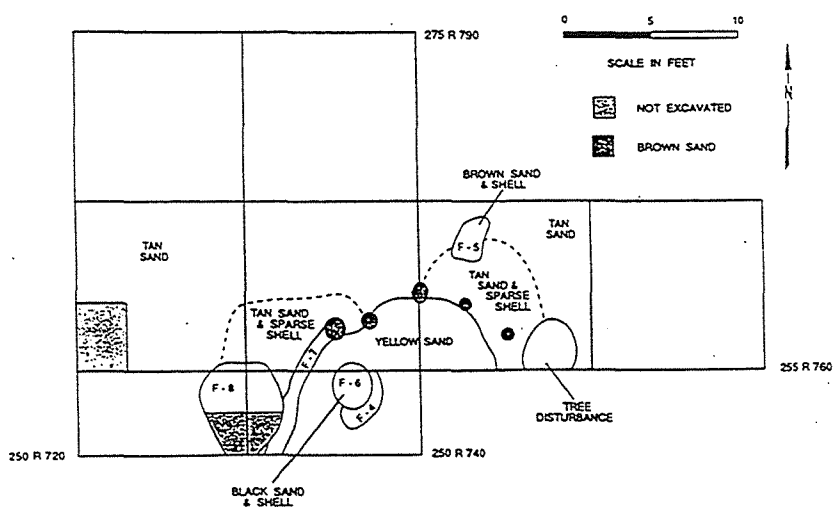

Figure 6. Deptford phase structure identified at 38BU464 (from Trinkley 1991:Figure15).

Site 38BU464 revealed both features and a portion of a Deptford phase structure (Figure 6). Likewise, 38BU19 revealed "abundant features, post holes, and daub (probably from structures)" (Trinkley 1991:216-217).

Based on the similarities, and differences, between these sites it was suggested that:

> sites such as 38BU19 appear to represent at least semipermanent "collector" settlements or large residential bases. Sites such as 38BU464 may represent base camps for "foragers" or smaller "collector" settlements. Sites such as 38BU1214, 38BU1262, and 38BU1249 all represent temporary encampments for collection/foraging activities (Trinkley 1991:217).

By 1991 a number of Middle to Late Woodland shell middens had been excavated and Kennedy and Espenshade (1991:40) found that at many of the sites oyster shell was the single most abundant cultural remain, with other artifacts (such as pottery or even faunal remains) being very scarce. Structural data, such as post holes or even features, was likewise rare. They proposed that at least some shell midden sites (such as 38BU1270, but clearly not like 38BU347 or even 38BU67) did not represent, "sites which were seasonally occupied by a resident population, consuming the oysters which were collected from the nearby marshes," but instead suggested that the "oysters were collected, shucked, preserved (smoking/drying), and removed from the site" (Kennedy and Espenshade 1991:40). They also suggested, as had Trinkley earlier, that traditional ceramic series such as Deptford and Wilmington overlapped.

These views were further refined and explored by Kennedy and Espenshade (1992) as a result of data recovery excavations at a series of four Middle Woodland sites (38BU132, 38BU372, 38BU1236, and 38BU1241). They noted that although large quantities of shell were found at these sites, artifacts, faunal remains, and ethnobotanical remains were sparse.

Table 3.
Shell Midden Sites Types (adapted from Espenshade et al. 1994:Table 48)

Attribute	Multi-Family Residential Base	Single Family Shell Midden	Single Family Shell-Less	Oystering Station
Oyster Contribution	High	High	Moderate to Low	Very High
Minority Shellfish Contribution	Moderate	Moderate	Low	Very Low
Vertebrate Faunal Contribution	Moderate	Moderate	Moderate to High	Very Low
Lithic Density	Moderate to High	Moderate	Moderate to Low	Very Low
Lithic Tool Diversity	Moderate to High	Moderate to High	Moderate	Low
Bone Tool Frequency	Relatively High	Moderate	Moderate	Low
Shell Tool Frequency	Relatively High	Moderate	Moderate	Low
Sherd Tool Frequency	Relatively High	Moderate	Moderate	Low
Ideotechnic Items	Relatively High	Moderate to High	Moderate	Low
Sherd Density	Relatively High	Relatively High	Moderate	Low
Human Remains	Relatively Common	Occasional	Occasional to Rare	Very Rare
Structural Features	Relatively Common	Common	Common	Very Rare

Further, the investigated sites all lacked (or had very few) post holes or features (Kennedy and Espenshade 1992:92). They note that, "variation between the study sites is quantitative (how many shell heaps/how many episodes) rather than qualitative (i.e., the site assemblages are very similar in diversity and content)" (Kennedy and Espenshade 1992:93). They reaffirm their earlier view that these types of sites "were established for the procurement and processing of a major resource, the oyster," probably during the spring or summer (based on shellfish seasonality data) (Kennedy and Espenshade 1992:94). They suggest that a focus of future research should be the identification of interior sites representing the remainder of the posited seasonal round.

The 1992 excavations at 38BU833 undertaken by Chicora Foundation in many ways reinforced the perception that some shell midden sites were generally "unproductive." Artifacts consisted almost exclusively of pottery with the observation that:

> the artifact collection . . . suggests a site at which very focused or a narrow range of cultural activities took place. Lithics appear to be relatively insignificant and, when present, to be highly curated. Other artifacts, such as bone or shell tools, are absent. The artifactual assemblage, in essence, provides no evidence of specialized activities and argues against the occupants intending to process any quantity of mammals, such as deer (Trinkley et al. 1992:37).

The subsistence remains were also sparse, reflecting a very focal subsistence quest. Vertebrate faunal species were clearly of secondary importance to the shellfish. Even the invertebrate remains reveal a strong preference for oyster (Trinkley et al. 1992:38).

As a result of additional Early and Middle Woodland excavations on Spring Island, Espenshade et al. offered a further refinement and explanation of their "Woodland Site Types" , noting that the "distinctions between these middens types are important to interpreting Woodland settlement" (Espenshade et al. 1994:175). Four specific site types, apparently spanning the Late Archaic and Woodland periods, are identified (see Table 3).

Multi-family residential bases "represent the largest aggregation of coastal residents" and were perhaps occupied year-round. Espenshade et al. remark that sherd density is high, a broad range of artifacts are present, a number of floral and faunal resources were apparently used, and a range of features may be expected. They offer as a Late Woodland example site 38BU19 (Espenshade et al. 1994:176).

Single family shell middens "are generally smaller versions of the multi-family residential bases" with a slightly decreased diversity of remains. They explain, however, that "a good Wilmington/St. Catherines example is not known" (Espenshade et al. 1994:177).

Single family, limited shell sites are thought to represent a seasonal encampment by a small group or perhaps even single family. Shell, while found, is limited to refuse in pits with no discernable midden. Artifact diversity is significantly less than would be found at even single family shell middens and, again, no Late Woodland examples are reported.

Finally, the oystering station was a site "occupied by small work teams for short visits focused on the procurement and processing of oysters" (Espenshade et al. 1994:177). These sites are similar to those discussed by Kennedy and Espenshade (1991, 1992) and are compared to "encampments for collection activities" (Trinkley et al. 1992:39).

Considering some approximation of the total settlement system, Espenshade et al. observe that:

> the oystering stations on Hilton Head, Spring, and Callawassie Islands (and at Colleton River) are all within a four hour canoe trip from the village at Callawassie [38BU19; the authors do not mention the similar village and mound at nearby 38BU347]. The lack of observed single-family shell middens may indicate that aggregated used of the coastal zone (i.e., year-round occupation of residential base camps) precluded the formation of single family sites (Espenshade et al. 1994:178).

Espenshade and his colleagues have clearly provided the discipline with an excellent starting point for additional discussion and further refinement. Viewing the shell middens as part of a larger subsistence system is an important advance over a simple descriptive typology. Yet, it leaves a variety of questions unanswered. The use of qualitative terms such as "moderate" and "relatively high" begs the question of where an individual site might fit in the scheme. One person's "moderate" is another's "relatively low." When one is dealing with very small sample sizes it is unlikely that the entire site has been examined, suggesting that it may be "relatively" easy to misjudge where a site fits within the scheme. And certainly even the authors would advise caution when using the scheme when relatively little is known about the site (for example, when only survey data is available). In sum, many are likely to consider this modification of a trait list approach unconvincing and/or confusing.

It is also possible to debate whether the "oystering stations" in fact represent the collecting and processing of oysters for smoking, just as it is possible to dispute the spring-summer season attributed to these sites. While Espenshade and his colleagues present very interesting ethnohistoric data to support the contention that smoking oysters is a viable preservation technique, application of the ethnographic data to the prehistoric period is more problematic. So too is even the premise —that drying oysters is something prehistoric groups would want to do, or even could do effectively.[2]

[2] It is important to consider what drying and smoking do. (continued...)

But most troubling is that while drying using a fire or smoking would both likely require pits, or at least broad hearth areas, and would result in relatively large quantities of wood charcoal, the posited processing stations have few pits and almost no charcoal. There is, it would seem, no more evidence to support the smoking of oysters than there is to support smoking of fish (see Trinkley et al.1992:37-38).

These issues aside, the proposed site types provide a valuable heuristic device which may help classify sites, at least once some level of testing or data recovery has been accomplished. Even this brief review of previous research does indicate a seemingly "real" difference between sites such as 38BU19 and 38BU833, representing either extreme of Espenshade et al.'s reconstruction. Sites such as 38BU464 and 38BU1214 seem to fall somewhere between these extremes, representing more than a brief encampment but less than a residential base. Perhaps multi-family shell middens should be considered as a classification during the Late Woodland?

In 1994 Chicora archaeologists examined a Middle Woodland shell midden bordering Old House Creek on Hilton Head Island. The site, 38BU861, was examined using both close interval (20-foot) auger testing and also block excavations. The work opened 700 square feet at five middens and 200 square feet at non-midden areas. The bulk of the fill was waterscreened through ¼-inch mesh, with consistent samples of midden and features waterscreened through ⅛-inch mesh. Each midden's size and orientation was plotted in the field. A topographic map was prepared using a 0.25-foot interval. Shell:soil ratios were obtained from each midden using a standardized procedure. Pollen samples were collected, along with ethnobotanial and zooarchaeological remains. Oysters and clams were both examined and a series of five radiocarbon dates were obtained from the site. The pottery recovered from the site was examined with special attention to paste and fabric attributes (Trinkley and Adams 1994).

Within the 260 by 140 foot study area nine individual middens were identified. Most were within 100 feet of the current marsh and all were above 10 feet AMSL (that is, above the wet, mucky soils typical of the lower elevations in the site area). The middens tended to get smaller further inland. The work also found that the middens tended to be clustered (at this site, nearly 45% of the middens were within 25% of the study area), indicating a nucleated settlement. The middens were found to cluster between 92 and 252 square feet. The data also suggested an inverse relationship between the shell:soil ratio and the midden size in square feet, with the larger middens tending to have fill dominated by soil. It is as though the larger middens were simply small middens more spread out and trampled down. Artifact density was found to decline dramatically more than 10 feet away from the midden toe. Refuse — shellfish, animal bones, and broken pottery — seems to have been concentrated. The presence of large quantities of crushed sherds suggests considerable pedestrian traffic in an area with only very limited evidence of plowing.

Only one structure was identified in the work at 38BU861 — a semi-circular posthole enclosure about 7 feet in diameter was found in association with a very small midden nearly 200 feet from the marsh edge. It appears that this rustic — and temporary — structure was intended to do little more than break the wind coming off the marsh in the cool season.

The corrected, one-sigma dates from the site range from about 2100 B.P. to about 800 B.P. — a seemingly exceptional range for a site producing primarily Deptford and St. Catherines pottery in good contexts. Nevertheless, the dates fall into the correct time frame and, once again, offer evidence of a continuum of Deptford and St. Catherines wares, as well as a continuum of the St. Catherines phase into

[2](...continued)
The purpose of drying is to take out enough water from the material so that spoilage organisms are not able to grow and multiply during storage. The final moisture content depends on the natureof the food, the processing techniques, and even the local climate. Smoking, usually at temperatures of 70° to 90° F, colors and flavors the tissues, helps retard rancidity, and assists in drying. Shellfish moisture content can rarely be reduced to below 40%, allowing preservation for a relatively short period. For shellfish to have any significant keeping ability the moisture content must be reduced to below 20%. Even at this level the ideal storage temperature is below 50° F (see Hertzberg et al. 1973 for additional information). This information suggests that drying or smoking of shellfish might allow the food to be kept for two or three days, but it is not likely to allow (in South Carolina's sub-tropical climate) the flesh to be stored for longer periods.

perhaps the thirteenth or fourteenth century A.D.

Pollen analysis revealed a change between the pre-midden and midden occupations, with the midden samples revealing greater variation in species, perhaps as a result of human activities opening up the forest and encouraging a variety of weedy species. The faunal assemblage revealed a high equitability index, suggesting that a number of taxa were being exploited, although there was a strong focus on wild mammals — such as deer and raccoon — which contributed 80% of the MNI and virtually all of the biomass. The faunal remains contributed two additional bits of information. First, the presence of silver perch is suggestive of a cool weather or fall occupation — consistent with the one structure. In addition, the absence of rodent marks on the bone may suggest that the remains were being quickly covered up. This, in combination with an absence of microstratigraphy at the site, suggests that the site was intensively used during relatively short periods of occupation.

The ethnobotanical remains revealed a wide variety of woods, suggesting that foraging activities incorporated a variety of environmental zones, including dry uplands, mesic marsh edge, and even wetland areas. Other floral remains, such as hickory nuts, viburnum seeds, and palmetto seeds, are suggestive of a fall or winter occupation. Nevertheless, shellfish was clearly the most important subsistence item. The three middens investigated contributed between 97.7 and 99.9% of the biomass present. They were dominated by oyster, comprising on average about 98% of each midden by weight. Generally middle to high intertidal clusters and scattered individuals from lower intertidal areas were primarily collected. It was also suggested that the site occupants focused their attention on the marsh very close to the site, rapidly depleting the large oysters and then turning to smaller individuals. Other shellfish include clam, ribbed mussel, periwinkle, and whelk.

The Deptford and St. Catherines pottery samples were found to be very similar, at least in terms of the cordage. In contrast to previous investigations, both wares at 38BU861 were dominated by right or S twist cordage. Many of the Deptford sherds and most of the St. Catherines pottery suggested use over open fires — probably to cook food. If the difference in temper is ignored, it is very difficult to separate the two wares. The examination of the St. Catherines paste suggests that the temper represents partially dried lumps of clay which had been incorporated back into the clay during the forming of vessels — there was no indication of ground sherds being used.

The work also found that the different middens contained the various types in consistent percentages. This may suggest that all of the middens are generally contemporaneous or, alternatively, that there was considerably stability in the various types over time. If the radiocarbon dates are to be accepted, then the latter explanation seems more reasonable.

Prehistoric Synopsis

It seems almost foolhardy, given the previous discussions, to attempt any detailed synthesis of the Middle and Late Woodland — and in fact none will be offered. It is appropriate, however, to provide a very general overview. It is also appropriate to view the Middle and Late Woodland from several vantage points, noticing the similarities even across space.

Sassaman et al. (1990:14-15) provide a synoptic overview of the Late Woodland in the Savannah River valley, noting that the period "is difficult to delineate typologically from its antecedents or from the subsequent Mississippian period." They observe that cord marking, present during the Middle Woodland, cannot be used as a marker, suggesting instead that the break should perhaps be accepted as the decline in Deptford wares about A.D. 500 to 550.

While Late Woodland sites are perceived as numerous in the Coastal Plain, there are relatively few identified in the Piedmont, perhaps because earlier simple stamped wares continue into the second millennium (Sassaman et al. 1990:14). They note that Stoltman's work on Groton Plantation offers about the only information on Late Woodland site distribution available for the region. The pattern of dispersed upland settlement (suggested by Stoltman to be associated with the beginnings of slash and burn agriculture) may also be interpreted as evidence for intensification of upland resource procurement. The corresponding increase in the number of small and dispersed Coastal Plain sites is

suggested to represent "a decrease in settlement integration over the Middle Woodland Period" (Sassaman et al. 1990:14). Of equal interest is the observation that the transition from Late Woodland to Mississippian is suggestive of considerable indigenous development, perhaps helped by the imposition of a chiefly elite (Sassaman et al. 1990:15).

While not intended to be synoptic, Anderson et al. (1982) provide considerable information on the Woodland in the Lower Santee River area of South Carolina. In particular, Anderson suggests two phases, McClellanville (A.D. 500 to 700) and Santee I (A.D. 700 to 900) form the Late Woodland, characterized by Wilmington, Cape Fear, Yadkin, and Santee pottery (Anderson et al. 1982:250). Again there appears to be a gradual, indigenous change from the Middle to Late Woodland, with a number of the wares continuing uninterrupted. In fact, the Wilmington wares, originating in the late Early Woodland (ca. 400 B.C.) continue into the Early Mississippian (ca. A.D. 1100). The shift into the Mississippian, however, is foretold by the development of the carved paddle Santee Simple Stamped wares.

Moving into North Carolina, Ward and Davis (1999:201) observe that the Deep Creek and New River series both represent coarse sand tempered wares dominated by cord marking (although variable amounts of simple stamped, net impressed, and plain wares are also found). While the flow of cord marking southward seems clear, there is little indication that carved paddle traditions moved northward. Of special interest is the Hamp's Landing pottery, tempered with crushed calcareous marl. Surface treatments include cord marking, fabric impression, and simple stamping (Ward and Davis 1999:202). While the one available radiocarbon dates places the ware in Early Woodland, the connection seems far more likely to be with Middle Woodland wares. In fact, Jones et al. (1997) suggest that the type of temper is not as important as the size, shape, and density of the temper, linking the ware with Hanover types. By the Middle Woodland there is the grog tempered Hanover ware and sand, grit and pebble tempered Mount Pleasant ware. Ward and Davis observe, "Mount Pleasant pottery is similar to Early Woodland Deep Creek ware and is probably a direct descendant of the Deep Creek ceramic tradition" (Ward and Davis 1999:203). With the rise of Cape Fear ware, fabric impressing became more common, at least on the southern coast.

The Late Woodland Period is briefly summarized by Phelps (1983:36-47) who notes that, "from A.D. 800 onward archaeological assemblages of the Late Woodland period in the North Carolina region can be related to ethnohistoric information and studies" (Phelps 1983:36). Consequently, the pebble tempered Cashie Series was likely produced by the Tuscarora, the shell tempered Colington Series was likely produced by the Carolina Algonkians, leaving the poorly understood shell tempered Oak Island wares to be attributed to the Siouan groups on the southern North Carolina coast. Outside of the presence of burial mounds there seems to be little connecting the North Carolina and southern South Carolina Late Woodland assemblages.

In Georgia the Early Woodland is typically marked by Deptford Check Stamped and Simple Stamped wares, characterized by straight or flared rims and a sandy paste (Steinen 1995:9). In contrast, DePratter (1979) identifies only Deptford Check Stamped, Cord Marked, and Complicated Stamped, placing the simple stamped sherds into the Refuge classification, along with dentate stamped, incised, and punctated.[3] DePratter (1979:112) also offers three Refuge and two Deptford phases to help break up the Early to Middle Woodland chronology. Check stamping first occurs in the Refuge III phase (ca. 900 B.C.), while cord marking does not occur until the Deptford I phase about 400 B.C. Simple stamping, first seen in the Refuge I phase (ca. 1100 B.C.) continues through the Deptford II phase (ca. A.D. 500), revealing its very long popularity. Toward the end of the Deptford III phase there is the introduction of nested diamonds, herring bone, and other unusual forms of quasi-check stamping. These motifs have been called Oemler Complicated Stamped (DePratter 1979:127-128). DePratter would have the Deptford giving way to Wilmington (the Georgia equivalent to the North Carolina Hanover wares) about A.D. 500. By about

[3] While some researchers note that the South Carolina Thom's Creek ware is rarely found into Georgia, it seems that in Georgia much of the Thom's Creek pottery has been subsumed under the Refuge heading.

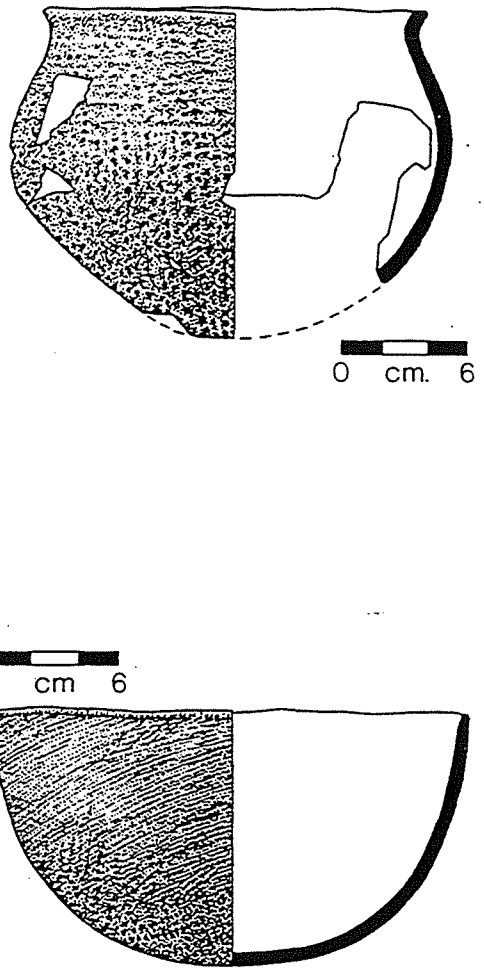

Figure 7. St. Catherines Cord Marked vessel (top) and Savannah Fine Cord Marked vessel (bottom) from Marys Mound, St. Catherines Island, Georgia (adapted from Larsen et al. 1982:Figure 9).

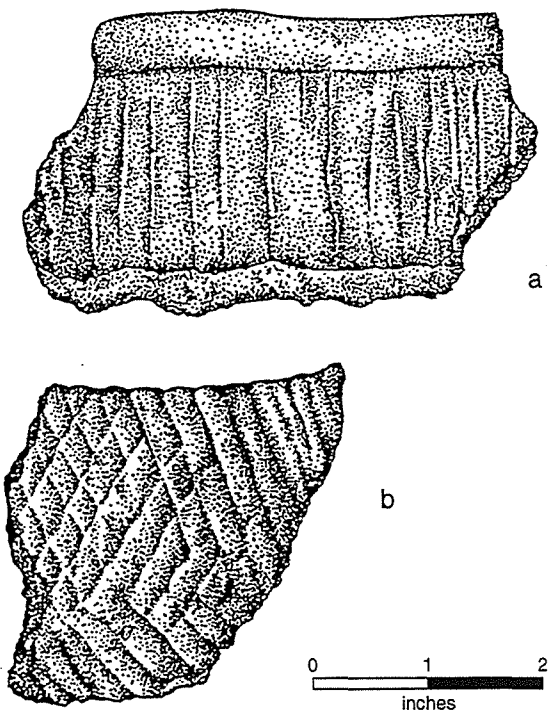

Figure 8. Examples of Ocmulgee I (a) and III (b) pottery (adapted from Steinen 1995:12).

A.D. 600 check stamping has dropped out and the assemblage is dominated by brushed and cord marked wares, all with a heavy grog temper. The brushed wares, while not often discussed, are reported by DePratter (1979:130-131) to consist of fine or faint combing or brushing impressions, as if applied by bundled sticks, grass or other implements.

In the interior of Georgia there is even less data. Frankie Snow's (1977) survey of the Ocmulgee Big Bend area produced large quantities of what he called "Ocmulgee I" pottery. He specifically states that this ware "is not Wilmington" (Snow 1977:42), noting that while there is some clay tempering (none of it similar to the abundant grog tempering of classic Wilmington), much of the pottery has a sandy paste (Snow 1977:36). Perhaps the most distinctive characteristic of this pottery (which is associated with at least one burial mound) is a heavy folded rim. Folded rims seem to drop out, while the paste becomes increasingly more gritty in succeeding Ocmulgee II and III types. There is no evidence of St. Catherines pottery. Instead, it seems that the cord marked Ocmulgee wares fill the gap. Snow even mentions that his Ocmulgee III pottery, which is found with small triangular points, shows "some traits suggestive of closer ties with coastal Savannah II Cordmarked ceramics"

(Snow 1977:43), suggesting that the Ocmulgee II wares may be Late Woodland.

Perhaps the most succinct summary of the Georgia Middle to Late Woodland St. Catherines manifestation is that offered by DePratter and Howard (1980:16-17). Significantly, they note that most of the Georgia data comes from burial mound excavations, "because only limited village [and presumably shell midden] excavations have been conducted" (DePratter and Howard 1980:16). Even with burials there is a limited range of artifact types — shell beads, worked whelk shell bowls or drinking cups, bone pins, and triangular projectile points. Not only is little known about village life, nothing is known concerning residential structures and there is no good evidence of agricultural crops. Once again the Late Woodland is presented as little more than an extension of the previous Middle Woodland lifeways.

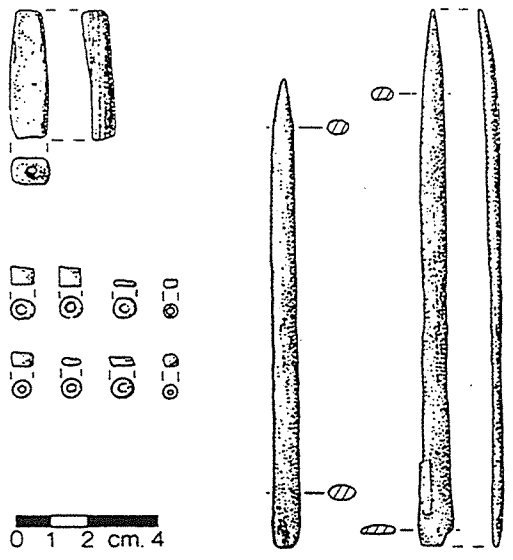

Figure 9. Whelk columella bead, shell disk beads, and bone pins from Johns Burial Mound, St. Catherines Island, Georgia (adapted from Larsen et al. 1982:Figure 28).

Some additional information, albeit from burial mound sites, is offered by Larsen et al. (1982) in their examination of mortuary data from the Marys and Johns mounds on St. Catherines Island. Figure 7 illustrates St. Catherines Cord Marked and Savannah Fine Cord Marked vessels from Marys Mound, while Figure 9 illustrates a variety of shell beads and bone pins recovered from Johns Mound.

DePratter (1979:119) provides a generalized introduction to the Late Woodland St. Catherines phase, noting its original definition by Caldwell (1971) and remarking that the ceramics are:

> characterized by finer clay tempering than that of preceding Wilmington types and by the increased care with which the ceramics were finished. The lumpy, contorted surface of Wilmington types was replaced by carefully smoothed and often burnished interiors and exteriors. St. Catherines Burnished is characterized by careful exterior burnishing, whereas surfaces of St. Catherines Plain are simply smoothed. St. Catherines Fine Cord Marked has more carefully applied and more consistently spaced cross cord impressions than did its predecessor, Wilmington Heavy Cord Marked (DePratter 1979:119).

DePratter also notes that the temper in the St. Catherines pottery consists of "crushed sherd or crushed, low-fired clay fragments" (DePratter 1979:131). One of the few detailed studies of prehistoric temper included a sample of six St. Catherines sherds (Donahue et al. n.d.). The study found that the trend toward decreasing grain size of the aplastic component, begun in the Middle Woodland, continues. The grain size distribution was found to be unimodal, with 96% of the grains less than 0.3 mm in diameter. None of the grains was larger than 0.9 mm. They suggest that the paste represents locally gathered clay, perhaps marsh clay, with no additions of sand. In contrast, the grog inclusions are coarse, ranging from about 2 to 3 mm, and they contain quartz grains

(perhaps reflecting tempering in crushed sherds). The average composition of the St. Catherines sherds is 71% paste, 25% grog inclusions, and 4% voids.

Early Settlement and Economic Development

The English established the first permanent settlement in what is today South Carolina in 1670 on the west bank of the Ashley River. Like other European powers, the English were lured to the New World for reasons other than the acquisition of land and promotion of agriculture. The Lord Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop which would provide great wealth through its distribution in the mercantile system.

By 1680 the settlers of Albemarle Point had moved their village across the bay to the tip of the peninsula formed by the Ashley and Cooper rivers. This new settlement at Oyster Point would become modern-day Charleston. The move provided not only a more healthful climate and an area of better defense, but:

> [t]he cituation of this Town is so convenient for public Commerce that it rather seems to be the design of some skillful Artist than the accidental position of nature (Mathews 1954:153).

As previously mentioned, early settlers came from the English West Indies, other mainland colonies, England, and the European continent. It has been argued that those from the English West Indies were the most critical to the future of the colony, as they brought with them a strong agrarian concept, involving both staple crops and, especially, slave labor (Sirmans 1966).

Early agriculture experiments which involved olives, grapes, silkworms, and oranges were less than successful. Ironically, it was often the climate which precluded successful results. While the Indian trade was profitable to many of the Carolina colonists, it did not provide the proprietors with the wealth they were expecting from the new colony. Ranching offered quick, and relatively easy, cash, but again the proprietors resisted such efforts, realizing that the profits they would reap were far smaller than possible from the mercantile system. Consequently, the cultivation of cotton, rice, tobacco, and flax were stressed as these were staple crops whose marketing the proprietors could easily monopolize.

Although introduced at least by the 1690s, rice did not become a significant staple crop until the early eighteenth century. At that time it not only provided the proprietors with an economic base the mercantile system required, but it was also to form the basis of South Carolina's plantation system (Carpenter 1973). Over production soon followed, with a severe decline in prices during the 1740s. This economic down swing encouraged at least some planters to diversify and indigo was introduced (Huneycutt 1949:33). Indigo complemented rice production since they were grown in mutually exclusive areas. Both, however, were labor intensive and encouraged the large scale introduction of slaves.

Although four counties, Berkeley, Craven, Colleton, and Granville, were created by the Proprietors between 1682 and 1685, the Anglican parishes, established in 1706, became the local unit of political administration. Christ Church, situated immediately east of Charleston and confined by the sea shore on one side and the Wando River on the other, was closely aligned with Charleston throughout its history. While Charleston County was created toward the end of the colonial period in 1768, the division of Christ Church remained a significant social, as well as political, unit into the late nineteenth century (see Gregorie 1961 for further information on the social and religious influence of the parish).

South Carolina's economic development during the pre-Revolutionary War period involved a complex web of interactions between slaves, planters, and merchants. By 1710 slaves outnumbered free people in South Carolina. While Christ Church Parish was sparsely populated, it, too, was dominated by African American slaves. By the 1730s slaves were beginning to be concentrated on a few, large slave-holding plantations. At the close of the eighteenth century some South Carolina plantations had a ratio of slaves to whites that was 27:1 (Morgan 1977). While over half of eastern South Carolina's white population

held slaves, few held very large numbers. The Charleston area had a slave population greater than 50% of the total population by 1790. This imbalance between the races, particularly on remote plantations, may have led to greater "freedom" and mobility (Friedlander in Wheaton et al. 1983:34). By the antebellum period this trend was less extreme.

The early history of the Seaside tract is still poorly understood, although it is clear that in the mid-eighteenth century the property was owned by Thomas Whitesides. Virtually nothing has been discerned about his public or private life. He does not appear in the Combined Alphabetic Index at the S.C. Department of Archives and History. There is no entry for him in the genealogical files of the South Carolina Historical Society. His only mention in Anne King Gregorie's history of Christ Church was that he was a Vestryman in 1755 (Gregorie 1961:46). He advertised only three times in Charleston's *South Carolina Gazette* — twice (in May 1752 and September 1755) as Church Warden of Christ Church Parish concerning church support and once (November 1761) concerning a run away slave. The only other mention of him in the newspaper is between late October and early November 1762, when his estate was being settled and his widow, Sarah Whitesides advertised outstanding debts. It appears that only in death did Thomas Whitesides leave a clear historical legacy.

Thomas Whitesides' will, although not dated, was proved on August 15, 1762 which suggests that he died only a week or two earlier. In the will, Thomas left his wife Sarah a life estate in his plantation as long as she maintained his children, "without charge" and under his name. At her death or remarriage it appears that the plantation lands would be evenly divided among his five sons — Thomas, John, William, Edward, and Moses — while his three daughters would each be given a lump sum of £200, to be paid by all his sons except Moses (Charleston County WPA Wills, volume 9, p. 305).

Christ Church was the scene of relatively little economic development during the late colonial period. Zierden and Calhoun note that:

> Charleston was the economic, institutional and social center of the surrounding region. The necessity of transacting business in Charleston drew planters eager to transform their crops into cash or goods . . . it [was] virtually imperative for a planter interested in society to reside in Charleston at least occasionally (Zierden and Calhoun 1984:36).

They argue that Charleston provided an opportunity for conspicuous consumption, a mechanism which allowed the display of wealth accumulated from the plantation system (with this mechanism continuing through the antebellum period). Scardaville (in Brockington et al. 1985:45) notes that the plantation system which brought prosperity through the export of staple crops also "made the colony . . . highly vulnerable to outside market and political forces."

The most obvious example of this is the economic hardship brought on by the American Revolution. Not only was the Charleston area the scene of many military actions, but Charleston itself was occupied by the British for over 2½ years between 1780 and 1782. The loss of royal bounties on rice, indigo, and naval stores caused considerable economic chaos with the eventual "restructuring of the state's agricultural and commercial base" (Brockington et al. 1985:34).

Antebellum Charleston, Cotton Production, and the Civil War

One means of "restructuring" was the emergence of cotton as the principal cash crop. Although "upland" cotton was available as early as 1733, its ascendancy was ensured by the industrial revolution, the invention of the cotton gin in 1794, and the availability of slave labor. While "Sea Island" cotton was already being efficiently cleaned, the spread of cotton was primarily in the South Carolina interior. Consequently, Charleston benefitted primarily through its role as a commercial center.

The 1790 census lists the estate of Thomas Whitesides in Christ Church, noting that there were two males under the age of 16, two females (one of whom was certainly Sarah), one other free white. While

the census doesn't enumerate the estate's land, it does reveal the presence of 19 African American slaves. By 1790 it appears that Moses Whitesides had struck out for himself, establishing his own household with his wife and nine slaves. Sarah Whitesides is still listed as the head of the household in 1800 census, although Moses is not listed.

In spite of these curious census results, a May 1798 survey by Purcell (found in Charles Parker's papers and copied in 1861) shows the division of a portion of Thomas Whitesides lands between his sons Moses and John (McCrady Plat 5966) (Figure 10). The apparent original, from which this copy was produced, is also present in the McCrady collection, cataloged as Plat 2357. A careful examination of the two reveals no substantive differences. The notes on the plat reveal that:

> Tract A found to contain 210 acres 93 hundreds exclusive Sands and Marsh belonging to Mr. Moses Whitesides
>
> B found to contain 220 acres 51 H. exclusive of Sands and Marsh belonging to Mr. John Whitesides
>
> NB The Tract A is the tract N4 in a partition plat of a body of Lands and Marsh belonging to the Estate of Mr. Whitesides decd. divided amonst his Sons, Said N4 being allotted to Mr. Moses Whitesides for 225 acres.
>
> The Tract B is the lot N°3 allotted to Mr. John Whitesides now held by his son John also said to contain 225 acres (McCrady Plat 5966).

The partition plat or at least a working copy, while undated, is also found in the McCrady collection. It shows the division of the plantation into four tracts, for Edward, Thomas, John, and Moses Whitesides (McCrady Plats 5590). William, who died only two years after his father, in 1764, is not included on the plat.

Returning to the plat showing the division between Moses (to the northeast) and John (to the southwest), there is considerable detail revealed. Previous mention has been made that the plat documents the physiography and drainage of the area. The boundary trees, for example, include primarily mesic or wet species, such as gum, water oak, pines, laural oak, and holly. The several live oaks are found primarily in the maritime forest adjacent to the "sea shore." The plat also shows three large galls running northeast-southwest through the northwest end of both tracts. Open or busy ponds are found scattered through the tracts. The property is described as "Flat Land in places low in woods mixed Timber," or as "Mixed Flat Land," or simply as "pine land."

The Moses Whitesides tract, encompassing 210 acres, included one "old field" of about 7.2 acres and one "Field Flat Land" of about 38.9 acres. This large field, however, is also shown to include the main settlement, consisting of a main house and fenced area of about 0.4 acre. Two additional buildings are found to the east and north of the main house and access is by a road which runs parallel to the long dimension of the tract but northeast of the main settlement. There is, in other words, no direct avenue or allée to this settlement. There does, however, appear to be an avenue running directly from the main house to the "sea shore." Such a landscape feature would not only permit a view of the marshes, but would also encourage a breeze, making the settlement more healthy.

West-northwest of the main settlement are the "negro houses," a double row of three structures for a total of six. When compared to the 1790 census which listed only nine slaves, this suggests that either several cabins were empty or that Moses Whitesides had substantially increased in his slave holdings.

Situated in the same field as the main house, this settlement likely took up an additional 1.0 acre. Consequently, Moses Whitesides was cultivating approximately 37.5 acres of "high ground" (or 17.9% of the total) and may have been growing rice in the sloughs or galls which were found on the tract.

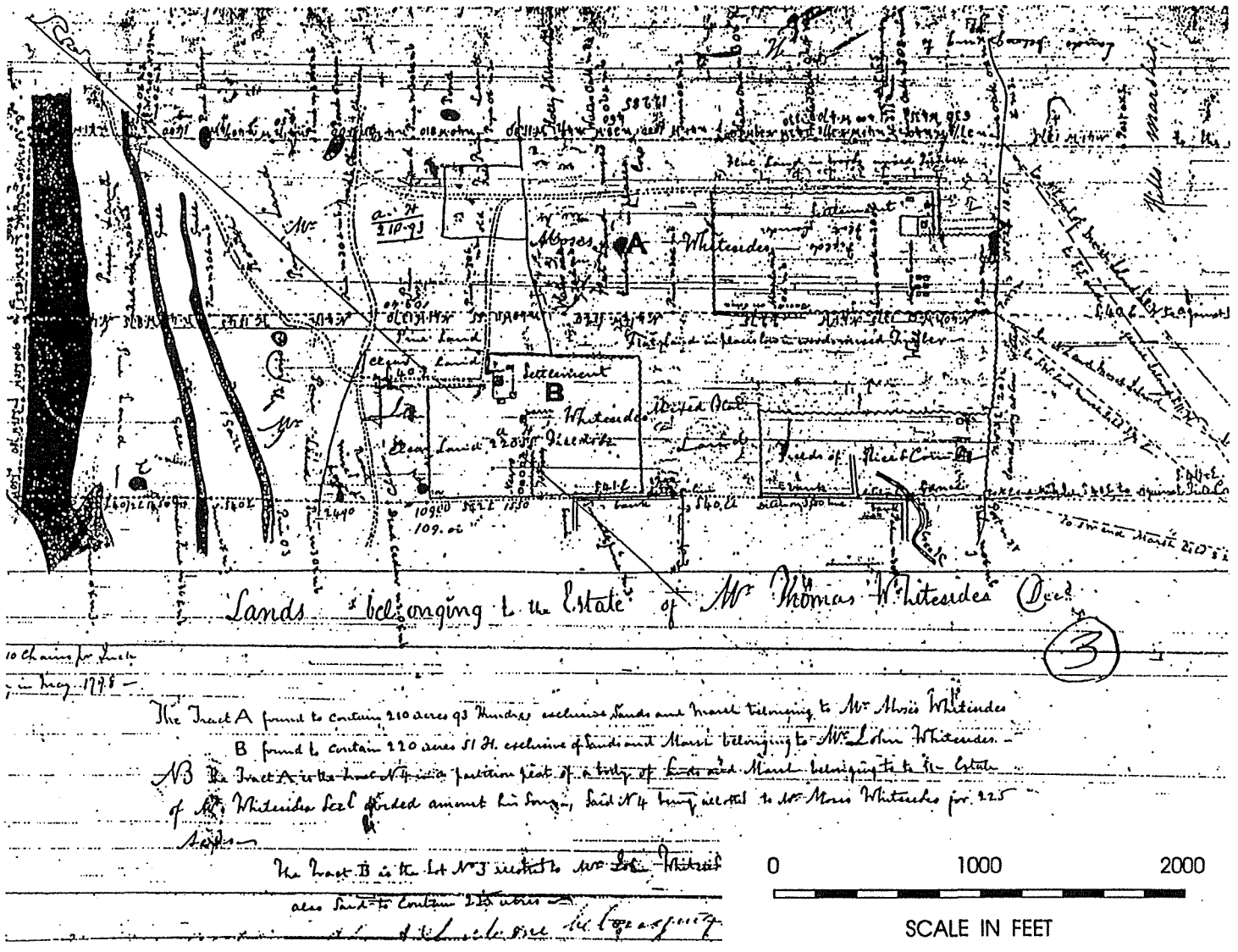

Figure 10. Plat of the John and Moses Whitesides tracts in 1798 (McCrady Plat 5966).

To the southwest of Moses was his brother, John Whitesides, with 220 acres (the subject of previous archaeological investigations, see Trinkley and Hacker 1996). Situated almost dead center on the parcel was the main settlement and the slave row, taking a form very similar to that seen on Moses' property. The main house was accessed by an avenue coming off the "Road to Christ Church." This was not the Charleston-Georgetown Highway (which developed into U.S. 17), but rather a precursor to modern Rifle Range Road. Immediately before John Whitesides house the road forks and leads over to the access road for his brother's property, suggesting that relations between the two were good. Also suggesting some degree of mutual aid is the location of a "well," situated at the "sea shore" end of the tract, between the two brothers' properties.

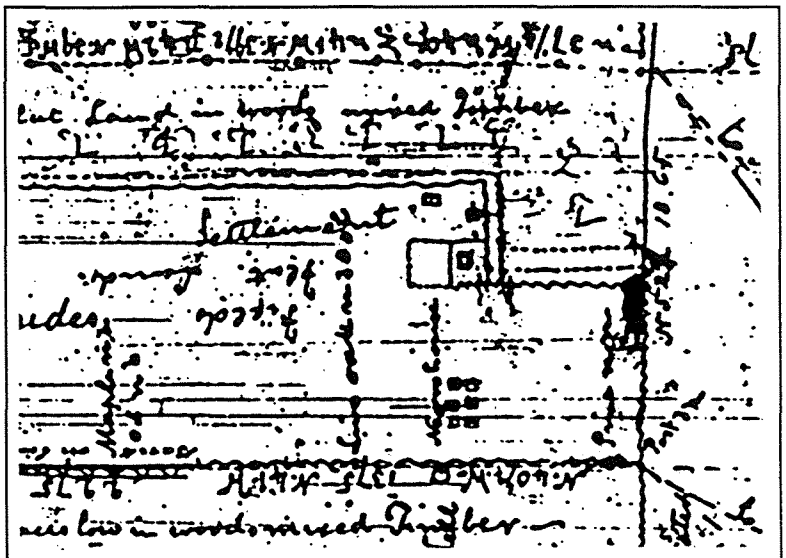

Figure 11. View of the Moses Whitesides settlement (McCrady Plat 5966).

Apparently both Moses and John Whitesides were involved in planting rice in the upland swamps shown as galls on the plats. In addition, John was planting corn and rice on a tract near the sea shore. It's likely that the remainder of the land in plantations was devoted to subsistence crops or fodder since there is no mention of another cash crop.

Sometime in the first decade of the nineteenth century Sarah Whitesides apparently died, since Robert Dorrill, in his 1807 action against John Whitesides and James Hibben, is listed as the administrator of Sarah Whitesides (S.C. Department of Archives and History, B1AE 002 1807 0972A 00). Another summary judgement that same year found that John and Moses Whitesides had been bound to their mother, Sarah, for the sum of £40 (S.C. Department of Archives and History, B1AE 002 1808 0002A 00). In another case, John Whitesides was sued by James Ballough for $24.94 on an open, unpaid account (S.C. Department of Archives and History, B1AE 019 1812 0198A 00). Taken together, these suggest that John Whitesides may have been struggling to "make ends meet." Moses, on the other hand, seems to have been more prosperous.

Curiously, of all the city directories published for Charleston, we have been able to find the Whitesides listed only for the years 1809 and 1813 (Hagy n.d.:136, 161). On both occasions the brothers were listed as "planters" in Christ Church Parish, about 8 miles from Charleston.

The 1825 tax returns for John and Moses Whitesides provide another view of their two operations. Moses filed his return for 309 acres and 30 slaves, paying a bill of $27.59¾. Two hundred and ten acres were assessed at a value of $4/acre, while 99 acres were assessed at only 20¢ an acre, suggesting they were essentially waste lands. The slaves were taxed at the standard 75¢ a head. In addition, Moses declared a town lot, valued at $500 (S.C. Department of Archives and History, 0014 052 1824 00236).

In contrast, John Whitesides possessed 238 acres, all appraised at $4/acre, and only 15 slaves. John also reports no town property and paid a bill of $14.80½ (S.C. Department of Archives and History, 0014 052 1824 00234).

In 1838 Moses Whitesides deeded a 225 acre parcel as a gift to James Daniel Jeffords Whitesides, his son (Charleston County RMC, DB T-10, p. 226). The deed indicates that the tract was purchased by Moses

Whitesides from Jack Whitesides. In spite of extensive research, no Jack Whitesides has been identified in the Charleston area, so this may represent an error in the deed preparation (see South Caroliniana Library, 2266). Regardless, James Daniel Jeffords Whitesides died without heirs in 1852 and the property returned to his father, Moses Whitesides, as well as his sisters, Anne Meree and Elizabeth M.E. Houston (Charleston County RMC, DB X-12, p. 343).

While John Whitesides died in the mid-1830s, his brother Moses continues to be identified in various records. For example, the 1850 agricultural census reveals that Moses Whitesides claimed 40 acres of improved land and 640 acres of unimproved property, worth $3000. The plantation included 10 horses, four mules, one milk cow, 100 head of cattle, and 10 swine, for a value of $850. The plantation produced only corn (210 bushels) and sweet potatoes (500 bushels), suggesting that he may have focused on supplying the Charleston market.

Table 4.
1850 Agricultural Production in Christ Church and on the Whitesides Plantations

Category	Christ Church	parish mean	Hannah Whitesides	Moses Whitesides
Acres improved	6,765	60	20	40
Value of farms	$302,200	$2,698	$1,000	$3,000
Value of farm implements	$11,000	$98	$ 0	$ 0
Value of livestock	$38,762	$346	$275	$850
Value of animals slaughtered	$8,670	$77	$75	$100
Value of orchard products	$730	$7	$0	$0
Value of market produce	$4,900	$44	$0	$0
Indian corn (bu)	26,565	237	200	210
Oats (bu)	5,330	48	0	0
Rice (lbs)	964,800	8,614	0	0
Ginned cotton (400 lb bales)	111	1	0	0
Wool (lbs)	1,541	14	0	0
Peas and beans (bu)	4,450	40	0	0
Irish potatoes (bu)	2,280	20	0	0
Sweet potatoes (bu)	60,686	542	250	500
Butter (lbs)	7,450	67	0	0

In contrast, his brother' widow, Hannah, was operating a farm with 20 acres of improved land and 130 acres of unimproved land, representing a total value of $1000. This may suggest that she was operating only a portion of the previous holding, but given the errors in the agricultural census records relatively little should be made of this discrepancy. The plantation included three horses, two milk cows, 30 head of cattle, and 15 swine, for a total value of $275. Production included 200 bushels of corn and 250 bushels of sweet potatoes. The value of animals slaughtered was a very modest $75.

These figures suggest that the Whitesides plantations, in the 1850s, were little more than small subsistence farms, perhaps focusing on cattle, even this late in time. No cash crops are reported and the quantities of crops and livestock are very modest. This impression is made even stronger when the two tracts are compared to the rest of Christ Church (Table 4). In many respects the plantation of Moses Whitesides comes close to the "average" or "typical" 1850 Christ Church plantation. The differences in some areas, such as orchard products and rice, are of no concern since these were commodities produced on a relatively few Christ Church plantations. In terms of acres improved, cash value of the farm, value of livestock, and value of slaughtered livestock, Moses Whitesides fits the mean. Hannah Whitesides, on the other hand, operated a very modest farm, even in the context of Christ Church.

It is clear that the John Whitesides plantation, along with the other small tracts subdivided at the death of Thomas Whitesides in the late eighteenth century, were all recombined by Theodore D. Wagner in one 1158 acre tract in the late antebellum. Relatively little is known about Wagner, although he was a prominent Charleston merchant. He was a partner is the factor house of John Fraser & Company, with G.A. and E.L. Trenholm, for a number of years (South Carolina Historical Society 11/448).He was the President of the John Fraser & Co in Charleston and a backer of the blockade running firm of Chicora Importing and Exporting Co. during the Civil War (Wise 1988:46, 115). He was also an owner of Hassell, East Bay, and Pritchard Street property in Charleston (McCrady Plat 7214). It seems likely that his ownership of the Sea Shore tract was a business investment — an opportunity to "corner the

commission market" by being both a producer and a merchant.

These combined Wagner lands are shown by a Robert K. Payne plat dated July 21, 1856 (McCrady Plat 6204; Figure 12). This plat shows the lands of Moses Whitesides, with the boundary line between Moses and John still clearly shown on the plat. Both the main settlement and the slave settlement for Moses Whitesides are still shown on the plat in the same locations as revealed initially on the 1798 plat. The main settlement is now shown as encompassing three structures and there is a new access road, forming an avenue or allée leading to the settlement. The slave settlement is shown as a double row totaling six houses — the same as 58 years earlier.

