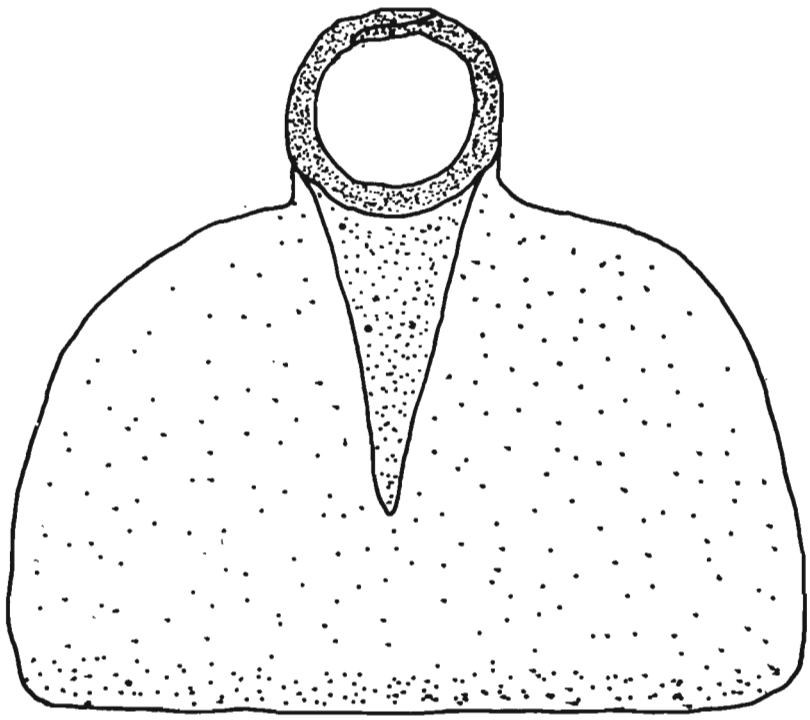
# AN ARCHAEOLOGICAL SURVEY OF LONGPOINT DEVELOPMENT, CHARLESTON COUNTY, SOUTH CAROLINA: PALMETTO GROVE PLANTATION



CHICORA FOUNDATION RESEARCH SERIES 8

# AN ARCHAEOLOGICAL SURVEY OF LONGPOINT DEVELOPMENT, CHARLESTON COUNTY, SOUTH CAROLINA: PALMETTO GROVE PLANTATION

RESEARCH SERIES 8

Michael Trinkley

PREPARED FOR:

Longpoint Associates
171 E. Bay Street
Charleston, SC

Chicora Foundation, Inc.
P.O. Box 8664
Columbia, South Carolina

February 1987

ISSN 0882-2042

And we walk among our brothers with
  a strange and far-away look in our eyes
And we often play the clown to hide
  the fact that something deep within us cries
Lord, some of us are poets, some dream
  until they die
'Til we're one with the spirit,
  we're unsatisfied.

--Lacy Dalton

ABSTRACT

This study represents a preliminary historical and intensive archaeological survey of the 275 acre Longpoint Development, situated in Mount Pleasant, Charleston County at the confluence of Horlbeck and Boone Hall creeks. The primary purpose of this investigation was to identify and assess the archaeological remains present in the proposed development, although secondary goals were to examine the relationship between aboriginal and historic settlement patterns and soil types and to explore the economic activity associated with what appeared to be a small, but successful plantation.

As a result of this work 12 archaeological sites were identified, primarily through the use of systematic shovel tests along the property's boundary with waterways and transects placed through the property's interior. Data on potential high probability areas, useful for future archaeological surveys, is generated by this study and the historical findings are compared to previous research on nearby plantations.

Of the identified archaeological sites, eight are primarily historic and four are prehistoric. The historic sites include the remains of the colonial, antebellum, and postbellum Palmetto Grove Plantation (38CH875) and a nineteenth and twentieth century cemetery (38CH877). Also identified are a large brick kiln (38CH876), a general store (38CH886), and a nineteenth century middle status farmhouse (38CH873). One prehistoric site (38CH884) represents an Early