What is more important is that the plat reveals a large bifurcated marsh slough southwest of the slave settlement. This feature is seen on later plats and provides an excellent means of locating the settlement.

The John Whitesides settlement was not indicated on this plat, suggesting that by this time it was no longer recognized, even as ruins. The main Wagner settlement had sifted back to the vicinity of the original Thomas Whitesides settlement. The cultivated fields are all consolidated along the "seas shore," protected by dikes and ditches, and account for about 240 acres, or 20.7% of the total tract.

Wagner held the property for less than four years, selling the 1158 acre (more or less) tract to B.J. Johnson in 1857 (Charleston County RMC, DB T-13, p. 198). The mortgage on the property, held by Wagner, was satisfied two years later, on August 1, 1859, although Johnson sold the property on April 8, 1859 to Peter P. Bonneau. At this time the tract was described in terms of the 1856 Wagner plat and the acreage continues to be described as 1158 acres. Bonneau continued to be shown as the owner on the 1863 "Map of Charleston and Its Defenses" (Figure 13). In 1859 Bonneau mortgaged the property to William L. Venning, perhaps to guarantee a loan for the purchase (Charleston County RMC, DB H-14, p. 169). Regardless, the mortgage was satisfied in 1863, just before Bonneau sold the tract to Theodore Stoney (Charleston County RMC, DB T-14 #2, p. 78).

Bonneau is another of those relatively unknown characters in history. Nothing relevant could be found in the S.C. Department of Archives and History's Combined Alphabetic Index. He does not appear in the files of the South Carolina Historical Society. He is not even listed in either the 1850 or 1860 federal census for South Carolina. No Bonneau appears in the Charleston Museum's survey of retailers, craftsmen or others advertising in the *South Carolina Gazette* (Calhoun and Zierden 1984).

We have found one mention of him in *The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies* (known as the OR). In a May 22, 1864 letter E.M. Seabrook, the Acting Assistance Adjutant-General for South Carolina wrote Colonel Peter Seabrook, Commander of the Nineteenth South Carolina Militia to:

> proceed with all possible dispatch to assemble the Nineteenth South Carolina Militia Regiment under your command. The regiment will rendezvous forthwith at Bonneau's place and await orders (OR 66, page 497).

This seems to have been his only Civil War action.

Bonneau is, however, listed on the 1860 agricultural schedule as owning a tract in Christ Church Parish (Table 5). It is enumerated as containing 250 acres of improved land, surprisingly close to that estimated from the Wagner plat. Only 350 acres of unimproved land are listed, suggesting either an error or possibly that "unimproved" was used by some owners or enumerators as meaning other than woodland. The plantation's value, $12,000, suggests the acreage may have been under-reported. Bonneau reported $500 in machinery. Livestock included 17 horses, three mules, 50 milk cows, four working oxen, 25 head of cattle, 40 sheep, and 60 pigs, with a total value of $3,000. The plantation produced 1000 bushels of corn, 30 bales of cotton, 300 pounds of wool, 150 pounds of beans and peas, 2,000 bushels of sweet potatoes, 100 pounds of butter, and 6 tons of hay. The animals slaughtered on the plantation were valued at $100.

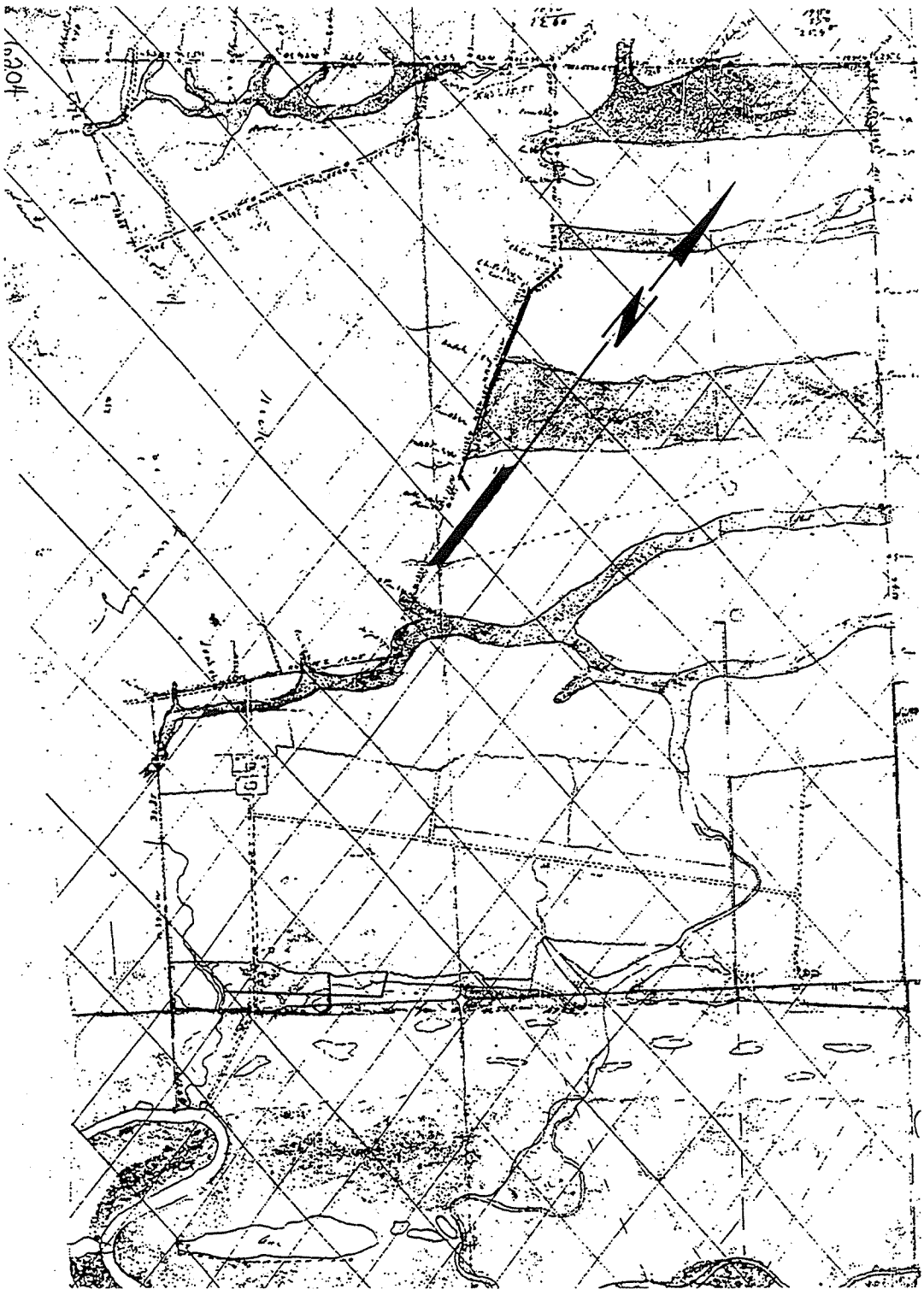

Figure 12. 1856 Thomas D. Wagner plat of the re-assembled Whitesides tracts (McCrady Plat 6204).

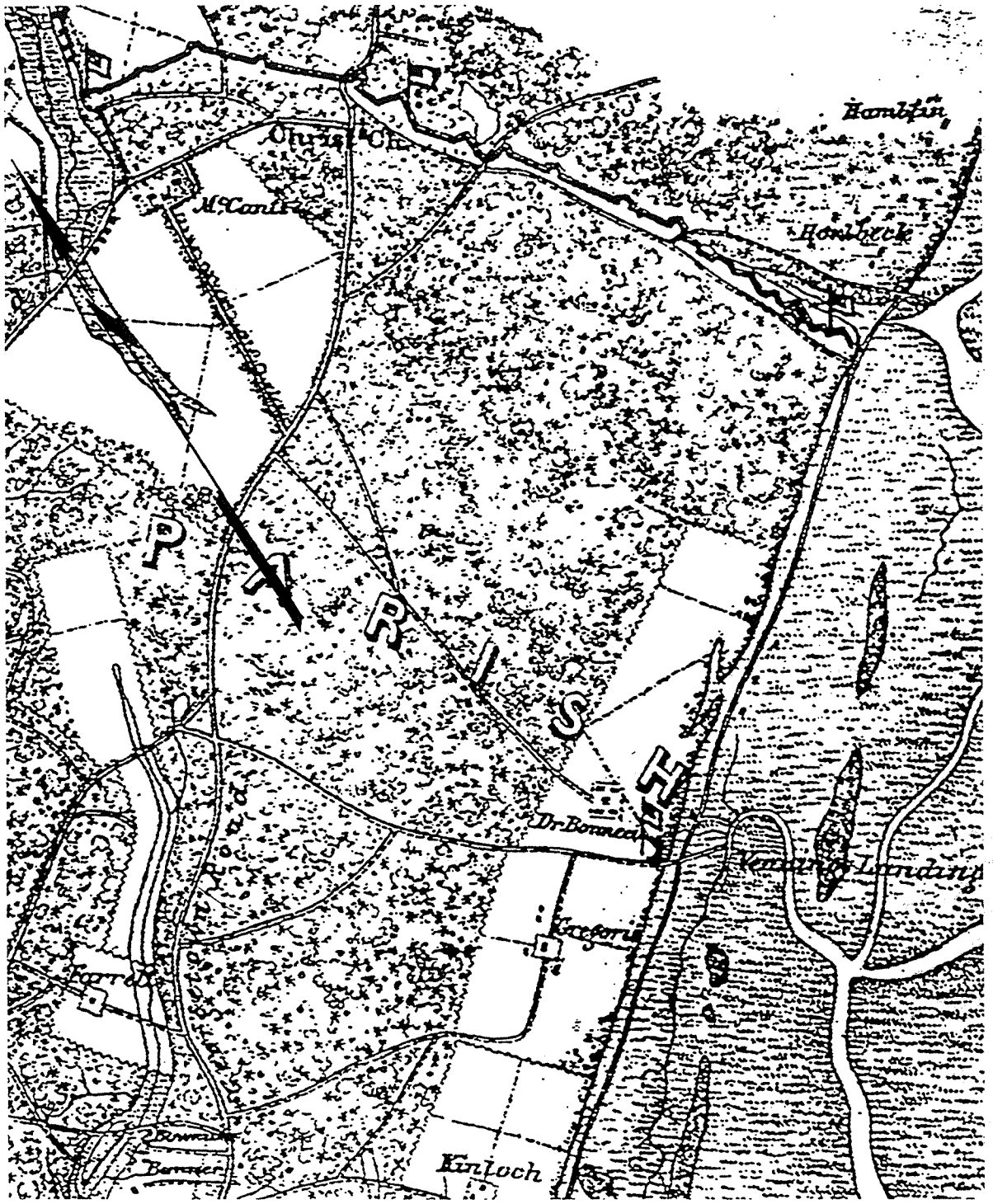

Figure 13. A portion of the 1863 "Map of Charleston and Its Defences" showing the Bonneau settlement and the Confederate earthwork from the sea shore to the headwaters of the Wando River.

The operation of the plantation had clearly changed dramatically from even 10 years earlier. Certainly this is partially the result of the operation's scale having been dramatically increased. It also appears that Bonneau sought to create a more conventional "plantation," moving away from ranching and subsistence farming toward a diversified farm focused on cotton.

The Bonneau plantation stands in contrast to many of the other plantations in Christ Church. Although containing about the average number of improved acres and having about the average of plantation implements, the Bonneau plantation produced substantially larger quantities of corn, wool, butter, sweet potatoes, and especially, cotton.

Table 5.
1860 Agricultural Production in Christ Church and on the Bonneau Plantation

Category	Christ Church	parish mean	Bonneau
Acres improved	12,821	217	250
Value of farms	$431,900	$7,320	$12,000
Value of farm implements	$28,165	$477	$ 500
Value of livestock	$78,176	$1,325	$3,000
Value of animals slaughtered	$5,270	$89	$100
Value of orchard products	$1,035	$18	$0
Value of market produce	$4,006	$68	$0
Indian corn (bu)	37,115	629	1000
Oats (bu)	2,825	48	0
Rice (lbs)	180,000	3,051	0
Ginned cotton (400 lb bales)	460	8	30
Wool (lbs)	3,484	59	300
Peas and beans (bu)	5,870	100	150
Irish potatoes (bu)	915	16	0
Sweet potatoes (bu)	42,300	717	2,000
Hay (tons)	464	8	6
Butter (lbs)	3,240	55	100

Cotton provided about 20 years of economic success for South Carolina. During this period South Carolina monopolized cotton production with a number of planters growing wealthy (Mason 1976). The price of cotton fell in 1819 and remained low through the 1820s, primarily because of competition from planters in Alabama and Mississippi. Friedlander, in Wheaton et al. (1983:28-29) notes that cotton production in the inland coastal parishes fell by 25% in the years from 1821 to 1839, although national production increased by 123%. Production improved dramatically in the 1840s in spite of depressed prices and in the 1850s the price of cotton rose.

The Charleston area did not participate directly in the agricultural activity of the state. Scardaville (in Brockington et al. 1985:35) notes that "the Charleston area, as a result of a large urban market and a far-reaching trade and commercial network, had carved out its own niche in the state's economic system." Zierden and Calhoun remark that:

> [c]ountry merchants, planters, and strangers "on a visit of pleasure" flocked to Charleston. Planters continued to establish residences in Charleston throughout the antebellum era and "great" planters began to spend increasing amount of time in Charleston (Zierden and Calhoun 1984:44).

In spite of this appearance of grandeur, Charleston's dependence on cotton and ties to an international market created an economy vulnerable to fluctuation over which the merchants and planters had no control.

While the wealthiest farms were those on the sea islands producing cotton (such as Edisto Island where the value of the average plantation was over $44,000), plantations in Christ Church (as well as other inland, non-cotton producing areas) had an average value of around $7,300. Christ Church Parish grew only 1.7% of the district's cotton, although it formed 10.1% of the improved acreage. An examination of the agricultural schedules for the Charleston area in 1850 and 1860 provides evidence for this economic slump. Scardaville (in Brockington et al. 1985:39-40) notes that produce, farm, and livestock values for Christ Church Parish were below what would be expected and outputs of many crops had decreased over time. But most significantly, rice was no longer an economically significant crop, production dropping by over 81% from 1850 to 1860.

The Christ Church Parish response to the reduction in rice was a shift to ranching and livestock production as a substitute. Between 1850 and 1860 the value of livestock increased by 120%, corn increased by 44%, and wool production increased by 126% (Scardaville in Brockington et al. 1985:41). It seems clear that Christ Church was engaged in a gradual shift from monocropping to truck farming. Its unique location at the doorstep of Mount Pleasant and Charleston allowed Christ Church to focus its agricultural pursuits on the needs of an expanding urban market.

An appropriate summary is provided by Zierden and Calhoun:

> [t]he economic decline of Charleston occurred as the city was growing increasingly defensive of its "peculiar institution." The city sullenly withdrew into itself, eschewing the present and glorifying its past. The great fire of 1861 devastated much of downtown Charleston. The War between the States . . . set the seal on a social and economic era (Zierden and Calhoun 1984:54).

Postbellum Period

After the Civil War Charleston and the surrounding countryside lay in waste. Plantation houses were destroyed, the city was in near ruins, the agricultural base of slavery was destroyed, and the economic system was in chaos. Rebuilding after the war involved two primary tasks: forging a new relationship between white land owners and black freedmen, and creating a new economic order through credit merchants. General sources discussing the changes in South Carolina include Williamson (1975), Goldenwieser and Truesdell (1924), and more recently, Zuczek (1996). Scardaville (Brockington et al. 1985:43-48), however, provides information on the changing labor patterns specifically in the study area.

Theodore Stoney, postbellum owner of the Sea Shore tract, is one of those tragic figures of the late Civil War — early postbellum who is known primarily through a string of bankruptcies, forced sales, and related legal problems (see Charleston RMC, DB G-15, p. 189; DB K-16, p. 202; DB G-15, p. 733; DB C-16, p. 210; DB E-16, p. 317). Throughout most of this period he was a partner of the Stoney, Lowndes & Co., Brokers, with Henry D. Lowndes and T.S. Snowden. He is listed in the 1870 population census as residing in Ward 2 of downtown Charleston. During the Civil War Stoney was the Secretary and Treasurer of the Southern Torpedo Co. in Charleston. He sought, and apparently found, favor with Confederate leaders like General G.T. Beauregard, who warmly supported the efforts to crack the Union blockade (OR 47, page 525). By 1864 he was apparently a Captain, leading special "army torpedo steamers" (OR 66, page 460).

Regardless of his war-time exploits, in April 1868 Stoney provided Arthur Hammond a large mortgage and by December of that year the U.S. District Court for South Carolina (with a parallel claim in Circuit Court) found him bankrupt. In April 1869 Stoney managed to reclaim his Sea Shore tract from the Court, although his other plantations, including the 1602 acre Laurel Hill and the 133 acre Elm Grove plantations, both in Christ Church Parish, were sold in 1872.

Stoney again mortgaged the Sea Shore tract in October 1873, only to again be found bankrupt in December 1873. In 1876 the Sea Shore tract was sold to B.H. Rutledge, Receiver of the Estate of Otis Mills (Charleston County RMC, DB X-16, p. 432).

It is likely that Stoney operated his plantation using one of several common forms of tenancy (see Scardaville in Brockington et al. 1985:46). Although tenancy was increasing throughout South Carolina during this period, it was increasing at a far greater rate in Christ Church. The number of farm units increased from 810 in 1860 to nearly 2,500 in 1870, an increase of over 207%, more than double the statewide rate. While only about 20% of the farms in South Carolina were under 10 acres, almost half of the farms in Charleston County were that size. In Christ Church Parish over 70% of the farms were under 10 acres in size. Scardaville suggests that, "a larger black population (86.3% in rural Charleston County and only 58.9% statewide) and henceforth more intensive demand for

Figure 14. Portion of the 1875 U.S. Coast Survey Map 1400b, "Bull's Bay to Breach Inlet."

land area might explain the greater division of the land in Charleston" (Brockington et al. 1985:47-48). It has also been suggested that the Christ Church plantation owners were more amenable to renting land to blacks.

It is during this period that one of the best regional maps is prepared, showing the study tract situated between lands reported to be owned by Wagner and Bryan. While the ownership information is often incorrect, the topographic features are well represented. Figure 14 shows the bifurcated marsh slough seen on the 1856 Wagner plat. While the slave settlement is no longer present, two structures are still standing — one at the Moses Whitesides main settlement area and another in the area of the slave settlement.

The disposition of the property by Rutledge is not clear, but in 1881 Stoney purchased Seaside Plantation from Rosa Bryan, then owner (Charleston County RMC, DB K-18, p. 108). The property is described as bounded to the north by lands of William McCants, to the east by lands of Mr. Corbett, to the west by lands of Mr. Venning, and to the south by the "sound." The property is still described as containing 1158 acres and reference is made to a plat by Robert K. Payne.

Beginning shortly after this purchase, Stoney began to sell small tracts to local blacks, perhaps supporting the idea that Christ Church planters were more willing to integrate the freedmen into the postbellum economy. In 1882 he sold 8¾ acres to Samuel Frazer (Charleston County RMC, DB A-31, p. 90). Additional parcels ranging from 1 to 15 acres were sold through 1896 (Charleston County RMC, DB A-31, p. 143, 160, 229; A-36, p. 70). Stoney, however, divested the bulk of the property in two separate sales to H.F.W. Breuer. The first sale, in 1885, was for 372.25 acres of high land and 407 acres of marsh (Charleston County RMC, DB A-31, p. 147). The second, for a total of 236¾ acres, was in 1886 (Charleston County RMC, DB A-31, p. 259). This second sale was shown on a plat recorded in Berkeley County (Berkeley County RMC, PB A, p. 18). This second transfer was of interior lands, bordered to the south on lands of Breuer.

In spite of his problems, Stoney was apparently an active member in the Christ Church Agricultural Society, organized in 1882. The Society's membership, like that of other organizations of the period, consisted of the remnants of the Southern planting aristocracy. The organizations, founded to encourage and promote the return of the "agrarian south," were concerned with a vast range of issues, including planting practices, the prices offered for various crops, the transportation of crops at reasonable prices on the new railroads, and resolving what were considered constant labor problems, i.e., the control of "Negroes."

For example, as late as 1909 the members of the Christ Church Agricultural Society agreed to a list of labor rules closely resembling antebellum slavery, including:

> ■ no laborer shall be taken who is in debt, without payment of such debt.
>
> ■ no laborer who has been discharged for insubordination shall be taken during the current year or within six months.
>
> ■ that all tenants shall agree to give there [sic] spare time to their landlords when called on (South Carolina Historical Society, Christ Church Agricultural Society Minute Book, 34-197)

The society's constant interest in agricultural prices and conditions is shown by a 1902 report:

> unusually fine corn crops planted in the parish, and also find the acreage a large one, which gives promise of a large yield. Peas and potatoes have not been neglected and, on the whole, the crops generally are up to the standard. The committee found the asparagus crops in good condition and some of the crops of young asparagus above the average. No complaints were made of rust . . . . Labor is abundant, but getting more and more inefficient each year . . . .

> Until we cease employing labor that has been discharged for cause, inefficiency, etc. . . . so long will we make the labor more and more worthless. We pay from 40 to 50 cents per day for our labor and I doubt if, under the best management, we receive 20 to 25 cents value for it . . . . The prices obtained for truck, during the past year have not been remunerative, more stuff being shipped and less money realized; in some instances the falling off amounting to 30 percent (South Carolina Historical Society, Christ Church Agricultural Society Minute Book, 34-197).

As Scardaville notes (Brockington et al. 1985:52), it is very difficult to use the agricultural schedules for economic analyses after 1870. The 1880 schedule seriously under-represents Charleston District, the 1890 schedules were destroyed by fire, all subsequent schedules are provided only on a county level (the individual parish and farm level information being destroyed under authority of Congress), and vital information is missing from the 1900 census. At a county-wide level, however, it is clear that between 1870 and 1910 Charleston's agricultural production gradually increased, the labor system stabilized, and prosperity returned.

In terms of relative importance, cotton and livestock were the two most important agricultural activities in Charleston County, followed by truck farming and grain production. During the early postbellum period there is also evidence of some land consolidation — the four tracts in excess of 1,000 acres in 1870 had increased to 151 tracts by 1880. Probably caused by high property taxes, foreclosures, and low selling prices this trend continued only for a decade (Scardaville in Brockington et al. 1985:57). During the late postbellum tenancy increased dramatically throughout South Carolina, except for several coastal areas where Scardaville suggests black farmers were able to purchase small tracts. Where tenancy did exist, it was largely cash rental, not sharecropping, and Scardaville argues that this formed the vital link allowing black ownership (Scardaville in Brockington et al. 1985:62).

The Twentieth Century

Breuer sold a portion of the Sea Side tract in 1903 to J.E. Williams and T.H. Williams, Jr. (Charleston County RMC, DB N-24, p. 74). Breuer strictly established the disposition of the tract, noting that it would be held by J.E. and T.H. Williams as a life estate, then to go to their oldest son, Arthur Middleton Williams. Only Arthur would have complete right and title to the tract. In 1913 J.E., T.H. and Arthur M. Williams sold the tract to The Palms Estate, Inc. (Charleston County RMC, DB N-26, p. 71). Apparently unable to satisfy the mortgage held by Arthur Williams, the property was sold at a Master's sale three and a half years later on May 30, 1916 (Charleston County RMC, DB I-28, p. 18). The purchaser, Arthur Williams, fared little better, being sued in turn by the Southern Home Insurance Company, which purchased the tract at a Master's sale on December 22, 1917 (Charleston County RMC, DB S-24, p. 346).

Just two days after their purchase, the Southern Home Insurance Company sold the 779.25 acre Sea Side Plantation to John T. Leonard (Charleston County RMC, DB O-25, p. 351). The deed refers to the F.J. Smith plat of 1885, although Leonard had a new plat made, dated January 1917 (McCrady Plat 2843). This plat shows only three structures, labeled "residence," in the same location as the 1858 Payne plat.

A 1919 War Department topographic map of the area provides considerably more information than the modern plat, revealing that a series of houses were already built along what would later become Rifle Range Road (Figure 15). The bifurcated drainage is not shown, having been replaced by ditches which were draining the tract, probably to improve its agricultural potential. Nothing remains of either the Moses Whitesides main settlement or the remnant slave settlement to the west.

The eastern portion of the property was sold by Ella Breuer, the executrix of H.F.W. Breuer, in 1912 to Ida Wilson (Charleston County RMC, DB G-26, p.

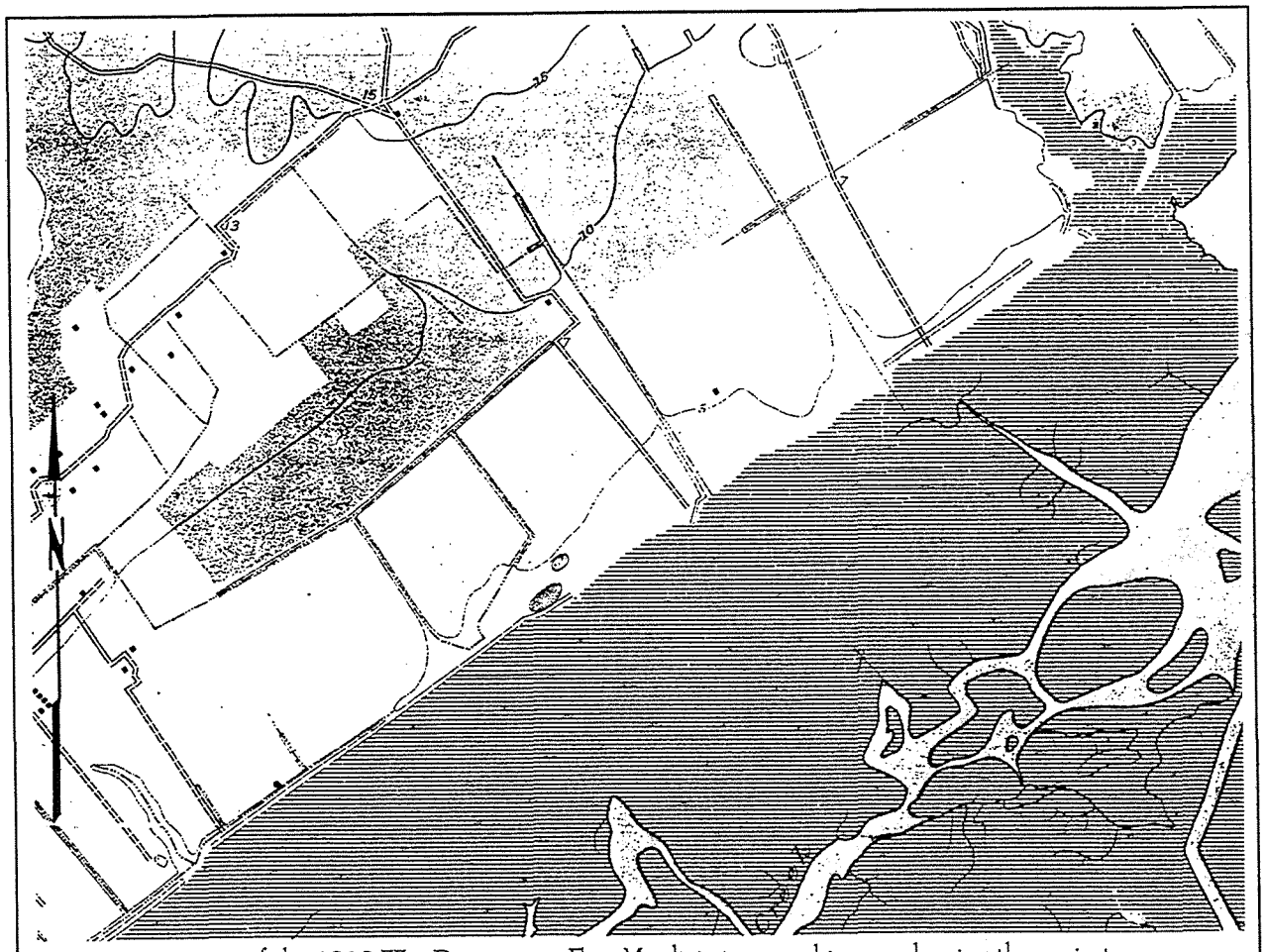

Figure 15. Portion of the 1919 War Department Fort Moultrie topographic map showing the project area.

83). A reference to the R.V. Royall plat of November 1911 is made in the deed, although this particular plat has not been identified. As a result of a 1923 complaint against Ida H. Wilson, the property was sold by F.K. Myers, Sheriff, to John F. Ohlandt and Caroline M. Ohlandt in 1924 (Charleston County RMC, DB U-30, p. 107). In 1925 Caroline M. Ohlandt sold the 241.5 acre tract to James S. Simmons (Charleston County RMC, DB V-32, p. 166). In 1931 the same tract was sold by Burnet R. Maybank to Lester A. Wilson (Charleston County RMC, DB U-35, p. 316). Although the derivation in the deed lists the previous sale to Simmons by Ohlandt, it has not been possible to determine how Maybank acquired the property. Regardless, Lester A. Wilson devised the tract, through his will, to his sons, Lester A. Wilson and Julian M. Wilson. In 1968 the Wilson's sold the tract to J.C. and Alberta Long (Charleston County RMC, DB N-91, p. 311).

John Leonard held the western three-quarters of Sea Side Plantation until his death in 1936. That year Leonard sold the pine timber rights on the tract to J.R. Herrin and it is likely that the pines were logged before the end of the year (Charleston County RMC, DB D-38, p. 481).

There is some evidence that Leonard also operated a canning factory not far from the old Venning estate, near Gennealtle's Casina Farm which was engaged in producing casina (or yaupon holly) tea (South Carolina Historical Society, William Henry Johnson's Scrapbook). It is likely, however, that the major economic activities of both the Leonard and

Wilson tracts was truck farming.

Beginning shortly after the Civil War, truck farming became one of the primary agricultural activities of Christ Church farmers. The combination of soil fertility, climate, and proximity gave truck farming an edge in the effort to supply Charleston with produce. As early as 1873 it was noted:

> the cultivation of garden produce for export in the neighborhood of Charleston, was not pursued as an occupation previously to the years 1865 or 1866. [Recently,] there are a large class of farmers & planters in St. Andrew's and Christ Church Parishes . . . who, in connection with a crop of Sea Island cotton, grow vegetables for export (Charleston Chamber of Commerce 1873:32-33).

As a result many blacks were employed as wage laborers. Produce increased from about one-quarter of the county's agricultural production in 1890 to over three-quarters by 1930 (Scardaville in Brockington et al. 1985:74). Much of this prosperity, however, disappeared during the Great Depression, when trucking in Charleston County declined by 75%.

Upon Leonard's death the property was sold by the Master in response to court action by South Carolina National Bank, who purchased the plantation for $15,000 (Charleston County RMC, DB W-33, p. 291). About a year later, in late 1937, the property was sold to Socarnat Bank Corporation of Delaware for $13,587 (Charleston County RMC, DB S-39, p. 579). It is likely that the property, during the height of the Great Depression, was seen only as dead weight and even taking a loss was better than continuing to pay the taxes. It was during this period that a number of South Carolina plantations were purchased by out-of-state investors. A January 1939 plat (Charleston County RMC, PB E, p. 59) shows the Sea Side tract, including the "settlement" in essentially the same location as that shown on the 1804 Diamond plat, the 1858 Payne plat, and the 1917 plat for John T. Leonard. No other structures or features are shown, and even the causeway to the landing is missing from the plat. The entire Sea Side Plantation, at this time, is shown in fields.

Socarnat Bank Corporation held Sea Side for just over a year before selling it on December 31, 1938 to Mary C. Sottile of Charleston (Charleston County RMC, DB E-40, p. 546). In 1945 Sottile exchanged Sea Side for three lots in the Wagner Terrace Subdivision in Charleston, owned by developer J.C. Long (Charleston County RMC, DB C-46, p. 187). Throughout his extend career buying and selling much Charleston property, Long held the Sea Side tract, as well as the Wilson tract to the east. In 1952 he devised a portion of the property including 76.5 acres of high ground and 62 acres of marsh to his wife, Alberta S. Long (Charleston County RMC, DB N-55, p. 611). Because of questions regarding the original deed, the property boundaries were clarified in a 1955 deed (Charleston County RMC, DB B-60, p. 177). The tract included basically the western end of Sea Side, including the residence and Sea Side Island. The plat (Charleston County RMC, PB H, p. 14) showing this tract unfortunately provides few details. It fails to show the main settlement, any roads, or the vegetation on the tract. In fact, the only useful feature is the revelation that there is bank paralleling the marsh, keying in to the presence of a bank on the 1858 Payne plat for Wagner.

In 1962 J.C. Long began the process of developing Sea Side Plantation. A plat drawn May 1962 shows the eastern two-thirds of the tract divided into a series of eight 25 acre strips, allowing a buffer between the proposed development lands and the property given to his wife 11 years earlier (Charleston County RMC, PB P, p. 22). A few months later, in August 1962 Long began the process of divesting himself of the Sea Side tract, selling three lots (numbers 1, 2, and 3) to The Beach Company for $97,500. The Wilson tract, of about 74 acres, was also sold to The Beach Company in 1973 (Charleston County RMC, DB J-103, p. 74). Alberta C. Long sold 219.15 acres to Dieci, Inc. in 1987 (Charleston County RMC, DB N-171, p. 62).

Historic Synopsis

Our primary interest, and hence focus, has

Figure 16. 1949 aerial photograph CDV-4F-7 showing the study area.

been on the mid-eighteenth through mid-nineteenth century. It was during this period that the plantation of Thomas Whitesides was subdivided (perhaps as early as 1762 and at least by 1798) and his son, Moses Whitesides began his farming operation. At that time there was a small nucleated main settlement and, to the west, a slave settlement of at least six structures. This settlement has been recognized as 38CH1477. The Whitesides plantation seems to represent the norm of Christ Church Parish — a small plantation, neither large nor small — producing crops and cattle for export to nearby Charleston markets.

By the late antebellum the Moses Whitesides tract was combined with other lands creating a much larger — and much more profitable — cotton plantation. While the main settlement was shifted back to the old Thomas Whitesides settlement, the Moses Whitesides settlement and slave row continued in use, perhaps for an overseer and field slaves. The plantation was held by several owners, probably all absentee owners who viewed the tract as an investment.

After the Civil War little remained of the Moses Whitesides plantation and the slave settlement (38CH1477) was no longer standing. This indicates that the settlement had a lifespan of perhaps 1762 through 1864, yielding a mean historic date of 1813. If the later beginning date of 1798 is used, then the site would have a mean historic date of 1831. By 1875 a single structure is shown closer to the marsh edge, probably representing a tenant farmer. This new structure is in the area of 38CH1466 and is gone by 1918.

The 1949 and 1954 aerial photographs show

Figure 17. 1967 aerial photograph 1610-78-1729 showing the study area.

the project area to be cultivated. The ditch and bank along the marsh edge is clearly visible, although there is no indication of structures or anything which might indicate remnant sites at either 38CH1466 or 38CH1477. The bifurcated marsh drainage is present in 1949, but the 1954 aerial reveals that efforts were well along to convert this into a pond.

By 1964 the pond had been completed and the fields to the north, except for those too wet and draining into the pond, had been planted in pine. Around the two archaeological sites the ground is still open, although cultivation appears to be very limited, perhaps to small patches to attract game or water birds. In fact, the only open ground is that around the periphery of the pond. This condition continued into 1973. At the time of the original archaeological survey, in 1993, much of this open ground had closed in, although there were still small cultivated patches at the edge of the pond. Between 1993 and 1999 these few open areas closed and there was no longer any open ground.

EXCAVATIONS

Methodology

Field Methods

The initial survey of these two sites included only shovel testing, typically at intervals ranging from 50 to 100 foot intervals, although in a few cases the interval was as close as 25 feet. As a result, we felt that discing the two sites, establishing survey collection grids, and conducting a surface collection would provide expedient information on artifact density and the distribution of the sites' components. However, as previously discussed, the sites had significantly grown up over the six years between the initial survey and the data recovery excavations and none of this methodology was possible.

We modified our research methodology, opting for more consistent, closer interval auger testing at each site, covering an area sufficient to encompass the originally identified sites. Auger testing was selected over shovel testing because our experience suggests that auger testing provides more consistent results with less damage to recovered artifacts. Prior to our work we arranged for the sites to be bush hogged in order to provide access.

Establishing site boundaries for both the bush hogging and the auger testing, however, proved difficult. In a few areas there was a occasional scatter of shell. Likewise, at 38CH1477 we found several brick fragments on the surface. In general, however, the ground visibility was very poor and there was no clear evidence of either site. Moreover, it appeared that a sizable portion of 38CH1477 had been covered over by a construction staging area immediately adjacent to the pond.

We felt that any effort at reconstructing site locations based on the original survey would likely yield questionable results, so rather than clear two distinct areas, establish two different grids, and conduct two separate auger surveys, we selected to open one large area, establish the grid covering what we felt would be adequate acreage for both sites, and auger test the entire area.

Even this, however, proved difficult. We had an area 900 feet northeast-southwest paralleling the dirt access road, or about 4.5 acres, bush hogged. Once opened, we found no additional clues to the location of the two sites. Consequently, a grid baseline was laid out bisecting the tract, from the perceived southern limit of the site following a magnetic orientation of 58°30' for 700 feet. This orientation was roughly parallel to the road bordering the pond and also seemed to maximize the "north-south" range. This orientation also gave us the ability to expand grid south or north, depending on the circumstances (Figure 18).

In order to establish horizontal control for the auger survey (as well as the following block excavations), a modified Chicago grid was established over the site area. The initial southwest corner was designed 250R450. With this system the first number indicates feet north of a datum (0R0), while the second number indicates feet right (or east) of the data. Therefore, 100R200 would be located 100 feet north and 200 feet east (or right) of the datum. Individual squares are designed by their southeast corner.

The established grid covered the area from N250 to N950 and bordering the access road from about R250 in the northern part of the site to R600. The site datum was established at 500R500, where a length of rebar, with an aluminum cap, was driven flush to the ground. The grid was also tied into a development datum on a double oak tree at the south edge of the site. This last datum was also used to provide vertical control at the site, being assigned an assumed elevation of 10.00 feet above mean sea level (AMSL).

Auger testing at the Fish Haul site on Hilton Head Island (Trinkley 1986:118-119) had used

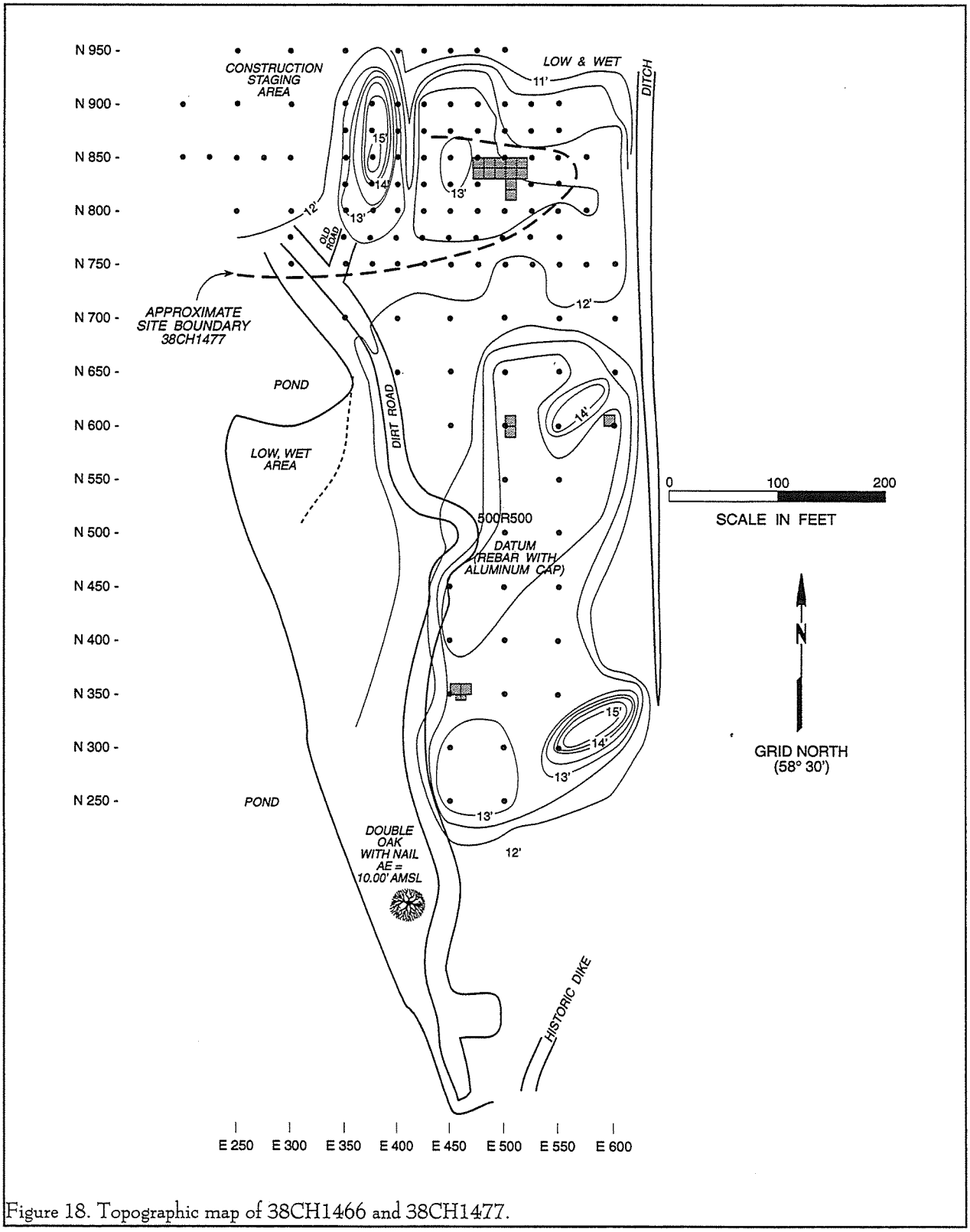

Figure 18. Topographic map of 38CH1466 and 38CH1477.

Figure 19. Auger testing the prehistoric site area.

50-foot intervals to great success, although the site area being covered there was 15 acres. We decided to conduct the additional testing of the prehistoric site (38CH1466) at the 50-foot interval, but to reduce the interval to 25-feet in the vicinity of where we anticipated the historic site (38CH1477) to be located. This would provide some degree of economics to the investigation of the prehistoric site, while providing data for the historic site which was data far superior to Fish Haul, better than the shovel testing, but still within the budget and time scheme of the current project.

This resulted in the excavation of 33 auger tests in the prehistoric site (Figure 19) . A total of 36 auger tests were initially placed at 50-foot intervals in the historic site area, with an additional 52 auger tests placed to fill in the grid, providing 25-foot coverage in the central area.

The tests were conducted with a two-person power auger equipped with a 10-inch bit. Each test was augered to a depth of 1.5 to 2.0 feet below the current ground surface. All tests were screened using ¼-inch mesh. Many of those in the prehistoric area were found to be very wet, both because of recent rain and also because of the low elevation. Frequently we found standing water within 0.5 to 1.0 foot below the ground surface and often it was necessary to waterscreen, rather than dry screen, the auger tests. While all artifacts were collected, both shell and brick was weighed in the field, noted, and discarded. The resulting artifact and shell weight data was used to produce density maps which were then used to help guide additional research at the two sites.

Elevations were also collected from each auger test point in order to create the site plan. This data suggests considerable alteration of the topography in this vicinity. There is a ditch bordering the marsh edge — the result of an eighteenth century ditch and dike system designed to hold back high tides that damaged agricultural lands. Several of the resulting excess spoil piles (or perhaps clean-up piles) are seen inland from the ditch. Today the accompanying ditch system terminates at about N300, although the dike itself continues along the property edge.

There is also another very large spoil pile at the northwestern site edge, which we believe is the result of twentieth century activities associated with the creation of a freshwater pond to the west. This pond was created following the natural marsh slough and pre-existing nineteenth century drainage ditches, probably associated with the agricultural fields.

Although the remainder of the site area appears to be flat, reference to Figure 18 reveals that there are actually two small "islands" of higher ground, one toward the north in the vicinity of what has been identified as 38CH1477, and the other to the south, at what we have called 38CH1466. The difference in elevation is typically only a half of a foot, but this is

Figure 20. Hand excavation in the historic block, 38CH1477, view to the east.

sufficient to vastly improve the drainage of these two "islands." It may also be significant that the bulk of the cultural remains are associated with one of the two higher sand ridges. Although never clearly visible by eye alone, a similar correlation between prehistoric shell middens and sand ridges with 0.5 foot difference in elevation has been observed at several coastal shell middens.

Excavation proceeded by hand with all soil either mechanically screened through ¼-inch mesh (Figure 20) or water screened through ¼ or ⅛-inch mesh (Figure 21). At both sites we anticipated water screening if water was available. As it turned out, our water source was tidal, and was therefore periodically available. This allowed about 50% of the soil from 38CH1466 and about 33% of the soil from 38CH1477 to be water screened through 1/8-inch mesh. In order to maintain productivity, the remainder was mechanically screened through ¼-inch screen. Finer dry screening was not possible since the soil never dried out sufficiently.

Screen loads were sorted in the field, with all materials from a single provenience bagged together. Shell and brick were quantified by weight in the field and discarded. Munsell soil color notations were made during the course of excavations, typically on moist freshly exposed soils.

One-quart soil samples were retained from each provenience. Shell samples were occasionally

Figure 21. Waterscreening of soil from the historic block.

Figure 22. Troweling units in the historic block at the base of excavations.

retained to document specified materials, but were not collected in any routine fashion.

Each unit which appeared to contain shell midden (or remnant midden), also had a shell column measuring 2.2 feet square established in its southeast corner. The matrix from this column was first weighed and then screened through ¼-inch mesh. The resulting shell was then weighed, in order to calculate the density of the midden. This is a standard approach that Chicora has used at a variety of middens. By continuing the practice we hope to accumulate a substantial data set that may help determine the normal variation by cultural association.

Afterwards the shell from the column was separated by species and quantified by weight. This allows us to evaluate the contributions of different species and to integrate the shellfish data into the zooarchaeological study as biomass.

Units were troweled (Figure 22) and photographed using black and white negative and color transparency film, typically at the base of the plowzone and the base of the excavations. Each unit was drawn at a scale of 1 inch to 2 feet. Features were designated by consecutive numbers. Post holes were consecutively numbered by specific unit.

Feature fill was water screened through 1/8-inch mesh and features, upon completion of their excavation, were also photographed using black and white negative film and color transparencies. One quart soil samples were obtained from all features. In addition, approximately 5 to 10 gallons of soil from each feature was retained for off-site water flotation.

At the conclusion of the work the excavations were covered in plastic and Centex Homes was notified that backfilling could be conducted at their convenience.

Laboratory Processing and Analysis

Processing was begun in the field, but was completed at Chicora's labs in Columbia. During the washing, artifacts were sorted by broad categories — pottery, lithics, bone, ceramics, glass, iron, and other materials. Upon drying the artifacts were temporarily bagged by these categories, pending cataloging. Conservation treatments have been conducted by Chicora personnel at the Columbia laboratory intermittently from May 1999 and are still on-going for some specimens.

Brass items, if they exhibited active bronze disease, 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 (until a chloride level of no greater than 1 ppm or 18 μmhos/cm was achieved using a conductivity meter) and the items were dried in an acetone bath. The conserved cuprous items

were coated with a 20% solution (w/v) of acryloid B-72 in toluene.

Ferrous objects were subjected to electrolytic reduction in a bath of sodium carbonate solution in currents no greater than 5 volts for a period of 5 to 20 days. When all visible corrosion was removed, the artifacts were wire brushed and placed in a series of deionized water soaks for the removal of soluble chlorides. When the artifacts tested free of chlorides (at a level less than 0.1 ppm, or 2 μmhos/cm), they were dewatered in acetone baths and were air dried for 24 hours. Afterwards, a series of phosphoric (10% v/v) and tannic (20% w/v) acid solutions were applied and the specimens were again allowed to air dry for 24 hours. They were finally coated with a 10% solution (w/v) of acryloid B-72 in toluene.

As previously discussed, the materials have been accepted for curation by the South Carolina Institute of Archaeology and Anthropology. The collection has been cataloged using this institution's accessioning practices. Specimens were packed in plastic bags and boxed. Field notes were prepared on pH neutral, alkaline buffered paper and photographic materials were processed to archival standards. All original field notes, with archival copies, are also curated at this facility. All materials have been delivered to the curatorial facility.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains.

In terms of the prehistoric collection, quantification of the remains is clearly one of the most significant concerns. There is mounting evidence that counts are the least accurate way to quantify prehistoric pottery (see the brief discussion in Trinkley and Adams 1994:35-36). In spite of this there seems to be little support for any other analytical approach and we have adopted the conventional approach to ensure that this work is comparable and widely useful.

We have concentrated on what Orton et al. (1993) term fabric (what Americanists call paste) analysis, coupled with detailed surface treatment analysis (i.e., the textile fabric itself). Each of these areas has been shown by a host of other researchers to be of particular importance in understanding pottery wares.

The visual paste studies have concentrated on a relatively few additional areas:

- *temper size*, based on the U.S.D.A. standard sizes for sand grains and are defined as:

very fine - up to 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 dominant size range given and the ranges shown in brackets. This was calculated for any sand inclusions and also for the grog itself.

- *Temper Shape*, 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.

- *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.

- *Core Cross Sections*, consisting 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,) and (5) reduced then cooled rapidly in air

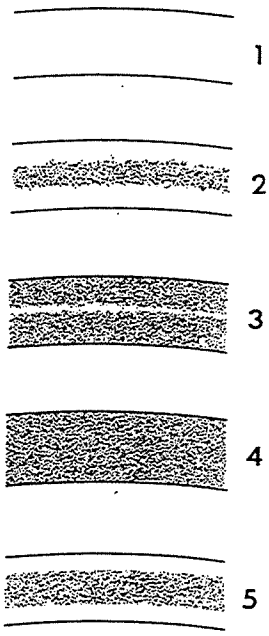

Figure 23. Stylized cross sections comparing variations in the appearance of firing cores in coarse-textured clays. The numbers correspond to descriptions in the text (adapted from Rye 1981:104).

leaving very sharp margins on the interior dark core (see Rye 1981:Figure 104; Figure 23).

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

- *Interior Treatment*, using the definitions developed by Blanton et al. (1986:183) for interior coastal plain pottery: (1) tool marks present, (2) no tool marks, no visible temper, (3) no tool marks, some temper visible but not protruding, and (4) no tool marks, temper protruding.

- *Exterior Smoothing*, was rated as either absent (when the exterior stamping was clean and sharp or plain sherds had a rough, non-compacted surface), moderate (when exterior stamping was 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*, classified as either present or absent with no effort to quantify degree or nature.

- *Rim Diameter*, measured in centimeters when a reliable arc was present.

- *Thickness*, measured in millimeters and taken 3 cm below the rim. 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 is likely from measurements taken on body sherds, which may represent virtually any part of the vessel.

- *Shoulder Form*, defined as (1) slightly flaring, (2) slightly restrictive at the rim, (3) straight sided, (4) hemispherical, and (5) flaring on straight-sided bodies.

- *Cordage Diameter*, measured as mm and including both warp and weft as appropriate.

- *Twists per Centimeter*, also measured as twists per 0.5 cm and extrapolated when necessary.

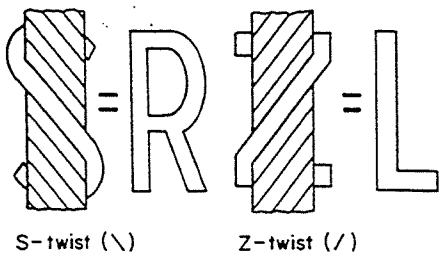

Figure 24. Criteria for identifying the direction of twist (adapted from Hurley 1979:Figure 5).

- *Direction of Twist*, which is a description of the slant of the segments, either sloping from the upper right to the lower left (Z twist) or from the upper left to lower right (S twist) (Figure 24). 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).

- *Distance Between Cords*, measured in mm and representing the distance to the nearest parallel cordage impression. Measurements were taken between four different cords and averaged for each sherd.

The temporal, cultural, and typological classifications of the historic remains follow such authors as Cushion (1976), Godden (1964, 1985), Miller (1980, 1991), Noël Hume (1978), Norman-Wilcox (1965), Peirce (1988), Price (1970), South (1977), and Walton (1976). Glass artifacts were identified using sources such as Jones (1986), Jones and Sullivan (1985), McKearin and McKearin (1972), McNally (1982), Smith (1981), Vose (1975), and Warren (1970). Additional references, where appropriate, will be discussed in the following sections.

The analysis system used South's (1977) functional groups as an effort to subdivide historic assemblages into groups which could reflect behavioral categories. Initially developed for eighteenth-century British colonial assemblages, this approach appears to be a reasonable choice for even nineteenth century materials since it allows ready comparison to other collections. Although criticized for problems in sample comparability (see, for example, Joseph 1989), even the system's detractors note that:

> whatever 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).

The functional categories of Kitchen, Architecture, Furniture, Personal, Clothing, Arms, Tobacco, and Activities provide not only the range necessary for describing and characterizing most collections, but also allow typically consistent comparison with other collections.

Another important analytical technique used in this study is the minimum vessel count, as both an alternative to the more traditional count of ceramics[1] and also as a prerequisite to the application of Miller's cost indices. The most common approach for the calculation of minimum number of vessels (MNV) is to lay out all of the ceramics from a particular analytic unit (such as a feature), grouping the sherds by ware, type, and variety (e.g., floral motif vs. pastoral). All possible mends are then made. Body sherds are, from this point on, considered residual and not further considered. Remaining rim sherds, which fail to provide mends, are examined for matches in design, rim form, colors, and other attributes which would indicate matches with previously defined vessels. Those which fail to match either mended vessels or other rims are counted as additional vessels. Since there were no closed features, such as wells or privies suitable for this level of analysis, the analytic unit used was all of the units from the excavations. These were combined for this analysis, using a minimum distinction method for the MNV, which tends to provide a relatively conservative count.

Although no cross mend analyses were conducted on the glass artifacts, these materials were

[1] Although counts are used in this, and virtually every study of historic wares, we know that they are biased as measures of the proportions of types. Simply put, the proportion by number of sherds of a particular type reflects two things — first, the proportion of that type in the population, and second, the average number of sherds into which vessels of that type have broken (known among some researchers are their brokenness) in comparison with the brokenness of other types. In general, however, brokenness will vary from one type to another and also from one size vessel of a particular type to another size vessel of the same type. Usually, types with a high brokenness will be over-represented in comparison to those with a low brokenness. More importantly, this bias not only affects the study of a single assemblage, but may affect the study, or comparison, of different assemblages which may have a different level of brokenness.

examined in a similar fashion to the ceramics to define minimum number of vessel counts, with the number of vessel bases in a given assemblage being used to define the MNV. Attempts were made to mend and match vessel bases in order to ensure the accuracy of the count. If a glass artifact exhibited a different color and/or form not represented by the counted bases, then it was designated a separate vessel or container.

The method used to determine the occupation span of the excavations is South's (1977) bracketing technique. This method consists of creating a time line where the manufacturing span of the various ceramics are placed. The left bracket is placed by determining where at least half of the ceramic type bars touch. The right bracket is placed the same way, however, it is placed far enough to the right to at least touch the beginning of the latest type present (South 1977:214). We have chosen to alter South's bracketing technique slightly by placing the left bar at the earliest ending date when that ending date does not overlap with the rest of the ceramic type bars.

Results of the Excavations

Auger Testing

Figure 25 reveals the artifact density map for the two site areas. The lower two concentrations both reflect primarily prehistoric remains and were interpreted to be the location of 38CH1466. One of the denser concentration appears to be at 600R500, in relatively close proximity to the access road. A second concentration is situated in the vicinity of 600R600, while a third is at 500R500, ranging to the northeast. The southern-most concentration is rather ephemeral, never exceeding 3 sherds per auger test.

The series of concentrations to the north, including one large area and five smaller clusters, occur in the area of what has been identified as 38CH1477 and consist primarily of historic remains. Although one clear concentration was found at 850R475, most of this area contains no more than 1 or 2 items per test — suggesting a very sparse occupation.

The original survey, of course, suggested that the historic site was concentrated further to the west, where a construction staging area had been established, and failed to clearly identify the more eastwardly concentration. This current study presents a more complex picture, suggesting that there may have been a linear arrangement of structures, with the pond having destroyed several, the construction staging area and road perhaps removing several more, and the current auger study identifying the far eastern portion of the settlement. This would be consistent with the historic evidence that reveals a slave settlement at this site with two rows of three structures each. The dispersion of these remains and the failure to identify a core area is also consistent with the extensive plowing anticipated from review of the aerial photographs.

Although the distribution of artifacts appears to clearly reveal two sites, Figure 26, illustrating the distribution of shell, does not. Instead there is a rather broad smear which seems to parallel the marsh front. The densest shell is found in the immediate vicinity of 600R500, where levels of about 10 to 13 pounds per auger test (approximately 1.2 ft^3) were identified.

The auger testing provided no clear evidence of individual middens. Instead it appears that one (or more) middens have been blurred or blended together by years of plowing, creating the one smear we see today. This, again, is consistent with the land-use history. In addition, it seems likely that the intensive eighteenth and nineteenth century occupation in this area affected the pre-existing prehistoric resources.

The auger study also provided information on the vertical distribution of materials. Neither prehistoric nor historic materials were found more deeply buried than about 1.1 foot. In even the better drained areas, soils tended to be damp, evidence chemical reduction, and exhibit dark A and B horizons. All of the materials identified came from the A horizon. Although plowing was not identified on the basis of plow scars, the degree of homogenization, coupled with the size of artifacts present, suggests that the entire area has been uniformly plowed for a great many years.

Excavations at 38CH1466

As stipulated by the research plan, a series of three blocks were excavated at 38CH1466 — two in

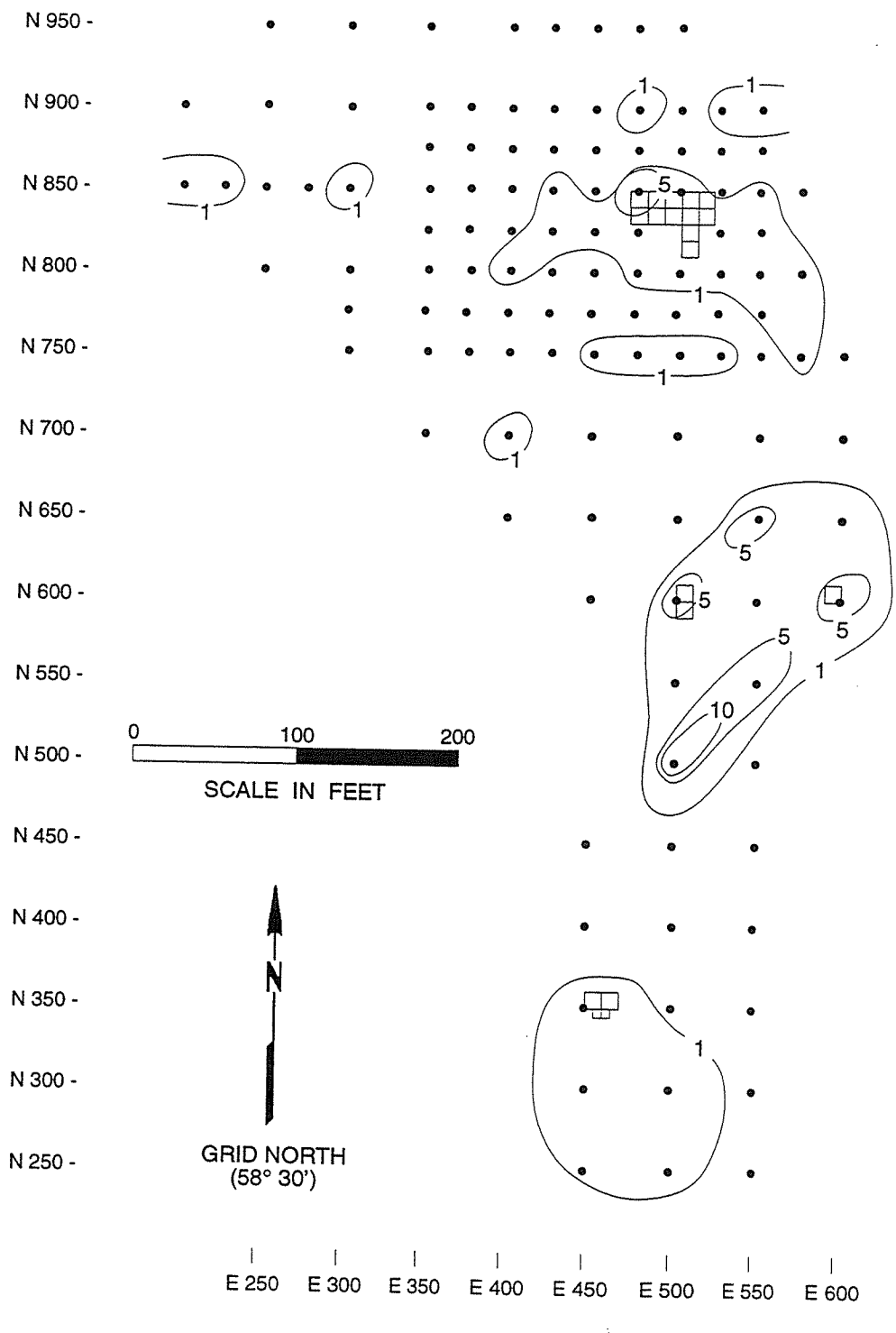

Figure 25. Artifact density at 38CH1466 and 38CH1477 based on the auger survey.

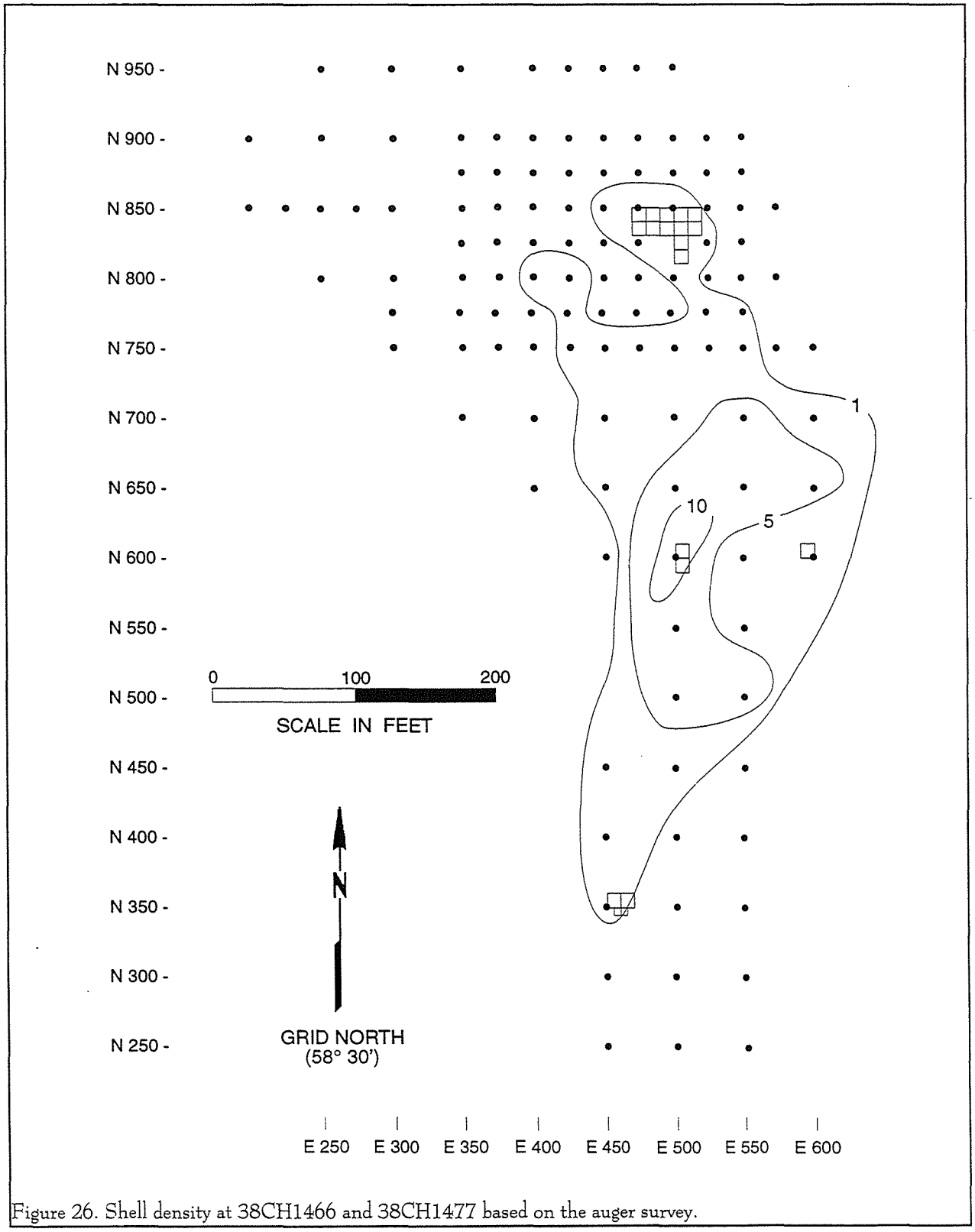

Figure 26. Shell density at 38CH1466 and 38CH1477 based on the auger survey.

what were considered non-shell areas and one where there was a concentration of shell midden (or shell debris), based on the auger study.

590-600R510, Shell Midden Area

The one shell midden excavation consisted of two 10-foot units, 590-600R510, placed on the basis of the dense shell remains found in the auger study. These excavations revealed 0.8 to 1.2 foot of very dark gray (10YR3/1) loam mixed with dense shell overlying a predominantly dark brown (10YR3/3) sand subsoil (Figures 27 and 28).

The combined weight of shell from these two units was 2,721 pounds. One shell column from each unit was removed and quantified. From 590R510 we identified a remnant (or plowed) midden with a shell:soil ratio of 1:2.9, while 600R510 yielded a shell:soil ratio of 1:2.7. Oyster was the dominant species in both, ranging from 43.0% to 61.5% by weight. Small shell fragments, not easily classified to species and indicative of the amount of plowing, were the next most common classification. Not unexpectedly the variation here is much smaller, ranging from 25.2 to 29.3% by weight. It is likely that much of this small debris is actually oyster.

The remainder of the shellfish species may represent individual meals or collection episodes and its importance is variable not only by unit, but also by location within each unit. Clam varied from only a trace in 600R510 to 7.1% in 590R510. On the other hand, periwinkle accounts for 31.5% of the midden by weight in 600R510, but only 1.4% in the column sample of 590R510. Whelk ranged from 0.1 to 0.7%. Neither unit produced any identifiable quantity of ribbed mussel or stout tagelus.

The excavations produced not only a quantity of prehistoric pottery, but also a number of relatively large historic ceramics. The excavation found historic remains throughout the shell zone, indicating that this is *not* an intact midden, but represents shell debris dispersed by plowing. It is also possible that additional shell was added during the historic period. The historic research, previously discussed, reveals that occupation continued in this area during the postbellum. As a result, it is not possible to accept the shell analyses as representative of an exclusively prehistoric occupation.

At the base of these two units a single shell pit was identified, measuring about 1.5 foot in diameter. This pit, designated Feature 4, consisted of a black (10YR2/1) sandy loam fill with abundant oyster. Upon excavation it revealed steeply sloping sides suggestive of a larger pit which had perhaps been truncated by plowing. The fill produced both primarily prehistoric sherds, with the inclusion of a single historic item (an iron latch fragment). It is likely that the pit was dug, and quickly filled, during the historic occupation of the site. The function of the pit is uncertain, but it is likely that

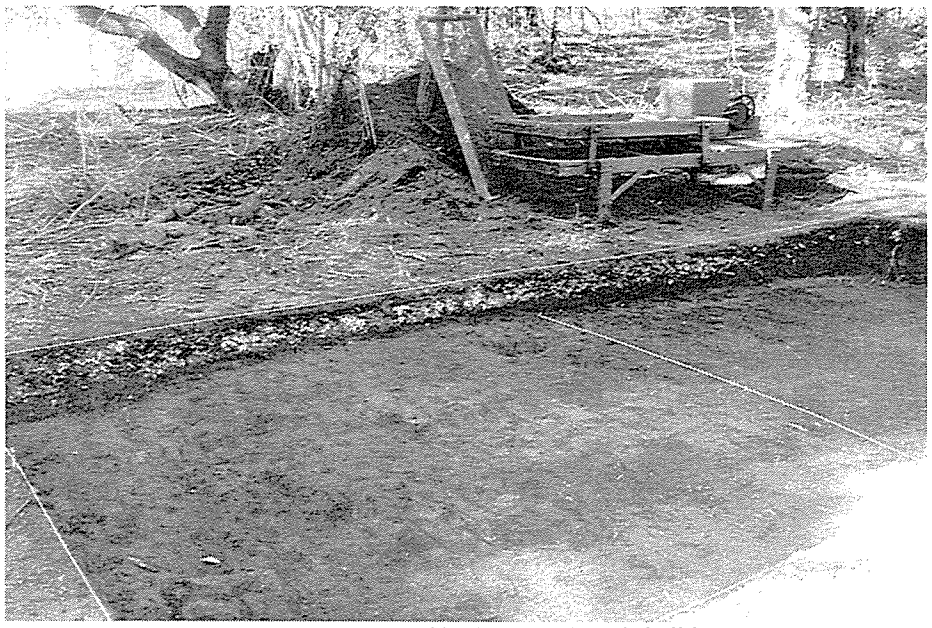

Figure 27. Units 590-600R510, west profile showing plowed shell lens.

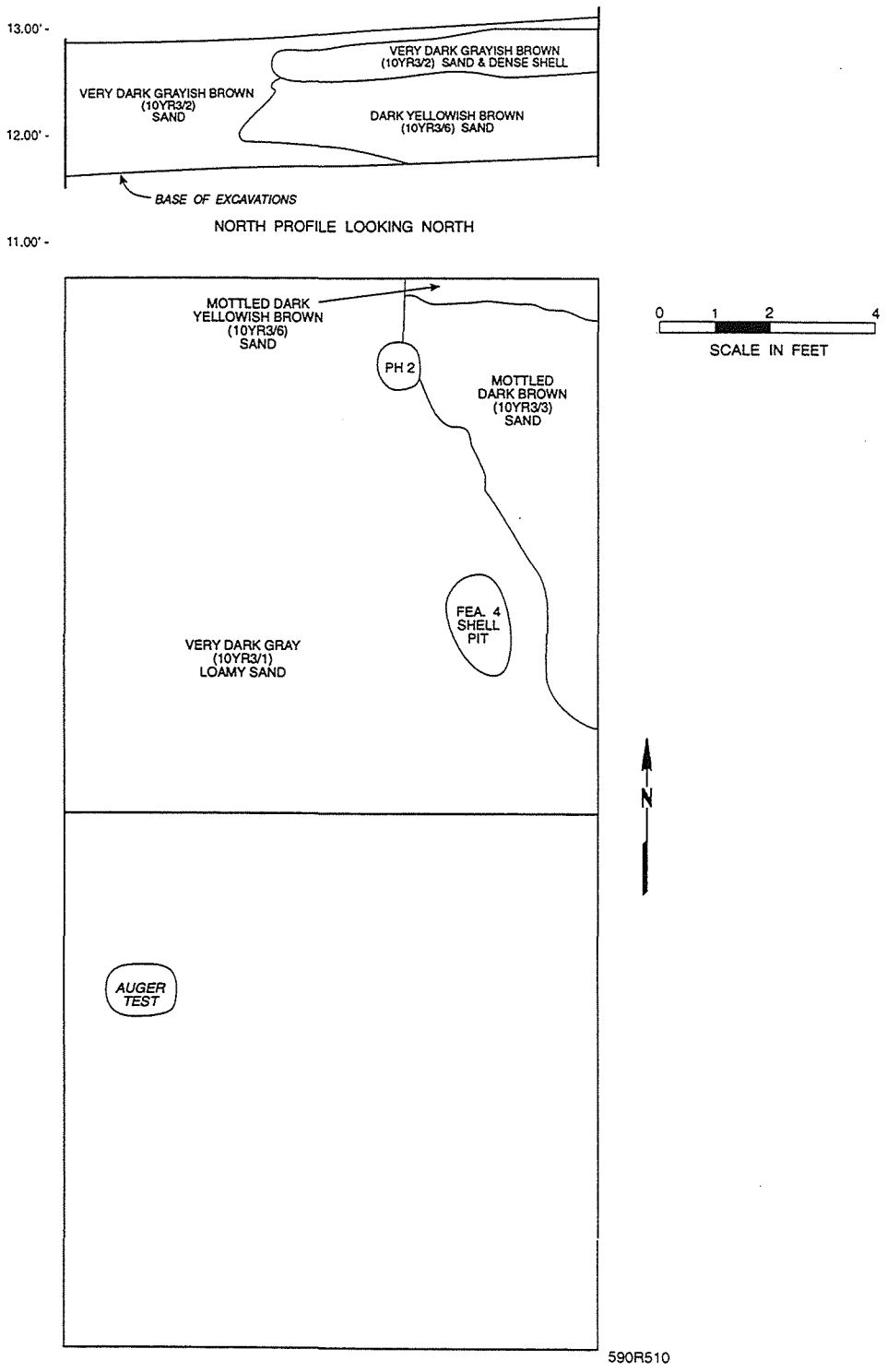

Figure 28. Plan and profile of excavations in 590-600R510 at 38CH1466.

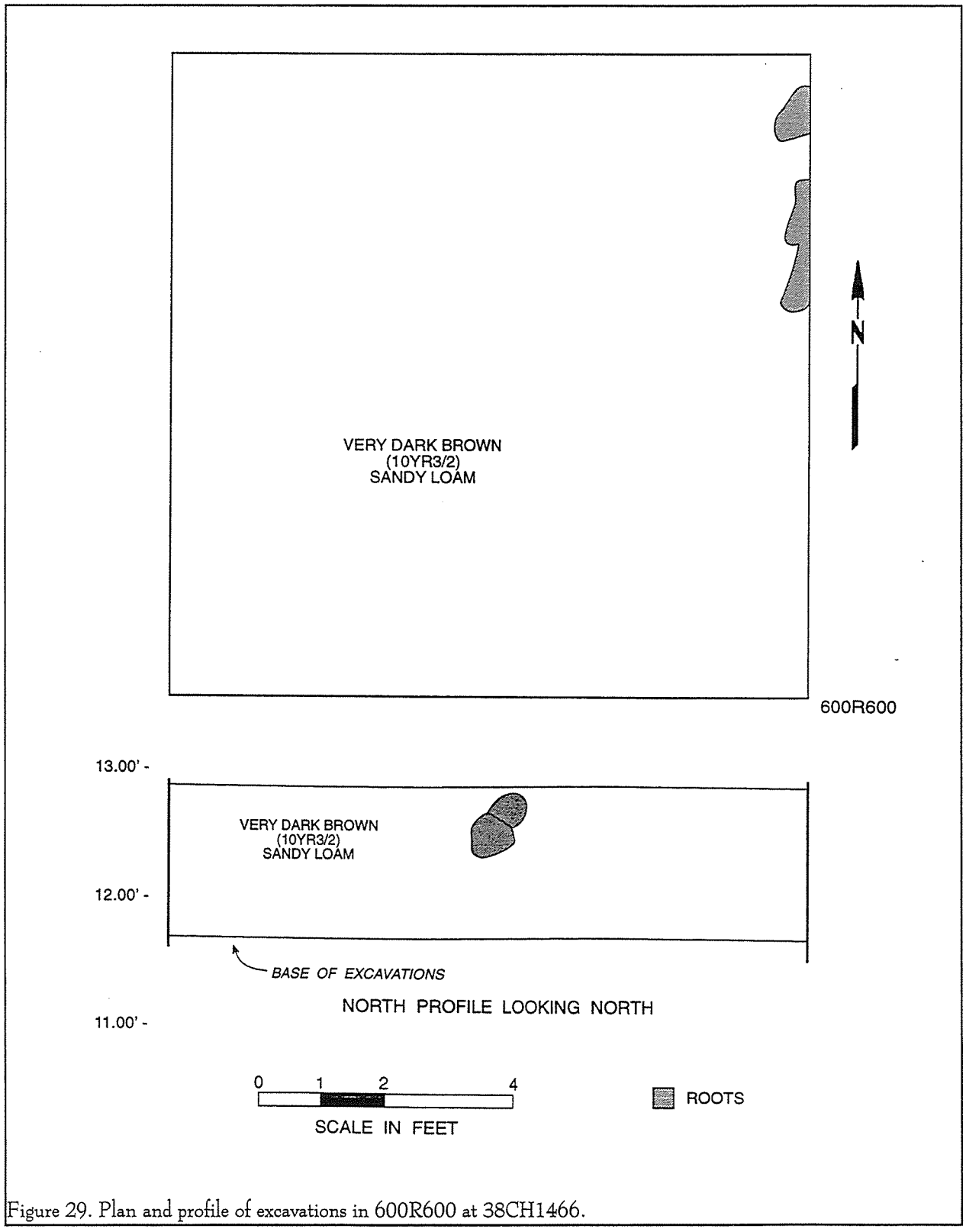

Figure 29. Plan and profile of excavations in 600R600 at 38CH1466.

the prehistoric remains are accidental inclusions in the pit.

600R600, Non-Shell Midden Area

The first of the two non-shell midden areas was established at 600R600, based on the auger test data which suggested this vicinity to be a relatively high producer of artifacts associated with relatively little shell. Our excavations found only 222 pounds of shell, significantly less than at the previously discussed midden. Although no definitive (or observable in profile) midden was present, a column was still removed and quantified for comparative purposes. We found that the shell:soil ratio is 1:9.6, also clearly distinct. Nevertheless, oyster is still dominant (accounting for 50.6% of the sample, followed by small fragments, periwinkle, clam, and whelk). This supports our belief that we are seeing shell midden widely dispersed over the site area by plowing.

The Ap horizon consisted of very dark gray (10YR3/1) sandy loam about 1.2 feet in depth, overlying a very dark brown (10YR3/2) sandy loam subsoil (Figure 29). Artifacts were again primarily prehistoric and this unit even produced a small lithic assemblage. In addition, however, we continued finding small quantities of historic materials (including 13.5 pounds of brick rubble). The proximity of this unit to the marsh edge places it in the area of the structure shown on the 1875 map (Figure 14).

Although artifacts were plentiful, the unit produced no features. As a result, no additional investigations were conducted in this area.

345R460-465, 350R460-470, Non-Shell Midden Area

The second of the two non-shell midden areas consisted of two 10-foot and two 5-foot units, again placed on the basis of the auger test data which suggested this vicinity to be a relatively high producer of artifacts associated with relatively little shell. Our excavations, which opened 250 ft^2, revealed only a trace of brick, although 581 pounds of shell were recovered. Shell columns in the two 10-foot units (again taken for purely comparative purposes, even though no midden was present), reveal shell:soil ratios of 1:105 — clearly revealing the small quantity of shell present in this particular site area (Figure 30).

The excavations reveals about 0.5 to 1.0 foot of very dark gray (10YR3/1) sandy loam Ap horizon soil overlying the subsoil of very dark grayish brown (10YR3/2) sand. The more shallow plowzone in this unit may be the result of earth removal associated with the construction of the nearby pond.

These units produced a number of tree stains, but more significantly a series of three features were also found. **Feature 1** is a portion of a wall trench structure. The eastern wall is oriented approximately north-south and extends the 13-feet length from N350 south to about N347 where it disappears into another vague stain. Where visible, however, this portion of the wall ranged from 1.0 to 1.6 feet in width and consisted of a black (10YR2/1) sand fill with lumps of gray lime mortar. At 351.5R463 there is a T-intersection and a wall extends about 10-feet to the west, gradually disappearing in the subsoil staining. Again, this leg of the feature contains black soil with abundant lumps of mortar. Upon close inspection this mortar is largely sand, with a relatively small quantity of lime and small fragments of pulverized shell.

Feature 1, upon excavation, was found to be about 0.5 to 0.7 foot in depth. No post impressions are visible in the base of the trench, although there is some variation in depth, vaguely suggestive of posts. The mortar is randomly dispersed in the fill and does not appear to be associated with any specific posts or areas (Figure 31). Since this material is very friable and found primarily at the surface of the feature, we believe that it is the remains of a "stucco" used as daub on the wattle wall. With the extensive plowing only the material just below the plowzone has survived. Artifacts included primarily prehistoric sherds, although a single pearlware ceramic and a small quantity of heavily corroded nail fragments were also present. This wall trench was excavated through a pre-existing prehistoric midden or occupation zone, resulting in the mixture of materials.

Feature 2, a shell pit, was found in 350R460-470, bisected by the R460 wall. The pit was encountered at the base of Level 1 and measured about

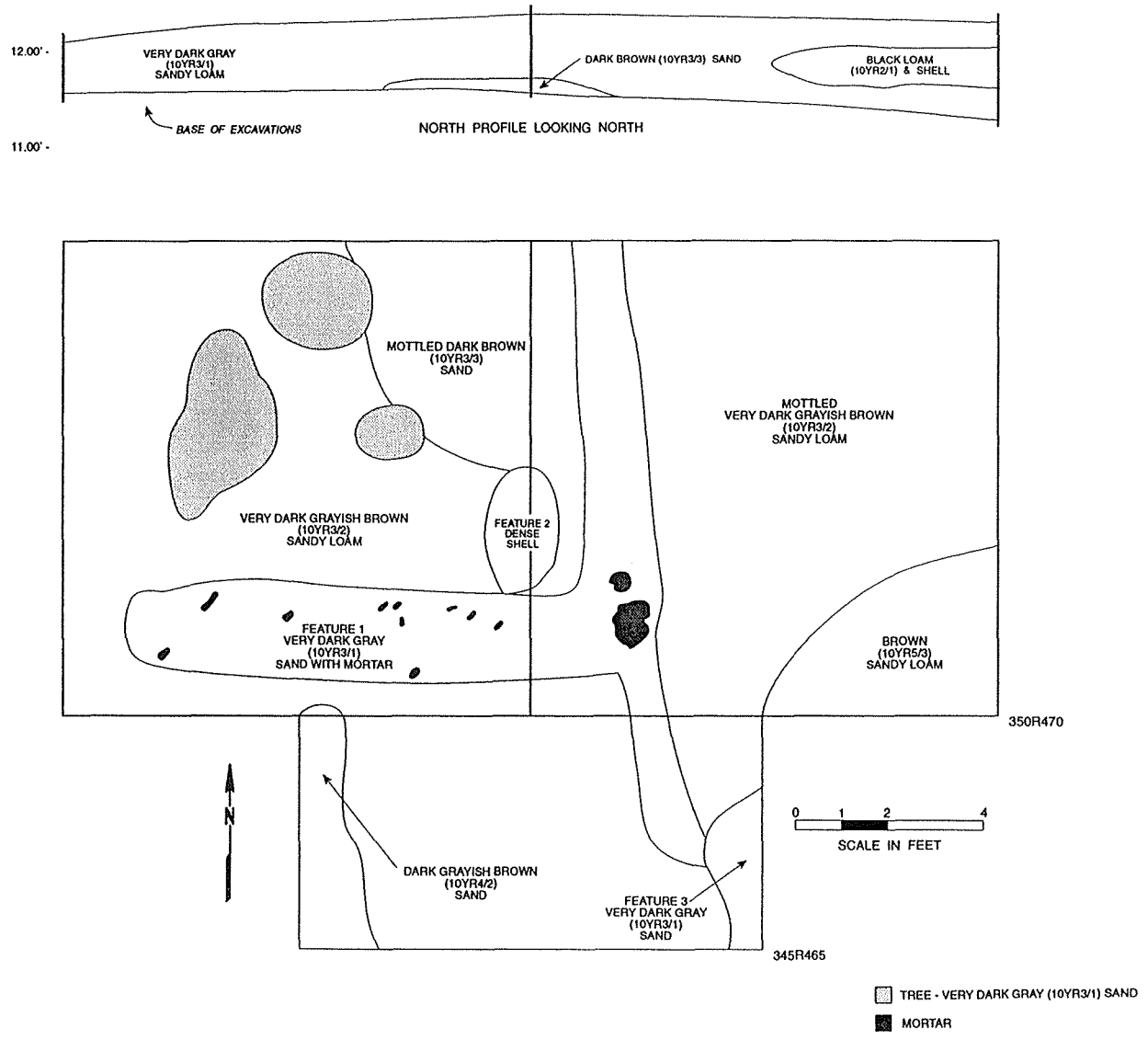

Figure 30. Plan and profile of excavations in 345R460-465 and 350R460-470 at 38CH1466.

Figure 31. Feature 1, partially excavated, view to the east.

2.3 feet north-south by 2.1 feet east-west. The fill consisted of black (10YR2/1) sandy loam with dense shell. Excavation and examination of this shell revealed that 92% consisted of oyster, with the remaining 8% consisting of clam fragments. The pit is very shallow, averaging between 0.2 and 0.4 foot in depth.

Although in close proximity to Feature 1, this pit produced only two prehistoric sherds. Although its temporal episode is questionable, it seems most likely that it dates from the prehistoric occupation of the site.

Feature 3 is situated southeast of Feature 1 in the southeast corner of unit 345R465. It, too, was encountered at the base of Level 1 and was identifiable by the darker fill (a very dark gray, 10YR3/1, compared to the subsoil in this area, a dark grayish brown, 10YR4/2). This fill tended to blend into Feature 1, and was largely distinguished by its greater density of shell and the absence of mortar inclusions.

Only the northwest quadrant of the feature was exposed by the excavations, so observations concerning its size and shape are speculative. It may, however, represent a fairly large shell pit, perhaps 3 feet in length north-south by perhaps 2 or more feet in width, east-west. The portion excavated is gradually sloping to the south, although it has a steeply sloping west side.

The artifact assemblage of the feature was very sparse — five prehistoric sherds. Again, the proximity to the historic feature and the high density of historic materials in the unit aside, it is likely that this feature represents a moderate sized prehistoric shell pit.

Excavations at 38CH1477

Excavations at the historic site consist of a series of 12 10-foot units, forming a single block placed in the one area of densest historic materials (Figures 32 and 33). Although we were initially concerned about the likelihood of recovering "good" historic remains, these excavations produced a large assemblage which appears to date primarily from the first quarter of the nineteenth century — within the posited mean historic occupation dates previously proposed.

The excavations include the units 820-830R510, 840-850R470-520. The east-west orientation developed as we traced out increasing brick and artifact densities, while the extension of the south was excavated in order to establish a southern limit on the artifact density. These excavations were, therefore, successful in almost completely exposing the core of the artifact concentration, likely centered about 840R490-500.

The units reveal a fairly consistent A or Ap horizon of black (10YR2/1) sandy loam ranging from 1.0 to 1.2 feet in depth overlying a heavily mottled dark

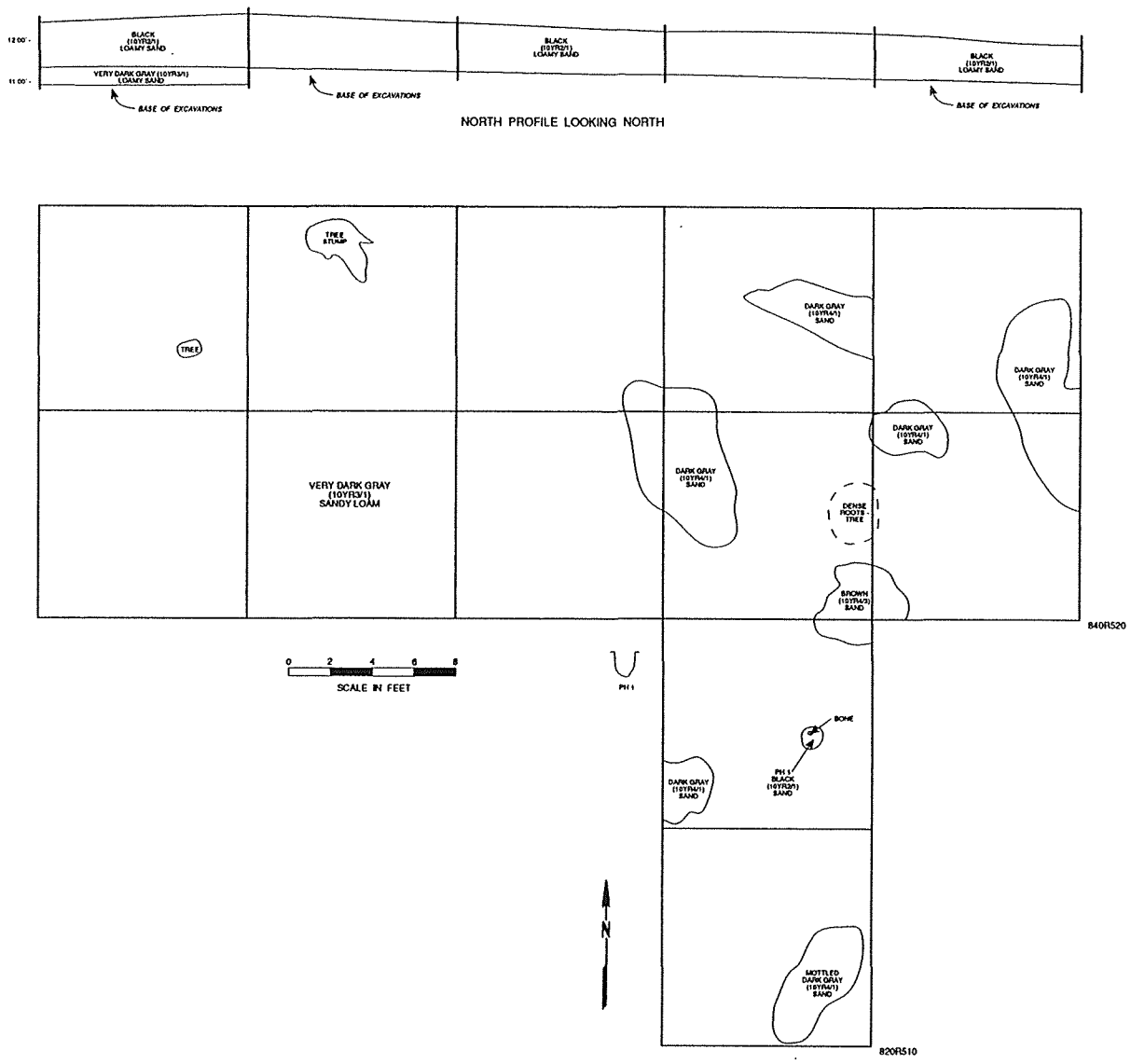

Figure 32. Plan and profiles of excavations in 820-830R510, 840-850R470-520 at 38CH1477.

Figure 33. View of the block excavation at 38CH1477.

gray (10YR3/1) loamy sand subsoil. This distinction was not always clearly defined. Plowscars were not recognizable in the heavily reduced soils. The units also failed to reveal any features. Only one post hole was identified (in 830R510). Although round with a slightly pointed base, the materials recovered suggest that this post was associated with the historic occupation.

Although no clear architectural remains were identified, the distribution of brick rubble does suggest the presence of structural remains. Brick density increases from amounts of 6 and 13 pounds in 840-850R470 respectively to 64 and 55 pounds in 850R510-520. The smear of brick to the east may be the result of plowing, or perhaps more likely (since elsewhere on the site the plow smearing seems to be oriented more north-south), the remnant of a brick chimney fall. In addition, our examination of artifacts reveals that the quantity of nails was greatest in the central units, decreasing to the east and west — likely indicative of a generalized structure location.

Artifact density was greatest toward the east, in units 840R500-510, but began to once again fall as we continued the excavations south-ward into 820R510. It seems likely, therefore, that we managed to isolate the east, south, and west edges of this particular occupation area. Excavation to the north was not possible because of a very low wet area.

With no additional structures indicated to the south or east, it seems likely that the identified structure is the southeastern one shown on the 1798 Moses Whitesides and 1856 Wagner plats. The remaining portions of this slave settlement were destroyed by either the pond construction or the more recent construction staging area.

PREHISTORIC ARTIFACTS

Introduction

For these discussions we have chosen to combined the prehistoric artifacts from both 38CH1466 and 38CH1477. While these site designations had meaning during the initial survey of the sites as a way of classifying concentrations, this study has revealed that the deposits are mixed and blended together by over a hundred years of plowing and construction activities. It makes more sense to combined the remains and explore the information that they can contribute as an assemblage, rather than to break them apart and compare and contrast them.

As alluded to in previous discussions, much of our research design was found to be inappropriate at this site. For example, we failed to identify well preserved (i.e., not plowed) middens capable of providing reliable information on shellfish density and use. More importantly, the plowing mixed prehistoric assemblages, making it difficult to offer much hope that the site will contribute to a better chronological understanding of the region. In fact, we are left primarily with a fairly large collection of prehistoric pottery (there are a few lithics as well) suitable for little more than descriptive analyses. Considering how few detailed studies there are of this nature, this is not an altogether unfortunate turn of events. In particular, the assemblage produced a number of Wando series sherds and this study provides an opportunity to better document this ware and compare it to other similar collections.

Lithics

The lithic assemblage is small, which is typical of coastal sites where almost any stone was brought in from elsewhere. It is nevertheless worth at least a brief discussion.

Flakes

Thirteen of the 19 specimens (68.4%) are siltstone, with 12 of the 13 representing what are clearly flakes with well defined striking platforms and other recognizable flake features. The other specimen is blocky and is better classified as a chunk. This has been defined by House and Ballenger as, "distinguishable from cores by lack of scars of detached flakes . . . [and] from flakes by the lack of observable striking platforms, dorsal and ventral forces, and other characteristics of flakes (House and Ballenger 1976:59). It was likely produced during an early reduction stage.

These materials are soft, almost chalky with rounded edges, and lack any recognizable grain structure. They are typically a pinkish gray (5YR8/1) to yellowish gray (5Y7/2). A similar material was reported by Anderson et al. (1982:131) from Mattassee Lake where it was identified on the basis of three flakes (out of over 86,000 specimens). Cable (1992a:65) notes the occasional presence of siltstone, which he includes with rhyolite and tuff, suggesting a Piedmont origin. We have observed similar materials from other coastal sites, but generally it is either so uncommon that no mention is made or it occurs as blocky fragments that are interpreted as unproductive experiments. At these sites the material appears to have been used far more commonly.

While Anderson and his colleagues don't provide any suggestions on the possible source of this material, Murphy does note that siltstones can be found in the McBean Formation, with exposures being common and including, "the area near St. Matthews in Calhoun County, along Tinker Creek and Upper Three Runs Stream in Aiken County, and along the North Edisto River from the city of Orangeburg north to Park Crossroads in Orangeburg County (Murphy 1995:178).

A single "gray" chert flake was recovered. This specimen does not evidence the waxy appearance of heat treated specimens (discussed below) and has a light olive gray (5Y6/1) color. This is not immediately

Table 6.
Flakes Recovered from 38CH1466 and 38CH1477

	Siltstone chunk	Siltstone flake	Gray chert flake	Gray HT chert flake	Honey HT chert flake	Pink HT chert flake
850R470	1					
590R510		2		1		
600R510		3				
600R600		4				
820R510					1	
840R480			1			1
840R490		1				
840R510		1				
850R490		1				
850R510				1	1	
Totals	1	12	1	2	2	1

recognizable as any common material. Slightly more common are heat treated gray chert flakes. These have a waxy appearance and range in color from a dark gray (N3, sometimes with very light gray [N8] streaks) to a light olive gray (5Y6/1) or olive gray (5Y4/1) with dusky yellowish brown (10YR2/2) streaks.

Other cherts include what we have called a honey heat treated variety. This material, waxy in appearance, has a moderate yellowish brown (10YR5/4) color. At times there are also mottles of dusky red (5R3/4). Fossil inclusions are common. Also present is an equally fossiliferous chert with a pale pink (5RP8/2) to pale red purple (5RP6/2) color. Both of these would probably be called "Allendale chert," although as Anderson and his colleagues observe, the source locations are scattered between the Savannah and Edisto rivers. This chert is widely used at a variety of South Carolina sites.

All of these materials are appropriately considered extra-local, being brought to the site from distances of 50 to 100 miles. What is unexpected is that so much siltstone is present. It would have been no closer than other, and more workable, sources of raw material. We can't image that it would have been preferred, so we can only imagine that other materials were not as readily or as cost-effectively available.

The flakes identified from this study are all interior flakes, showing no adhering cortext (and excluding flakes of bifacial retouch). These flakes likely represent later stages of raw material reduction and stone tool manufacture. They would have been intermediate between primary or secondary flakes — characteristic of early stage reduction — and flakes of bifacial retouch — produced during the thinning or resharpening of finished tools. In other words, the flakes recovered from the site suggest that some tool production was taking place on-site.

Supporting this view are the presence of two (exhausted) chert cores. One has been burnt and varies in color from a very light gray (N8) to a light gray (N7). The other is an example of gray heat treated chert. Its color varies from a light olive gray (5Y6/1) to a dusky yellowish brown (10YR2/2). The former was recovered from 850R520, the latter from 840R510. These specimens exhibit areas where flakes have been detached and both appear to have been discarded because they were exhausted.

Absent from the collection are flakes of bifacial retouch. While this may suggest that maintenance activities weren't taking place at the sites, it seems more reasonable that these flakes were either selected against by the recovery methods or that the siltstone material (which is most common) simply doesn't survive as such small flakes. As discussed below, several of the tools suggest reworking.

Tools

Eight tools or tool fragments were recovered from the excavations. Two are siltstone, one is quartz, and the remaining five are chert.

Two specimens are identifiable projectile points. One (recovered from 600R600) is a triangular projectile point measuring 26mm in width, ~31mm in width, and 6mm in thickness. This specimen is within the parameters of the Yadkin Large Triangular point (Coe 1964:45, 47, 49) and is likely associated with Middle Woodland pottery (this unit is dominated by Deptford wares). The tip is broken, which may account for its discard. The other (from 850R510) is a heat

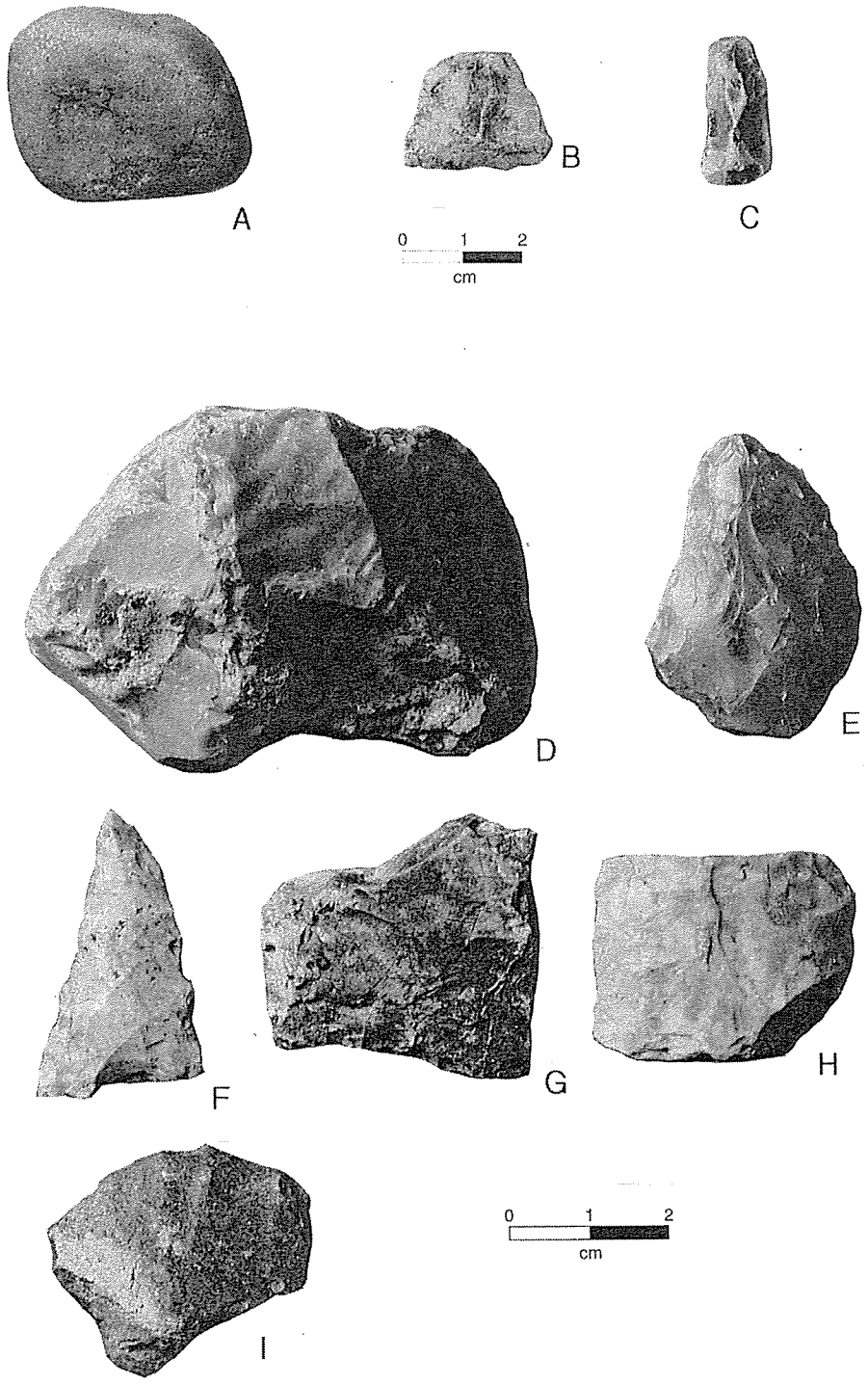

Figure 34. Lithics from 38CH1466 and 38CH1477. A, quartz pebble with pecking; B, siltstone Yadkin Large Triangular; C, siltstone drill; D, gray chert core; E, Morrow Mountain I; F, heat-treated chert biface tip; G-H, chert biface midsections; I, used chert flake.

treated chert Morrow Mountain I (Coe 1964:37-38) measuring 37mm in length, 26mm in width, and 10 mm in thickness. This point was manufactured from a waxy moderate brownish yellow (10YR5/4) chert with streaks of moderate brown (5YR3/4). This Middle Archaic point has sustained considerable edge damage or wear and was likely discarded.

Other possible projectile point fragments include a chert tip from 840R500, a midshaft fragment from 840R510, and a burnt fragment from 850R510. While too fragmentary for positive identification, all three are consistent with stemmed points such as the Savannah River Stemmed, Small Savannah River Stemmed, or Gypsy Stemmed (Coe 1964:44-45; Oliver 1981:151-156). The tip is of a pale pink (5RP8/2) to pale red purple (5RP6/2) heat treated chert. It measures 35mm in length and has a maximum width of 20mm. The midsection from 840R510 is a grayish orange (10YR7/4) chert. It measures 33mm in width, 25 mm in length, and 11mm in thickness. The final specimen is burnt with crazing and potlid flakes. It currently varies in color from dark gray (N3) to light gray (N8) and represents only a portion of a midsection.

A siltstone drill fragment was recovered from 600R600. It measures 31mm in length, at its widest it is 12mm, and its thickness is 7mm. It closely resembles those identified by Coe (1964:Figure 62) as Kirk drills, although we have no reason to believe that the specimen dates this early.

A single used flake was recovered from 840R480. This specimen, of dark gray (N3) heat treated chert, evidences small flakes removed from its edge.

The final specimen is a quartz stone measuring 31 by 12 mm and about 7mm in thickness. In the center it evidences a pecked depression about 13mm in diameter. While often called "nutting stones," such specimens may also represents anvils used in bipolar flaking. Other researchers (see Oliver et al. 1986:195) have suggested that such remains may indicate a "response to the scarcity of lithic material."

Summary

The lithic remains are too sparse to allow much in the way of detailed conclusions, although they do suggest some interesting observations. The presence of even this amount of lithic material is noteworthy at a coastal site. So, too, is the recovery of clearly flaked siltstone. While this material is more than occasionally found at coastal sites as angular chunks, the bulk of it at these two sites evidences its successful use in knapping. In fact two tools — a Middle Woodland point and a drill fragment — were also recovered. We suspect that this material was locally available.

In contrast, the remainder of the material at the site — both chert and quartz — likely came further, probably from the Upper Coastal Plain or the Fall Line. Several sources are likely, given the colors present. The bulk, although not all, of the chert was heat treated, or thermally altered, to enhance its flaking.

Although the tools present suggest heavy use, eventual exhaustion, and discard, secondary flakes are most common and flakes of bifacial retouch are absent. We suspect that tools were reworked and sharpened at these sites, but our collection strategy selected against the recovery of such evidence. Certainly the flakes present suggest that siltstone blanks were worked on site. The presence of chert cores suggests that flake tools were being manufactured — and one was recovered. The pitted quartz stone is suggestive of bipolar flaking, although no characteristic debris of this technique were recovered. Again, we may have selected against their recovery by relying primarily on ¼-inch screening or the heavy plowing of the site may have made the recovery of such evidence problematical.

The temporally sensitive lithics suggest a Middle Archaic presence, although an Early to Middle Woodland occupation — consistent with Deptford pottery — is more clearly evident. As at other sites, it appears that diminutive stemmed points continue to be found well into the Woodland, along with triangular points.

Pottery

Seventeen units and four features yielded

Table 7.
Pottery Recovered from 38CH1466 and 38CH1477

	Thom's Creek			Deptford					Wando					Wilmington							
	Plain	Shell	Reed	Cord Marked	Fabric Imp	Simple Stamp	Check Stamp	Plain	Cord Marked	Simple Stamp	Check Stamp	Plain	UID	Cord Marked	Fabric Imp	Plain	UID	UID	Subtotal	Small	Total
345R460				1	14	5	7		3	1		5			1			5	42	52	94
345R465				2	7	19	7	16		2		23			18			1	95	103	198
350R460				12	16	29	7	15	2	3		4			9			2	99	212	311
350R470				17	7	31	2	15	6	4		20			8			6	116	146	262
590R510				18	5	90	1	48		18		6					2	5	193	425	618
600R510				35	23	37	14	27	14	5		5	2	3				11	176	172	348
600R600			1	79	7	44	4	49	20	8	2	5				1		8	228	544	772
820R510																			0	16	16
830R510	2	2	4															3	11	0	11
840R480																		4	4	15	19
840R490																		4	4	15	19
840R500																			0	7	7
840R510	1		4																5	10	15
840R520																			0	10	10
850R490																			0	2	2
850R510																		2	2	0	2
850R520																			0	10	10
Feature 1 East				3		8	2	1											14	17	31
Feature 1 West							2			1									3	12	15
Feature 2 North												1							1	1	2
Feature 3									2						2	1			5	0	5
Feature 4 North					1		1												2	1	3
Feature 4 South				2															2	4	6
Totals	3	2	9	169	80	263	47	171	47	42	2	69	2	3	38	2	2	51	1002	1774	2776
% by Series	21.4%	14.3%	64.3%	23.2%	11.0%	36.0%	6.4%	23.4%	29.0%	25.9%	1.2%	42.6%	1.2%	6.7%	84.4%	4.4%	4.4%				
% of Series by Total	1.5%			76.8%					17.0%					4.7%							

2776 sherds, of which 1002 (36.1%) were over 1-inch in diameter and were suitable for more detailed analysis. These large sherds were sorted into five typological categories, with 51 specimens (5.1%) left as residuals or unidentifiable. Of those which could be classified to type, 14 (1.5%) were classified as Thom's Creek, 730 (76.8%) were classified as Deptford, 162 (17.0%) were placed in the category of Wando, and the remaining 45 (4.7%) were identified as the Wilmington or Hanover series (Table 7).

Thom's Creek

The Thom's Creek pottery fits well within the accepted typology (see Trinkley 1976). The paste is friable and sandy, including abundant fine sand and moderate to occasional medium sand, all of which is subangular to subrounded.

The most common decorative motif is a variation of reed punctation, typically as linear rows of cut reeds, accounting for 64.3% of the assemblage. Plain sherds are next in abundance (accounting for 21.4%). These were, admittedly, difficult to distinguish from the Deptford wares and may be underrepresented. Nevertheless, they were distinguished by a sandier (i.e., more friable) feel, as well as the presence of interior shell tooling. The last decorative motif are the shell punctated sherds (14.3% of the Thom's Creek assemblage). These were circular impressions from shells, likely the tip of a periwinkle.

The Thom's Creek pottery was identified from only three proveniences — 600R600, 830R510, and 840R510. While one specimen came from the eastern edge of 38CH1466, most (13 of the 14 sherds) came from two units at the southern edge of the historic block (38CH1477). This small "cluster" of Thom's Creek was found at the base of the plowzone and extending into the subsoil. It is likely that a deep test in this area would have produced additional Thom's Creek wares. Unfortunately the area was heavily reduced and it was impossible to determine if these sherds were confined to a feature or were distributed across the unit.

Regardless, this Late Archaic-Early Woodland ware is a relatively minor constituent of the prehistoric occupation.

Deptford

The Deptford pottery is the most common prehistoric ware found during these investigations, with the 730 fragments including examples of cord marking (N=169, 23.2% of the Deptford assemblage), fabric impression (N=80, 11.0%), simple stamping (N=263, 36.0%), check stamping (N=47, 6.4%), and plain (N=171, 23.4%).

Although there is some variation in Deptford paste which appears related to surface treatment, there is also considerable internal consistency.

DePratter (1979:123) describes Deptford as containing "fine to medium quartz grit," while the pottery itself was described as "very sandy." Anderson and his colleagues remark that the Deptford wares "exhibited varying quantities of small (0.5-2.0mm) rounded quartz inclusions" and was "gritty" (Anderson et al. 1982:280). The range noted (0.5-2.0mm) includes medium and coarse sand.

These previous discussions are commenting on both the paste body (very sandy or gritty) as well as the aplastic inclusions (if they are, in fact, inclusions and not natural to the clay source). We found that 78% of this collection exhibits very fine to fine sand paste, while the remainder was classified as having a medium sand paste. This means that the native clay contained abundant amounts of very fine to medium sand. In addition, we found that there were sparse amounts of medium to very coarse quartz grain inclusions. In fact, 61% of the Deptford wares contained coarse to very coarse quartz. Nearly 18% contained only medium sand inclusions. In spite of this, 21% contained no inclusions (the Deptford Fabric Impressed were the least likely to contain inclusions, with 54% of the pottery exhibiting a very fine to fine sand paste). Where inclusions were present they were consistently quartz grains, ranging from rounded to subangular, which suggests that they were likely natural inclusions in the clay sources.

The core cross sections varied considerably by surface treatment. While the sample sizes are small, this may suggest that different vessels were subjected to different firing procedures, perhaps because they were

Table 8.
Sherd Core Sections by Surface Treatment (in percent)

	Oxidized	Central Core Reduced	Reduced	Reduced Exterior	Reduced Interior	Reduced Int. & Ext
Cord Marked	53		23		18	6
Check Stamped			40		60	
Fabric Impressed	27	9	18	9	37	
Simple Stamped	44	22	28		6	

intended for different functions or perhaps because they were manufactured by different potters. Alternatively, it is important to recognize that often one vessel can possess several different cross sections if the firing is not very carefully controlled. Table 8 shows the variation in cross sections by surface treatment.

When all of the Deptford wares are combined and surface treatment is ignored, the three most common cross sections are completely oxidized (36%), completely reduced (27%), and reduced interior (25%). The completely oxidized cross sections are suggestive of vessels with little or no organic material in the clays fired under completely oxidizing conditions. The sherds with cross sections exhibiting complete reduction are suggestive of clays with abundant organic matter fired in a reducing atmosphere and allowed to cool in oxygen starved conditions. The cores with reduction present only on the interior suggest a firing in a reduced atmosphere, but cooling upside down in the presence of oxygen, so that the exterior of the vessel (but not the interior) is oxidized. Where the interior core is reduced, a somewhat similar scenario is suggested, with the reduced vessel removed from the fire and allowed to cool in an oxygen rich atmosphere. This causes oxidation of the vessel interior and exterior, with only the core remaining reduced.

When sherds possibly altered by cooking or use conditions are excluded from consideration, it appears that firing practices were poorly controlled, with roughly equal numbers of vessels being oxidized and reduced. Variations on these two themes are primarily the result of cooling practices, which were again not very well controlled. The general lack of control suggests that firing could have been conducted above ground with only minimal efforts to control heat and sooting.

The **check stamping** includes three identifiable variations. Check stamping consists of a waffle pattern with checks ranging from about 3x4 to 6x8mm. Linear check stamping tends to be more consistent, with checks about 3x3 to 3x4mm separated by lands about 3 to 4mm in width. Also present, and included in the check stamping category are a variety of herring bone checks ranging from about 2x4 to 3x6mm.This particular motif is classified by some as Oemler Complicated Stamped (see DePratter 1979:127128). DePratter suggests that this type is late, occurring at the end of the Deptford phase, about A.D. 500. On the other hand, Anderson et al. (1982:Figure 82f, h) seem to incorporate this style into the linear check stamped motif. Given the small collection size, we have not separated any of check stamps and lump them in an inclusive category. Like those found at Mattassee Lake, however, we notice that a number are either very faintly stamped or were smoothed (probably by accident) after stamping.

The **cord marking** in this collection has all been subsumed under the Deptford series. We have not attempted to distinguish Cape Fear or Yadkin (cf. Anderson et al. 1982:138). It is unlikely that any of these specimens would be comparable to those Anderson and his colleagues classify as Yadkin (described as being "characterized by a higher than usual incidence of fair-sized (1.0-3.0mm) quartz inclusions"). The sherds from this study do not seem to have a particularly high incidence of medium or coarser sand inclusions. Consequently, they might be considered Cape Fear by some researchers. We don't believe, however, that any researcher has demonstrated any substantive difference between the Deptford and Cape Fear wares, either on the basis of chronology or physical attributes. As a result, the two are still mired in typological uncertainty.

The interior of the vessels were roughly smoothed. Only one example of interior striations, suggestive of smoothing when the clay was leather hard, was identified. Most of the vessel interiors appear to

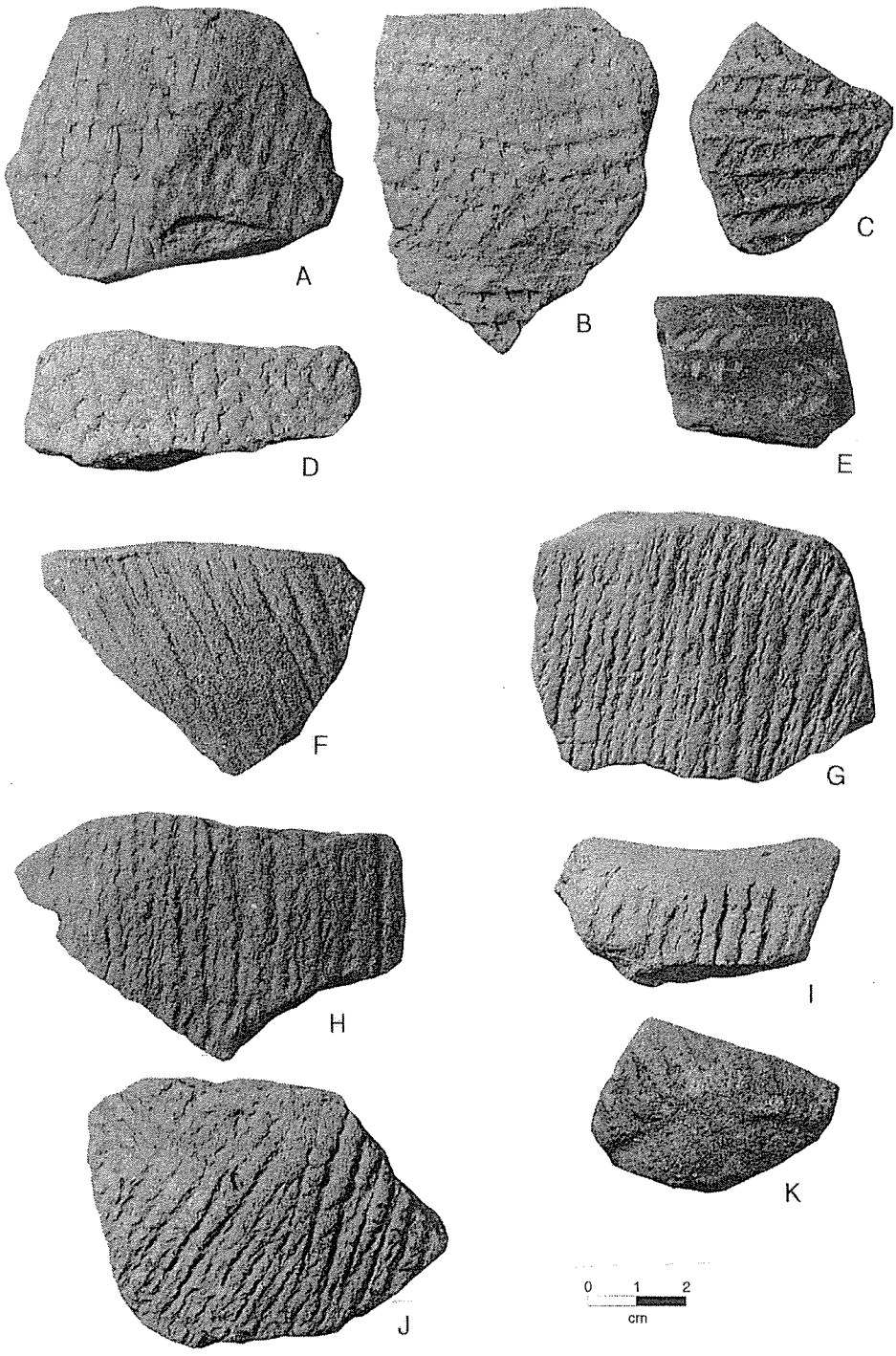

Figure 35. Deptford Check Stamped and Cord Marked pottery. A-B, Deptford Check Stamped; C-E, Deptford Check Stamped, sometimes called Oemler Complicated Stamped; F-J, Deptford Cord Marked; K, Deptford Cord Marked abrader.

have been smoothed with a moist hand or similar soft and flexible tool while still moist and pliable.

The cordage evident in this collection includes both Z or left final twist and S or right final twist cordage, with the latter being about twice as common as the former. The right or S twisted cordage has two to three twists per centimeter, with the cordage being 1 to 2 mm in diameter. It was primarily applied in parallel bands between 1 and 7mm apart. Overstamping or cross-stamping occurs on about 40% of the sherds. The Z or left final twist cordage exhibits three to six twists per centimeter, making it a harder or more tightly twisted cord. The diameter of the cordage is similar, although the range is from 1 to 3mm. Because some of the cordage is thicker, the distance between cords is also sightly greater, ranging from 2 to 4mm.

Nearly 80% of the rim sherds have a rounded rim form, with rim thickness ranging from 7 to 11mm. Shoulder forms are typically straight, although several slightly outflaring shoulders were also observed. Vessel diameters range from 13 to 39cm. In a very few cases we observed that the smoothing of the lip was carried down 6 to 10mm below the rim to the exterior, smoothing over cord stamping.

In a similar fashion, we classified all of the **simple stamped** pottery as Deptford, primarily because we could not distinguish any differences in paste. In contrast, Anderson and his colleagues distinguish Deptford Simple Stamped from a later Santee Simple Stamped. While the temporal differences are convincing, the distinctions between the two wares are difficult to distinguish in a mixed collection, with the most significance difference perhaps being that the earlier Deptford wares have U-shaped impressions, while the Santee wares have V-shaped impressions (Anderson et al. 1982:285, 304). Nevertheless, DePratter fails to identify any Deptford simple stamping and places this surface treatment in the classification of Refuge Simple Stamped (DePratter 1979:121).

In a mixed plowzone context we did not feel confident separating the simple stamped wares. There is considerable variation in the motif, with the grooves ranging from 1 to 6mm in width and we did notice that there seems to be a distinction between those with grooves between 1 and 2mm in width and those between 4 and 6mm. The former are far more likely to be V-shaped, while the latter are almost always U shaped. Whether this is an intentional difference or is simply related to the nature of the tools and materials available is not entirely clear. When these two groups are sorted and their pastes are examined, we were unable to notice any consistent differences — although we have a very small collection.

In general, the narrower grooves have narrower lands, typically 1 to 3mm in width, while the wider grooves have correspondingly wider lands, up to 5mm. Nevertheless, there is considerable overlap and we have found considerable variation on a single sherd. Compounding the difficulty is that about 40% of the sherds evidence cross or overstamping, making it difficult to evaluate the motif.

Nearly two-thirds of the rim sherds evidenced a rounded lip. The remaining one-third was about evenly divided between flat lips and pointed lips sloping to the interior. Rim thickness varied from 7 to 10mm, with a mean of 8mm and most rims had straight shoulder forms, suggestive of deep jar forms. Rim diameters, where they could be calculated, ranged from 23 to 31cm.

Fabric impressed pottery is not identified by DePratter (1979) in the Georgia collections. Anderson et al. (1982:293-301) classify it as either Yadkin or Cape Fear, distinguishing the two on the basis of the fabric and paste. While found in Cape Fear, the Yadkin wares seem to more commonly have a rigid warp element. In addition, the Cape Fear paste is "characterized by varying amounts of small (0.5-2.0mm), rounded clear, white, or rose quartz inclusions" (Anderson et al. 1982:296), while the Yadkin is "characterized by large amounts of rounded and subrounded white and clear quartz gravel (1.0-6.0mm; average about 3.0mm)" (Anderson et al. 1982:300). Using these sorting criteria, the pottery identified in this study as Deptford Fabric Impressed could just as easily be classified as Cape Fear Fabric Impressed.

In contrast, Cable (1992b:62) argues that the paste of fabric impressed pottery from the central South

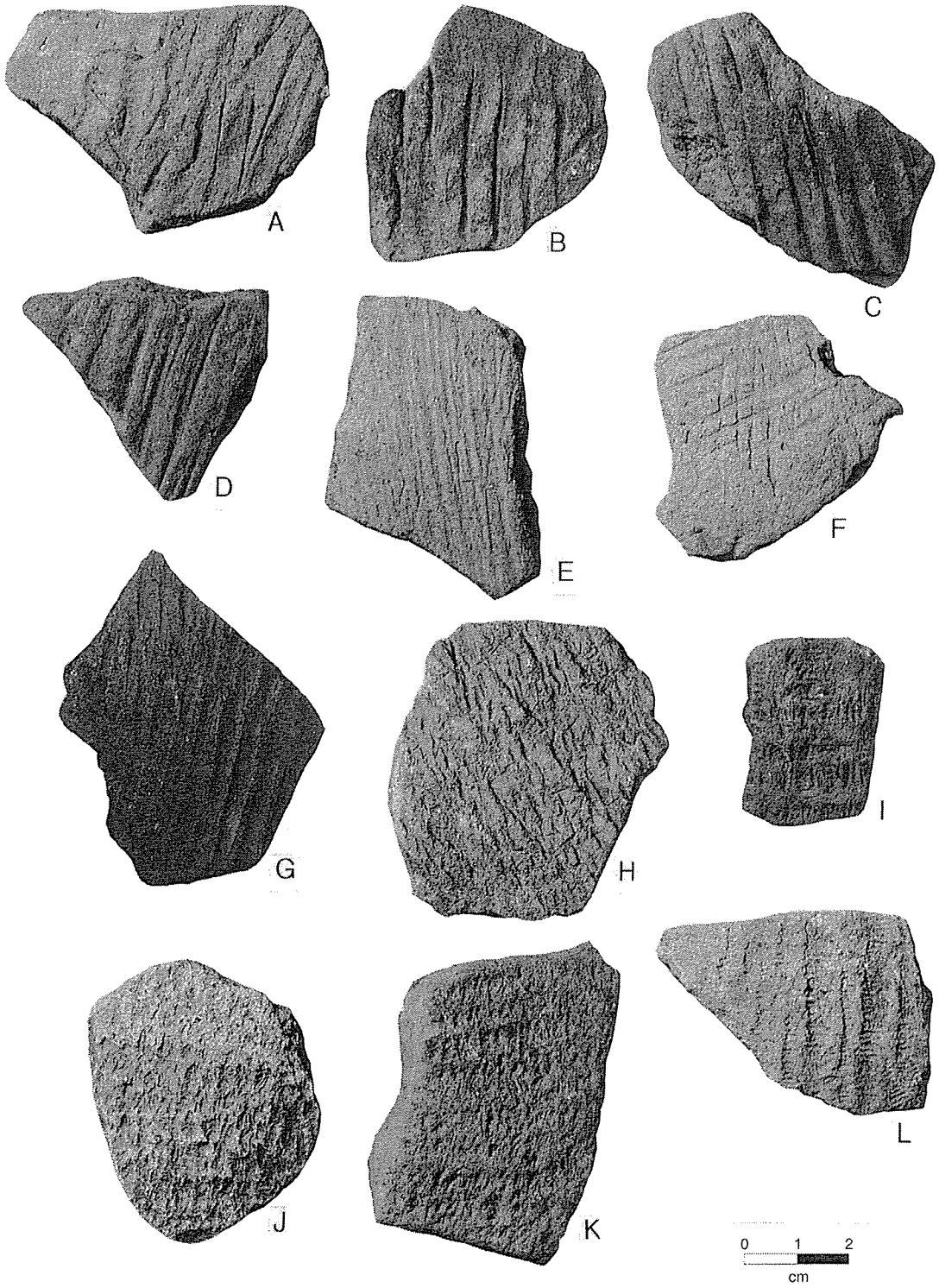

Figure 36. Deptford Simple Stamped and Fabric Impressed pottery. A-G, Deptford Simple Stamped (note variation in size and application of stamping); H-L, Deptford Fabric Impressed (note variation in stiffness of warp).

Carolina coast is indistinguishable from that associated with conventional Deptford wares. He notes that, "if it were not for surface treatment variation, there would be no basis for separating most of the fabric impressed material . . . from the local Deptford Series," and that, "the variability contained in the Cape Fear Series can actually be distributed across the other extant series in the central South Carolina coastal sequence, and that this practice provides a much clearer picture of the chronology and developmental role of cord marked and fabric impressed surface treatments in this region" (Cable 1992b:62).

It is certainly the case at these sites that the paste is indistinguishable, or nearly so. The only significant difference is that the fabric impressed surface treatment appears (in this small sample) to be found on pottery which generally has a finer paste. About 54% of the pottery has a paste comprised of very fine to fine sand without any appreciable amount of coarser inclusions. Just over 27% of the pottery has a fine sand paste with sparse medium sand inclusions, and only 18% of the pottery evidences coarse inclusions. All of the inclusions are rounded, indicating that they are native to the clay source. We do not believe that these differences are sufficient to justify a Cape Fear designation and feel more comfortable containing the material within the Deptford series.

While about 9% of the pottery lacks a distinct warp and is more suggestive of a loose or bunched fabric, the bulk of the collection does exhibit a well-defined, and usually very stiff, warp. This warp ranges from 2 to 7mm in diameter, while the weft cordage ranges from about 0.8 to 2mm. Where no stiff warp was identified, both the warp and weft varied from 1 to 2mm. Overstamping occurs in about 36% of the specimens.

All of the rim forms exhibited rounded lips. Anderson et al. (1982:296) suggest that this assemblage is likely to be earlier than fabric impressing with flattened lips. In the current mixed collection, however, this provides relatively little assistance in understanding the collection. Rim thickness is fairly tightly clustered between 9 and 10mm. Vessel diameters range from 20 and 25cm and several sherds reveal pointed bases (it is worth commenting that nothing in the Deptford collection suggests the presence of tetrapodal supports).

Wando

The Wando Series was initially reported by Adams and Trinkley (1993:64-69) based on a relatively small collection of pottery from the Seaside Plantation survey. The defining characteristic of the pottery were the "abundant quantities of limestone temper" found in the paste. The particles at that time were reported to range from 0.5 to 6mm and to consist of some sort of carbonate material. It was found at voids at the surface of many sherds and as rounded particles on the interior of sherds. It was reported at that time that other researchers in the immediate area had identified similar pottery, although no detailed descriptions were available.

The source for the inclusions was not clear, although the initial work suggested three possible geological features — the Duplin, Santee Limestone, and Cooper Marl (Adams and Trinkley 1993:68).

Since that time some additional work has been conducted on this pottery in the Mount Pleasant area. Brockington and Associates, for example, reports finding the Wando series throughout "the Wando basin (Mt. Pleasant/Wando Neck, Cainhoy Peninsula)" and have even found a few sherds as far south as Edisto (Eric Poplin, personal communication 2001). Whether or not all of these are typologically identical is uncertain. It is also reported that the pottery was found at 38CH1025, where a radiocarbon date of "AD 800-900" was obtained (Eric Poplin, personal communication 2001). The report on this work, however, is not currently available.

Curiously, a similar ware has been identified on the southern North Carolina coast. Called Hamp's Landing, it consists of plain, thong-marked, cord marked, fabric impressed, and simple stamped surface finishes. The paste is called limestone tempered, with the limestone coming from crushing calcareous marls (Ward and Davis 1999:202). This ware may be associated with Late Archaic-Early Woodland ceramics or may have a much later association with the sherd or grog tempered Hanover wares. In particular Jones et al. (1997:101) argue that it is the size, shape, and density

Table 9.
Sherd Core Sections by Surface Treatment (in percent)

		Central Core		Reduced
	Oxidized	Reduced	Reduced	Interior
Cord Marked	23		69	8
Simple Stamped	17	33	33	17

of the aplastic inclusions which should be focused on, not that the material is limestone, and they would link the pottery with the Middle Woodland Hanover series.

At a macroscopic level the paste of the specimens found during this study is dominated by very fine to fine sand. About 31% of the specimens evidence larger quartz inclusions. About 21% of the sherds include some amount of medium sand, while an additional 10% of the specimens exhibit inclusions as large as coarse sand. Where these medium or coarse sands are found, they are always rounded, suggesting that they are natural inclusions in the clay source.

The carbonate inclusions are found as both intact particles and also as voids in the paste where they have been leached out. We often noticed that a sherd would exhibit holes or voids on the exterior surfaces, but when broken open would exhibit intact inclusions. The intact particles range from 0.5mm to 6mm, with most particles ranging from about 1 to 2mm. It was also noticed that many of the inclusions show a color shift from white to pink, perhaps associated with the firing process.

Figure 37 illustrates the frequency of inclusions. Most of the sherds exhibit a paste where the inclusions account for 25% of the total volume. A second peak occurs with just over a quarter of the sherds having a paste where the inclusions account for only 5% of the volume. The trend line reveals that there are likely two peaks — one at around 5% and another at about 25%. There are relatively few sherds with more inclusions, suggesting that somewhere around 40% we reach a point where the inclusions cause failure of the pottery vessel.

The sherds exhibit some differences in core cross sections by surface treatment (see Table 9). The cord marked sherds are dominated by fully reduced cores, suggestive of a paste with organic material fired in a reducing atmosphere and cooled prior to being exposed to oxygen. The next most common cross section is fully oxidized, suggestive of a vessel fired under fully oxidizing conditions. Relatively infrequent are cores suggestive of a vessel turned upside down and fired under reducing conditions, and then allowed to cool with exposure to oxygen.

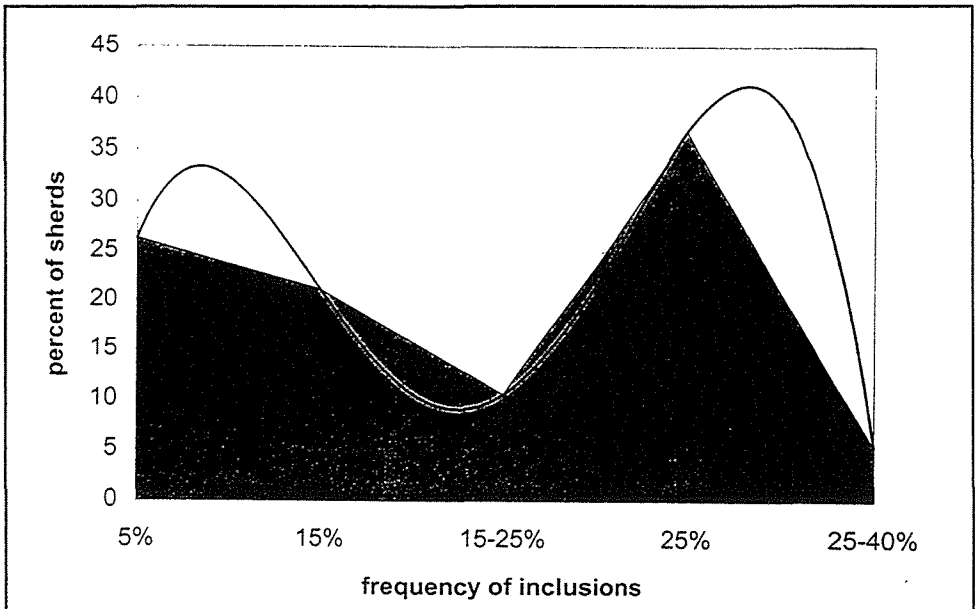

Figure 37. Graph of the frequency of inclusions by percent of sherds, showing a trend line.

The simple stamped sherds, in contrast, reveal a wider range of cross sections with no clear firing method being most common. There were about equal numbers of fully reduced cross sections and cross

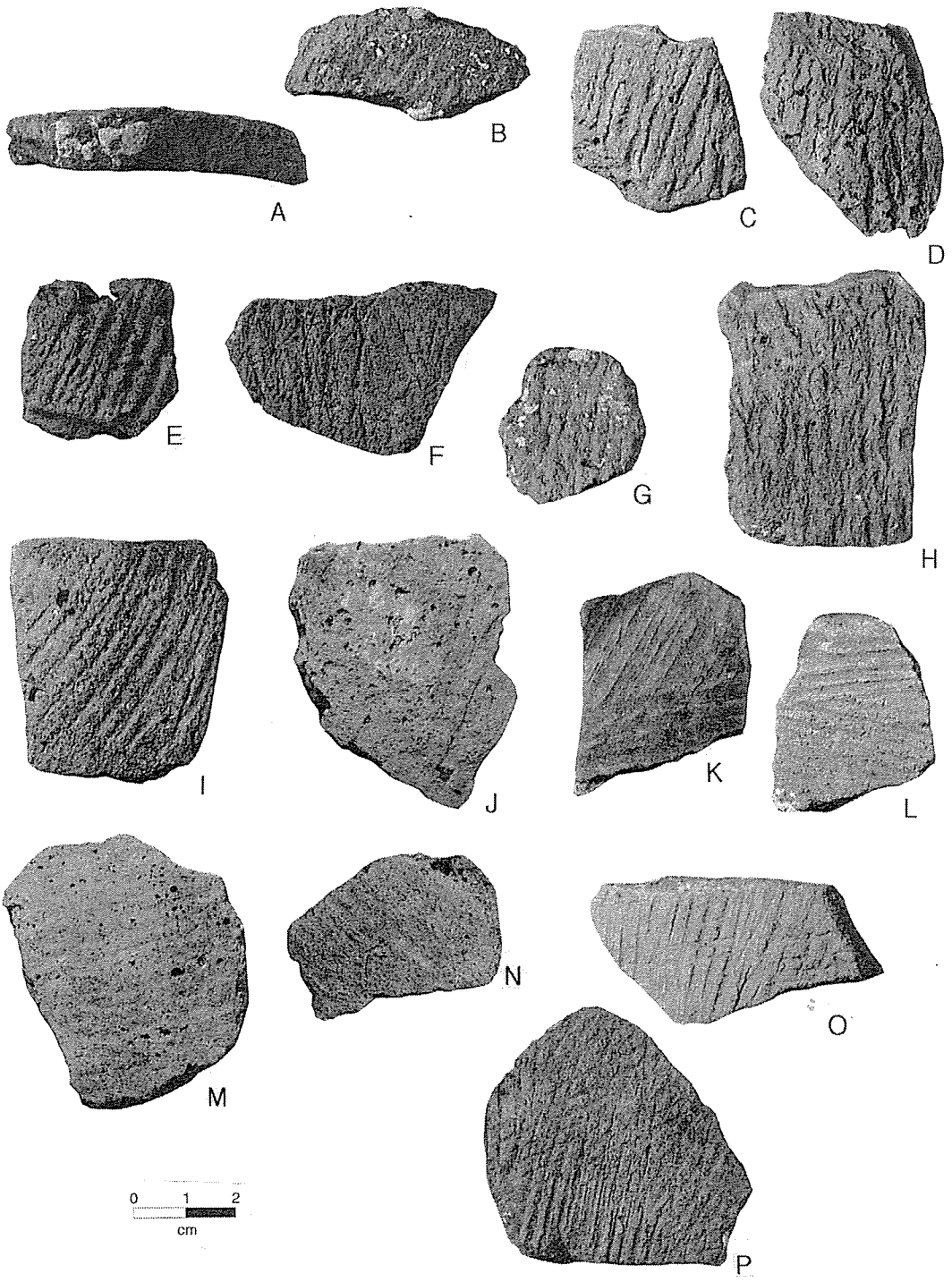

Figure 38. Wando Cord Marked and Simple Stamped pottery. A, view of cross section showing large inclusions; B-H, Wando Cord Marked (note presence of both white inclusions and voids); I-P, Wando Simple Stamped (note variation in size and application of stamping).

sections with a central reduced core. The latter are suggestive of firing in a reducing atmosphere with cooling in open air. Also present, but in reduced numbers are cores that are fully oxidized and also cores that are suggestive of firing upside down in a reducing atmosphere with cooling in an open setting.

Like the Deptford specimens, these suggest a range of (probably open) firing methods. What is perhaps more interesting is that the range of core cross sections — if not the actual percentages — is very similar between the two wares. We don't believe these similarities suggest any typological linkage, although they may suggest some technological affinities.

Two samples of what we are classifying as Wando were selected for additional petrographic analysis by Spectrum Petographics. One sample (38CH1466-44-4) included white fragments, presumed to be carbonate or limestone as well as voids. The other sample ((38CH1466-40-4) had what appeared to be similar, albeit larger, aplastic inclusions, but no voids.

The report of this investigation is included as Appendix 1, but in general in the first sample (38CH1466-44-4) the aggregate comprised about 35% of the paste and included polycrystalline and monocrystalline materials. The former are large crystal carbonates which are not particularly consistent with marl deposits. The origin, however, is best described as uncertain. Regardless, they comprise about 10% of the paste. The latter, monocrystalline, materials are primarily quartz, with minor amounts of feldspar and hornblende. These materials comprise about 25% of the paste and the bulk of the aplastic inclusions. The paste itself is unremarkable. The thin section analysis revealed about 10% of the sherd cross section consisted of voids.

The second sample was most remarkable for its absence of carbonate material. The aggregate comprised fully 45% of the sherd in cross section. The components were polycrystalline materials consisting of clay, quartz, and clinozoisite — what might be described by claystone, and monocrystalline materials, primarily quartz, with minor amounts of feldspar and hornblende. Each contributed about equal proportions of the aplastic inclusions. The paste is again unremarkable and nearly identical to the first sample. In addition, this sherd also contained "flattened void spaces" which we have interpreted to be leached limestone, even though none were immediately visible on the surface of the sherd.

What is most interesting is that examples of sherds identified as being typologically identical have very different paste characterizations — one includes carbonates, the other claystone. Clearly we need to be far more precise in terms of aplastics and need to find a means to more clearly distinguish the two. But perhaps most revealing is that regardless of actual material in the sherds, the pottery appears to be visually identical.

This research suggests that future analysis of this pottery might benefit from a more detailed petrographic study. With a better understanding of the paste components it may be possible to begin the process of identifying the source clays, which seem to be rather unique.

The cordage of the **cord marked** specimens in this collection includes both Z or left final twist and S or right final twist cordage, with the two occurring in almost equal proportions. The right or S twisted cordage has three to six twists per centimeter, with the cordage being 1 to 2 mm in diameter. It was primarily applied in parallel bands between 1 and 4mm apart. Overstamping or cross-stamping is not common, occurring on about 15% of the collection.

The Z or left final twist cordage exhibits two to six twists per centimeter. The diameter of the cordage is identical, with a range of from 1 to2mm. Like the S twist cordage it, too, was applied in parallel bands between 1 and 4mm apart and overstamping was uncommon.

These two styles are far more like each other than they are similar to the Deptford cordage. There are no examples of very heavy cords and, in general, the stamps are more clear, with the cords more evenly spaced.

All of the rims identified in the collection have rounded lips and straight shoulder forms. The initial study of Wando pottery found examples of flattened rims with cord marking, suggesting that this variation exists as a minority component. The rim thickness

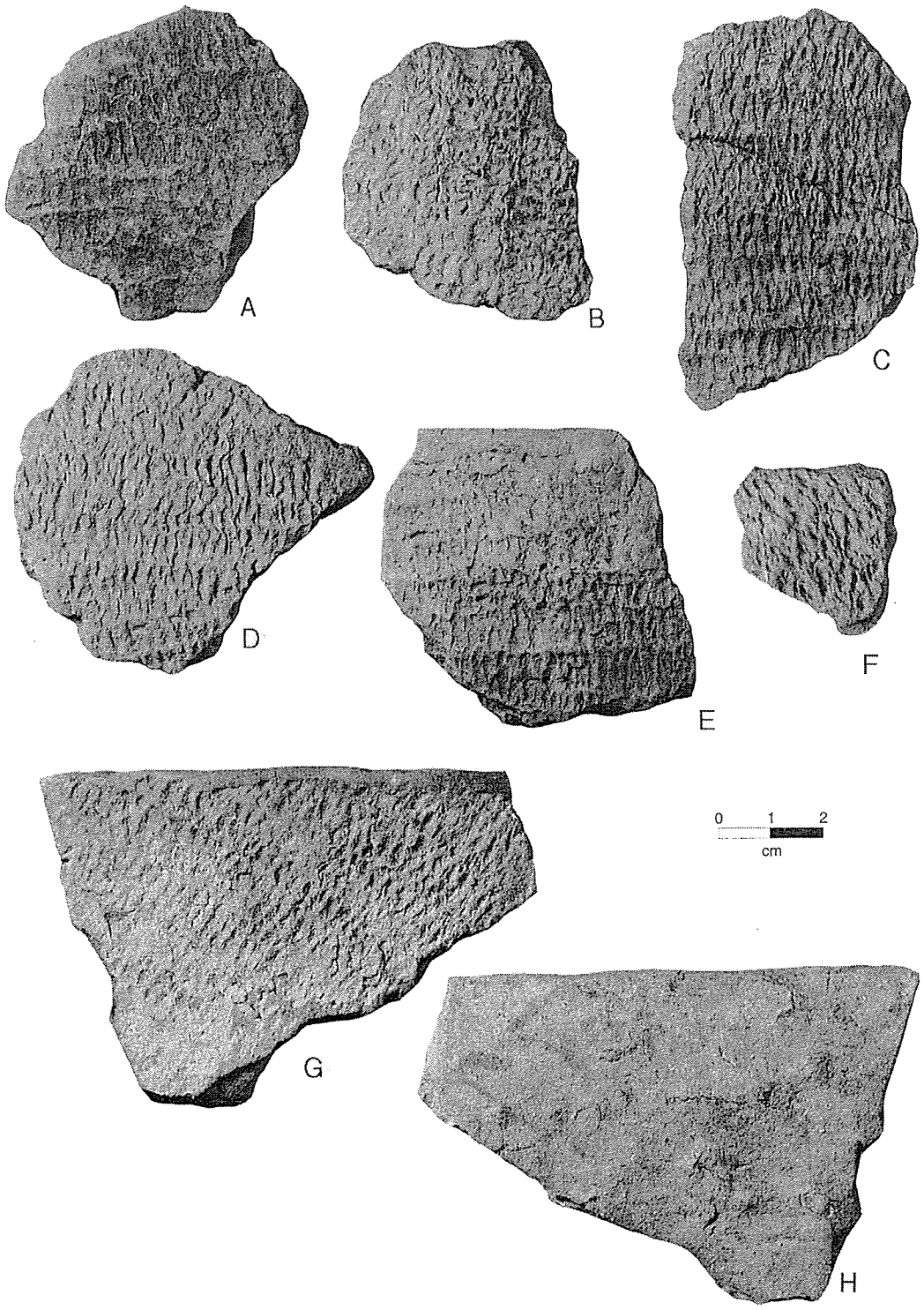

Figure 39. Wilmington pottery. A-G, Wilmington Fabric Impressed; H, interior of sherd G showing "lumps" of grog, some breaking through surface.

ranges from 8 to 10mm, with most clustering about 8mm. Vessel rim diameters range from 20 to 31cm. One rim evidenced smoothing for a distance of 5 to 8mm below the rim, obliterating the cordage.

The other surface treatment found in the current collection is **simple stamped**, which was not found during the initial study in 1992. The grooves are generally thin, ranging from 1 to 3mm in width, but clustering between 1 and 2mm. The intervening lands range from 1 to 3mm. Overstamping is common, being found on about 67% of the specimens. This treatment is most similar or analogous to what Anderson et al. (1982) classify as Santee Simple Stamped or which has been previously called McClellanville.

In this collection both flattened and rounded rims occur in near equal percentages. The rim thickness is 8mm and the shoulder form is uniformly straight. The sherds, however, were too small to allow an accurate calculation of rim diameter.

Wilmington

The last pottery to be briefly discussed is classified as Wilmington. In some respects this pottery had caused less typological confusion than many others since there has been a general (albeit incomplete) agreement that the paste consisted of either crushed sherds or grog. A greater problem, at least on the southern South Carolina coast and into Georgia, has been distinguishing Wilmington from St. Catherines. DePratter, for example, notes only that the St. Catherines grog is "typically smaller" than that found in Wilmington (DePratter 1979:131). In addition, the cordage of St. Catherines pottery is sometimes smaller and the ware includes varieties, such as net marked, which are not generally reported for Wilmington. Nevertheless, it is not difficult to see the gradual shift from Wilmington to St. Catherines. Anderson et al. (1982) and more recently Cable (1992b) suggest that the sherd or grog tempered pottery spread down the coast gradually, making it earlier in North Carolina than South Carolina and most recently introduced in Georgia.

We have found that DePratter is accurate when he characterizes St. Catherines as containing smaller particles. We have also noted that in the Beaufort area the St. Catherines paste is often contorted and it may be difficult to identify specific inclusions. While the interior of sherds may be "lumpy" the inclusions rarely break through. In contrast, the Wilmington pottery contains identifiable fragments of sherds or clay grog, these particles are clearly identifiable in cross section, and they often break through the interior wall.

There is some indication that to the north of Beaufort not only is St. Catherines pottery increasingly rare, but the paste characteristics change. For example, Cable identified the dominant Wilmington paste in the area north of Mount Pleasant as, "a friable, well-sorted, silty clay with very fine to fine rounded quartz sand aplastics . . . lumps of clay/grog are generally sparsely distributed in the matrix and exhibit a modal diameter range of 0.5 to 4.0 mm" (Cable 1992b:58). A less common variant includes medium to coarse rounded and subangular quartz, suggesting to Cable that this variety may be transitional from Deptford. From Mattassee Lake Anderson and his colleagues note that the paste was "tempered with small (0.5-4.0mm) lumps of aplastic clay (grog); larger lumps (to c. 10mm) occasionally noted" (Anderson et al. 1982:273).

The assemblage from this work closely resembles these descriptions. The sand matrix of the sherds is characterized by very fine quartz sand. Grog inclusions are abundant, frequently accounting for 25% of the sherd volume. These inclusions give the paste a contorted appearance and it is often difficult to identify individual inclusions. Where clearly visible the size ranges proposed by other investigators seems appropriate.

Loftfield noted this same feature in samples from the North Carolina coast,

> the pieces of aplastic tended in the construction process to begin to soften and lose definition in relation to the plastic portion of the paste. Consequently it is difficult to measure the size of the inclusions or to determine much about their original condition. Pieces vary in size

> from 1 to 5 mm in diameter as measurable today but this bears no certain resemblance to their original condition (Loftfield 1976:154).

He goes on to note that the paste "seems poorly kneaded being lumpy and contorted" (Loftfield 1976:154).

About 50% of the collection evidences complete oxidation of the paste, with 40% of the cores revealing complete reduction. The remaining 10% of the collection reveals interior reduction with exterior oxidation. These latter specimens are perhaps vessels which were fired up-side down and allowed to cool in an oxygen rich setting.

In terms of the fabric used to stamp the vessels Loftfield notes that in his North Carolina sample the warp rods were soft and 2 to 3mm in diameter, with the weft elements being 0.5 to 1mm in diameter (Loftfield 1976:156). The Mattassee Lake samples are similar. Anderson observes that the fabric was poorly defined, suggestive of a loose weave, but where warp and weft were identifiable, both were pliable. Rigid warp rods were a minority (Anderson et al. 1982:273).

In this study we observed two distinct fabric types. One is similar to those described by Anderson and Loftfield. There is much overstamping and the warp and weft elements are not well defined. We were able to identify the cordage in one specimen as a Z-twist cord with eight twists per centimeter and measuring between 1 and 2mm in diameter. Where visible, the warp elements were 1 to 2mm, with weft elements also 1 to 2mm in diameter.

The other variety of fabric evidenced rigid warp elements ranging from 4 to 10mm in diameter with soft, pliable weft fabric averaging 2mm (and ranging from about 1.5 to 3.5mm). This rigid warp variety was far more abundant at the studied sites than the loose variety previously discussed.

Flat and rounded rims occur in equal proportions, although all of the identified rims evidenced straight shoulder forms. Rim thickness ranged from 7 to 9mm. Vessel diameters ranged from 30 to 41cm, reflecting the largest diameter vessels identified. One specimen revealed a pointed base, with fabric impressions to the base of the vessel.

In terms of the fabric, the Hanover material is almost identical to the Deptford Fabric Impressed. The only real difference seems to be size of the vessels themselves and the use of grog. Whether this suggests a transition from Deptford or an introduced northern tradition which blended with Deptford is impossible at this point to determine.

Other Artifacts

The only other prehistoric artifact identified in the assemblage is a Deptford Cord Mark sherd which was used as a hone. This specimen exhibits several grooves, each 4 to 5mm in diameter and 2 to 3mm in depth. The hone was likely used for the shaping or smoothing of bone awls or pins. Similar hones are found with Early Woodland assemblages (Thom's Creek, Refuge, and Deptford), but seem to be less common by the Middle Woodland.

Other specimens, such as worked whelks, bone awls, and sherd abraders were not recovered from the collection, although the intensive plowing may have affected preservation.

HISTORIC ARTIFACTS

Introduction

The historic artifacts are examined in the context of the two general excavation areas — 38CH1466 and 38CH1477.

Readers will recall that the former area includes seven units in three different site areas. This site is dominated by prehistoric pottery, although small quantities of historic remains were found in several of the units. The historic assemblage, however, was concentrated in units 600R510 and 600R600. Although these are the closest units to the major historic block in 38CH1477, the materials are distinctly different — representing an assemblage that is clearly later in time. The latter area (38CH1477) represents a large block excavation, consisting of 12 10-foot units.

These discussions will review the materials found in each area and relate the different assemblages to the historic evidence available for the site.

38CH1466

Five of the seven units in 38CH1466 produced 935 artifacts, yielding a density of 2.2 artifacts per square foot. This, however, is deceptive since two units, 590-600R510 produced 823 (88.0%) of the specimens, for a density of 4.1 artifacts per square foot. The remaining 112 artifacts were spread out over three units.

Kitchen Group Artifacts

A total of 349 Kitchen Group artifacts was recovered, most representing ceramics (274 or 78.5%) or glass (71or 20.3%). Recovered were a wide range of late eighteenth through mid-nineteenth century ceramics, including primarily pearlwares and whitewares. Also present were a few ceramics typically considered to be early to mid-eighteenth century wares, such as North Devon Gravel Tempered and lead glazed slipware. As discussed below, the latest ceramics recovered, which provide the TPQ date for the block, are the whitewares.

The major types of ceramics are shown in Table 10, revealing that tablewares, such as the porcelains, creamwares, pearlwares, and whitewares, account for 98.9% of the ceramics. Utilitarian wares,[1] such as the brown and blue/white stonewares, account for about 1.1% of the collection. This suggests that food storage containers were not abundant at the site and that most of the ceramics present were intended for use on the table.

All of the eighteenth century wares are represented by single specimens and even the mid-eighteenth to early nineteenth century creamwares are represented by only two specimens.

Table 10.
Major Types of Datable Pottery at 38CH1466

Porcelain		5	1.8%
Stoneware		2	0.7%
Brown	1		
Other	1		
Earthenware		267	97.4%
Slipware	1		
Refined	1		
Coarse	1		
Creamware	2		
Pearlware	33		
Whiteware	213		
Yellowware	15		
Burnt	1		

[1] Utilitarian wares are those used in food preparation and storage. They typically include stonewares and coarse earthenwares, but exclude Colono ware, because of the possible ethnic differences in food preparation and consumption practices.

Potters continued to experiment with the cream bodied creamwares, in an effort to imitate the Chinese porcelains, and eventually pearlware was produced. By 1779 Wedgwood had produced pearlware, what he called an "improvement" on the creamware (Walton 1976:77; see also Noël Hume 1978:129-132). By 1790 the ware was further "improved" by Spode who added a small trace of cobalt to the formula to serve as a "blue whitener" (Feild 1987:54). Today pearlwares are recognized by the blue puddling of the glaze and over-all bluish cast.

The excavations at units in 38CH1466 produced a small quantity of this ware. Most is undecorated (N=12, 36.4%), followed by blue transfer print (N=8, 24.2%) and annular (N=6, 18.2%). The remainder of the assemblage includes blue hand painted and edged.

In general these decorations become more expensive (and hence we often assume they are used by individuals of greater wealth) as the amount of hand work increases. Consequently, plain (after its initial introduction), annular/cable, and edged are the least expensive of the wares — and they (because of the dominance of plain wares) account for 60.6% of the collection.

It is also thought that the vessel forms may often provide a clue to wealth and status. Plates and more complex pieces tend to be associated with more wealthy individuals and bowls tend to be found in greater frequencies on slave sites. This collection reveals one cup, two bowls, and two plates. Consequently, three of the five vessels (60%) are consistent with a lower status occupation. Curiously, the cup and one of the two bowls is decorated with blue transfer print — an expensive and generally high status style.

The pearlware assemblage is suggestive of a mixture of wares specifically acquired for African American slaves, such as the edged and annular wares, supplemented with discarded (or surreptitiously removed) items from the planter's table.

The whitewares represent yet another development or stage in the effort to produce a truly white ceramic. Whiteware is a fine bodied earthenware developed by C.J. Mason in 1813. It was patented under the name of Mason's Patent Ironstone China," yet distinguishing ironstone from whiteware presents a challenge. South (1974:247-248), for example, used an "ironstone-whiteware" category, while Price (1979:11) uses only a "whiteware" category which includes both "types." Both researchers point out that differentiating between whiteware and ironstone using vessel hardness (or degree of vitrification) is an uncertain or even invalid approach. For the purposes of this study, the term whiteware encompasses both categories of ceramics. In general, however, there are very few examples of ceramics which might be potentially classified as "ironstone" at 38CH1466.

There are 213 fragments of whiteware recovered from the different units. Of these 49.3% (N=105) are undecorated. The next most common motif is annular (N=40). Also present are 19 specimens of polychrome hand painted, 16 examples of blue edged, and 14 sponge decorated examples. There are also 13 examples of transfer printed whiteware.

Like the pearlwares, this collection seems dominated by less expensive motifs. Plain, edged, annular, and sponged motifs account for 175 specimens or 82.2% of the assemblage. When vessel forms are examined, 22 of the 31 vessels (70.9%) are plates, with the remainder representing hollow ware forms (cups and bowls). When only higher status decorative motifs are considered the collection includes one saucer and three plates. The remaining saucer and 17 plates are all associated with lower status decorations, as are all of the bowl and cup forms.

In this case it is not so easy to ascribe the higher status items as coming from the planter's table. Many of the whitewares were produced through reconstruction and to the end of the nineteenth century. Consequently, these ceramics may reflect consumerism choices of free African Americans.

The last of the ceramics identified is yellowware. This ceramic was made from primarily New Jersey and Ohio clays that, when fired, take on a dark yellow color. Sometimes wheel-thrown, it was more often mold-cast, with the subsequent application of an alkaline glaze to intensify the yellow color. Best known

Table 11.
Shape and Function of Ceramic Vessels From 38CH1466

Shape	#	%
Tableware	35	94.6
Plates/saucers	24	68.6
Bowls	11	31.4
Serving	0	0.0
Tea & Coffeeware	2	5.4
Utilitarian	0	0.0

are bowls, often with decorative color bands. This collection yielded only 15 examples, representing a single vessel — a bowl with a 6-inch diameter.

Looking at the collection from 38CH1466 as a whole, it is clearly dominated by plate forms which account for over two-thirds of the total tableware. Serving pieces, as well as utilitarian wares, are not represented.

It is also important to observe that this site did not include any Colono ware pottery, in contrast to 38CH1477, discussed below. This is most likely because the assemblage at this site is more recent, likely extending into the postbellum.

Container glass accounts for 71 fragments or 20.3% of the Kitchen Group total. The most prevalent glass type is that commonly called "black," which is actually dark green in transmitted light, comprising 59.2% of the glass found in this site (N=42). These represent "wine" bottles commonly used in Europe and North America, although containers were likely reused by African Americans for a variety of liquids. The materials in this collection were too fragmented to allow any meaningful minimum vessel analysis.

The next most common container glass was aqua — represented by a paultry 16 fragments. Only one bottle could be clearly identified, based on a molded body fragment. Other glass colors include brown (four specimens), clear (two specimens), manganese (one specimen), and blue (one specimen), as well as three melted fragments. The fragments are small, all evidencing the affects of plow damage. The collection provides little information other than that beer and wine bottles were most common and were likely being reused by the site occupants.

A single tableware item was recovered — a fragment of a "thumbprint" tumbler with a rim diameter of about 2½-inches. It wasn't until the first quarter of the nineteenth century that tableware began to made of pressed glass, with the items manufactured including tumblers, salts, cups, and plates (McNally 1982:34). The glass is not leaded, suggesting that it was of lesser value and might reflect an item either from the planter's table or acquired by a freedman in the postbellum.

Kitchenware items include one kettle leg and two kettle body fragments. Iron kettles were designed to either hang over the fire, if the weight could be supported, or to actually sit in the coals of the hearth (Feild 1984:93). By the eighteenth century the kettle was firmly established in kitchens and, being costly, would be "passed down from generation to generation and were highly valued" (Lantz 1970:15). By the late nineteenth century kettles, at least in urban areas, were on their way out of fashion, being replaced by the iron stove and more manageable pots (Lantz 1970:31). This decline is clearly evidenced when period catalogs are examined. For example in the mid-nineteenth century there were two full pages of different types of iron kettles (Russel and Erwin 1980 [1865]:392-393), but by the end of the century, they had been reduced to but one entry with seven different sizes (Israel 1968:130). In spite of this gradual decline in popularity, these kettle fragments offer no real assistance in dating since it is clear that kettles, in rural South Carolina, were used well into the first several decades of the twentieth century.

Architecture Group Artifacts

A total of 504 architectural fragments was recovered, representing about 53.9% of the total artifact assemblage.

The single largest category is that of nails, with the 501 specimens accounting for 00.4% of the collection. Of these 371, or 74.1%, can be discounted

since they could not be either measured or identified by type.

Eleven nails were identified as hand wrought, meaning they were individually forged by blacksmiths, either in America or England.[2] The wrought nail shank can be distinguished from machine cut nails (introduced about 1780) by their taper on all four sides, instead of only two (see Howard 1989:54; Nelson 1968). These nails, while largely replaced by machine cut nails at the beginning of the nineteenth century, continued in specialized use far longer. Only one head type was present — a clasp head (sometimes called a "T-head"). This style was produced like the rose head, but was struck two additional times on either side of the head, to form the characteristic T-shape. These nails were usually used in trim work where the holding power of the larger head was not needed and the head would distract from the appearance (Lounsbury 1994:412).

Far more common were cut nails, with 119 recovered from the excavations. These were produced by a machine that cut each shaft from a sheet of iron, tapering the nail along its length on only two, instead of all four, sides. Although this machinery was invented in the 1780s, nails produced by machine were slow to reach the South, not becoming widely available until the first quarter of the nineteenth century. Lounsbury (1994:107) suggests that the most widely available variety from the 1790s through the early 1820s were those whose heads were still hand forged (that is, a machine cut nail with a hand forged head). After about 1815 machines capable of both cutting and heading the nails were introduced and hand forged heads gradually declined in significance. Of the machine cut collection, all have cut heads, suggesting their use post-dates 1815.

Because different size nails served different self-limited functions, it is possible to use the relative frequencies of nail sizes[3] to indicate building construction details. Unfortunately with only 22 identifiable and measurable specimens this effort is of little use. Nails range from 4d to 16d, with one 40d identified. There is a peak in the 10 to 16d range where 14 of the 22 specimens are found. This size range would be typical of framing, suggesting that the structure was no longer using craft traditions techniques of pegging.

The only other architectural items include two fragments of window glass and a single hand wrought iron hasp.

Until the modern period window glass was either crown or cylinder, with crown glass dominating the eighteenth and early nineteenth century market. Regardless, it is usually difficult to distinguish the two unless certain, usually large, parts of the glass are present (Jones and Sullivan 1985:171). At 38CH1466 all of the fragments are small, reflecting considerable fragmentation of the panes, probably during plowing. The two fragments are both colorless glass (suggestive of nineteenth century use).

Tobacco Group Artifacts

The excavations in 38CH1466 produced 46 tobacco artifacts (representing 4.92% of the total assemblage), including 24 white clay pipe stem fragments, 10 white clay pipe bowl fragments, and 12 stoneware stub stem pipe fragments.

Of the 10 white clay bowls, seven were plain and three had vertical ribs.

The most common diameter pipestem is 5/64-inch, accounting for 58.3% of the collection (N=14). The remainder had a 6/64-inch bore diameter. Most

[2] Lounsbury (1994:239) notes that while nails were certainly manufactured locally in the South, "a sizable proportion of the nails used in buildings through the late 18th century were imported from England."

[3] Nails were not only sold by shape, but also by size, the lengths being designated by *d* (pence). This nomenclature developed from the medieval English practice of describing the size according to the price per thousand (Lounsbury 1994:239). Nelson (1968:2) provides the same interpretation, although the price was per hundred. Common sizes include 2d - 6d, 8d, 10d, 12d, 20d, 30d, and 40d. It was not, however, until the late nineteenth century that penny weights were standardized.

have no decoration although two feet were present.

The collection also includes 12 salt glazed stoneware stub stem pipe fragments, including six stems and six bodies. Baldwin (1993:178) comments that pipes were an "important sideline" for some South Carolina stoneware potters, a view earlier presented by Greer, who noted,

> Pipes made by hand pressing in molds are another form of commonly produced molded wares. They were frequently manufactured by small folk potteries in the southern United States (Greer 1981:150).

Clothing Group Artifacts

This category includes 23 buttons, accounting for 2.46% of the total assemblage from 38CH1466. The buttons, classified by South's (1964) types, are listed in Table 12. Only the Type 7 buttons are eighteenth century, although they extend into the early nineteenth century. The remainder of the recovered buttons are all nineteenth century specimens, with the Type 23 porcelain buttons being most common in the mid- to late nineteenth century.

Personal Group Artifacts

Only one artifact is included in the personal group — a fragment of a pocket knife's brass lining. By the late nineteenth century inexpensive pocket knifes were almost entirely iron lined, while the better quality knives were brass lined.

Activities Group Artifacts

This final artifact group includes a total of 12 specimens (or 1.28%of the total assemblage). The category is broken down into a variety of classes — construction tools, farm tools, toys, fishing gear, storage items, stable and barn items, miscellaneous hardware, and a rather general class called simply, "other" (South 1977:96). The collection includes three triangular file fragments in the tool category; five strap fragments in the storage category; and one chain link, one bolt head, and one brass nail fragment listed under miscellaneous hardware.

Triangular files, also known as tapers or three-squares, are typically used for sharpening saws and other fine work. They seem to be frequently found on slave settlements and they may provide indirect evidence of the amount of woodworking (sawing) which was taking place by slave carpenters.

The strap metal is typical of barrels and boxes and tends to be more common on nineteenth century sites. The hardware items are all bits and pieces that might be found in any agricultural context, except for the brass nails. These were most frequently used on boats and tend to be found in many low country slave contexts — probably reflecting salvage and reuse by the slaves. It's interesting that these nails were of such value to warrant the attention of Charles Manigault, who warned his son to, "keep an eye on the waste, and theft by negroes of those copper nails [which] cost more than their weight in Copper Money" (Dusinberre 1996:141). We have previously suggested that these nails may represent elements of African American ritual and symbolism that have not been previously recognized (Trinkley and Hacker 1999:177).

Table 12.
Buttons Recovered from 38CH1466

Type	Description	#	Other (measurements in mm)
7	spun brass/white metal with eye cast in place	1	12.8
18	stamped brass	2	20.4, 24.1
19	bone, 5-hole	2	10.6, 15.4
22	shell	1	21.9
23	porcelain, convex, with rays at edge	1	10.2
23	porcelain, convex	15	9.0, 9.3, 9.4, 9.5,9.9, 10.3, 10.4, 2-10.7, 2-11.3, 11.5, 13.1, 1-frag
23	porcelain, convex, blue	1	11.1

38CH1466 Summary

It maybe useful to briefly draw together the information concerning the historic remains at 38CH1466 and review what we have learned about this area. Perhaps first we should consider what the collection tells us about the occupation span.

The mean ceramic date for the area, ca. 1850, is shown in Table 13. This table also provides information concerning manufacturing date range for the various ceramics. The *terminus post quem* (or TPQ) date is that date ***after which*** the zone was deposited. It is based on the latest dated artifact present in the assemblage. In this case the TPQ is 1836, the beginning date for sponge decorated whiteware. In other words, there had to be occupation in this area at least as late as 1836 for this ceramic to have been present, broken, and deposited. South's bracket dates provide additional help. South would propose a beginning date range for the occupation around 1826, with a terminal date perhaps 1865.

In actuality, we suspect that the terminal date was sometime in the last quarter of the nineteenth century. It is unlikely that occupation extended into the twentieth century since there is no decalcomania whiteware. This is also supported by the absence of South Carolina Dispensary bottles, which would be found post-dating 1891. Consequently, occupation in the area might have been abandoned by 1890.

This archaeological assemblage closely resembles what would be expected from the settlement shown in this area on the 1875 Coast Survey map (Figure 14). The combination of archaeological and historical data, therefore, suggest a short-term postbellum occupation.

It is also helpful to examine the settlement from the perspective of what archaeologists call the artifact pattern — a way of arranging the collection of artifacts in various categories. These patterns also help compare sites and have resulted in the definition of several broad or defining patterns. There are patterns representative of eighteenth century slaves, nineteenth century slaves, yeoman farmers, and of course plantation owners. The pattern resulting from an excavation depends, quite naturally, on the part of the plantation being examined. Archaeologists have realized this for years (see Joseph 1989), and it is most important when you begin to compare and contrast patterns.

The pattern of the assemblage at 38CH1466 is presented in Table 14, along with a comparison to other patterns. The pattern fails to resemble either that of the nineteenth century owner (Revised Artifact Pattern) or nineteenth century slave (Georgia Slave Artifact Pattern). Nor does it resemble what would be expected of the eighteenth century slave (Carolina Slave

Table 13.
Mean Ceramic Date for 38CH1466

Ceramic	Date Range	Mean Date (xi)	(fi)	fi x xi
Canton porcelain	1800-1830	1815	1	1815
Lead glazed slipware	1670-1795	1733	1	1733
North Devon	1650-1775	1713	1	1713
CW, undecorated	1762-1820	1791	2	3582
PW, blue hp	1780-1820	1800	5	9000
blue tp	1795-1840	1818	8	14544
edged	1780-1830	1805	2	3610
annular/cable	1790-1820	1805	6	10830
undecorated	1780-1830	1805	12	21660
WW, blue edged	1826-1880	1853	16	29648
poly hand paint	1826-1870	1848	19	35112
blue tp	1831-1865	1848	9	16632
non-blue tp	1826-1875	1851	4	7404
annular	1831-1900	1866	40	74640
sponged	1836-1870	1853	14	25942
undecorated	1813-1900	1860	105	195300

480,960 ÷ 260 = 1849.8

hp = hand painted; tp = transfer printed

Table 14.
Previously Published Artifact Patterns Compared to 38CH1466
(numbers in percents)

	Revised Carolina Artifact Pattern[a]	Carolina Slave Artifact Pattern[a]	Georgia Slave Artifact Pattern[b]	Pied Tenant/Yeoman Artifact Pattern[c]	Freedmen[d]	38CH1466
Kitchen	51.8-65.0	70.9-84.2	20.0-25.8	40.0-61.2	36.8	37.3
Architecture	25.2-31.4	11.8-24.8	67.9-73.2	35.8-56.3	57.0	53.9
Furniture	0.2-0.6	0.1	0.0-0.1	0.4	0.7	-
Arms	0.1-0.3	0.1-0.3	0.0-0.2	-	0.3	-
Tobacco	1.9-13.9	2.4-5.4	0.3-9.7	-	0.7	4.9
Clothing	0.6-5.4	0.3-0.8	0.3-1.7	1.8	1.2	2.5
Personal	0.2-0.5	0.1	0.1-0.2	0.4	0.2	0.1
Activities	0.9-1.7	0.2-0.9	0.2-0.4	1.8	3.1	1.3

[a]Garrow 1982
[b]Singleton 1980
[c]Drucker et al. 1984:5-47
[d]Trinkley 1986:Table 21

Artifact Pattern). The artifact pattern is, however, very similar to both the Piedmont Tenant/Yeoman Artifact Pattern and the artifact pattern identified from a large freedmen's village on Hilton Head Island. While there are differences — inflated tobacco and clothing categories and a smaller than anticipated activities category — the assemblage from 38CH1466 closely resembles these patterns in the key categories of kitchen and architecture.

This finding adds additional credibility to our interpretation of these remains reflecting the dwelling shown on the 1875 map of the project area. And it also further strengthens our reliance in the freedmen pattern as a valid indicator of low country freed African American. It seems to indicate that the freed slave focused on expanding his or her stock of kitchen goods, perhaps reflecting a change in both foodways and also work habits. The increase in Activities Group artifacts reflects the independence of the freedman and his responsibility for the operation and maintenance of the farm. It seems likely that as more documented postbellum freedmen sites are investigated it will be easier to identify the pattern and, more importantly, the pattern will take on greater meaning.

We have previously discussed the prevalence of flatware (plates and saucers) at the site. This reliance on flatware over hollow ware may be an indication of changing foodways. There may have been fewer one-pot meals, with greater variety in the diet. This may reflect more free time or at least a greater ability to schedule work. Likewise, the increased numbers of high status ceramic motifs may indicate a growing consumerism on the part of the freedman — a desire to stock his table with "nice" ceramics, even if bought by the piece.

38CH1477

The excavations at this site consisted of 12 10-foot units. Although we found no evidence of postholes or wall trenches, likely because of plowing, we believe that this represents the location of slave dwellings based on artifact density. The area produced 6,843 artifacts, yielding a density of 5.7 specimens per square foot. This density, however, is deceptive since there is so much variation in the excavation block. Densities ranged from 3.1 specimens per square foot on the west edge (850R480) to 10.7 specimens per square foot in the site core (840R490) to 5.3 artifacts per square foot at the south edge of the site (820R510).

Kitchen Group Artifacts

A total of 5086 Kitchen Group artifacts was recovered, most representing ceramics (3805 or 74.8%)

Table 15.
Major Types of Datable Pottery at 38CH1477

Porcelain		34	0.9%
Stoneware		412	10.8%
Brown	284		
Blue/Gray	61		
Other	67		
Earthenware		3359	88.3%
Slipware	41		
Refined	44		
Coarse	168		
Delft	2		
Creamware	816		
Pearlware	1482		
Whiteware	657		
Yellowware	29		
Burnt	119		
Other	1		

or glass (803 or 15.8%). Recovered were a narrow range of early through mid-eighteenth century ceramics, including primarily lead glazed slipwares, with a very few examples of delft and Westerwald. Late eighteenth century creamwares were more common, early nineteenth century pearlwares are very common, and mid-nineteenth century whitewares far less so. As discussed below, the latest ceramics recovered, which provide the TPQ date for the excavations, are the whitewares. There is little indication that the area saw occupation past the Civil War.

The major types of ceramics are shown in Table 15, revealing that tablewares, such as the porcelains, delft, creamwares, pearlwares, and whitewares, account for 84.1% of the ceramics. Utilitarian wares (used primarily in food preparation and storage), such as the stonewares (excepting the Westerwald) and coarse earthewares, account for about 15.9% of the collection. Utilitarian wares are slightly more common at this site than they were at the Roupelmond slave settlement (Trinkley and Hacker 1999:94, 106), but considerably less common than they were at the nearby main settlement for John Whitesides (Trinkley and Hacker 1996:53).

The most common eighteenth century ware is lead glazed slipware, accounting for 43 examples. Slipware was a traditional eighteenth century form of pottery decoration in which a white or cream-colored slip is trailed over an buff or red earthenware body. A clear lead glazed slip is then applied before firing. Examples of pink and buff fired-clay bodies were encountered. Cushion observes that most slipware potters, "were primarily concerned with producing the everyday necessities for the more humble table" (Cushion 1976:79).

During the eighteenth century utilitarian slipwares made in Staffordshire and other parts of England were exported to the colonies in huge numbers. These were often offered for sale in newspapers and while no examples are immediately available from Charleston, Miller cites several examples from elsewhere:

> in 1757 a New York merchant offered for sale ". . . Crates Common yellow Wares both cups and Dishes . . . ." Another New York vendor, in 1768, advertised "yellow Dishes by the Crates . . ." (Miller 1974:2).[4]

It seems likely, therefore, that the slipwares were a common, and very inexpensive, commodity imported into the colonies.

The next most common eighteenth century pottery was Chinese porcelain. Of the 18 fragments identified, all are underglazed blue. Until the early nineteenth century Chinese porcelain was an expensive, very fine, thin ware usually associated with the tea ritual (and therefore most commonly found in tea forms). Its presence is considered an indicator of high status (Lewis 1985; Stone 1970:88). During the nineteenth century the quantity exported into the United States increased and the quality declined dramatically, making it a poor indicator of status or wealth during this later period. It is nevertheless likely that these wares had originally been

[4] Pringle, on several occasions, does mention crates or hogsheads of "earthenwares," although he doesn't specify the type (Edgar 1972:1:147, 403).

purchased for use by the owners of the plantation and subsequently found their way into slave houses — either as styles changed and the owner acquired new sets, or as the individual pieces were damaged, or perhaps even as theft.

The forms recovered include two 10-inch plates, one 9-inch plate, one 7-inch plate, a 6-inch saucer, and a 4-inch bowl lid. These forms are ones which would be expected on the planter's table and support the idea that the porcelain found its way into the settlement from the main house.

Tin-glazed delft accounts for only two specimens in the collection. Both are typically English and are plain white delftware. Cushion indicates that, like slipware, the bulk of the delft until sometime in the eighteenth century was utilitarian, intended for the table. By the eighteenth century there were merely decorative forms, although none were encountered at 38CH1477. The one identifiable delftware vessel was a straight-sided jar about 3½-inches in diameter.

Westerwald is a gray salt glazed stoneware with incised, stamped, sprigged, and cobalt painted decorations. Although mugs and jugs are most common, there are examples of chamber pots (Noël Hume 1978:280-285). The forms represented by the two examples from this work cannot be identified.

As previously discussed, early cream bodied wares with dipped glazes would be transformed into the creamware so well known at sites spanning the eighteenth and nineteenth centuries. Developed in the 1750s by Josiah Wedgewood, this cream colored earthenware was considered a revolution in ceramic production. It provided a fine glazed ware at a relatively inexpensive cost, and came in sets with a wide variety of vessel forms and styles. At this site creamwares account for 816 specimens, second only to the pearlwares.

The majority of these are undecorated (94.8%, N=774), although 26 annular creamware sherds, nine cable decorated creamwares, and six hand painted creamware fragment were also identified.

The creamwares represent three cups, 15 bowls, one saucer, 34 plates, seven chamber pots, one straight sided jar, two bowl lids, and one child's mug. Most of these vessels are undecorated creamware. The polychrome hand painted ceramic represents only one 3½-inch cup and one 8-inch plate, the brown transfer print is represented by the child's mug, and cable and annular wares include only two bowls. This assemblage, dominated by plate forms (which are more than twice as common as hollow ware forms), is suggestive of materials passing from the planter to his slaves.

As potters continued to experiment with creamware, in an effort to imitate the Chinese porcelains, pearlware was eventually produced. By 1779

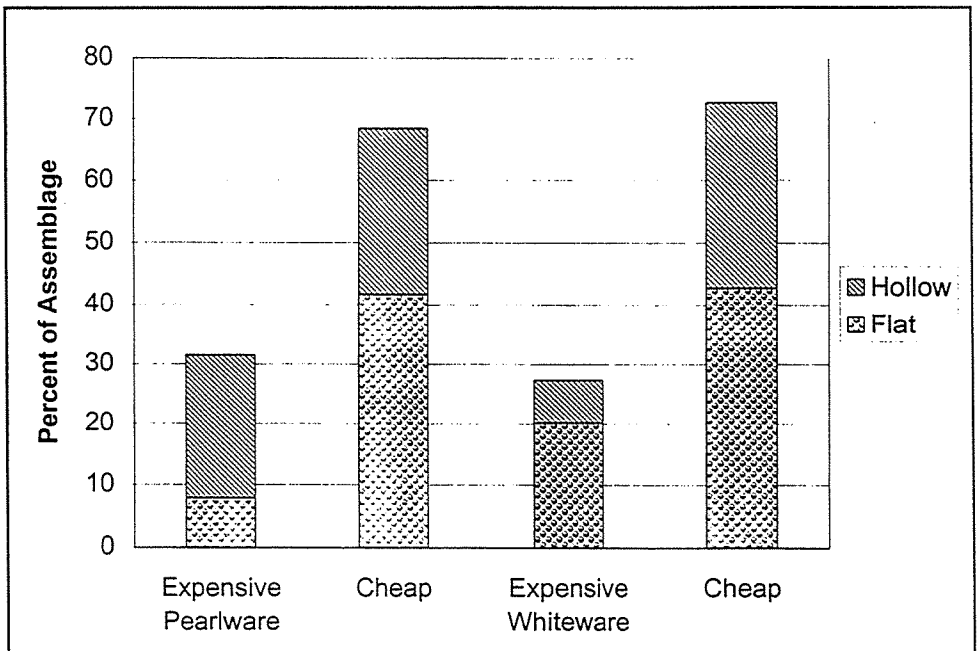

Figure 40. Flatware and hollow ware by pearlware and whiteware.

Wedgwood had produced pearlware, what he called an "improvement" on the creamware (Walton 1976:77; see also Noël Hume 1978:129-132). By 1790 the ware was further "improved" by Spode who added a small trace of cobalt to the formula to serve as a "blue whitener" (Feild 1987:54). As previously discussed, pearlwares today are recognized by the blue puddling of the glaze and over-all bluish cast.

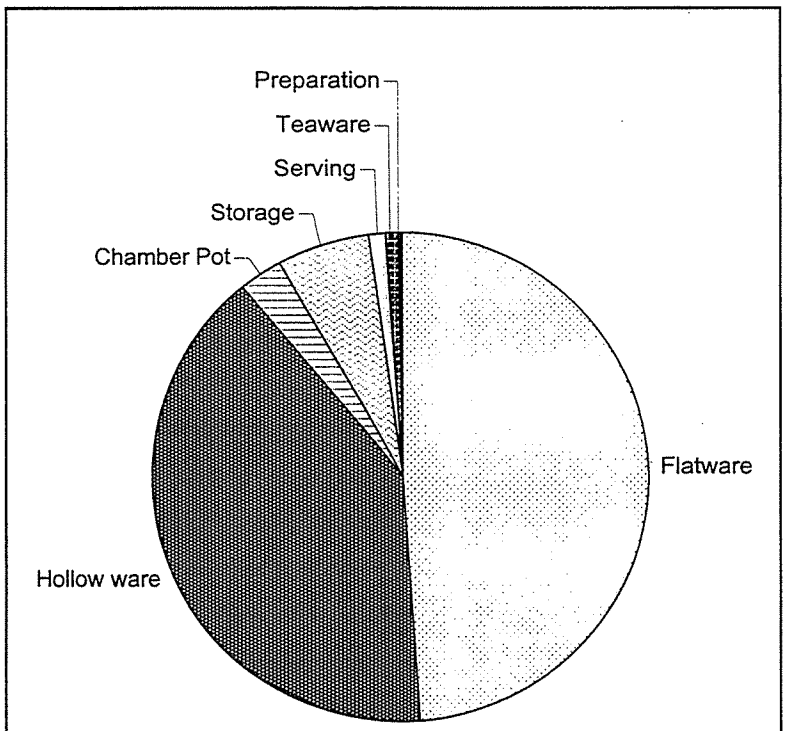

Figure 41. Vessel function (MNV).

We recovered 1482 fragments of pearlware, half of which were undecorated. The next most common motif was annular ware, accounting for 246 specimens, or 16.6% of the pearlware assemblage. These are followed by edged wares (N=174 or 11.7%) and blue transfer printed ceramics (N=156 or 10.5%). The remainder of the assemblage consists of polychrome and blue hand painted wares, and mocha wares.

In general these decorations become more expensive (and hence we often assume they are used by individuals of greater wealth) as the amount of hand work increases. Consequently, plain (after its initial introduction), annular/cable, and edged are the least expensive of the wares — and they (because of the dominance of plain wares) account for 78.3% of the collection. This suggests that these pearlwares were purchased specifically for slave use.

In the pearlware collection there is a greater balance between flatware and hollow ware, with plates and saucers represented by 63 examples and bowls and cups including 67 specimens. Chamber pots are also reduced in number, with only two included in the collection. There is one straight-sided jar, two bowl lids, two teapot lids, and one platter (which might be included with flatware).

It is also thought that these vessel forms may often provide a clue to wealth and status. Plates and more complex pieces tending to be associated with more wealthy individuals and bowls tending to be found in greater frequencies on slave sites. At first glance the MNV analysis sends a mixed message. Although there are more bowl forms, plates were still very common. Yet, when we look at these plates we find that 53 (84.1%) are plain or edged — inexpensive decorations. In contrast, the hollow wares were about evenly divided between expensive and inexpensive motifs.

In other words, flatwares were heavily weighted toward inexpensive varieties, and hollow wares were evenly divided between expensive and inexpensive. This suggests that the planter was purchasing ceramics — both plates and bowls — specifically for use by his slaves. To these purchased wares were added mixed pieces, largely high status and largely hollow ware, coming from the planter's table.

The whitewares represent yet another development or stage in the effort to produce a truly white ceramic. Whiteware is a fine bodied earthenware developed by C.J. Mason in 1813. It was patented under the name of Mason's Patent Ironstone China," yet distinguishing ironstone from whiteware presents a

challenge. South (1974:247-248), for example, used an "ironstone-whiteware" category, while Price (1979:11) uses only a "whiteware" category which includes both "types." Both researchers point out that differentiating between whiteware and ironstone using vessel hardness (or degree of vitrification) is an uncertain or even invalid approach. For the purposes of this study, the term whiteware encompasses both categories of ceramics.

There are 657 fragments of whiteware recovered from the excavations at 38CH1477. Of these 50.5% (N=332) are undecorated. The next most common motif is annular (N=120, 18.3%). Also present are 43 specimens of edged ware, and one example of a sponged decoration. More expensive motifs include 23 specimens of polychrome hand painted, 88 examples of blue transfer printed, and 39 specimens of non-blue transfer printed.

Like the pearlwares, this collection is dominated by less expensive motifs (plain and annular) which may have been purchased specifically for slave use. In fact, the percentage of low status or expensive wares increases from 68.5% in the pearlware to 72.6% in the whiteware, suggesting that more resources were being put into inexpensive wares for slave use.

When vessel forms are examined, 53 of the 84 vessels (63.1%) are flatwares, with the hollow wares representing the remaining 44.1% of the assemblage. This suggests a gradual trend away from bowl and cup forms and toward flatware — perhaps indicating a gradual evolution of foodways in the African American community.

The relationship of the pearlwares and whitewares is shown in Figure 40. This helps reveal that while the proportion of expensive and inexpensive wares remains pretty constant between the pearlwares and whitewares, the make-up of the expensive wares changes. In the pearlware assemblage it is dominated by hollow wares. In the whiteware assemblage it is dominated by flatwares. Overall, flatwares increase at the expense of hollow wares.

Looking at the collection from the site as a whole (ignoring temporal indicators or change) and including all of the identifiable vessels, we see a collection dominated by flatware, although hollow ware vessels run a close second (Figure 41). About 8% of the collection is represented by chamber pots, storage containers, serving plates, teaware, or food preparation vessels.

Although this portion of the site produced only 48 fragments of early to mid-eighteenth century ceramics, there were also 453 fragments of Colono ware pottery. If these had been added, the 501 specimens would have formed a much larger collection of early pottery and they would represent about 10% of the total ceramic assemblage — representing a fairly significant contribution by these local, low-fired earthenwares. They are further described in a following section of this report.

An examination of vessel matches across the excavated units reveals much plow damage, with some vessels spread across as many as five units. In fact, two vessels of glossy brown alkaline glazed stoneware were found spread across 10 of the 12 units., while an Elers-like teapot was found broken and dispersed between eight different units. Besides confirming the obvious, the examination of vessel matches also revealed that units 840-850R490 were the core of the distribution, with 19 of the 26 (73.1%) matched vessels including at least one of these two units. This further supports our previous observations based on site density.

Container glass accounts for 803 fragments or 15.8% of the Kitchen Group total. The most prevalent glass type is that commonly called "black," which is actually dark green in transmitted light, comprising 73.2% of the glass found in this portion of the slave settlement (N=588). These represent "wine" bottles commonly used in Europe and North America. Olive Jones (1986) has conducted extensive research on this bottle style, discovering that the cylindrical "wine" bottle represents four distinct styles — two for wine and two for beer — linked to their size and intended contents. These four styles, however, were not just used for wines and beers. Other products, such as cider, distilled liquors, vinegar, and mineral waters might also have been sold in these bottle styles. In addition, they would have been used by private individuals as containers for decanting, storing, and serving beverages either bought

in barrels or made at home.

In these excavations at least nine bottles with blown bases are represented and two are blown in mold bases.

Free-blown bottles, especially the so-called "wine bottles," were common prior to 1730. After this date a demand for greater standardization began the transition to bottled blown inside contact molds (Jones and Sullivan 1985:21-23). All of the blown bases in this collection appear to also evidence mold seems, suggesting that they postdate 1730.

The blown (and mold-blown) bases range from 2.7 to 10.4 cm in diameter. Those under about 9.0 cm are below the range discussed by Jones (1986). There are four examples of bottles with basal diameters of 9.0 cm, probably representing wine bottles from the period 1790-1850 and one with a diameter of 10.4 cm, described by Jones as an undersized beer style, dating between 1765 and 1805.

However these bottles began their lives, it seems likely that containers were valuable enough to be reused for relatively long periods of time. It doesn't seem to be until the mid-nineteenth century that bottle glass became inexpensive enough to be considered a consumable or disposable commodity.

Four bottles have diameters of 7.6 cm and may represent small beer or ale bottles. One has a diameter of only 2.7 cm and was likely used for medicine. The final bottle is 3.8 cm square and is classified by Fike (1987:10) as a "fluted oblong (variant 2)."

While no base was recovered, one case bottle body fragment was recovered. This is an example of a square bottle — a type that was often packed in cases or "cellars," according to Noël Hume (1978:62). Frequently ascribed to the Dutch, these bottles were likely produced by any number of different countries and in this case, it was likely English. The style was most popular in the seventeenth and early eighteenth centuries.

The next most common container glass was aqua — represented by a paultry 83 fragments. These fragments represent only four bottles, including two blown bases and two molded bases, with diameters ranging from 3.8 to 7.7 cm. Two medicine and two soda water bottles are likely represented. Dark aqua accounts for an additional 35 specimens, although only one blown base is identifiable. This specimen was probably a medicine bottle.

Clear glass, accounting for 34 fragments, has a MNV of only three bottles. One is a very small (1.8 cm) blown base that was likely used for medicine, another blown base has a diameter of 5.0 cm and may also have contained medicine. The specimen is a small fragment of a blown in mold base.

Other glass colors present include brown (8 specimens), green (21 fragments), blue (21 specimens), purple (one fragment), and melted (3 fragments).

Also present are eight fragments of manganese glass, representing about 1% of the entire glass collection. Although manganese glass is most commonly associated with glassware from the last quarter of the nineteenth century through the beginning of World War I, it does occur in specimens dating to as early as the eighteenth century (Jones and Sullivan 1985:13). The fragments in this collection cannot be conclusively associated with any specific time period. Given the plowing and other disturbances, they may represent late intrusions into the site, perhaps from the vicinity of 38CH1466.

A single fragment of amber glass was recovered. The specimen, although small, is characteristic of the S.T. Drake bitter bottles in the shape of a log cabin. This bottle would post-date 1862 (Fike 1987:33).

The bulk of the bottles recovered from this site were primarily used for either alcohol or medicine. It seems that the medicinal bottles, because of their size, would have seen relatively little re-use. On the other hand, the beer and wine bottles might have been used for any number of purposes once the alcohol was consumed, either by the slaves, or more likely, the planter.

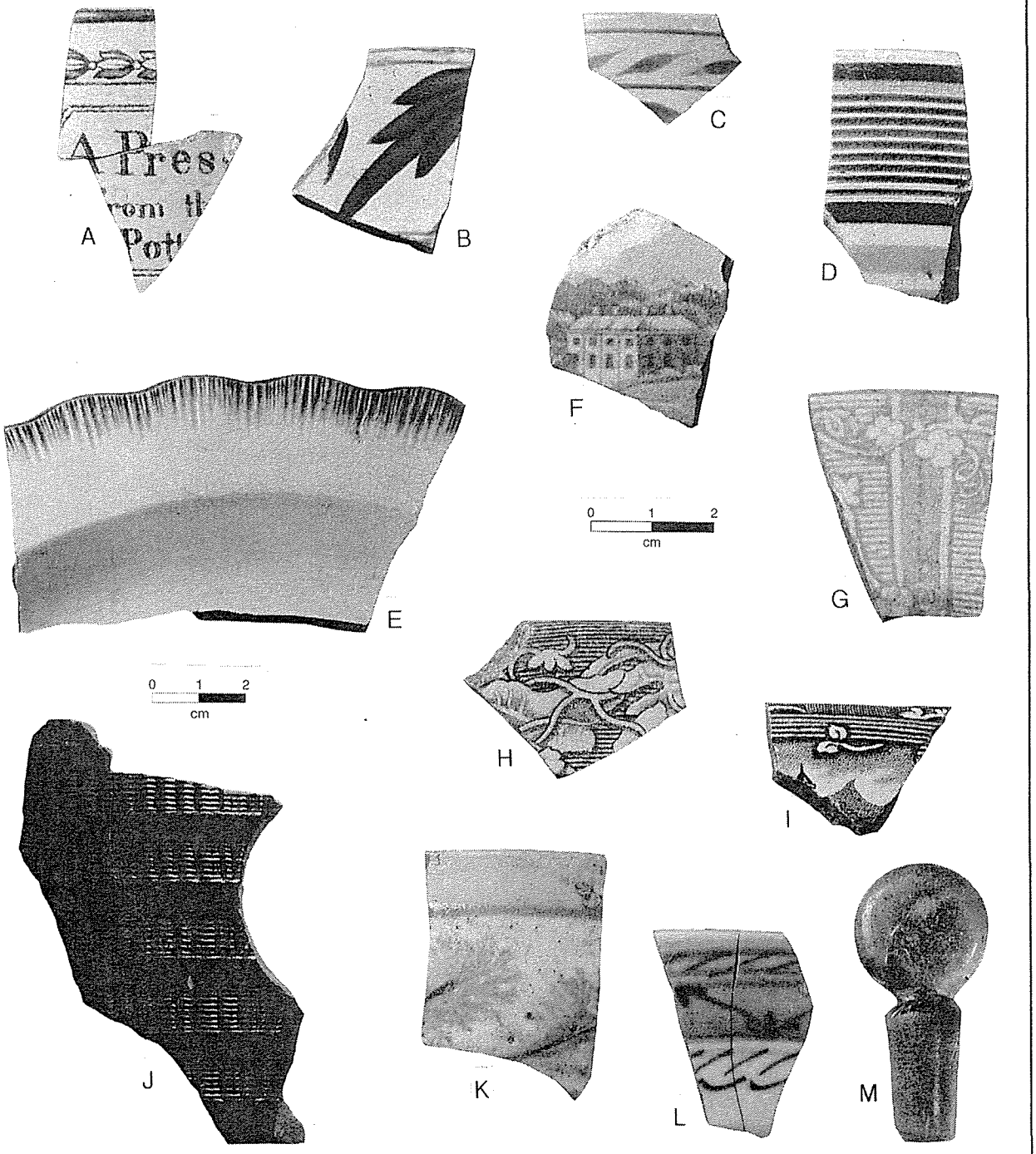

Figure 42. Kitchen Group artifacts from 38CH1477. A, brown transfer printed creamware; B, blue hand painted pearlware; C, polychrome hand painted pearlware; D, annular pearlware; E, blue edged pearlware; F, blue transfer printed pearlware; G, blue transfer printed whiteware; H, brown transfer printed whiteware; I, black transfer printed pearlware; J, refined red earthenware, clear lead glaze; K, annular/mocha yellowware; L, Chinese porcelain; M, clear glass stopped.

Thirteen tableware items were recovered from the excavations, representing about 0.3% of the Kitchen Group artifacts. Included are 11 fragments of clear glass and two utensil fragments.

The clear glass includes an interesting array: one decanter or bottle stopper, seven fragments of panel tumbler body, one blown tumbler base 2¾-inches in diameter, one fragment of a glass bowl with molded ribs, and one fragment with molded scallops and dots from an unidentifiable vessel. Taken together these represent one stopper, two tumblers, one bowl, and one unidentified vessel.

Glass bowl forms had a number of functions, although many were associated with wine — either as wine glass coolers or wine bottle stands (see, for example, McNally 1982:58-59). Also common were shallow vessels more closely resembling finger bowls (McNally 1982:120). Regardless, its likely that this specimen dates to the first half of the nineteenth century.

Although small press-molded items were being made in the seventeenth and eighteenth centuries, the techniques used did not allow the creation of entire hollow ware vessels. It wasn't until the first quarter of the nineteenth century that tableware began to made of pressed glass, with the items manufactured including tumblers, salts, cups, and plates (McNally 1982:34). These early examples were almost always of clear glass, such as the specimens recovered from 38CH1477.

The utensils include two handle fragments, one of iron and another of white metal. While these may represent broken and discarded utensils, they may also represent intentional alterations. We have previously commented on the prevalence of broken utensils at low county sites, suggesting that the utensils were modified for use in making the palmetto and rush baskets so common to the low country (see Trinkley 1986:236-237).

All of the 12 Kitchenware items recovered from this work are kettle fragments. Iron kettles were designed to either hang over the fire, if the weight could be supported, or to actually sit in the coals of the hearth (Feild 1984:93). By the eighteenth century the kettle was firmly established in kitchens and, being costly, would be "passed down from generation to generation and were highly valued" (Lantz 1970:15). By the late nineteenth century kettles, at least in urban areas, were on their way out of fashion, being replaced by the iron stove and more manageable pots (Lantz 1970:31). This decline is clearly evidenced when period catalogs are examined. For example in the mid-nineteenth century there were two full pages of different types of iron kettles (Russel and Erwin 1980 [1865]:392-393), but by the end of the century, they had been reduced to but one entry with seven different sizes (Israel 1968:130). In spite of this gradual decline in popularity, the kettle fragments from this work offer no real assistance in dating since it is clear that kettles, in rural South Carolina, were used well into the first several decades of the twentieth century.

Architecture Group Artifacts

A total of 1207 architectural fragments was recovered, representing about 17.6% of the total artifact assemblage.

The single largest category is that of nails, with the 1178 specimens accounting for 97.6% of the collection. Of these 1168, or 99.1%, can be discounted since they could not be either measured or identified by type. Three nails were identified as hand wrought, meaning they were individually forged by blacksmiths, either in America or England.[5] The wrought nail shank can be distinguished from machine cut nails (introduced about 1780) by their taper on all four sides, instead of only two (see Howard 1989:54; Nelson 1968). These nails, while largely replaced by machine cut nails at the beginning of the nineteenth century, continued in specialized use far longer.

Seven cut nails were also found in the excavations. These were produced by a machine that cut each shaft from a sheet of iron, tapering the nail along its length on only two, instead of all four, sides.

[5] Lounsbury (1994:239) notes that while nails were certainly manufactured locally in the South, "a sizable proportion of the nails used in buildings through the late 18th century were imported from England."

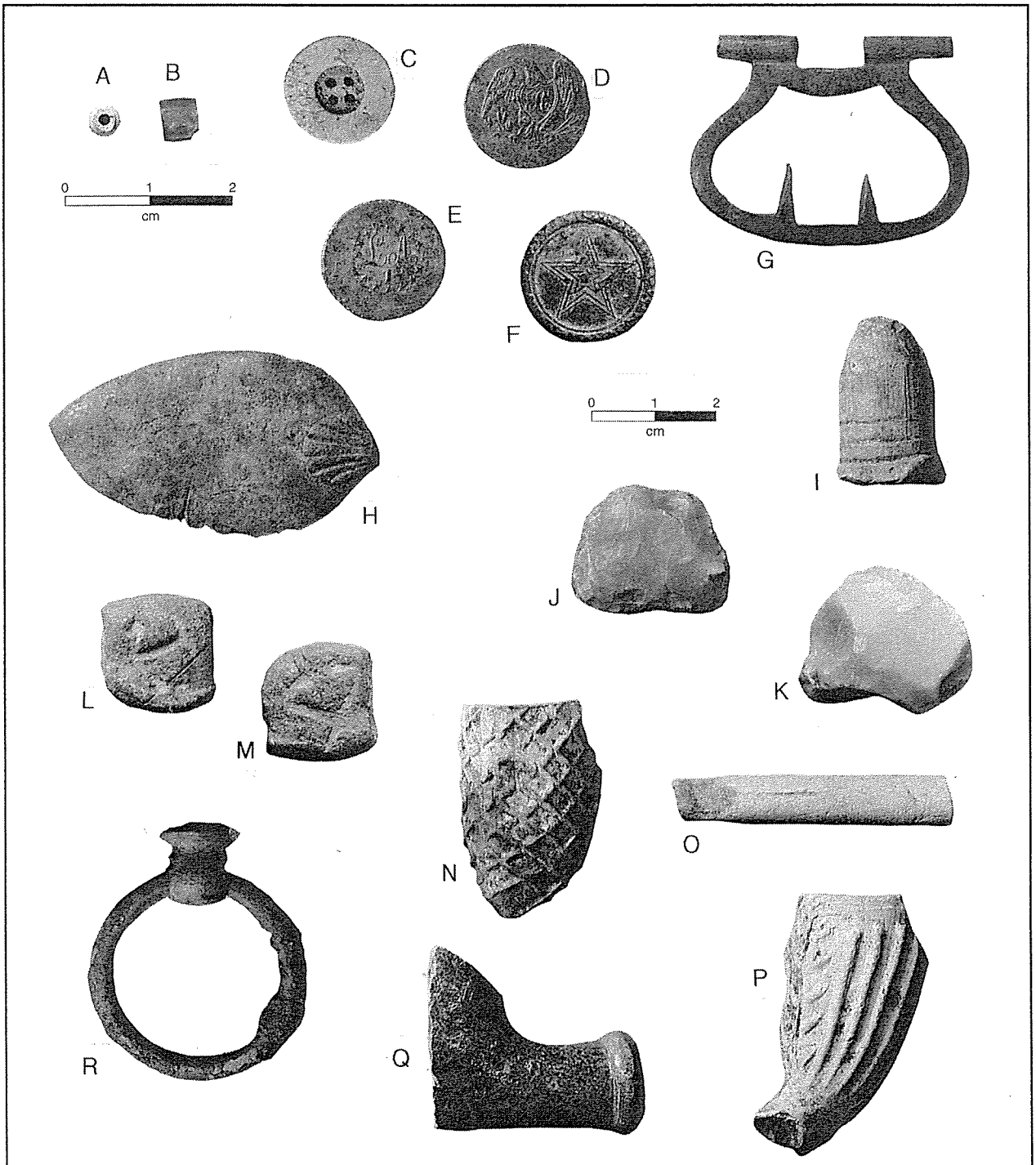

Figure 43. Other artifacts from 38CH1477. A, "seed' bead; B, blue glass tube bead; C, bone button; D, Regiment of Riflemen brass button; E, Light Artillery brass button; F, brass button; G, brass buckle; H, flattened white metal spoon bowl; I, minie ball; J-K, gunflints; L, lead seal; M, reverse of lead seal; N, cross hatched pipe bowl; O, pipestem with chewed end; P, ribbed pipebowl; Q, stub stem stoneware pipe; R, brass drawer pull.

Although this machinery was invented in the 1780s, nails produced by machine were slow to reach the South, not becoming widely available until the first quarter of the nineteenth century. Lounsbury (1994:107) suggests that the most widely available variety from the 1790s through the early 1820s were those whose heads were still hand forged (that is, a machine cut nail with a hand forged head). After about 1815 machines capable of both cutting and heading the nails were introduced and hand forged heads gradually declined in significance. Of the machine cut collection, all have cut heads, suggesting their use post-dated ca. 1820.

Although, as previously discussed, different size nails served different self-limited functions, this collection included only two measurable nails. Consequently no observation concerning the nature of the construction is possible.

The next most common Architecture Group artifact is that of flat glass (all of which appears to represent window glass), accounting for 1.8% of the group (N=22). Until the modern period window glass was either crown or cylinder, with crown glass dominating the eighteenth and early nineteenth century market. Regardless, it is usually difficult to distinguish the two unless certain, usually large, parts of the glass are present (Jones and Sullivan 1985:171). All of the fragments are small, reflecting considerable fragmentation of the panes, probably during plowing. We recovered only colorless glass (suggestive of nineteenth century use).

The final items in the assemblage were five spikes, perhaps representing the use of large framing timbers, a pintle, and a pintle hook fragment. These latter two items are of a size generally used for shutters. While typically used in eighteenth century construction there seem to be many examples of them continuing to be used well into the first quarter of the nineteenth century, especially in more rural areas.

Furniture Group Artifacts

The only furniture artifact recovered from the posited slave structure was a brass drawer pull ring. The 1¼-inch diameter ring is a size that might be used for a drawer on a small table. The style is not temporally sensitive and could date from the eighteenth through late nineteenth century. The item may indicate the use of scavenged furniture, or it may represent a recycled item.

Arms Group Artifacts

Six arms artifacts were recovered, representing about 1% of the total assemblage. These include three gunflints, one folded lead, one lead shot, and one minie ball.

A review of research concerning gunflints is provided by Davis (1986). In general, however, both Emery (1979:37-48) and Noël Hume (1978:220) agree that English flints tend to be gray or black, while French flints tend to be brown or honey-colored, with the majority of flints found on colonial sites coming from France because of their superior quality.

The specimens from 38CH1477 include two gray flints, likely English, and only honey-colored flint, very likely French. Based on their size all were likely used in pistols or small rifles. The folded lead was a flint wrap, used to cushion the gunflint.

The single lead shot has a diameter of about 0.37 inch. This size is within the range of buck shot and is not temporally sensitive. The .58 caliber minie ball is almost certainly from the Civil War. Since there were buck and ball cartridges used during the Civil War, even the buck shot may date from this period (see Thomas 1997).

Tobacco Group Artifacts

The excavations produced 449 tobacco artifacts (representing 6.6% of the total assemblage), including 339 pipe stem fragments and 110 clay pipe bowl fragments.

Of the 110 bowls, 49 were plain, 31 had vertical ribs, and 11 had leaves at the seam. The remaining specimens included a variety of motifs: diagonal ribs, roulette work, leaves, stars, and a checker board pattern. One was the classic "TD" bowl. The "TD" pipes have been discussed by Hopkins (1937),

Humphrey (1969), and Walker (1966). Originating in the eighteenth century, this pipe style continued to be made well into the mid-nineteenth century.

Another uncommon example has a skull and cross bone design. Although this symbol may have been used by a number of groups, it is most common among the Odd Fellows and is occasionally used by the Knights of Pythias (see the 1895 Montgomery Ward Catalog and the 1902 Sears and Roebuck Catalog for examples).

Pipes with such emblems were produced in London after 1750 and became more widespread and often imitated in the nineteenth century (Atkinson and Oswald 1975:40). It's possible, however, that this example is linked to either a member of the Odd Fellows (organized in 1843) or the Knights of Pythias (organized after the Civil War). Both groups are African American fraternal orders which developed as a result of the exclusion of blacks from the mainstream white societies.

The most common diameter pipestem is 5/64-inch, accounting for 72.0% of the collection (N=244), followed by 4/64-inch (N=58, 17.1%). There are 36 with a 6/64-inch bore diameter and one fragment. Most have no decoration and none contain information on their manufacturer.

Clothing Group Artifacts

This category includes 60 buttons and four other clothing items, accounting for 0.9% of the total assemblage. The buttons, classified by South's (1964) types, are listed in Table 16. These styles span the mid eighteenth through mid-nineteenth centuries, with most (32 of the 52 identifiable buttons) dating from the first half of the nineteenth century. Only the Type 7, 8, and 9 buttons are generally thought to be eighteenth century (although see below). Likewise, only two of the Type 27 buttons are probably mid-nineteenth century, likely dating from the Civil War.

Table 16.
Buttons Recovered from 38CH1477

Type	Description	#	Other (measurements in mm)
7	spun brass/white metal with eye cast in place	11	15.4, 15.5, 17.0, 18.5, 2-19.5, 19.6, 20.0, 20.2, 25.0, frag
8	molded white metal with eye boss	4	14.6, 19.8, 22.9, 24.7
9	brass flat disc, hand stamped face, no foot	1	26.0
18	stamped brass	14	14.6, 15.2, 15.3, 18.8, 19.4, 2-19.5, 19.9, 2-20.1, 20.2, 2-21.2, 21.7
19	5-hole bone	1	frag
20	4-hole bone	2	16.3, 18.5
21	iron, with fiber center	1	17.1
22	4-hole shell	1	frag
23	porcelain, convex	10	9.4, 9.6, 10.1, 10.4, 10.8, 10.9, 2-11.0, 14.2, frag
24	fabric covered iron, loose eye	1	20.0
26	machine stamped brass, loose eye	14	22.0
27	brass, domed, machine embossed, back only	3	12.8, 18.1, 20.6
28	machine stamped brass, poorly soldered eye	2	18.6, 20.2
--	brass	6	10.4, 11.1, 11.7, 17.4, 19.5, frag
--	black glass, 2-hole fish-eye	1	15.6
--	white porcelain, bell-shape	1	9.7

Far more temporally sensitive are the back marks or face information found on eight of the buttons. The earliest, a

brass Type 18 button, has the back mark, "•H•T & D•TREBLE•GILT / STAND:COL•." The English firm of Hammond, Turner & Dickinson made buttons ca. 1800 (Luscomb 1967:93).

A Type 18 button is marked with an intertwined LA below which is the number "1." Both are surrounded by 13 stars. Albert (1969:51) identifies this as a Light Artillery, First Regiment button, used on uniforms from 1808 through 1821. Another button is identified by Albert (1969:76) as a style used by the Regiment of Riflemen from 1812 through 1816.

A white metal Type 8 button was identified with a script I and oval below with a central star, prime point facing down. Albert (1969:21) identifies this as an Infantry button, dating from 1812 through 1815. A somewhat similar brass Type 8 button was found which was identified by Albert (1969:32) as an Infantry Officer's button. He suggests dates from ca. 1812 to 1821. A brass Type 28 button is identified by Albert (1969:32) as a militia button, with a date range from ca. 1812 through 1821. The back mark "R•R," represents Richard Robinson & Company, which Tice (1997:15) dates from 1813 through 1828.

A Type 27 brass button has the back mark, "SCOVILLS / ★ EXTRA" which Tice (1997:28) dates from 1827 through 1840.

The final button, a Type 26 brass example, has a back mark of "★WADHAMS & CO ★ SUPERFINE." Luscomb (1967:212) identifies this under "The Wadhams," noting that the firm became Wadhams & Company in 1847 and that by 1850 they had ceased making buttons.

What is perhaps most interesting is the number of early, i.e., pre-Civil War, military buttons in this collection. Five likely date from the War of 1812. While it seems clear that there was a great deal of activity on the Carolina coast (see, for example, Fraser 1989:191-193 and Wallace 1951:369), this is still a relatively poorly documented period in South Carolina history. The quantity of buttons, however, suggests that this plantation may have been a mustering ground for the militia or that troops may have been stationed at the plantation, perhaps at a lookout. Regardless, the lost or discarded buttons made their way into the slave settlement.

The other clothing items include one ladies brass belt clasp, two brass buckle fragments, and one iron buckle.

Personal Group Artifacts

The two artifacts comprising the Personal Group represent just less than 1% of the total assemblage. The items recovered are two glass beads.

The two beads include one opaque wire wound milk glass (Type W1d, using the Kidd and Kidd [1970] typology) measuring 4.0 mm in diameter and 2.4 mm in length (often called a "seed" bead), and one translucent blue glass example (Type 1a) measuring 4.9 mm in diameter and 4.5 mm in length.

Chief among the slaves' personal possessions were beads. They are so common that many have suggested that beads are virtually diagnostic (Stine et al. 1996). Although blue is a frequently cited color, and our own research suggests that these are most common, a wide range of colors and styles have been found in slave contexts.

Activities Group Artifacts

This final artifact group includes a total of 28 specimens (or 0.41%of the total assemblage). The category is broken down into a variety of classes — construction tools, farm tools, toys, fishing gear, storage items, stable and barn items, miscellaneous hardware, and a rather general class called simply, "other" (South 1977:96). The collection includes two doll's plates and a white clay marble in the toy category; a lead fishing weight in the fishing gear category; a brass padlock escutcheon and a lead seal in the storage category; an iron harness ring in the stable category; and a staple, "S" hook, bolt and nut, and brass nail in the hardware category. In the "other" category there are nine fragments of flint, a small iron rivet, a lead puddle, four fragments of brass, and a "chunk" of brass.

The doll's plates are undecorated white porcelain and have a diameter of 2-inches. These were

originally part of a doll's "tea set." They would have been fairly expensive and would have been more at place in a main house assemblage. They may have found their way into the slave settlement through theft or may represent elderly black slaves taking care of white children. Clay marbles were produced from at least the eighteenth century and continued to be made at least to 1928, although their popularity declined as glass became more common and affordable. Baumann (1991:138-147) briefly reviews the various games of chance which used marbles. Although we commonly think of marbles as a child's game, it is important to realize that they were just as often used by adults in gaming. Games such as "ringer" and "spanner: were likely played for cash wagers and formed the nucleus of urban backlot gaming. In rural contexts, their function may have been more benign, but there is little information (Noël Hume [1978:329], for example, barely mentions marbles, saying nothing about their use).

The lead weight may have been a sinker, although it was more likely a net weight. Similar size and shape weights are still used in the low country as weights on cast nets, used both for fish and shrimp.

The brass escutcheon may be evidence of slaves using locks to protect their property, although the nature of the item found suggests that it served a secondary function. Like other brass items in the collection, we are inclined to suggest a ritual function. The lead seal is not similar to others that we have identified. It measures about 17 by 19 mm in size and represents a single piece folded over on itself and pressed together at the open edge, forming a seal. On one face is an anchor motif, while on the opposite is a more stylized design which might be described as ice tongs. While the original function of this seal was probably to identify mercantile items, its use by African Americans is uncertain. The strap fragment indicates barrels or boxes being brought onto the plantation. These are characteristic of the nineteenth century.

The harness ring measures ⅝-inch and is identical to those illustrated in the 1895 Montgomery Ward catalog.

The hardware items are all typical of items that might be found in a farm context. Of special interest is the brass nail, which measures 2-5/16-inches in length. We have previously mentioned that these nails are common on low country slave settlements and have suggested that they may represent more than simply items lost or discarded. We attribute a ritual function to both these nails and the other brass items found in slave contexts.

The other category includes a range of items which might, under other circumstances, simply be dismissed as representing miscellaneous debris. The flint fragments are all non-local specimens, likely materials brought into Charleston as ballast. Colors range from honey to gray to light brown to dark brown. All began as well rounded pebbles, but are generally broken. Similar materials are found at a large number of slave sites. Beyond suggesting that they represent items picked up in Charleston and brought back to the plantation, defining a function is difficult. Since most in this collection have been broken, there may have been effort to convert them into either strike-a-lights or gun flints, although none are clearly indicative of either function. The remnant brass chunks and fragments, like the escutcheon, may represent shiny materials brought into the slave settlement as ritual or magic items.

38CH1477 Summary

As in the case of 38CH1466, it maybe useful to briefly draw together the information concerning the historic remains at the slave settlement and review what we have learned about this area and those who lived there. Perhaps first we should consider what the collection tells us about the occupation span.

The mean ceramic date for the area, ca. 1813, is shown in Table 17. This table also provides information concerning the manufacturing date range for the various ceramics. The *terminus post quem* (or TPQ) date is that date ***after which*** the zone was deposited. It is based on the latest dated artifact present in the assemblage. In this case the TPQ is 1836, the beginning date for sponge decorated whiteware. In other words, there had to be occupation in this area at least as late as 1836 for this ceramic to have been present, broken, and deposited. South's bracket dates provide additional help. South would propose a beginning date

Table 17.
Mean Ceramic Date for 38CH1477

Ceramic	Date Range	Mean Date (xi)	(fi)	fi x xi
Canton porcelain	1800-1830	1815	18	32670
Westerwald	1700-1775	1738	1	1738
Lead glazed slipware	1670-1795	1733	43	74519
Plain Delft	1640-1800	1720	3	3440
CW, cable	1790-1820	1805	9	16245
annular	1780-1815	1798	26	46748
hand painted	1790-1820	1805	6	10830
undecorated	1762-1820	1791	774	1386234
PW, mocha	1795-1890	1843	32	58976
poly hand paint	1795-1815	1805	76	137180
blue hp	1780-1820	1800	59	106200
blue tp	1795-1840	1818	156	283608
edged	1780-1830	1805	174	314070
annular/cable	1790-1820	1805	246	444030
undecorated	1780-1830	1805	741	1337505
WW, blue edged	1826-1880	1853	43	79679
poly hand paint	1826-1870	1848	23	42504
blue tp	1831-1865	1848	88	162624
non-blue tp	1826-1875	1851	39	72189
annular	1831-1900	1866	120	223920
sponged	1836-1870	1853	1	1853
mocha	1831-1900	1866	2	3732
undecorated	1813-1900	1860	332	617520

5,515,227 ÷ 3,042 = 1813.03

tp = transfer printed

range for the occupation around 1795, with a terminal date of about 1835.

The mean ceramic date is exactly what was projected based on the historic documentation. As previously discussed, the historic documents suggest a beginning date for the slave settlement of about 1762, with occupation extending through the Civil War — resulting in a mean historic occupation date of 1813.

In this context the mean ceramic date provides excellent guidance, while the bracket dates both begin too late and end too early. We suspect the beginning date is too late because we don't figure in the presence of Colono wares and, in particular, their importance during the early slave occupation. The terminal bracket is placed too early since by the mid-nineteenth century there was likely a strong reliance on the available whitewares.

It is also helpful to examine the settlement from the perspective of what archaeologists call the artifact pattern — a way of arranging the collection of artifacts in various categories. As previously discussed, these patterns also help compare sites and have resulted in the definition of several broad or defining patterns. There are patterns representative of eighteenth century slaves, nineteenth century slaves, yeoman farmers, and of course plantation owners.

The pattern of the assemblage at 38CH1477 is presented in Table 18, along with a comparison to other patterns. The pattern very closely resembles the Carolina Slave Artifact Pattern, which is generally found at eighteenth century slave settlements. In general the pattern reveals low architecture and high kitchen ranges. The architectural artifacts are not well represented since these early slave settlements were characterized by wall trench and ephemeral buildings which left few nails and almost no window glass. There were, however, a large number of kitchen items, primarily ceramics and Colono ware pottery. By the nineteenth century we generally see a shift to the Georgia Slave Artifact Pattern, in which the proportion of architectural remains increases because of greater attention to the quality of slave housing.

This finding tends to support our belief that the slave settlement had its origins in the early to mid-eighteenth century. What is surprising, however, is that there weren't sufficient changes in the nineteenth century to more fully balance the kitchen and architecture categories, perhaps pushing the artifact

Table 18.
Previously Published Artifact Patterns Compared to 38CH1477
(numbers in percents)

	Revised Carolina Artifact Pattern[a]	Carolina Slave Artifact Pattern[a]	Georgia Slave Artifact Pattern[b]	Pied Tenant/Yeoman Artifact Pattern[c]	Freedmen[d]	38CH1477
Kitchen	51.8-65.0	70.9-84.2	20.0-25.8	40.0-61.2	36.8	74.3
Architecture	25.2-31.4	11.8-24.8	67.9-73.2	35.8-56.3	57.0	17.6
Furniture	0.2-0.6	0.1	0.0-0.1	0.4	0.7	>0.1
Arms	0.1-0.3	0.1-0.3	0.0-0.2	-	0.3	0.1
Tobacco	1.9-13.9	2.4-5.4	0.3-9.7	-	0.7	6.6
Clothing	0.6-5.4	0.3-0.8	0.3-1.7	1.8	1.2	0.9
Personal	0.2-0.5	0.1	0.1-0.2	0.4	0.2	>0.1
Activities	0.9-1.7	0.2-0.9	0.2-0.4	1.8	3.1	0.4

[a]Garrow 1982
[b]Singleton 1980
[c]Drucker et al. 1984:5-47
[d]Trinkley 1986:Table 21

pattern into the range of the freedman or tenant farmer.

That the pattern stays very clearly dominated by kitchen remains suggests that the quality of housing at the Moses Whitesides plantation did not improve and that ephemeral housing continued to be the norm well into the nineteenth century.

The tobacco range is higher than is generally expected for eighteenth century slave settlements, more closely reflecting the increase we expect for nineteenth century sites. The clothing group reflects a similar situation. Although these catagories are often ignored as being too small to either warrant much attention or to be trusted to provide reliable information, perhaps at this site these two catagories are more temporally sensitive and reflect the changes which did occur during the nineteenth century.

Certainly the importance of tobacco can't be ignored. There are period accounts, such as the South Carolinian Henry Muhengerg who noted simply, "slaves love tobacco" (quoted in Morgan 1998:374), and there are even circumstances where slaves were buried with tobacco pipes (Morgan 1998:642). The higher than expected incidence of clothing may be affected by the prevelence of scavenged buttons, or it may simply indicate the increased pressure on slave owners in the nineteenth century to care for their slaves.

We have previously discussed that the pearlware was dominated by hollow wares, while the later whitewares were dominated by flatwares — suggesting that this may reflect a gradual change in foodways among the African Americans on the plantation. It suggests that the incidence of one-pot meals declined over time. As at the freedman's site, this may indicate more free time, or a greater ability to schedule work — or it may indicate a greater effort by the white plantation owner to mold the lives of his slaves.

One of the most powerful tools for analysis of the economic value of archaeological ceramic assemblages is Miller's (1980, 1991) CC Indices. The technique provides a rough approximation of the economic position of the assemblage when compared to other assemblages. In this case, since the slave's ceramics were largely selected and provided by the owner, it may also provide some indication of the owner's financial status, or at least his desire to have his status reflected in what was provided to his slaves for their use.

Of course, in the case of this collection there is good evidence that at least some ceramics were being recycled — that is, were being sent to the slave

Table 19.
Miller's Index Values for 38CH1477 and Comparion to Other Sites

Creamware and Pearlware	Value (date)	#	Product	Whiteware	Value (date)	#	Product
PLATES				PLATES			
undec.	1.00	33	33.00	undec.	1.00	16	16.00
edged 6"	1.41 (1814)	5	7.05	edged 6"	1.17 (1846)	1	1.17
7"	1.33 (1814)	11	14.63	7"	1.14 (1846)	1	1.14
8"	1.28 (1814)	22	22.16	8"	1.13 (1846)	9	10.17
9-10"	1.33 (1814)	15	19.95	9-10"	1.14 (1846)	9	10.26
painted 5"	2.25 (1838)	3	6.75	12"	1.57 (1846)	1	1.57
6"	2.10 (1838)	1	2.10	flowblue 7"	2.97 (1846)	1	2.97
8"	2.36 (1838)	1	2.36	8"	3.03 (1846)	1	3.03
printed 5"	3.73 (1814)	1	3.73	printed 8"	2.42 (1846)	4	9.68
7"	3.50 (1814)	1	3.50	9-10"	2.11 (1846)	4	8.44
8"	3.42 (1814)	2	6.84			31	64.43
		95	122.07			2.08	
		1.28					
BOWLS				BOWLS			
undec.	1.00	1	1.00	cable/annular	1.22 (1842)	16	19.52
cable/annular	1.20 (1814)	36	43.20	painted	1.60 (1846)	2	3.20
painted	2.80 (1814)	15	42.00	printed	2.58 (1846)	2	5.16
printed	2.80 (1814)	9	25.20	splatter	1.11 (1855)	1	1.11
		61	111.40			21	28.99
		1.83				1.38	
CUPS				CUPS			
undec.	1.00	5	5.00	undec.	1.00	8	8.00
painted	1.50 (1814)	4	6.00	printed	3.00 (1845)	2	6.00
printed	3.00 (1814)	3	9.00			10	14.00
		12	20.00			1.40	
		1.67					

Plates1.48
Bowls1.71
Cups1.54

Combined1.57

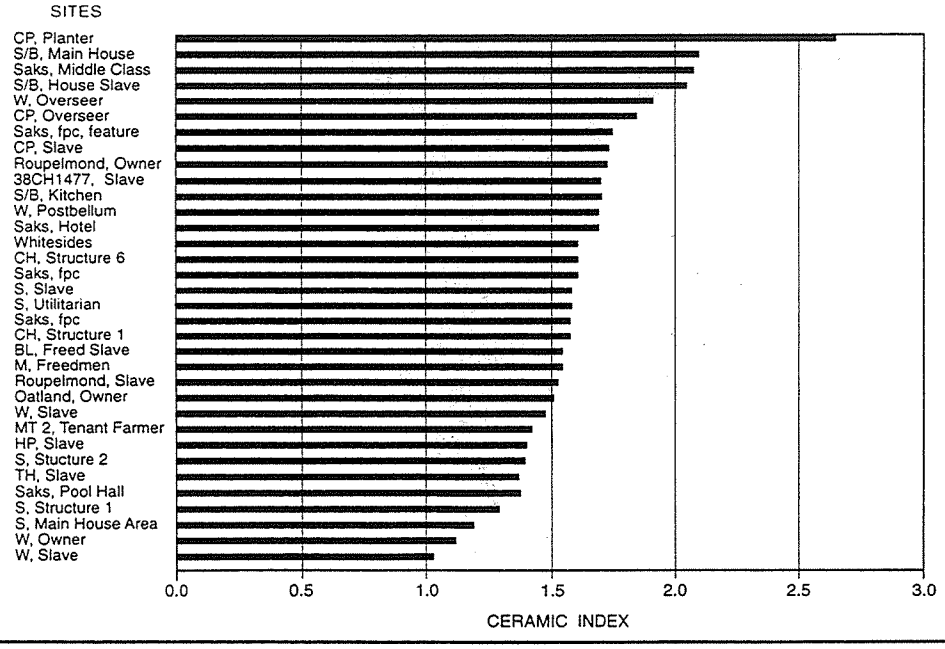

Table 20.
Attribute Summaries for Colono ware and River Burnished or Catawba Potteries
(from Wheaton et al. 1983)

	Yaughan	Catawba
Thickness	Average .725 cm thick up to very uneven on individual vessels and even single sherds.	Average ±.5 cm thick; 1.1 cm, regular and even.
Form	Generally open incurving bowls and small flared mouth jars, lips were crudely rounded, or flattened with a finger or stick.	Generally straight sided, open, outflaring bowls, and small well made jars, lips were tapered and well finished.
Body	Wide variation in size, amount and type of non-plastics, generally various water-washed sands, oxidation was usually not complete, leaving a dark core.	Limited variety of nonplastics, generally fine particle size and completely oxidized or completely reduced.
Surface	Ranged from crudely smoothed to polished with obvious evidence of the polishing tool, generally interiors of bowls and exteriors of jars were polished, color ranged from black to dark brown to reddish orange, great variation on individual vessels and sherds.	Usually highly polished on interior and exterior of bowls and wide mouthed jars, polish marks were often evident, color ranges from black to gray to buff, little variation on individual sherds, some vessels were intentionally reduced.
Decoration	.3% had decoration on interior of bowls including prefiring notched rims, reed punctate, thimble impressed, incised lines; post firing incision in the form of a cross in a square and a circle occurred on the interior bottoms of a few bowls.	3.5% of Catawba had undulating "day-glo" red painted lines on the exterior of jars and the interior of bowls applied after preliminary or final firing of the vessel; occasionally red dots were placed around the undulating line, or around small regular facts taken out of the interior lip; or both.
Method of Manufacture	Bases occasionally coil made and body was hand modelled, poor control over firing temperature and firing time, handles appeared to be attached to the surface of the vessel.	Evidence supports hand modelling but sample is too small for definite conclusions, firing temperature and time were well controlled, reduction when it occurs was intentional, handles had plugs on the end which were inserted in the wall and smoothed from the inside.

settlement, perhaps when cracked, chipped, or simply out of vogue. Moreover, the Miller indices are only appropriate on collections which date from the last two or three decades of the nineteenth century. The indices have not been developed to deal with early eighteenth century assemblages, such as the lead glazed slipwares. So at best we'll only really get a reconstruction of ceramic status for the nineteenth century.

In spite of these limiting factors (or issues of uncertainity), Table 19 provides the raw calculations used for Miller's indices along with a synopsis calculation of 1.57. Although we can't compare this figure to the main plantation settlement (it has been destroyed by the Isle of Palms Connector), it tends to place the slaves at 38CH1477 fairly low in the range of ceramic status, but about mid-range for other slave occupations (base of Table 19).

Colono Ware Pottery

Much has been written about Colono wares and several previous Chicora publications briefly recount many of these views (see, for example, Trinkley and Hacker 1996). In the late 1980s and early 1990s there was considerable effort to devise typologies for Colono ware that might make sense out of the admixture of both Native American and African American contributions. This resulted in a general (although not complete) consensus that the pottery might be divided into Yaughan — a pottery produced by slaves for their own use — and River Burnished or Catawba — a pottery produced by Native Americans for sale or trade. While there were a number of attributes used to separate the two, thickness and surface treatment have been most often stressed and appear to be of primary utility in the gross separation of the wares. Table 20 provides an overview of the two.

There has been a gradual shift on the part of some researchers away from discussions of typology. Many have suggested that the typological questions are simply unimportant, especially in the plantation society where there was creolization. Singleton and Bograd comment:

> typologizing colonoware as either African or Native American segments a culturally plural society, drawing boundaries between groups that may not have existed (Singleton and Bograd 2000:8).

They also argue that, "the object [in this case, Colono ware] comes to define the group rather than the group defining the significance of the artifact" (Singleton and Bograd 2000:9).

We understand — and appreciate — these views. Moreover, it seems reasonable to make sure that we take seriously the underlying caution that the plantation landscape is a mixture of white, black, and red and that it may often be difficult (or even impossible) to separate the three. Nevertheless, it seems that to ignore the fundamental question of typology also serves to blur over a very wide range of additional questions: Were Native American vessels being purchased and if so, why? Were those Native American vessels being made in the immediate vicinity or were they being transported from elsewhere? Were the African American and Native American vessels being used in similar fashions?

In addition, Singleton and Bograd comment that:

> European American appropriation of colonoware is regrettably an underexplored topic. This oversight may be a consequence of archaeologists' preoccupation with who made colonoware rather than who used it and thus transformed its meaning (Singleton and Bograd 2000:9).

This presumes that the only goal of typology is to determine the admittedly single-minded question of "who made this pot." Yet, it seems reasonable that who made the pot *may* affect how the pot was used. When Singleton and Bograd (2000:9) recommend that archaeologists "examine how this artifact was used, appropriated, and transformed by its makers and users" they imply that Colono ware is a monolith, with all of it being "used, appropriated, and transformed" in a similar fashon. Again, we aren't sure that this is the

case.

Of course, ultimately it may be that these questions are unanswerable. But that does not yet seem to be resolved and it seems that it is reasonable to continue the effort to understand Colono typologically, especially if that endeavor doesn't hinder other attempts to, as Singleton and Bograd recommend, understand "identify formation, cultural interaction, and change under colonialism" (Singleton and Bograd 2000:9).

Analytical Methods

The Colono wares from 38CH1477 were analyzed following the procedures established for the study of the Broom Hall Colono wares (Trinkley et al. 1995:204-205) and implemented in the examination of both the John Whitesides and Roupelmond collections (Trinkley and Hacker 1996:73:82, 1999:142-144), . The variables used include:

- Sand Temper Size, based on the U.S.D.A. standard sizes for sand grains, 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), and very coarse (1.0 to 2.0 mm);

- Sand Temper Shape, also known as degree of rounding, defined as angular (convex shape and sharp corners), subangular (convex shape with rounded-off corners), and rounded (convex shape and no corners);

- Frequency of Sand 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 25% being moderate, and 5% or less being sparse;

- Temper type: mica, quartz, clay inclusions, and voids;

- Surface treatments: smoothing, identified when the sherds had a regular but not glossy surface, and burnishing, identified when the sherds had a semi-glossy finish;

- Core Cross-Sections, consisting of a visual observation of a freshly broken edge. Sherds were characterized as (1) oxidized with no core, (2) oxidized with an interior core margin, and (3) reduced, being dark throughout with no core;

- Rim diameter, measured in centimeters when a reliable arc was present;

- Rim form;

- Thickness, measured in millimeters and taken 3 cm below the lip of the rim. When this portion of the vessel was not present sherd thickness was taken as a distinct measurement;

- Vessel form;

- Presence of charring or sooting;

- Evidence of use (i.e. cutlery marks or spoon scrapes);

- Decoration; and

- Appendages.

Findings

We found the need to modify some of this approach given that our collection was small and highly fragmented. Only site 38CH1477 produced Colono ware pottery. In addition, the pottery was recovered exclusively from plowzone contexts, so the materials were heavily fragmented. Of the 553 fragments recovered, only 124 (22.4%) are included in this

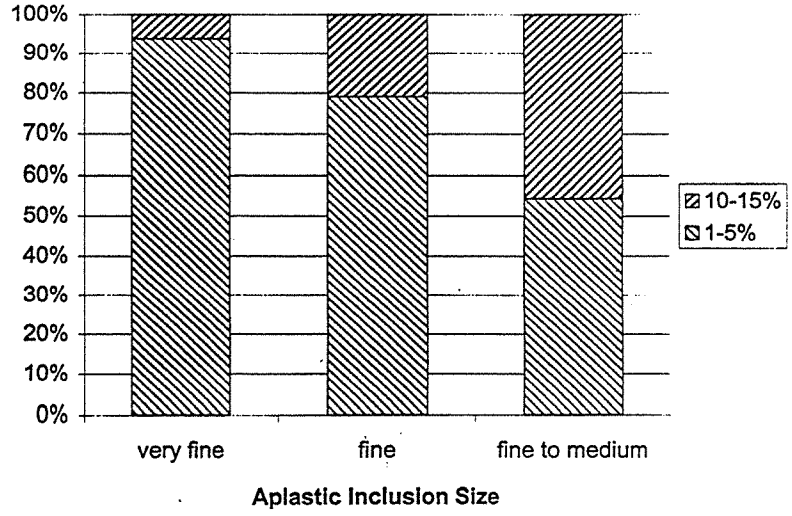

Figure 44. Frequency of inclusions by size.

analysis. These include sherds over 1-inch in diameter and rim sherds sufficiently large to allow data collection. While we are reasonably certain that the materials included in our analysis are representative, this remains a small collection.

In terms of the paste, we found that 60.6% of the sherds exhibited only fine quartz sand in the clay matrix. An additional 29.3% of the sherds were dominated by very fine quartz sand. Only 10.1% of the sherds exhibited aplastic inclusions in the fine to medium range. Where medium sand was present it was consistently rounded; no sharp or angular fragments were identified from the macroscopic work. While not quantified, we noticed that several sherds showed contorted paste, suggestive of poor or uneven mixing. Five of the 109 sherds (4.6%) revealed what appear to be argillaceous (ACF) clots, likely representing small dried clay particles which were included in the paste during the manufacturing process.

When the frequency of sand inclusions is examined, the only seemingly significant conclusion is that the finer the inclusions, the less abudant they are. This is shown graphically in Figure 44. In other words, this collection as a whole would be considered to have a fairly fine paste with few inclusions.

Moving from the paste to the firing, Figure 45 shows the contribution of each core cross-section by aplastic inclusion. What stands out is that the very fine to fine pastes have generally similar proportions of core sections, suggesting similar firing conditions, while the sherds with coarser particles tends to exhibit different firing conditions. We are not inclinded to make too much of this observation, given the small size of the fine to medium paste (N=11).

If we combine all of the data, regardless of paste, then we *may* have a more realistic view of the pottery from this site. In such a case cross-sections 1-3 dominate the collection, accounting for 83.2% of the assemlage. The most common, cross-section 3, accounts for just under a third of the collection (32.7%, N=35) and is indicative of a clay which included

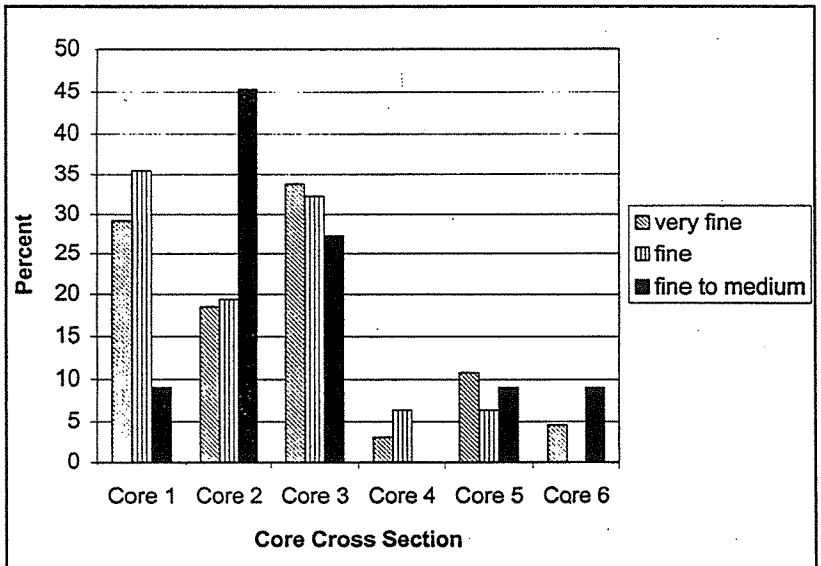

Figure 45. Core cross sections by size of aplastic inclusions.

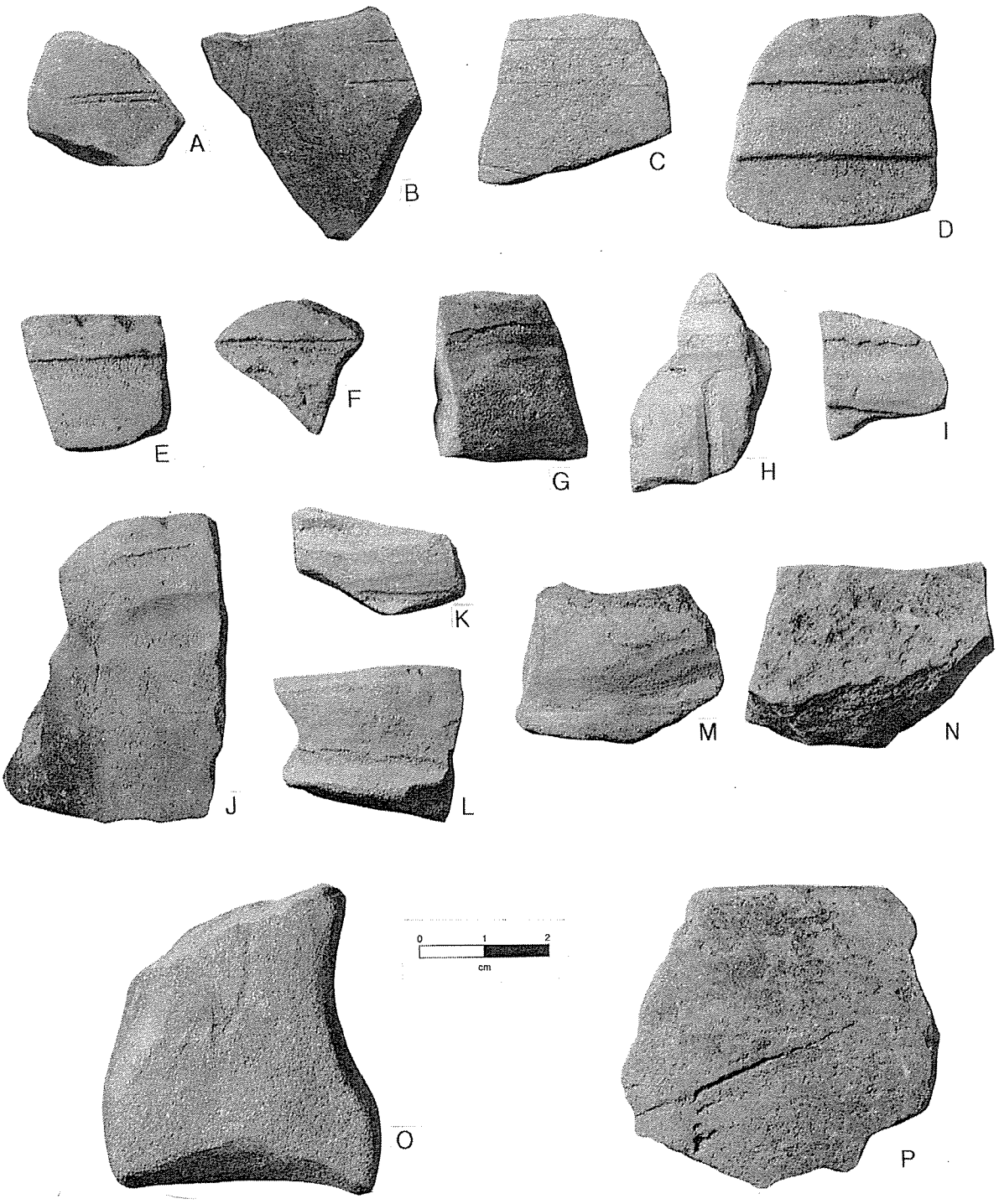

Figure 46. Colono ware pottery from 38CH1477. A-C, incised decoration; D-H, cutting using a broad tool on leather hard clay bodies; I-M, impressing, probably using a finger; N, spalled Colono sherd, indicating on-site firing; O, handle from a porringer; P, charring on the exterior of a Colono sherd.

organic material and which was fired in a reducing atmosphere. This gives the pottery a characteristically dark color throughout.

The next most common is cross-section 1, which accounts for 29% of the assemblage (N=31). This is suggestive of firing in an oxidizing atmosphere and a paste which did not include abundant quantities of organic material. In contrast, cross-section 3, which exhibits a dark central core, is suggestive of an organic-rich clay, fired in an oxidizing atmosphere. This cross-section accounts for about 21.5% of the assemblage (N=23). Cross-section 5 represents similar clay and firing, except that the vessel was likely fired rim down. This allowed air to gain access to only the exterior, while the interior was fired in what amounted to a reducing condition.

In other words, almost a third of the pottery (core cross-sections 2 and 5) had abundant organic matter in the clay and was fired in an oxygen rich setting, likely an open fire. Nearly an additional third (core cross-sections 3) also had organic matter in the paste, but were fired in a reducing atmosphere. And just about another third of the vessels exhibited little or no organic matter and were fired in an oxygen rich atmosphere (core cross-section 1).

Shifting our attention from the paste and firing process to the surface treatments and rim forms, we see generally great uniformity. Fully 96% of the pottery evidences moderate smoothing. None evidenced what would be considered burnishing, although this evaluation may have been biased by the erosive effects of plowing. One or two sherds did suggest remnant burnishing facets, so burnishing may have been present at the site. The remaining 4% of the collection revealed a lack of smoothing on either the interior or exterior surfaces. Again, we are not inclined to place much reliance in this particular observation, given the wear seen on some sherds. What was interesting is that one sherd exhibited clear evidence of spalling and breakage during firing — revealing that at least some of the pottery was produced on-site.

Decoration was identified on 15 sherds and is of three general types: incising using a small, probably pointed, tool; cutting, using a broad, flat instrument; and impressing, probably using the finger or similar soft, pliant tool. All of these techniques are, of course, related — they all represent various forms of displacement (see, for example, Rice 1987).

Incising has been reported as a decoration on a small minority of Colono ware pottery from a variety of sites, including Yaughan and Curriboo (Wheaton et al. 1983:229), and Broom Hall (Trinkley et al. 1995:218). It has also been reported by Ferguson in the context of "marks that bear a striking resemblance to the cosmograms of the Bakongo peoples in Central Africa" (Ferguson 1999:126; cf. DeCorse 1999:139-140). In the case of the case of 38CH1477, three sherds exhibit incising. Two of the examples indicate application to leather-hard clay, while the final example (because of the fine chipping along the edges of the lines) indicates application when the vessel was nearly dry. The size of the sherds precludes any observations concerning design; each case, however, seems intentional and well-executed.

Cutting or carving is observed on 11 sherds. In these examples a tool has been used to cut or remove lines of clay. Four of these examples are rim sherds and in each case the cutting begins between 7 and 13 mm of the lip. All of these examples seem to suggest multiple lines parallel to the lip. One sherd also exhibits cutting perpendicular to the lip, below at least one cut line parallel to the lip. These cuts range from 1 to 8 mm in width and all seem to have been made when the vessel was leather hard.

The final decoration, termed impressing, is found on at least three sherds (and possibly two others). On at least two of the three sherds the impressing is associated with cutting. Impressing seems to be parallel to the rim and, although variable, is about 10 mm in width.

Only two lip forms were found in this collection: flattened and rounded. The flattened examples account for 67.3% of the collection (N=37) and have a mean thickness of 7.2 mm. Many of these flat lips (59.5%, N=22) were also notched. One (2.7%) was what we have called undulating in the past (Trinkley et al. 1995:219). The rounded lips account for the remaining 32.7% of the collection (N=18) and

have a mean thickness of 8.1 mm. Notched lips occur, but in a lower frequency (33.3%, N=6). In contrast, the undulating lip form is more common (11.1%, N=2). The sample sizes for both are so small, it seems unlikely that much can be made of these findings, except to note that these two lip forms were most common.

When we consider vessel diameters by lip form, the flat lips reveal a wider range (from 4.5 to 12 inches) but a smaller mean size of 7.2 inches. The rounded lips have a range from 7 to 9 inches and a mean of 8 inches. If all are combined, then the mean vessel diameter is 8.5 inches.

Summary

Perhaps the most obvious question is whether this assemblage includes both Yaughan and Catawba pottery or if only a single ware is represented? It is tempting to pull out the few coarser sherds and classify them as something "different." This splitting, however, seems inappropriate at this site since these sherds don't really strike us as very different.

Just as difficult to determine is exactly what ware is represented using the existing sorting criteria. For example, the pottery falls into the thickness range of Yaughan, but the paste most closely resembles that of Catawba. The modest surface finishing, however, is characteristic of the Yaughan. One sherd reveals spalling, indiciative of on-site manufacturing — supporting the view that the pottery is Yaughan.

So, while we can certainly call the pottery from the Moses Whitesides slave settlement Colono ware, we are less certain whether it should be called Yaughan or Catawba. Either way, it seems to have been manufactured by the enslaved African Americans at the plantation.

If we attempt to follow the advice of Singleton and Bograd (2000) and focus, instead, on the context of the pottery we are surprisingly on far firmer ground. The vessels represented by this collection seem to include both large bowls and pots that were probably used to prepare meals, as well as smaller bowls used to serve up individual meals. In fact, without this Colono ware, the eighteenth century ceramic assemblage is very sparse, with South's bracket dates suggesting few European ceramics prior to about 1795. These Colono vessels filled the gap between the earliest settlement, ca. 1762, and when European ceramics became inexpensive enough to be widely used by slaves, ca. 1795.

What is also clear is that various forms of decoration — not generally reported at other sites — were used on the collection. The decorations all seem closely enough related to make us wonder if we are seeing the work of a relatively small number of artisans — again supportive of the view that the wares were all made on-site. Also of interest is that the techniques used to produce these incisings and carvings are the same techniques that Ferguson (1999) reports as representing cosmological symbols. While none of Ferguson's motifs are present (or at least are not recognizable), we wonder if the limited used of these decorative techniques may perhaps signify that these vessels functioned differently in the African American settlement? We also wonder if more "decorated" pottery exists in collections, but has not been thought sufficiently important to warrant attention?

ETHNOBOTANICAL REMAINS

Introduction

Because most of the excavations at 38CH1466 and 38CH1477 involved plowzone contexts, ethnobotanical remains were sparse and recovered primarily from features. The only materials available from the 38CH1477 slave settlement consist of a small quantity of wood charcoal handpicked from a post hole. At 38CH1466 there were flotation samples from three features and one unit, as well as handpicked charcoal from one of the features. Regardless of the site designation, the collection consists of two prehistoric and four historic contexts.

Flotation samples, offering the best potential to recover very small seeds and other food remains, are expected to provide the most reliable and sensitive subsistence information. Samples of 10 to 20 grams are usually considered adequate, if no bias was introduced in the field. Popper (1988) explores the "cumulative stages" of patterning, or potential bias, in ethnobotanical data. She notes that the first potential source of bias includes the world view and patterned behavior of the site occupants — how were the plants used, processed, and discarded, for example. Added to this are the preservation potentials of both the plant itself and the site's depositional history. Of the materials used and actually preserved, additional potential biases are introduced in the collection and processing of the samples. For example, there may be differences between deposits sampled and not samples, between the materials recovered through flotation and those lost or broken, and even between those which are considered identifiable and those which are not. In the case of these sites the soil samples were each 5 gallons in volume and were water floated (using a machine assisted system)at the completion of the field investigations. As discussed, and approved, in the scope of work, flotation samples were taken only from features with dark, organic fill, judged to be the most likely to yield ethnobotanical remains.

Handpicked samples may produce little information on subsistence since they often represent primarily wood charcoal large enough to be readily collected during either excavation or screening. In the case of these samples, one was taken from a post hole, another consisted of relatively large pieces of charcoal from feature excavation, and another was collected from dry screening of unit excavations. The identified wood will likely represent the materials used for building only if the wood is either noncarbonized (suggesting the wood post rotted in situ) or if there is evidence of the structure burning. Otherwise, the wood recovered from post holes (and post molds, for that matter) most likely represents only the charcoal specks that are incorporated in the surrounding soils.

Such handpicked samples are often most useful for providing ecological information through examination of the wood species present. Such studies assume that charcoal from different species tends to burn, fragment, and be preserved similarly so that no species naturally produces smaller, or less common, pieces of charcoal and is less likely than others to be represented — an assumption that is dangerous at best. Such studies also assume that the charcoal was being collected in the same proportions by the site occupants as found in the archaeological record — likely, but very difficult to examine in any detail. And finally, an examination of wood species may also assume that the species present represent woods intentionally selected by the site occupants for use as fuel — probably the easiest assumption to accept if due care is used to exclude the results of natural fires.

While this method probably gives a fair indication of the trees in the site area at the time of occupation, there are several factors which may bias any environmental reconstruction based solely on charcoal evidence, including selective gathering by site occupants (perhaps selecting better burning woods, while excluding others) and differential self-pruning of the trees (providing greater availability of some species over

others). These factors are of particular concern at historic sites where there is evidence of wood selection being guided by heat production, quality of the fire, ease of igniting, and a whole range of other factors (for a brief review from an urban perspective, see Zierden and Trinkley 1984). There is even evidence that some owners planted trees (such as weeping willows, *Salix babylonica*) specifically for the wood they produced through normal pruning. Consequently, at a historic site hand picked charcoal may tell us more about cultural factors than it does about the natural environment. Smart and Hoffman (1988) provide an excellent review of environment interpretation using charcoal which should be consulted by those particularly interested in this aspect of the study.

Procedures

The four flotation samples were prepared in a manner similar to that described by Yarnell (1974:113-114) and were examined under low magnification (7 to 30x) to identify carbonized plant foods and food remains. Remains were identified on the basis of gross morphological features and seed identification relied on Schopmeyer (1974), United States Department of Agriculture (1971), Martin and Barkley (1961), and Montgomery (1977).

The handpicked samples were also examined under low magnification with a sample of the wood charcoal identified, where possible, to the genus level, using comparative samples, Panshin and de Zeeuw (1970), and Koehler (1917). Wood charcoal samples were selected on the basis of sufficient size to allow the fragment to be broken in half, exposing a fresh transverse surface. A range of different sizes were examined in order to minimize bias resulting from differential preservation.

Results

The results of the flotation analysis are provided in Table 21. In all but one case the floated material was at the 20 gram "threshold" typically proposed as adequate. Unfortunately all four samples were extraordinarily "dirty" with the uncarbonized fraction (representing primarily rootlets) comprising the bulk of each sample. This reduced the actual useful material to very minuscule proportions.

It should be noted that Feature 1 is a historic wall trench, while Features 2 and 3 are interpreted to represent prehistoric shell pits. The one unit flotation sample was from 590R510 and was originally thought to represent a prehistoric shell midden. Subsequently we discovered that this unit primarily reflected a postbellum freedman's occupation.

Wood charcoal is the most abundant non-trash material in only three of the samples. In Feature 3 small bone fragments actually outweigh the wood charcoal. In spite of the generally disappointing results, seeds were recovered from the historic feature, the freedman's unit, and one of the two prehistoric pits. In

Table 21.
Analysis of Flotation Samples
weight in grams

	Wood Charcoal		Bone		Uncarb.		Hickory		Seeds		
Provenience	wt	%	wt	%	wt	%	wt	%	wt	%	Total Wt
F 1	2.40	29.1			5.86	70.9			>0.01[a]	t	8.26
F 2, S½	5.23	16.5	0.01	t	26.33	83.2			0.07[b]	0.2	31.64
F 3	0.99	4.4	2.06	9.1	19.63	86.5					22.68
590R510, L1	3.74	11.6	0.29	0.9	27.20	84.6	0.09	0.3	0.83[c]	2.6	32.15

[a] 4 seed coat frags of *Polygonum sp.*
[b] 3 UID seed coats, 2 *Nyssa sylvatica*
[c] 1 peach pit

the historic wall trench (Feature 1), we recovered four fragmentary seed coats of *Polygonum sp.* The Polygonaceae family includes such erect annuals as knotweed and smartweed. From the freedman's deposits we encountered both hickory nutshell (which may represent either prehistoric or historic additions), as well as a single peach pit, which would represent the historic occupation. In the prehistoric shell pit we recovered three unidentifiable seed coats (all very fragmented) and two intact seeds of *Nyssa sylvatica* or the black tupelo.

The only remains found in the two handpicked samples is pine (*Pinus spp.*). Examination of large wood fragments in the flotation samples revealed only pine and oak (*Quercus spp.*).

Discussion

The prehistoric evidence is limited to results from Features 2 and 3. Regrettably these provide little information. The dominant woods are pine and oak, although the two black tupelo seeds provide evidence of a third species in the site area. Morton (1974:105) notes that the fruit is somewhat bitter, but is known to have been eaten, either raw or made into preserves during the historic period. It seems likely that it would also be used by Native Americans. The other seed coats are unidentifiable, but probably represent weedy species found in disturbed habitats.

The historic collection is somewhat more varied. The charcoal represents woods which could reasonably be associated with drier soils in the region. Pine, while suggestive of a disturbed habitat, is present naturally in the mesic fine sand ridges of many hardwood forests (Barry 1980:138). The abundance of pine, however, might also suggest a fire sub-climax pine forest.

It may be significant that both pine and oak are frequently used fuel woods. On the average, a cord of air dried pine provides about 80% of the heat value of a short-ton of coal, while oak provides about 84% the value. In contrast, sweetgum typically provides about 68%. Only the hickories (which were relatively uncommon in the area) consistently provide high heat values, averaging about 97% that of coal.[1] The choice of wood for fuel did not, however, depend entirely on its calorific power. Other factors likely included freedom from smoke, completeness of combustion, and rapidity of burning. Pine, for instance, gives a quicker, hotter fire, and is easier to ignite, but is consumed in less time than many other woods. Oaks provide a more steady fire and heat than pine, but are difficult to ignite and not as easy to split (Graves 1919; Reynolds and Pierson 1942). In combination they form an almost perfect union.[2]

The absence of woods typical of wet soils may suggest that the site area was historically drier than it is today. This is certainly supported by the available sea level data. It is also likely that the soils were drier when the lands were being actively drained and cultivated.

There are four hickories common to the Charleston area — bitternut (*Carya cordiformis*), water (*C. aquatica*), mockernut (*C. ovalis*), and pignut (*C. glabra*). These species occur on a variety of soil types, from dry woods to rich or low woods to swamp lands. In South Carolina they fruit in October, although seeds are dispersed from October through December (Radford et al. 1968:363-366). Good crops of all species are produced at intervals of up to three years when up to about 16,000 nuts may be produced per tree (Bonner and Maisenhelder 1974:271). Complicating this simple

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[1] The varying quality of fire wood has long been recognized. For example, Reese notes: "The heavy and dense woods give the greatest heat, burn the longest, and have the densest charcoal. To the dense woods belong the oak, beech, alder, hazel, birch, and elm: to the soft, the fir, the pine of different sorts, larch, linden, willow, and poplar" (Reese 1847:116).

[2] Elisabeth Donaghy Garrett goes to great lengths, however, to illustrate that even the perfect combination of fire woods, blazing in the perfectly constructed fireplace, often did little to warm, or light, plantation rooms. Even with fires, water, foods, ink, and even wines, froze overnight in deep winter. Thomas Chaplin, writing from his St. Helena, Beaufort County plantation in January 1857, noted that his thermometer was down to 20 degrees in the house at eight in the morning and that everything was frozen hard, including eggs, milk, and ink (Garrett 1990:189).

seasonality is the ability of the nuts to be stored for up to six months.

While hickory nuts commonly supplemented the prehistoric diet, their use during the historic period appears limited. In the seventeenth century John Lawson (Lefler 1967:105) remarked on the tastiness of soup made from hickories. He also mentioned some hickories tasted "as well as any Almond." Yet a review of period cookbooks (see, for example, Crump 1986) fails to suggest that hickories were any more integrated into planned meals in the eighteenth century than they are today. It is likely that they provided incidental, gathered food, but were not significant to the typical diet. It may be that the nutshell is an accidental inclusion, although it has also been reported from the Broom Hall and Roupelmond slave sites — suggesting that the resource may have been used by African Americans more often than realized.

Although only one peach pit was recovered in the postbellum unit, it may be an indicator of the plantation's remnant orchard.[3] The peach fruits, in the lower coastal plain, from April through June. Sam Hilliard observes that:

> The peach was the favorite fruit in most of the South and was prized as food either fresh, dried, or preserved.[4] If sufficient quantities were produced, the surplus was fermented to wine and distilled into brandy. Many farmers fed them to hogs, as they were considered very nutritious, and often were encouraged to plant orchards to serve specifically for animal feed (Hilliard 1972:180-181).

Ann Leighton (1976:237) also notes the popularity of peaches. In 1629 there were 21 named peaches. By 1768 there were at least 31. And by 1850 over 250 named peach varieties were published. Regardless, all belonged to one of two groups, generally described as the freestones or melting-peaches in which the pulp or flesh separates easily from the stone and the clingstones in which the flesh clings or adheres to the stone.

South Carolina planters like Chaplin (Rosengarten 1987) frequently mention peach, revealing that the trees were planted using both seeds and also "slips." They seem to have been used not only in the orchards, but also to mark fence rows or otherwise interspersed across the plantation landscape.

Polygonum is a weed-like annual plant that is found in waste places and disturbed habitats. It would be very much "at home" in the vicinity of a slave settlement. There are a number of species, with at least seven found in the Charleston area.

A single seed has been found in the collections from Yaughan and Curriboo, where Gardner (1983) discounts its use, suggesting instead that it represented an accidental inclusion, perhaps from the use of exterior hearths or the burning off of weedy patches. Eight seeds were found in the Lesesne and Fairbank collections. Again Gardner (1986) discounts their contribution, suggesting again that they represent accidental inclusions.

On the other hand, Porcher devotes three pages to the different species and their medicinal uses, including as a tonic, laxative, diaphoretic, astringent, emetic, and purgative (Porcher 1991 [1863]:370-373). He also observes that there are two climbing varieties that could be used as replacements for buckwheat. Morton (1974:115) also notes that the young leaves can be eaten like greens.

This collection, when compared to other plantation assemblages, is rather barren. Gardner (1983) found the eighteenth century slave assemblages at Yaughan and Curriboo dominated by wood charcoal

[3] It is likely that peaches, a fruit of the temperate zone, were on the far edge of their natural range in the Charleston area. Though they prefer relatively warmer areas, they also require a resting period of winter cold for at least two months, during which time they gather strength for producing leaves and flowers in the spring.

[4] One source also documents that peach pits themselves were roasted, salted, and eaten in rural black areas, such as on John's Island and in Berkeley County (Morton 1974:118).

(almost exclusively pine), although a variety of food materials were also represented, such as corn, rice, hickory and walnut, peach, hawthorn, bramble, and beans. A number of weed seeds, such as *Polygonum*, goosegrass, and possibly *Setaria, Paspalum, Panicum,* and *Digitaria* were also recovered, although they were found in small quantities and were often very eroded.

At the early antebellum Lesesne and Fairbank plantations, Gardner remarked finding, "an impressive variety of plant remains" (Gardner 1986:F-9). These included corn, rice, peach, watermelon, peanuts, cotton, chinaberry, spurge, *Iva*, hickory, acorn, pecan, blackberry, grape, blueberry, hackberry, plum or cherry, persimmon, and maypops. While few were present as more than one or two examples, the variety is, indeed, impressive. Contributing to this variety, however, was the excavation of a well, which produced a number of species not found elsewhere on the plantation, such as watermelon, peanuts, cotton, pecan, plum or cherry, and maypops.

Although 38CH1466 and 38CH1477 offer far less, likely a result of the nature of the features encountered, they do reveal an assemblage which incorporates at least a few of the species found elsewhere. In addition, the repeated occurrence of knotweed suggests that this species represents more than an accidental inclusion and may have been used by African Americans, either as a food or as a medicinal plant. Similarly, the hickory nutshells may reflect the integration of wild plant resources into the slave diet.

ANALYSIS OF FAUNAL MATERIALS

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Introduction

The vertebrate faunal collections from two sites associated with Seaside (Moses Whitesides)Plantation are analyzed for this study. The first site, 38CH1466, is a prehistoric Middle Woodland midden. Temporal placement is based on the presence of Deptford, Hanover, and Santee-McClellanville sherds. The second site, 38CH1477, represents a slave settlement of a small landowner at the turn of the nineteenth century. Placement of excavation units at both sites was based on the results of controlled auger tests (see Table 22).

For 38CH1466, the faunal remains were obtained from one auger test (500R500), the east half of Feature 1, and five and a half 10x10 foot units (590R510, 600R510, 600R600,350R460, 350R460, and 345R465). Most of the faunal material was recovered from level 1 excavations which appeared to be disturbed. Units 590-600R510 were placed on the basis of the dense shell remains identified as a prehistoric shell midden. The presence of historic mammals (cow and pig), indicates the midden's continued use through time. The other units were placed in areas with high artifact density but comparatively little shell.

The second site, 38CH1477, represents a historic occupation with a mean date from the first quarter of the nineteenth century. Twelve 10-foot units were placed in the area. Units include 820-830R510, and 840-850R470-520. Faunal material was also recovered from one auger test at 800R475.

Analytical Techniques

The faunal collections from the two sites were studied using standard zooarchaeological procedures. Species identification was aided by the comparative collection housed in the Cobb Institute of Archaeology at Mississippi State University. Skeletal elements were sorted by class, suborder, or species. The side (right or left), specific bone section (diaphysis, epiphysis, distal,

Table 22.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Auger Test 500R500 (38CH1466 and Auger Test 800R475 (38CH1477).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
38CH1466							
Unidentified Mammal	1	1	100	1.41	100	0.0358	100
Total	1	1	100	1.41	100	0.0358	100
38CH1477							
Unidentified Drum, *Scianidae* spp.	2	1	100	3.37	100	0.0955	100
Total	2	1	100	3.37	100	0.0955	100

proximal, etc.), and level of maturity (immature, adult, old adult), were recorded whenever preservation permitted. Elements of all taxa and other analytical categories were also weighed (in grams) and counted. The Minimum Number of Individuals (MNI) was computed for each animal category using paired bone elements and age (mature/immature) as criteria. Grayson' s (1973) method using stratigraphic divisions was employed to determine MNI. For the collections analyzed in this study, this meant treating identical stratigraphic layers (i.e., Level 1) as a single unit. This method ideally provides a MNI count that is less conservative than the minimum distinction method (entire site treated as one unit) and more conservative than the maximum distinction method (horizontal and vertical strata are treated as single units) (Grayson 1973: 438).

For site 38CH1466, the shell midden and non-shell midden areas were treated both as two separate units and a single unit. Rationale for combining the materials as a single unit was based on the identified disturbance of the site well into the historic period. Likewise, by separating them as shell midden and non-shell midden, differences in the faunal assemblages can be teased out.

As a measure of zooarchaeological quantification, using MNI is problematical (Casteel 1977; Grayson 1973, 1984). Depending on the method used (minimum distinction, maximum distinction, or stratigraphic layers), the MNI calculated for a faunal assemblage may be under or over representative. Likewise, use of MNI emphasizes small mammals over large ones. For example, a rabbit may be represented five times for every one deer, but the deer contributes more to the diet. Additionally, representation of an animal does not presume its use in entirety at the site (Reitz and Weinand 1995). Certain cuts may have been sold or traded elsewhere (Scott 1981; Thomas 1971; Welch 1991) affecting the representation of certain bone elements at the site. Because of the problems discussed above, it is important that research questions consider the limitations inherent in using MNI.

Given the problems associated with using MNI as a measure of species representation, an estimate of biomass contributed by each taxon is calculated. Based on weight in grams, the method used is allometric and considers the biological relationship between soft tissue and bone mass. Biomass is determined using the least squares analysis of logarithmic data where bone weight is used to determine the amount of tissue it supports (Casteel 1974,1978; Reitz and Wing 1999). The relationship between body weight and skeletal weight is expressed by the allometric formula $Y = \log a + b(\log X)$ (Simpson et al. 1960). Y is the biomass in kilograms, X is the skeletal weight in kilograms, a is the Y-intercept for a log-log plot using the method of least squares regression and the best fit line, and "b" is the constant of allometry, or the slope of the line defined by the least squares regression and the best fit line. The allometric values used in this study were derived from Reitz (1985: Table 4).

Sample size can restrict the use of biomass and MNI in the analysis of faunal materials. Several studies have proposed using a sample size of at least 200 individuals (MNI) or 1400 bones (NISP) for reliable use of these methods (Casteel 1978; Grayson 1973; Wing and Brown 1979). According to Reitz and Weinand (1995) small faunal samples tend to be biased towards one species over another. In addition to the effects of excavation procedures and potential spacial differences in bone presence, differential preservation of certain bone elements, as well as different species, could affect faunal representation. Unfortunately, archaeological excavations do not normally yield the ideal sample size for faunal analysis and little can be done to correct for the biases present in small faunal assemblages.

Observations of bone modifications classified as sawed, clean-cut, burned, chopped/hacked, gnawed and worked are also included in the analysis. Sawing is distinguished where parallel striations are observed on the outer layer of bone. Clean-cut marks are generally produced by sawing but striations are not present. Burned bone is modified by exposure to fire during preparation or after discard. Cuts are defined as shallow incisions on the bone surface and are generally associated with cutting meat around the joint area. Chop/hack marks are created using a cleaver or ax. Gnawed bone indicates bone was not buried immediately following disposal and consequently was exposed to

animals. Human modification of bone not associated with butchering is identified as worked bone (Reitz and Weinand 1995).

Recording the presence or absence of bone elements in a faunal assemblage provides useful information on butchery patterns and animal husbandry. Elements identified for cattle and deer were classified as "head" (cranial fragments and teeth), "axial" (vertebra and ribs), "forequarter (scapula, humerus, ulna, and radius), "hindquarter" (innominate, femur, tibia, and fibula), "hindfoot" (tarsals and metatarsals), "forefoot" (carpals and metacarpals), and "foot" (phalanges). Using log difference scale models for cattle (Reitz and Zierden 1991) and deer (Reitz and Wing 1999) bone representation can be observed. These models provide a means for examining bone representation in a faunal assemblage (see Reitz and Zierden 1991 for discussion).

Identified Fauna

Before considering the results of the zooarchaeological analysis the general use and habitat preference for each individual species is considered. Tables 22-28 list the various animal species identified in the archaeological collections recovered from excavations of 38CH1466 and 38CH1477. A total of 519 bones were present in the 38CH1466 faunal materials representing 17 species and 33 minimum number of individuals (Tables 22-25 and 27). For 38CH1477, 534 bones were recovered representing 6 species and 16 minimum number of individuals (Tables 22 and 28).

Domestic Mammals

Two domestic mammals, cattle (*Bos taurus*) and pig (*Sus scrofa*), were identified at both sites. Cattle have been an important meat source in the Southern United States but they are less efficient to raise than other domestic mammals such as the pig (Hilliard 1972; Rouse 1973; Towne and Wentworth 1950, 1955). Since cattle are large herbivores, they require large quantities of grain and grasses to keep weight on. Furthermore, beef does not preserve as well as other meats such as pork. Clearly, greater food and labor resources are required to make cattle production profitable (Tomhave 1925). Despite their cost, cattle supply other important resources such as milk products and hides, providing additional economic incentives for keeping herds (Hilliard 1972; Rouse 1973; Towne and Wentworth 1955). With the exception of the 345R460 units (Table 25) and Feature 1 (Table 27) at 38CH1466, cattle contributed more to the diet than any other species. This data is presented in Tables 23, 24, and 28. The highest percentage of cattle is observed at 38CH1477 where it represents over 87 percent (Table 28) of the total biomass calculated for identified species. For the 38CH1466 site, cattle contributed to about fifty percent of the total biomass in the shell midden deposit (Table 23) and 600R600 unit (Table 24).

Pigs are one of the most important domestic animals used for food in the Southeast (Hilliard 1972) In general, pigs require little care and can roam freely scavenging naturally available food resources such as seeds, roots, fruits, eggs, and small mammals. Cattle store only 11 percent of the calories they consume while pigs store 35 percent therefore making pigs more economically feasible to raise for meat yield. Unlike beef, pork preserves very well and because of its high fat content, is very appetizing. Additionally, pork is a very good source of thiamine (Towne and Wentworth 1950), a nutritional source important for the prevention of beri-beri (Wing and Brown 1979:38-39).

For the collections discussed here, the highest frequency of pig, 12.14%, is observed in the shell midden context at 38CH1466 (Table 23). The non-shell midden 600R600 (38CH1466) also contained pig, though pig contributed about half as much to the total biomass (6.81%). At 38CH1477 pig (10.39%) followed cow in the percentage of biomass total, indicating its importance at this site (Table 28).

Wild Mammals

Several wild mammals were identified in the faunal collections recovered from the two excavations. These include deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), opossum (*Didelphis virginianus*), eastern cottontail (*Sylvilagus floridanus*), and bobcat (*Lynx rufus*). All but the bobcat were probably used for food.

Table 23.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for the Shell Midden Area 590-610R510, Level 1 (38CH1466).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
Domestic Mammals							
Cow , *Bos taurus*	27	2	11.7	286.08	51.69	4.274	48.73
Pig, *Sus scrofa*	9	1	5.9	61.1	11.03	1.0652	12.14
Wild Mammals							
Deer, *Odocoileus virginianus*	22	3	17.5	164.97	29.79	2.6041	29.69
Opossum, *Didelphis virginiana*	1	1	5.9	1.49	0.3	0.0376	0.43
Eastern Cottontail, *Sylvilagus floridanus*	3	1	5.9	3.15	0.57	0.0738	0.84
Bobcat, *Lynx rufus*	1	1	5.9	4.32	0.78	0.0981	1.12
Unidentified Mammal	215	-	-	445.14	-	-	-
Unidentified Mammal Burned Bone	34	-	-	58.53	-	-	-
Total Mammal	312	9	52.8	1024.78	94.16	8.1528	92.95
Aves							
Turkey, *Meleagris gallopavo*	2	1	5.9	4.42	0.8	0.0789	0.9
Total Aves	2	1	5.9	4.42	0.8	0.0789	0.9
Reptile							
Box Turtle, *Terrapene carolona*	9	1	5.9	9.13	1.64	0.1391	1.58
Unidentified Turtle	10	-	-	6.47	-	-	-
Corn Snake, *Elaphe guttata*	1	1	5.9	1.13	0.2	0.0156	0.18
Rattlesnake, *Crotalus* spp.	1	1	5.9	0.84	0.15	0.0115	0.13
Unidentified Snake	1	-	-	0.26	-	-	-
Total Reptile	22	3	17.7	17.83	1.99	0.1662	1.89
Pisces							
Hardhead Catfish, *Arius felis*	1	1	5.9	0.15	0.02	0.0033	0.03
Unidentified Drum, *Scianidae* spp.	2			1.34	0.24	0.0483	0.55
Black Drum, *Pogonias cromis*	10	1	5.9	14.39	2.6	0.2799	3.2
Red Drum, *Sciaenops ocellatus*	1	1	5.9	0.55	0.09	0.0245	0.28
Southern Flounder, *Paralichthys lethostigma*	1	1	5.9	0.62	0.1	0.0172	0.19
Unidentified Fish	2	-	-	2.17	-	-	-
Total Pisces	17	4	23.6	19.22	3.05	0.3732	4.25
Total	353	17	100	1066.25	100 (n/553.68)	8.7711	99.99

Total Biomass all Weight	Biomass kg	Biomass %
Mammal	13.476	96.92
Aves	0.0789	0.56
Reptile	0.2801	2.01
Pisces	0.069	0.5
Total	13.904	99.99

Table 24.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for 600R600, Level 1 (38CH1466).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
Domestic Mammals							
Cow, *Bos taurus*	11	1	9.1	191.1	46.64	2.9726	49.82
Pig, *Sus scrofa*	2	1	9.1	20.95	5.11	0.4065	6.81
Wild Mammals							
Deer, *Odocoileus virginianus*	8	2	18.2	51.31	12.52	0.9102	15.25
Raccoon, *Procyon lotor*	1	1	9.1	2.44	0.59	0.0587	0.98
Unidentified Mammal	52	-	-	74.59	-	-	-
Total Mammal	74	5	45.5	340.39	64.86	4.348	72.86
Aves							
Chicken, *Gallus gallus*	1	1	9.1	0.49	0.12	0.0107	0.18
Total Aves	1	1	9.1	0.49	0.12	0.0107	0.18
Reptile							
River cooter, *Pseudemys floridina*	8	1	9.1	6.32	1.54	0.1088	1.82
Unidentified Turtle	1	-	-	6	-	-	-
Rattlesnake, *Crotalus* spp.	2	1	9.1	2.54	0.62	0.0354	0.59
Total Reptile	11	2	18.2	14.86	2.16	0.1442	2.41
Pisces							
Black Drum, *Pogonias cromis*	39	3	27.2	134.55	32.84	1.4634	24.53
Unidentified Fish	4	-	-	1.05	-	-	-
Total Pisces	43	3	27.2	135.6	32.84	1.4634	24.53
Total	129	11	100	491.34	99.98 (n/409.7)	5.9663	99.98

Total Biomass all Weight	Biomass kg	Biomass %
Mammal	4.9978	73.92
Aves	0.0107	0.16
Reptile	0.2492	3.68
Pisces	1.5037	22.24
Total	6.7614	100

Deer are browsers and grazers and prefer deciduous forest edge and open fields (Choate et al. 1994). They played an integral part of the prehistoric Native American diet for food, skins, and tools (Hudson 1976). Deer also were hunted by settlers in most areas in the Southeast well into the nineteenth century (Hilliard 1972).

At 38CH1466, deer was the only mammal identified in Feature 1 (Table 27) and represented as much of the total biomass as reptile and fish. For the shell midden area (Table 23) deer contributed close to 30% of the total biomass but represented the largest percentage of the total MNI. The non-midden areas varied in respect to deer. For 600R600 (Table 24), deer represented 15.25% of the biomass weight and 18.2% of the total MNI. A much higher frequency of deer was recorded for the 345R460 units (Table 25) where 71.43% of the total biomass and 40% of the total MNI was deer. Deer was the only wild mammal identified at the 38CH1477 site (Table 28) representing only 2.18% of the biomass and 6.67% of the MNI.

Raccoon and opossum were found in small quantities at 38CH1466 (Tables 23 and 24). Both species are nocturnal and able to adapt to a variety of habitats including wooded areas near water, cleared fields, and around human settlements (Choate et al. 1994).

Opossum was identified in the shell midden (Table 23) by one skeletal element, but only contributed

Table 25.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for 345R460-465, 350R460-470 (38CH1466).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
Domestic Mammals							
Cow , *Bos taurus*	2	1	20	5.92	11.32	0.1303	12.97
Wild Mammals							
Deer, *Oldocoileus virginianus*	7	2	40	39.41	75.35	0.7179	71.43
Unidentified Mammal	13	-	-	36.57	-	-	-
Unidentified Mammal Burned Bone	1	-	-	1.19	-	-	-
Total Mammal	23	3	60	83.09	86.67	0.8482	84.4
Reptile							
River cooter, *Pseudemys floridina*	5	1	20	5.04	9.63	0.0934	9.3
Total Reptile	5	1	20	5.04	9.63	0.0934	9.3
Pisces							
Unidentified Drum, *Scianidae* spp.	1	1	20	1.93	3.7	0.0633	6.3
Total Pisces	1	1	20	1.93	3.7	0.0633	6.3
Total	29	5	100	90.06	100 (n/52.3)	1.0049	100

Total Biomass all Weight	Biomass kg	Biomass %
Mammal	1.4047	89.96
Aves	0	0
Reptile	0.0934	5.98
Pisces	0.0633	4.05
Total	1.5614	99.99

to 0.43% of the total biomass and 5.9% of the MNI. Likewise, raccoon was represented by one element in the 600R600 unit (Table 24), contributing 0.98% of the biomass and 9.1% of the MNI.

The eastern cottontail was also identified in the 38CH1466 faunal assemblage, but only in the shell midden context (Table 23). Like raccoon and opossum, rabbits occupy a number of different habitats. It prefers eastern deciduous forests and forest edge habitats, but it also lives in upland thickets, grasslands and along weedy fence rows (Choate 1994). For 38CH1466, the cottontail contributed 0.84% of the biomass weight and 5.9% of the total MNI.

The two skeletal elements identified as bobcat were associated with the shell midden excavation at 38CH1466 (Table 23), and its presence is probably associated with the Woodland occupation rather than historic disturbance. Ethnohistoric evidence suggests that the bobcat could have been used for food or hunted for its fur (Leftler 1967). Although not commonly associated with diet, modern-day Algonquian Indians of Canada have reportedly eaten lynx (Wilson 1983). Cranial elements of the bobcat were used for ceremonial purposes by Indians in the Ohio Valley (Parmalee 1959). Bobcats live in a variety of habitats, but they prefer areas of dense vegetation, swamps, rocky outcrops, and forest habitats (Choate et al. 1994).

Domestic Birds

The only domestic bird species identified in the faunal remains was the chicken (*Gallus gallus*). Chickens are relatively easy to keep. Like pigs, they can feed themselves scavenging for available foods or they can be kept in pens and cared for by humans. Chicken was a popular food resource for both slave and plantation owners in the eighteenth and nineteenth centuries. In addition to meat, they provided eggs for food and cooking ingredients (Hilliard 1972:46-47) and possibly feathers which would have been useful for bedding.

Table 26.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Level 1 (38CH1466).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
Domestic Mammals							
Cow, *Bos taurus*	40	2	7.7	483.08	30.85	6.8488	49.21
Pig, *Sus scrofa*	11	2	7.7	82.05	5.24	1.3889	9.98
Wild Mammals							
Deer, *Odocoileus virginianus*	37	5	19.2	209.69	13.39	3.2316	23.22
Raccoon, *Procyon lotor*	1	1	3.8	2.44	0.15	0.0587	0.42
Opossum, *Didelphis virginiana*	1	1	3.8	1.49	0.09	0.0376	0.27
Eastern Cottontail, *Sylvilagus floridanus*	3	1	3.8	3.15	0.2	0.0739	0.53
Bob Cat , *Lynx rufus*	2	1	3.8	4.32	0.27	0.0981	0.7
Unidentified Mammal	280	-	-	556.3	35.53	-	-
Unidentified Mammal Burned Bone	35	-	-	22.72	1.45	-	-
Total Mammal	410	13	49.8	1365.24	87.17	11.7376	84.33
Aves							
Chicken, *Gallus gallus*	1	1	3.8	0.49	0.03	0.0106	0.07
Turkey, *Meleagris gallopavo*	2	1	3.8	4.42	0.28	0.0789	0.56
Total Aves	3	2	7.6	4.91	0.31	0.0895	0.63
Reptile							
Box Turtle, *Terrapene carolina*	9	1	3.8	9.13	0.58	0.1391	1
River Cooter, *Pseudemys floridina*	13	1	3.8	12.52	0.79	0.1719	1.23
Unidentified Turtle	11	-	-	12.47	0.79	-	-
Corn Snake, *Elaphe guttata*	1	1	3.8	1.13	0.07	0.0156	0.11
Rattlesnake, *Crotalus sp.*	3	1	3.8	3.34	0.21	0.0466	0.33
Unidentified Snake	1	-	-	0.26	0.01	-	-
Total Reptile	38	4	15.2	38.85	2.45	0.3732	2.67
Pisces							
Hardhead Catfish, *Arius felis*	1	1	3.8	0.15	0.01	0.0033	0.02
Unidentified Drum, *Scianidae* spp.	3	-	-	3.27	0.21	0.0935	0.67
Black Drum, *Pogonias cromis*	49	4	15.4	148.94	9.51	1.5777	11.33
Red Drum, *Sciaenops ocellatus*	1	1	3.8	0.55	0.03	0.025	0.18
Southern Flounder, *Paralichthys lethostigma*	1	1	3.8	0.62	0.03	0.0172	0.12
Unidentified fish species	6	-	-	3.22	0.2	-	-
Total Pisces	61	7	26.8	156.75	9.99	1.7167	12.32
Total	512	26	99.4	1565.75	99.92	13.917	99.95

In the faunal collection, chicken was not well represented with only two individuals identified. At 38CH1466, one element was identified in the 600R600 unit (Table 24). The biomass contribution was 0.18% and 9.1% of the total MNI. At 38CH1477, chicken was also identified by one element (Table 28), contributing 0.01% of the biomass and 6.67% of the MNI at the site.

Wild Birds

Turkey (*Meleagris gallopavo*) was the only wild

Table 27.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for Feature 1, East Half (38CH1466).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
Wild Mammals							
Deer, *Odocoileus virginianus*	1	1	33	1.51	17.25	0.0381	16.9
Unidentified Mammal	4			4.76	54.4	0.1071	47.51
Total Mammal	5	1	33	6.27	71.65	0.1452	64.41
Reptile							
River cooter, *Pseudemys floridina*	1	1	33	1.45	16.57	0.0405	17.96
Total Reptile	1	1	33	1.45	16.57	0.0405	17.96
Pisces							
Unidentified Drum, *Scianidae* spp.	1	1	33	1.03	11.77	0.0397	17.61
Total Pisces	1	1	33	1.03	11.77	0.0397	17.61
Total	7	3	99	8.75	99.99	0.02254	99.98

bird identified in the collections and was only identified in the shell midden area at 38CH1466 (Table 23). The turkey MNI for the faunal assemblage is one (5.9%), constituting 0.9% of the total biomass. The turkey has long been considered an important food source for prehistoric Southeastern populations (Hudson 1976; Leftler 1967; Swanton 1946). Not only did turkey provide food, but its bones were fashioned into tools, such as awls and ornaments such as bone beads (Wilson 1983). Feathers were used for headdresses, cloaks, and ceremonial fans (Hudson 1976) and in the manufacture of arrows (Swanton 1946).

Reptiles

Two reptile species were classified as turtle in the 38CH1466 collection. These species were river cooter (*Pseudemys florida*), and box turtle (*Terrapin carolina*). The river cooter is found primarily in and around bodies of fresh water such as ponds, swamps, rivers, canals, and on occasion brackish waters (Obst 1986:109). These turtles can be seen on land sunning themselves or looking for areas to nest. According to Hilliard (1972:89), the river cooter was used as a food resource in the South during the eighteenth and nineteenth centuries.

The other turtle species identified was the box turtle. This turtle is widespread throughout the southeast, and can be seen both in terrestrial (open or mixed forests where the climate is hot and dry in the summer and winters are mild) and permanent water environments (lakes, streams, etc.) (Obst 1986:106). It like the other species was also used as a food resource during the nineteenth century in the south (Hilliard 1972:89).

The box turtle was found in the shell midden context (Table 23) and represents 5.9% of the MNI and 1.58 percent of the total biomass. Box turtle appears to have contributed more to the diet than several small mammals but somewhat less than fish. River cooter was identified in both non-midden contexts. For the 600R600 unit (Table 24) it represents a rather small contribution (9.1% MNI and 1.82% biomass). In contrast the turtle contribution is for the 345R460 units (Table 25) is somewhat greater (20% MNI and 9.3% biomass), but the faunal assemblage in considerably small (29 NISP).

One alligator tooth was identified in the 38CH1477 level 1 units (Table 28). Alligators are the largest reptiles in North America. They grow from six to fifteen feet long and can be found in freshwater, brackish marshes, swamps, rivers, and bayous (Wernert 1982).

Pisces

Fish varies in its role in the 38CH1466 and

Table 28.
Minimum Number of Individuals (MNI), Number of Bones, Weight, and Estimated Meat Yield by Species for 820-830R510, 840-850R480-520, Level 1 (38CH1477).

Species	NISP	MNI #	MNI %	Weight gm	Weight %	Biomass kg	Biomass %
Domestic Mammals							
Cow , *Bos taurus*	133	10	66.66	1323.84	89.75	16.9688	87.04
Pig, *Sus scrofa*	28	2	13.33	124.82	8.46	2.026	10.39
Wild Mammals							
Deer, *Odocoileus virginianus*	5	1	6.67	21.98	1.49	0.4244	2.18
Unidentified Mammal	269	-	-	513.73	-	-	-
Unidentified Mammal Burned Bone	94	-	-	122.37	-	-	-
Total Mammal	529	13	86.66	2106.74	99.7	19.4192	99.61
Aves							
Chicken, *Gallus gallus*	1	1	6.67	0.71	0.05	0.0015	0.01
Total Aves	1	1	6.67	0.71	0.05	0.0015	0.01
Reptile							
Alligator, *Alligator mississippienis*	1	1	6.67	3.13	0.22	0.0734	0.37
Total Reptile	1	1	6.67	3.13	0.22	0.0734	0.37
Unidentified Bones	1	-	-	0.6	-	-	-
Total	532	15	100	2111.18	99.97 (n/1475.02)	19.4941	99.99

Total Biomass all Weight	Biomass kg	Biomass %
Mammal	25.778	99.71
Aves	0.0015	0.01
Reptile	0.0734	0.28
Pisces	0	0
Total	**25.8529**	**100**

38CH1477 diets. Interestingly, no fish was identified in the extensive level 1 excavations at the historic site, 38CH1477 (Table 28), but several elements identified as drum species were observed in the auger test at the site (Table 22). Only four species of fish were identified in the 38CH1466 faunal collection. Both identified and unidentified fish made up 9.09% of the total biomass from the site (Table 26). The four species identified include hardhead catfish (*Arius felis*), black drum (*Pogonias cromis*), red drum (*Sciaenops ocellaatus*),

and possibly Southern flounder (*Paralichthys lethostigma*). Drum and young catfish are commonly found in bays and estuarine environments, as well as tidal shores (Boschung et al. 1983; Marrinan 1974). Of the drum species, black drum is the largest weighing up to 109 pounds followed closely by red drum at around 92 pounds.

The sea catfish species or the hardhead catfish is commonly used for food. Hardhead catfish is the larger of the two sea catfish species weighing around 12 pounds while its cousin, gafftopsail catfish average about 5-6 pounds. Southern flounder are bottom dwellers found along the North Carolina coast to Florida (Robbins et al. 1986). All species were identified in the shell midden faunal assemblage (Table 23) while only drum was identified in the non-midden areas (Tables 24 and 25) and Feature 1 (Table 27).

Commensal Species

Commensal species include animals found near or around human habitations but are not generally consumed by humans. These animals include pets, pests, vermin and animals that feed on them. Dogs, snakes, amphibians, rats and mice are common examples of commensal species. Two snake species corn snake (*Elaphe guttata*) and the rattlesnake (*Crotalus* spp.), represent the commensal species identified. Both were associated with the shell midden provenience (Table 23) while vertebrae also believed to be rattle snake were observed in the 600R600 unit (Table 24).

Results

Three levels of inquiry are used in this investigation. The first involves an inventory of the animal remains associated with each of the areas and the determination of their representation in the diet. Second, modifications of the bone elements, such as cut marks and rodent gnawing, are consider in hopes of providing insights into butchering techniques. Finally, the number and weight of bone elements representing different cuts of meat in the large mammals (cow and deer), are compared to provide information on which cuts were most likely consumed and which cuts were under or over-represented in the collection.

Before discussing the results of the analysis of the faunal assemblages recovered for 38CH1466 and 38CH1477, a few comments concerning the bone sample size need to be offered. As mentioned earlier in this study, the recommended size for a reliable faunal sample is 200 MNI or 1400 NISP (number of identified specimens) in order to provide reliable interpretations (Grayson 1973; 1984; Wing and Brown 1979). Examination of the Tables 22-28 indicates that the faunal samples recovered during the excavations of 38CH1466 and 38CH1477 are in every case well below the minimum size suggested. Since there are clear possibilities for bias and under-representation of faunal species the inferences and interpretations presented here should be considered preliminary at best. However, it is reasoned that such interpretations are necessary in order to answer existing questions and develop further questions concerning diet at the two sites.

38CH1466

The prehistoric occupation of the area is represented by the units associated with 38CH1466. Two major excavation areas, the shell-midden (590R510-600R510) and non-shell midden areas (600R600 and 345 units), are included. Fauna identified for the shell-midden area is listed in Table 23. Unfortunately, as is evidenced by the presence of domestic mammals, this area had been used during historic times, probably as a discard area for a nearby structure. Clearly if no historic disturbance had occurred at the midden, the faunal collection would have provided insight into prehistoric Woodland diets in the area. Despite its disturbed condition several interesting patterns surfaced. First, the shell midden faunal collection contained the largest number of wild species (n=12) (Table 23) when compared with the other assemblages (Tables 24, 27, and 28). Second, the wild animals identified in the collection occupy a diversity of habitats indicating a generalized use of the environment. The two non-midden areas excavated at the site also contain domestics (Tables 24 and 25). The only context at 38CH1466 that did not contain domestic animals was Feature 1 (Table 27). This finding was unexpected given that Feature 1, in addition to prehistoric artifacts, contained an assemblage of nails and historic ceramics. Although Feature 1 contained a

small quantity of animal bone (NISP=7), mammal, reptiles, and fish were all represented.

Table 26 combines the faunal materials recovered from level 1 at the site. When domestics are ignored, fish and wild mammals appear to surface as important dietary resources, followed by turtles and finally the one wild bird identified, turkey.

Modified bone is presented in Table 29. Where bone modification occurs, burning is the most common form identified at the site. Interestingly, the only sawing or cutting occurred in the shell midden collection where sawing was identified on a cow element and one pig bone had been cut.

Figures 47 and 48 provide the log difference scale for cattle (Figure 47) and deer (Figure 48) for 38CH1466. The zero line indicates a "standard" model of bone representation for the species. Any deviation from the zero axis indicates over (+) or under (-) representation of the elements in a category. Figure 47 indicates that cattle bones recovered from the site were predominately teeth and cranial elements while the other categories are under represented. This pattern for 38CH1466 may reflect the better preservation of dental remains (due to enamel) or it might indicate that the other parts were discarded elsewhere. It should be noted that the "foot" category includes the hindfoot , forefoot, and foot bones. For deer, the log difference scale for 38CH1466 is relatively close to the zero axis. One interpretation is that the deer bone is associated with the prehistoric settlement and the entire deer was butchered and discarded in the same general area.

Table 29.
Bone Modifications Recorded for 38CH1466 and 38CH1477 (by number)

Site/Unit	Burned	Sawed	Cut
38CH1466			
Feature 1			
UID mammal	4		
Total	4	-	-
590-600R510, Lv. 1			
Cow	1	2	
Pig		1	
UID mammal	34		
Total	35	2	1
345R460-465, 350R460-470, Lv. 1			
Deer	2		
UID mammal	1		
Total	3	-	-
38CH1477			
All Units, Lv. 1			
Cow	1		
UID mammals	94		
Total	95	-	-

38CH1477

38CH1477 represents the slave habitation for a small plantation. Little research has been completed on small plantation culture which comprise the vast majority in South Carolina. Instead, much plantation research in South Carolina has focused on large plantations and the wealthier owners. The slave diet at 38CH1477 (Table 28) appears to rely heavily (97.44% of the total biomass) on domestic animals, cow, pig, and chicken. Some deer is represented (2.185% of the total biomass), which might indicate that hunting was used to supplement the slave diet. Alligator may have been used to supplement the diet as well. The one alligator tooth observed in the 38CH1477 assemblage may represent the only preserved element from the specimen. Another explanation for its presence is that alligators, as reptiles, loose and replace teeth throughout their life.

The high dependency on domestic animals by the slave population at 38CH1477 is expected based on slave diets recorded elsewhere in South Carolina. At Seabrook Plantation, 38BU323 (Campo et al. 1998), 94.2% of the total biomass consisted of domestic mammals (Hogue 1998: Table 58). Likewise, at Broomhall Plantation, 38BK985 (Trinkley et al. 1995), over 95% of the total biomass consist of domestic animals (Hogue et al.1995). Two major differences stand out when the three faunal assemblages are compared. At 38CH1477, no sheep elements were identified in the collection. In contrast, sheep made up

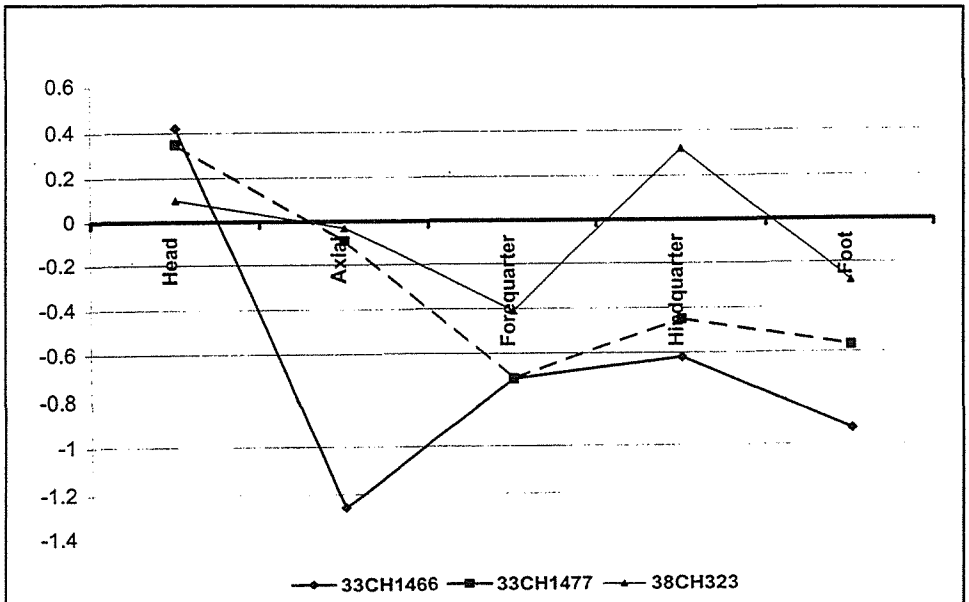


Figure 47. Log difference scale for cattle.

could support the economic explanation discussed earlier. Slaves at smaller plantations may have been forced to supplement their diet, as less domestic resources were available to them.

Bone modifications at 38CH1477 (Table 29) consisted solely of burned bone with neither sawing nor cutting observed on the bone elements. This pattern could reflect sample size or different processing of cattle and pig at the plantation. At Seabrook Plantation, 56% of the bones modified had been burned and 27% sawed.

4% at Broomhall (Hogue et al. 1995) and over 8% of the biomass weight at Seabrook Plantation (Hogue 1998). According to Hilliard (1972) sheep played a minor role as a subsistence resource in the Southeast possibly because of the acquired taste for venison by Europeans (Carson 1985:2). The absence of sheep at 38CH1477 may reflect the economic differences between the small and large plantations in South Carolina. Small plantation owners may have not been able to afford or did not have the labor to engage in sheep production. A second deviation between the three slave faunal assemblages is that deer is found only in the 33CH1477 collection. This lack of deer at the larger slave plantations

When the log difference model is used to compare cuts of beef (Figure 47), 33CH1477 shows

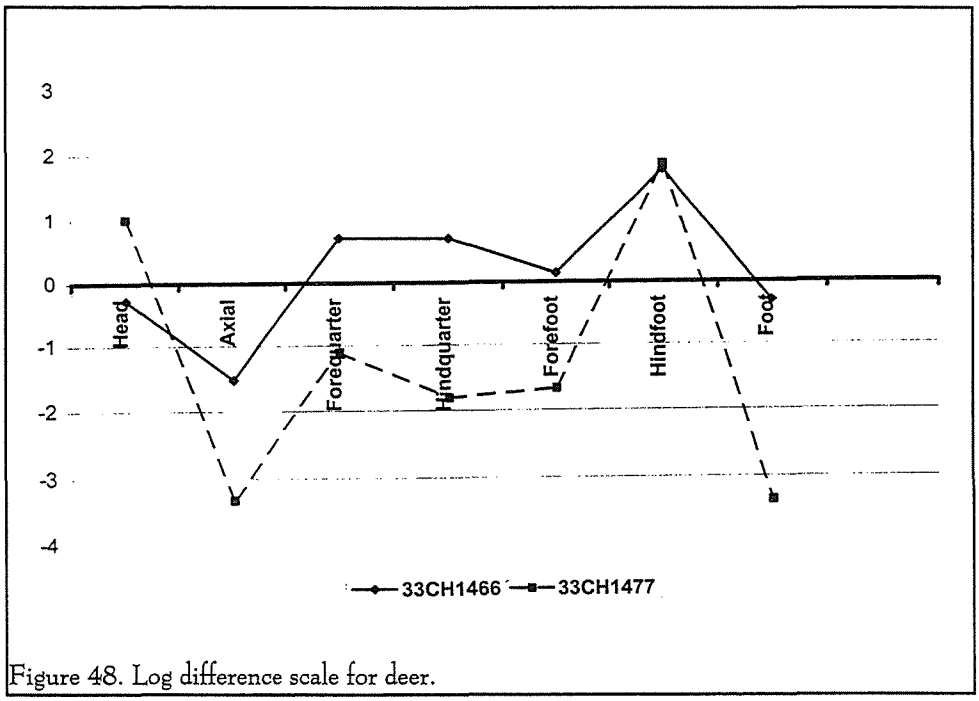


Figure 48. Log difference scale for deer.

under-representation of all cuts except "head". In contrast, cuts of beef associated with the slave population at Seabrook Plantation (38CH323), indicate fairly standard representation of head and axial elements with over-representation of hindquarter and under-representation of forequarter and foot bones. In short, the slaves at Seabrook Plantation had access to better cuts of beef than those at the smaller Seaside Plantation (33CH1477).

Interestingly, when the log difference model for deer is used (Figure 48), most categories are under-represented except the head and hindfoot. If slaves at 33CH1477 were supplementing their diet with deer, it is expected that the log difference pattern would appear more like the one for 38CH1466. One interpretation may be that the slaves at 38CH1477 were given the poorer cuts of deer, while the better cuts were reserved for the owner's table. In this sense deer may have functioned much like cattle in the foodways of at least this one small plantation.

Conclusions

The faunal collections recovered from excavations at 38CH1466 and 38CH1477 are generally dominated by domestic mammals. The prehistoric Woodland site, 33CH1466, unfortunately had been disturbed into historic times as a relatively large percentage of the collection contained cattle and pig. Because of this disturbance, little can be concluded concerning the prehistoric Woodland diet. However, the variety of wild species represented in the assemblage (Tables 23-27) indicates a generalized use of the environment including forest and marine resources. Likewise, when domestics are ignored, the deer and fish appear to play a major role in the diet. Most of the species identified at 38CH1466 were associated with the shell midden area (Table 23) at the site possibly indicating better bone preservation in these units.

The diet for the slave inhabitants at 38CH1477 was assessed. The slaves differ from others studied in the area as they were associated with a small plantation rather than a large wealthier one. Domestic mammals played a major role in the diet (Table 28), a pattern seen among other slave populations in South Carolina. When comparisons are made among faunal collections associated with slave dwellings, 33CH1477 stands out from others as there is no sheep represented and deer is present. Further comparisons of beef and deer cuts using a log difference scale (Figures 47 and 48) point to poorer cuts of meat (predominately head) being present at 33CH1477. One conclusion drawn from this data is that the slaves at Seaside Plantation were not as economically well off as slaves living at large plantations, a reflection perhaps of the economic differences in plantation wealth.

RADIOCARBON DATING

Introduction

Two samples from 38CH1466 were identified as appropriate for radiocarbon dating. One was Feature 2, which contained a single Wando Plain sherd. The other was Feature 3, which contained two Wando Plain, one Hanover Plain, and two Hanover Fabric Impressed sherds. While both assemblages are spartan, these were the only sealed contexts which produced Native American collections.

Neither feature produced a great deal of charcoal. While the amounts might be suitable for conventional beta-counting methods with extending counting, if any of these pieces were from earlier (or later) fires, such as forest fires and wind-blown charcoal from other pits, the resulting date would be an average of all of the individual pieces of charcoal.

Consequently, we chose to use Accelerator Mass Spectrometry (AMS) instead of conventional beta-counting. Conventional dating measures the radiocarbon age by measuring the radioactivity of the sample. In contrast, AMS directly counts the radiocarbon atoms by converting the atoms in the sample into a beam of fast moving ions. The mass of these ions is then measured by the application of magnetic and electronic fields.

Accuracy and precision of AMS is generally similar to conventional radiometric dating. In fact, some have suggested that the best conventional counters can achieve higher precision and lower backgrounds than AMS, *assuming a suitably large, pure sample is used*. Of course, this is rarely the case in archaeology. So, the benefit is the much smaller sample size that is necessary. In general, samples containing 0.00025 to 0.3 g of final carbon are adequate for AMS dating.

Small samples do have their drawbacks, such as the greater mobility within deposits and more difficulty in controlling contaminants. Nevertheless, for 38CH1466, we believe that AMS dating was far superior to conventional beta-counting methods.

In addition to the C14 counting, we also examined the stable isotope ratios (C13/12). Measurement of the 13C/12C ratio allows for correction of the measured 14C age based on the amount of isotopic fractionation (enrichment or depletion) in the sample, as compared to the modern standard. For best accuracy this ratio is requested along with radiometric dating. Without it, one is assumed in age calculation. While this assumption can often be very close, many plant materials may introduce a sizeable error without measurement of the 13C/12C ratio.

The dating was conducted by Beta Analytic, Miami, Florida. They noted that the samples provided more than adequate carbon for accurate measurement and that all analyses went normally.

Results

The results of the AMS dating are provided as Figures 49 (for Feature 2) and Figure 50 (for Feature 3).

Feature 2 yielded a date of 1220 ± 40 B.P. (Beta-150815; wood charcoal; $\delta^{13}C$ = -26.1‰). The calibrated date is A.D. 790, with a range from A.D. 770 to 880.

Feature 3 yielded a date of 1150 ± 40 B.P. (Beta-150816; wood charcoal; $\delta^{13}C$ = -27.5‰). The calibrated date is A.D. 890, with a range from A.D. 870 to 960.

The uncalibrated dates are only 70 years apart; with a plus-or-minus of 40 years, they overlap. The calibrated dates are slightly further removed from each other, but there is, again, an overlap of the one-sigma standard error. Based on this it appears that the sample which contained both Wando and Hanover might be

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.1:lab. mult=1)

Laboratory number: Beta-150815

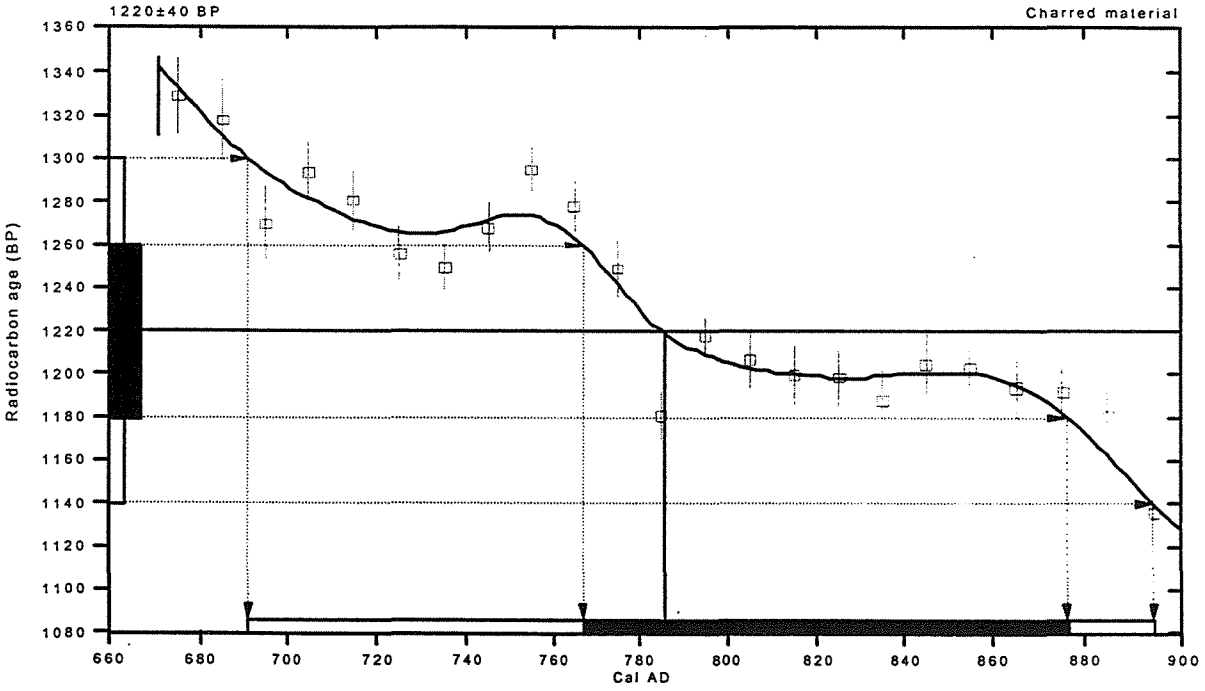
Conventional radiocarbon age: 1220±40 BP

2 Sigma calibrated result: (95% probability) Cal AD 690 to 900 (Cal BP 1260 to 1060)

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 790 (Cal BP 1160)

1 Sigma calibrated result: (68% probability) Cal AD 770 to 880 (Cal BP 1180 to 1070)



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Database used

Calibration Database

Editorial Comment

Stuiver, M., van der Plicht, H., 1998, Radiocarbon 40(3), pxii-xiii

INTCAL98 Radiocarbon Age Calibration

Stuiver, M., et. al., 1998, Radiocarbon 40(3), p1041-1083

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

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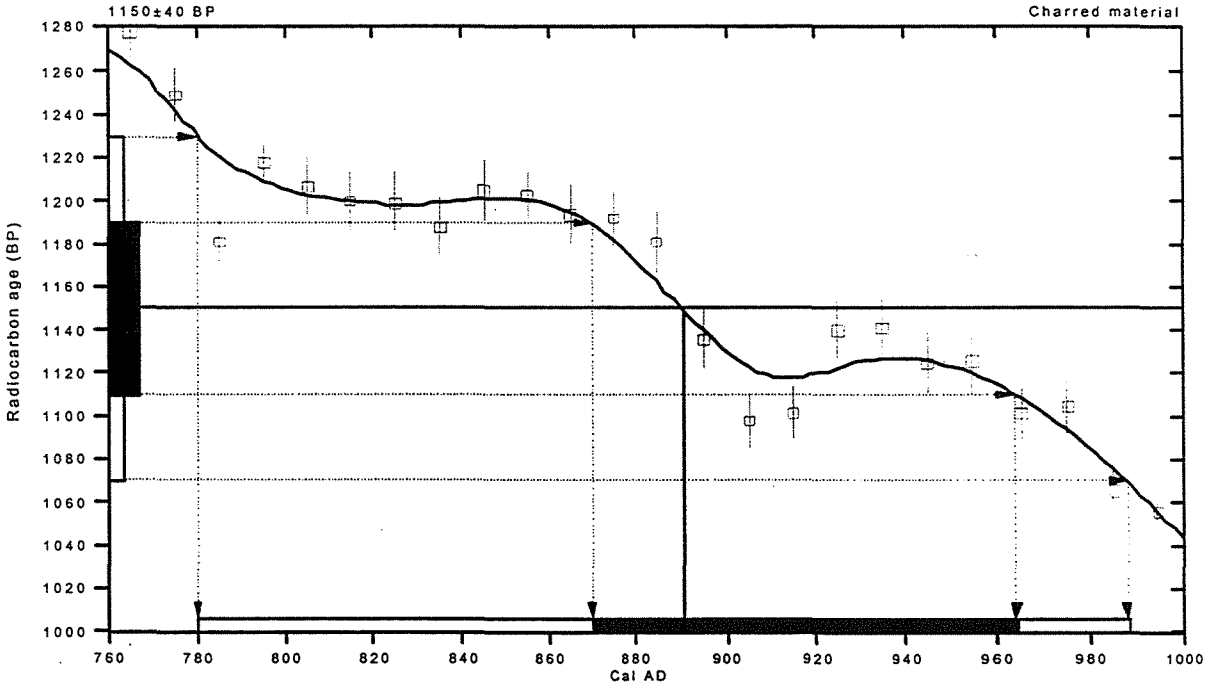
Figure 49. Feature 2, calibration of radiocarbon age to calendar years (Beta-150815).

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-27.5:lab. mult=1)

Laboratory number:	**Beta-150816**
Conventional radiocarbon age:	**1150±40 BP**
2 Sigma calibrated result: (95% probability)	**Cal AD 780 to 990 (Cal BP 1170 to 960)**
	Intercept data
Intercept of radiocarbon age with calibration curve:	Cal AD 890 (Cal BP 1060)
1 Sigma calibrated result: (68% probability)	Cal AD 870 to 960 (Cal BP 1080 to 990)



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INTCAL98 Radiocarbon Age Calibration

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Figure 50. Feature 3, calibration of radiocarbon age to calendar years (Beta-150816).

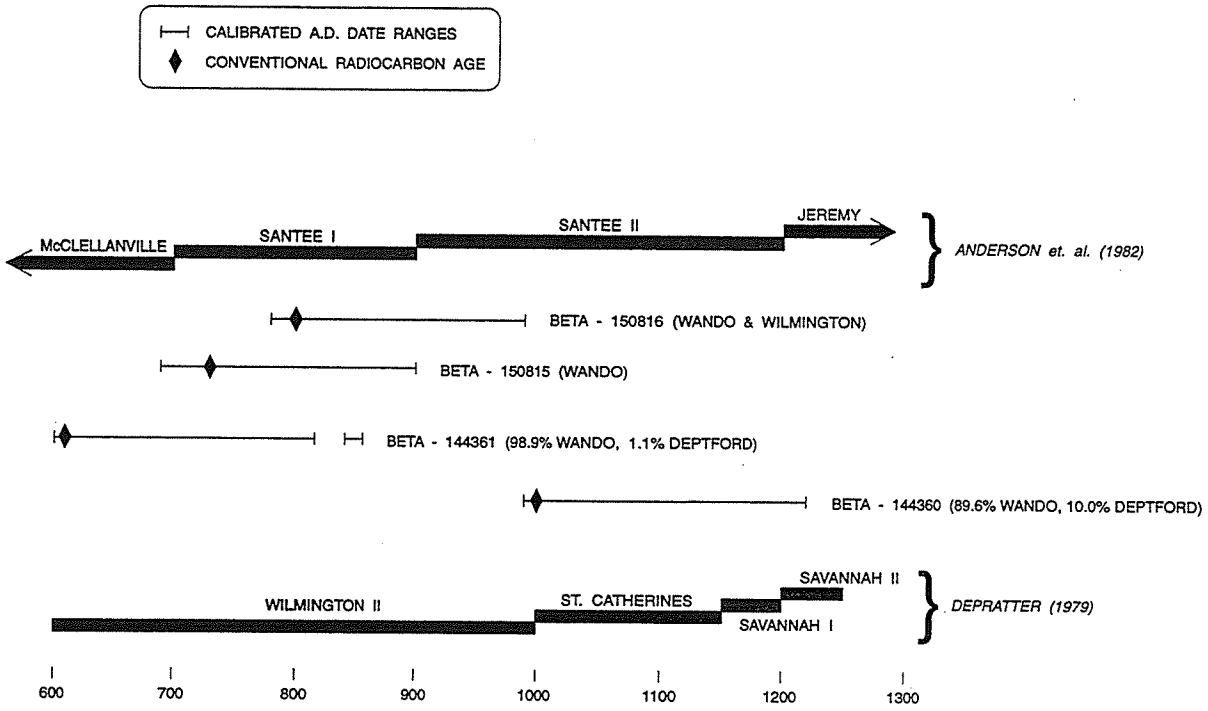

Figure 51. Plot of radiocarbon dates associated with the Wando Series.

slightly later in time than the sample which contained only Wando pottery. But we again caution the reader that the collections are very small.

The only other possible Wando dates we have found are those from Parker Island (38CH1025), provided by our colleagues at Brockington and Associates. There two dates were obtained. One, from a shell midden associated with 234 Wando sherds, 26 Deptford sherds and one Stallings sherd, was 950 ± 60 B.P. (Beta 144360). The other, from this same site, also came from a shell midden context with 87 Wando sherds and one Deptford sherd, was 1340 ± 70 B.P. (Beta 144361). The calibrated dates are A.D. 990-1220 and A.D. 600-815/840-855 respectively (Eric Poplin, personal communication 2001).

As seen in Figure 51, all of these dates fall within the Wilmington II period as defined by DePratter (1979) at the mouth of the Savannah River to the south of the project or within the McClellanville, Santee I and Santee II periods as defined by Anderson et al. (1982) based on their work to the north-northwest in the vicinity of Mattassee Lake.

CONCLUSIONS

These excavations explored two archaeological sites found on the Seaside Farms tract in 1992. One, 38CH1466, was a prehistoric site which during the original survey produced primarily Deptford pottery, along with Hanover, Santee-McClellanville, and a few sherds with an unusual aplastic inclusion thought to be limestone. These sherds were identified as Wando at the time, although very little was known about them or their temporal placement. The site was considered to be important since further work might be able to address the Wando pottery and its place in coastal chronology.

The other site, 38CH1477, was a historic occupation, thought to represent the slave settlement of Moses Whitesides. The site produced a range of creamwares, pearlwares, and whitewares, yielded a mean ceramic date of 1809. While some early ceramics were present, Colono pottery was not common. Nevertheless, this site was deemed important since it tied into previous work conducted at the neighboring John Whitesides plantation and could provide us with a glimpse of how African American slaves lived on the farm or plantation of a small freeholder.

Subsequent data recovery investigations were conducted at these two sites in early 1999. Heavy rains and the low setting of the sites required some methodological modifications of our work. In addition, we found that the western half to two-thirds of the historic settlement, 38CH1477, had been affected by a construction staging area (not associated with any work by our client). The good news was that we found a portion still preserved in dense woods. The bad news was that those dense woods precluded stripping as a means of feature discovery. We also discovered that since the original survey, the prehistoric site had been quickly taken over by a dense thicket, which also precluded the effective use of stripping. At both sites we used auger testing to help focus in our excavations on those areas which exhibited the greatest density, coupled with best access.

38CH1466

Our work included the excavation of three distinct areas at the prehistoric site (38CH1466) — one shell midden area and two non-shell midden areas. As we opened our units we discovered that excavation required far more time than anticipated (both because of the abnormally wet conditions and also because the area was now forested). In addition, and of far greater concern, we discovered far more historic materials in the units than was suggested by the original survey.

The presence of historic remains throughout excavations in 38CH1466 caused a variety of problems. It required that we abandon a variety of anticipated analyses, including pollen, phytolith, and shell, since it was impossible to ascertain the temporal association of the shell or eliminate possible mixing. The faunal analysis of these collections was of limited use for the same reason.

What was useful, we believe, is the detailed analysis of the pottery present in the collection. While we weren't able to tease out any stratigraphic information, we were able to examine assemblages of Deptford, Hanover, and Wando pottery. For all three the strength of this work is the detailed analysis of the materials recovered from this location. Rather than simply describing the pottery as "gritty," "sandy," or some similar imprecise term, we have tried to be very clear in our descriptions.

In terms of the Deptford wares, there is variation, but it is overwhelmed by the consistency of the paste — a fine sandy clay with generally sparse amounts of medium to very coarse quartz grain inclusions. Firing practices appear poorly controlled, suggestive of above ground firing with only minimal efforts to control heat and sooting. Check stamping included three variations, one of which is sometimes classified as Oemler Complicated stamped. The cord marking includes both left and right twists, with the

latter being about twice as common as the former. While the left final twist cordage is harder or more tightly twisted, the diameter of the cordage is similar and we see relatively little reason to distinguish the two varieties. Some of the simple stamped pottery might have been classified as McClellanville or Santee, but with a plowzone collection, we were reluctant to do this. In fact, the collection fit in nicely with the Deptford wares on the basis of paste. We did notice a difference in the cross-section of the grooves, with those having V shaped grooves also exhibiting narrower impressions than those with U shaped groves. In terms of the fabric impressed pottery, we agree with Cable's previous assertions that there is no substantive paste difference between this surface treatment and any of the others. We could see, in other words, no reason for sorting it out and classifying it as Cape Fear.

Turning to the Wando assemblage we were able to offer far more detail concerning this pottery than was available in our original type description and hope that other researchers are able to build on our analysis to expand the understanding of this particular ware. The paste is dominated by very fine to fine sand, although slightly less than a third of the sherds evidence larger quartz sand inclusions. What are identified as carbonate inclusions are found both as large white masses and also as voids, the latter presumably reflecting holes left by the inclusions as they leach out in acidic soils. The intact particles range from about 0.5 to 6 mm, with most having a modal diameter of 1 to 2 mm.

The most significant discovery came from the petrographic analysis of two sherds. In one we were able to identify large crystal carbonates which are not characteristic of marls. In the other, we found an absence of carbonate material. Instead, the aggregate consisted of clinozoisite — what might be called claystone. Although the two look similar in a quick visual inspection they are clearly different in petrographic analysis.

The cord marked wares included both left and right twists, but there are distinct differences with the Deptford examples. For example, there are no examples of very heavy cords and the paddles were more carefully wrapped, with the cordage being more evenly spaced. The simple stamped wares evidence less variability than the Deptford, with most of the collection being very similar to the pottery previously identified as McClellanville or Santee.

We are inclined to see the Wando pottery as a variant on the theme of Wilmington, with the Wando potter using either limestone or claystone rather than grog. Although different material was used, the end result, it appears, was very similar. Curiously, this same conclusion was reached by colleagues in North Carolina looking at a pottery called Hamp's Landing.

The Wando and Wilmington pottery at 38CH1466 has been tightly dated to between about 700 and 1000 A.D., with an overlap between about 800 and 900 A.D. Wando pottery has been found in large quantities by our colleagues at 38CH1025. While we have no information concerning any typological details, the Wando pottery, associated with Deptford, was dated from about 600 to 850 A.D. and 1000 to 1200 A.D., with the earlier date associated with a zone containing less Deptford. Interpreted at face value, this suggests that the Wando is earlier than Deptford, but roughly coeval with Wilmington. This, however, reverses what we have good reason to suspect about both Deptford and Wilmington. While we are very "happy" with our dates, we don't know how they related to those from 38CH1025. Clearly, the work conducted thus far points out the need for yet additional work — that includes detailed typological studies, petrographic work, and the collection of material suitable for AMS dating.

The last pottery present at 38CH1466 is Wilmington. The matrix of the pottery is a very fine sand. Aplastics include grog inclusions, typically accounting for about a quarter of the sherd's volume. These clay inclusions (we found nothing that could be called a "broken sherd") range from about 0.5 to 4 mm. Two distinct fabrics were identified in the 38CH1466 collections. One has generally small, soft warp rods and is characterized by much overstamping. The other has rigid, relatively large warp rods with much less overstamping. In terms of the cordage, we had a very small sample, but it appeared almost identical to the Deptford wares.

Turning to other materials, about the only remains worthy of note were the number of lithics found

at the time. Of greatest interest to us was the recovery of siltstone as both recognizable flakes and also tools (including one Yadkin point that was likely associated with the Deptford pottery at the site). Although this material is not uncommon, it is usually blocky, suggesting that a knapper had tried and abandoned the material as unsuitable. In this collection it appears that a source was found that was marginally workable and it was used. This points out that on the stone poor coastal plain there must have been a constant search for suitable materials.

The other materials were primarily cherts, which included a heavily battered Morrow Mountain I point and fragments that are consistent with types such as the Small Savannah River and Gypsy — which may also have been used along with the Deptford pottery.

The historic materials found at 38CH1466 are worthy of at least a brief comment. The mean ceramic date for the collection is 1850, although we believe that the terminal date is likely in the last quarter of the nineteenth century. A pattern analysis of the collection reveals that it fits within the admittedly broad parameters of the Piedmont Tenant/Yeoman Artifact Pattern, and is a very close match to that identified at the freedman's village of Mitchelville on Hilton Head Island.

We believe that the collection is consistent with what would be expected from a small, isolated, farmstead of a free black immediately after the Civil War. As we did additional historical and cartographic research, we identified just such a settlement on the 1875 Coast Survey map. While undocumented, we suspect that this was likely a wage laborer on the postbellum plantation. Although this was not a focus of our research design, it provides important information supporting the Tenant/Yeoman and Mitchelville patterns.

The recovered prehistoric materials don't provide a great deal of help in trying to "reconstruct the lifeways" of the people who lived at 38CH1466. As previously mentioned, the mixing of prehistoric and historic materials didn't allow us to explore the use of shellfish in the diet, or to obtain reliable pollen or phytolith samples. The faunal material was equivocal. There are species likely to represent prehistoric use, but the samples are small and the mixing makes definite attribution impossible.

As a result, the contribution of 38CH1466 must rest on the typological and chronological information — primarily as it relates to the "mysterious" Wando pottery.

38CH1477

In the historic area (38CH1477) we opened a block consisting of 12 10-foot units. While we found a sizeable historic collection we were unsuccessful in our efforts to identify architectural remains.

With additional background research, we discovered that both sites had historically been heavily plowed. This accounts for some mixing of remains, as well as the absence of features in the historic block.

The historic research also helps better understand the activities at the slave settlement. We identified a variety of owners from the mid-eighteenth century until the Civil War, although the Whitesides appear to have held the tract until about 1856 (see Table 30). In the four years ca. 1856 and 1860 the property passed through three different owners and we believe that the bulk of these were absentee and looked at the plantation as an investment. Consequently, the bulk of the activities and events observed in the slave settlement are attributable to Moses Whitesides.

Table 30.
Ownership of the Study Tract
Prior to the Civil War

Thomas Whitesides
↓ will 1762
Sarah Whitesides (wife, life estate)
↓ plat 1798
Moses Whitesides (son, by will)
↓ plat 1856
Theodore D. Wagner
↓ Deed 1857
B.J. Johnson
↓ Deed 1859
Peter P. Bonneau

The mean ceramic date for the site is 1813, which is exactly what we projected based on the historic documentation which suggested a beginning date of ca. 1762 and a terminal date of ca. 1865. On the other hand the terminal bracket date was found to be too early — likely because the Colono (which account for much of the early pottery) are not included in the bracket technique — and the beginning date was found to be too late — since by the nineteenth century the whitewares are not very time sensitive.

The artifact pattern, while not exact, is a pretty close fit with the Carolina Slave Artifact Pattern, generally attributed to eighteenth century slave settlements. This is perhaps one of the more interesting findings. Although the slave settlement, based on temporally diagnostic remains, was occupied from the middle of the eighteenth century through the middle of the nineteenth century, the artifact pattern is strongly suggestive of a pattern dominated by kitchen artifacts, with very little evidence of structural remains. At eighteenth century sites this is explained by rustic or ephemeral housing, such as the various wall-trench styles. And the pattern is seen changing in the nineteenth century as more permanent architecture is introduced.

The pattern analysis seems to suggest that this more permanent architecture — glassed windows, frame construction, structures raised above grade — was not seen at Moses Whitesides' Plantation. The pattern analysis reveals very few nails and little window glass. In fact, the window glass is so sparse that we wonder if it was actually used for glazing or if it may have had other functions. But this absence of permanent architecture is also supported by the finding, at 38CH1466, of at least one wall trench structure (Feature 1) which contained pearlware — a late eighteenth and early nineteenth century ceramic.

We believe that the use of impermanent architecture continued well into the nineteenth century at Moses Whitesides plantation, likely as a result of his economic status. By the time the plantation left the Whitesides family, it passed through a series of largely absentee owners who held the property for very short periods of time. It is unlikely that any of them would have been interested in making capital improvements on a plantation they did not intend to hold long. Consequently, we see the slave settlement at 38CH1477 remain in the same location throughout its history and to reveal no evidence of substantive improvement, in spite of the reform movements of the first half of the nineteenth century (e.g., Adams 1990:70ff.).

What we do seem to see at the slave settlement is evidence of changing foodways. While the pearlwares were dominated by hollow wares, the later whitewares were dominated by flatwares. Whether this reflects the choice of the African American slaves or the desire of the planter is not evident from the archaeological record. In fact, analysis is far more complex than this suggests.

When we look at the creamwares, we find that they are dominated by plate forms. We believe, however, that the bulk of these wares, charactered by expensive decorations, were coming from the planter's table and being passed down to the slave row.

With the introduction of pearlwares we begin to see something different. The flatwares are heavily weighted toward inexpensive motifs, while the hollow wares were evenly divided between expensive and inexpensive varieties. We believe that this signals the purchase of ceramics by the planter specifically for the use of his slaves (the low status flatwares and hollow wares) coupled with continued pass-along of higher status hollow ware from the planter's table.

The whitewares suggest an intensification of the purchase of ceramics specifically for slave use. There are even more flatwares and there seem to be fewer pieces making their way from the planter to his slaves.

When Millers' indices for these ceramics are examined, we obtain a view not so much of the slaves and their consumer choices, but rather the financial well being of the owner and what he chose to acquire for his African American slaves. The resulting figure of 1.57 is fairly low in the range of ceramic status, but it is mid-range for other slave settlements.

Another artifact which warrants some brief mention are the buttons from the slave settlement. This

site produced one of the largest assemblages of War of 1812 military buttons we have seen. The number lost and finding their way into the slave settlement may suggest that the plantation was the location of a mustering ground for the militia or that perhaps it was the location of a coastal lookout. Unfortunately, this is a period of South Carolina's history which has attracted relatively little scholarly interest.

In exploring the Colono pottery, we commented that the ware seems to exhibit attributes of both slave-made Yaughan and Indian-made Catawba. Regardless, there are at least a few clues that suggest the pottery was manufactured on site and probably represents vessels made by the slaves on the plantation. The vessels include both large bowls and pots probably used to prepare meals, as well as smaller bowls used to serve up individual meals. This helps reinforce our belief that at least during the eighteenth century one-pot meals were the norm.

Another feature which we believe is important in the Colono assemblage is the decoration. At 38CH1477 we found a variety of incised, cut, and impressed lines. While none are on the bases and none appear to be "cosmograms," all do seem to be strikingly similar and suggestive of a limited number of artisans. Although decorative motifs are found at other African American slave sites, generally little attention has been paid to the motifs or their application. It may be that this area is worthy of greater attention.

Unfortunately, the ethnobotanical remains from the slave settlement are sparse. We didn't find large, sealed repositories of trash, so we weren't able to make many observations concerning the plant remains. We did encounter a peach pit — again documenting the African American taste for this particular fruit. We also found hickory nut shells, which may be associated with the historic remains. While not commonly thought of as slave food, we note that hickories have been found at several other slave sites and may represent a small, but at times significant, dietary supplement. Also recovered were several polygonum seeds. Coming from a plant which is very much at home in disturbed habitats, we can't rule out the possibility that these seeds are simply accidental inclusions in the archaeological record. There are, however, abundant period accounts of the plant being used for a variety of medicines. We suggest that the dismissal of these seeds as only evidence of weeds may be missing a far more complex story of African American herb use.

Turning to the faunal remains at the site we find a small and admittedly plow-abused collection. Nevertheless, the slave diet appears to rely very heavily on domestic animals, primarily cow, pig, and chicken (with the emphasis on cow). One difference quickly noted in the collection is that this assemblage, unlike others examined from South Carolina, does not contain sheep. We believe that this may be an indicator of the reduced status of Moses Whitesides since sheep — or mutton in its final condition — is considered a high status food. No sawing or cutting was observed on any of the bone, suggesting processing on the plantation. When the cuts were examined, it became clear that the slaves at Moses Whitesides' plantation received a disproportionate share of cheap, head cuts. When the cuts of deer are examined, they too reveal that the slaves were receiving only the least desirable cuts. We suspect that the better cuts went to the table of the owner.

While a large number of slave settlements have been excavated, most have not been examined in the context of their owner. At 38CH1477 we have the opportunity to look at a slave settlement operated by a small, "typical" planter of Christ Church over a relatively long period of time. We see that the economic status of the owner did have consequences to his slaves — dwellings remained substandard well into the nineteenth century and foodways were noticeably lower in status. The observation concerning diet has been previously suggested at the William Pope slave row on Daufuskie Island (Trinkley 1989), so the results from 38CH1477 are particularly interesting.

When we compare and contrast the slave settlement of Moses Whitesides with the main settlement of his brother, John Whitesides (Trinkley and Hacker 1996), we see that in many respects the artifacts and food remains left behind make it difficult to distinguish the lifeways.

Yet there was a difference, well articulated by Stephanie McCurry, who noted that yeomen, "as freemen and masters in a world in which most were

neither, they knew their own freedom to be secured by riveting the unfreedom of others" (McCurry 1995:240). And so it was with the Whitesides; while John Whitesides may have been rather unsuccessful, especially by comparison to his brother Moses, and may have possessed physical trappings only slightly better than his brother's slaves, he was both white, free, and enfranchised. He was, in McCurry's words, a "master of a small world."

Far more useful than comparing slave to freeman, would be to compare slaves from the same area. Unfortunately, we do not yet have the data to do this. For example, the slave settlement of John Whitesides was destroyed before it could be studied and other slave settlements in the Christ Church area have not been studied in a manner that will allow comparisons.

In other words, while we have been successful at wringing a great deal of information from this settlement, what we need are additional settlements associated with well-documented plantations, preferably under the ownership of one individual throughout the period from the mid- to late eighteenth century through the mid-nineteenth century.

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APPENDIX 1.
PETROGRAPHIC ANALYSIS OF TWO WANDO SHERDS

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Winston, Oregon 97496

Key to Petrographic and Photomicrographic Descriptions

Clay minerals common in altered rocks must often be identified by X-ray diffraction either because their optic properties are not diagnostic or because they are too fine grained to be reliably identified by optical methods. The term "clay" is used herein to denote fine grained phyllosilicates in general. Under ideal conditions, it is often possible to optically discriminate between four major groups: kaolinite, smectite, mica (including illite), and chlorite. This is done whenever conditions permit.

The term "sericite" is applied to fine grained colorless phyllosilicates that show upper second order maximum interference colors. These could include muscovite, illite, paragonite, lepidolite, margarite, clintonite, pyrophyllite, and talc. The term "intermediate clay" is applied to fine grained very pale or colorless phyllosilicates that show upper first order maximum interference colors. These are probably dominated by chlorite, smectite, and mixed-layer illite/smectite.

The term "opaques" is used to refer to all materials opaque (and sometimes semi-opaque) to transmitted light. The term "FEOH" is herein used to indicate fine grained, yellowish to reddish brown, earthy materials of varying opacity in transmitted light. FEOH is probably mostly Fe oxyhydroxides but may sometimes include sphalerite, realgar, orpiment, jarposite, a number of Mn oxyhydroxides, and organic matter.

Particle size distributions are given as (A-B-C μm), where A, B, and C are the smallest, median, and largest particles sizes, respectively, in microns. A question mark (?) In the position of A, B, or C indicates that the value of A, B, or C was indeterminate, probably because of excessively large or small particle size or statistically insignificant numbers of particles.

Mineral abundances are visual estimates. For mutli-lithologic materials (cuttings, etc.), mineralogy, textures, and alteration are described only for the dominant lithology.

Section preparation codes are as follows: (1) Format: 27x46 mm, 51x76 mm, or 1 inch round; (2) Finish: standard lapping (STD) or polished (POL); (3) Stains: sodium cobaltinitrite (SCN), alizarin red S (ARS), potassium ferricyanide (PF), and barium chloride + potassium rhodizonate (BCPR); and (4) Cover: none, permanent Loctite acrylic (PLA), or removable Canada Balsam (RCB).

Photomicrograph captions/labels contain the following items of information in consecutive order separated by forward slashes: (1) sample identification, (2) film roll number, (3) frame number, (4) type of illumination, (5) field of view (FOV) or the magnification of the color print, which is given as the number of times actual size (i.e., 32x), and (6) the job identification number. "PPL" indicates plan-polarized light; "XPL" indicates cross-polarized light. "R" indicates reflected light. "C" indicates that the substage condenser was in (sometimes used for Fe-oxides). "O" indicates substage condenser in an oblique position. These various illuminations can be combined. "CON"

indicates conoscopic illumination. For normal photography of hand specimens, the focal length of the lens used is given rather than the magnification. POL means that a polarizing filter was used with the lens, and DAY means the sample was photographed in diffused daylight.

Features on photomicrographs can be located by using the accompanying orthogonal grid. A block of squares is marked by referencing the uppermost left and lowermost right corners of the block, i.e., A6-E15. Linear feature are marked by designating the extent of the feature from beginning to ending points, i.e., B6 to L19.

A question mark after a rock or mineral name in a petrographic description means that there is some degree of uncertainty about the identification of that rock or mineral.

The size of an alteration selvege around a vein is given as a half-width (the width of a selvege on one side of the vein) expressed as a fraction of the associated vein width (vw).

Comments

Carbonate aggregate was absent from sample CH1466-40-4, but present in sample CH1466-44-4. The carbonate occurs as polycrystalline grains of [sparry calcite + clay + quartz + feldspar.] Its origin is indeterminate, and its textures are not particularly distinctive for discriminating possible source materials.

Sample CH1466-40-4

Minerals:
Framework Components (45%) "Aggregate" is composed of:

polycrystalline (23%)
[clay + quartz + clinozoisite] (23%)
[quartz + feldspar] (<1%) metamorphosed quartz diorite (?)
FEOH (<1%)

monocrystalline (22%)
Quartz (20) + feldspar (probably mostly plagioclase) (2%) + hornblende (<1%) + clinozoisite (<1%) + FEOH (<1%)

Matrix (45%) "Paste" is composed of brown clay (45%)

Porosity (10%) is composed of flattened void spaces.

Alteration:
No other alteration features were observed.

Sectioning:
Format: 27 x 46 mm Finish: STD Stains: ARS + PF Cover: PLA

Sample CH1466-44-4

Minerals:
Framework Components (35%) "Aggregate" is composed of:

polycrystalline (10%)
[sparry calcite+ clay + quartz + feldspar] (10%)
quartz (<1%) metamorphosed quartz diorite (?)
FEOH (<1%)

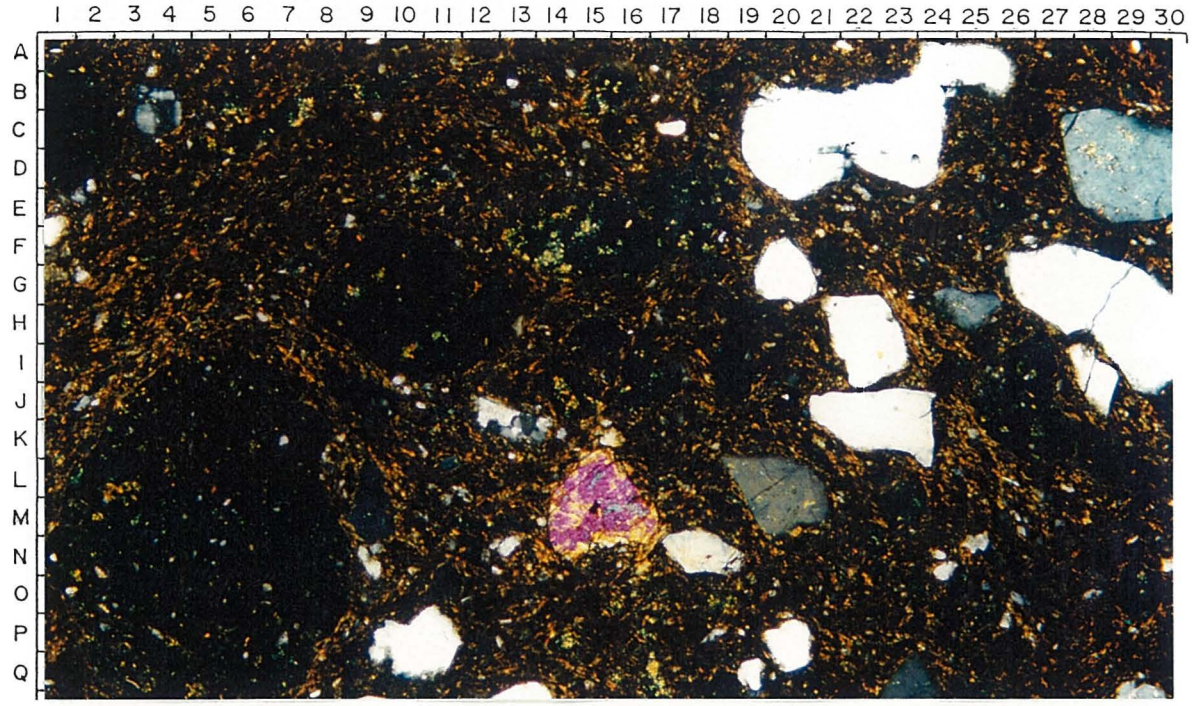
monocrystalline (25%)
quartz (22%) + feldspar (probably mostly plagioclase) (3%) + hornblende (<1%) +clinozoisite (<1%) + FEOH (<1%) + opaques (<1%)

Matrix (55%) "Paste" is composed of brown clay (55%)

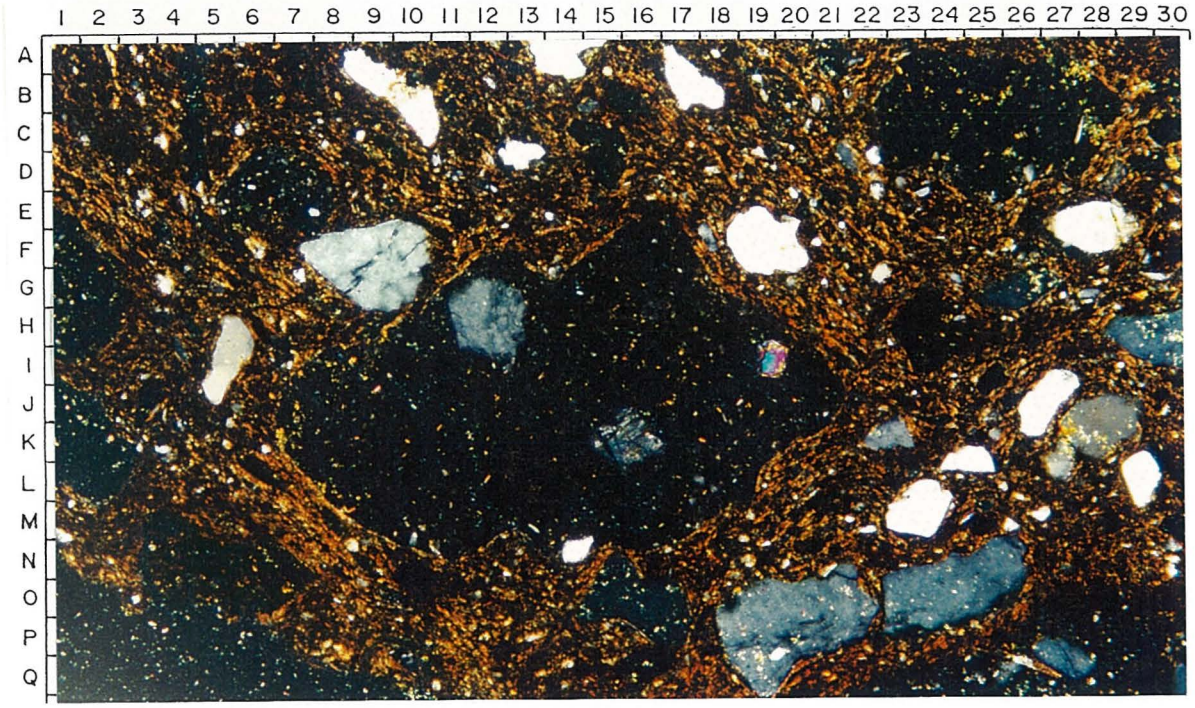
Porosity (10%) is composed of flattened void spaces.

Alteration:
No other alteration features were observed.

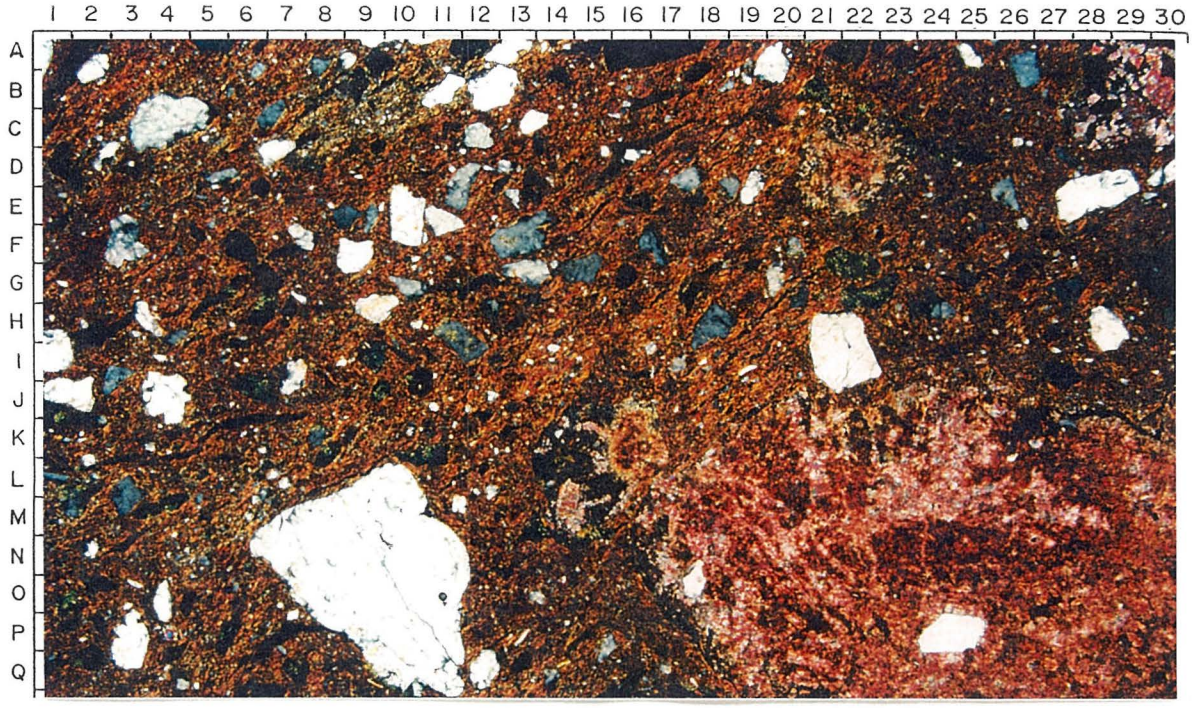
Sectioning:
Format: 27 x 46 mm Finish: STD Stains: ARS + PF Cover: PLA



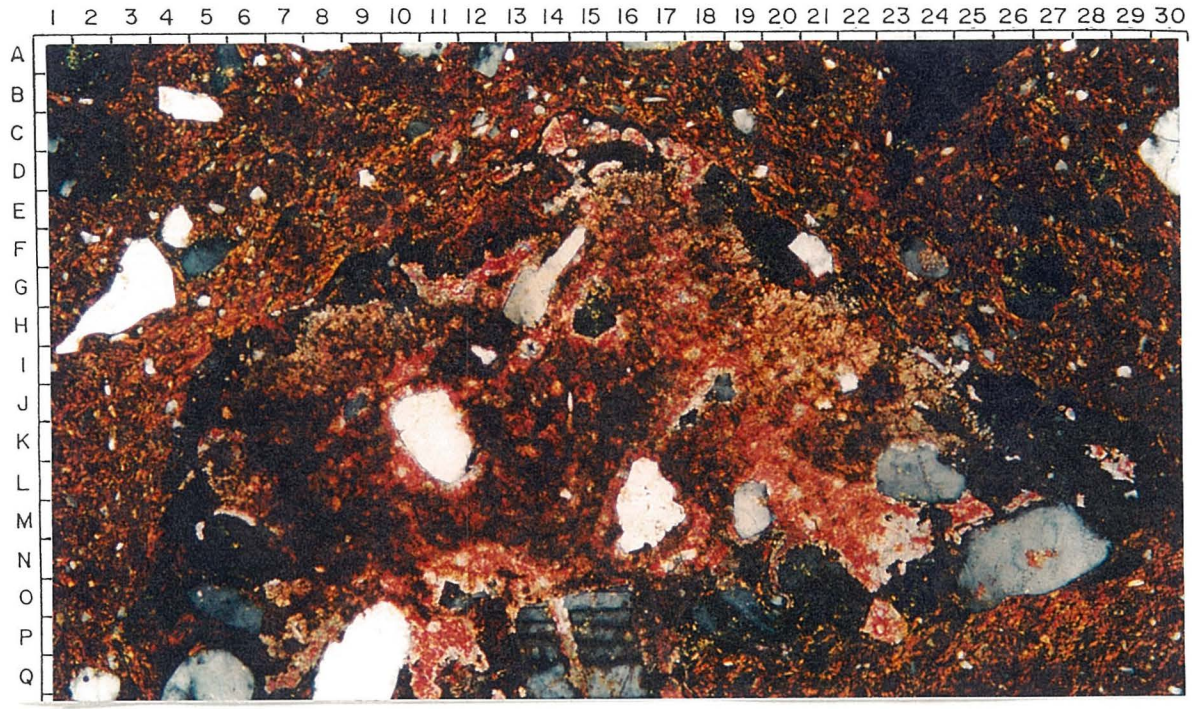
CH1466-40-4/01001/08/XPL/57X/KQP Ceramic sherd showing typical appearance of aggregate clay (K3-P7) + quartz (S9, L20, C20, D29) + clinozoisite (M15) fragments in a brown clay matrix (A5-E14).



CH1466-40-4/01001/10/PPL/57X/KQP Ceramic sherd showing appearance of a clay fragment (H10-L18) containing sparse quartz (H12) + clinozoisite (K15).



CG1466-44/4/01001/11/XPL/28X/KQP Cermaic sherd showing typical appearanceof aggregate dominated by limestone (K20-Q30) + quartz (J4, E10, N9, I21) fragments in a brown clay matrix (J9).



CH1466-44-4/01001/12/XPL/57X/KQP Ceramic sherd showing closeup appearance of a calcite (stained red; P11, M21) fragment containing fragments of + quartz (K11) + plagioclase (P15).

1-58317-055-3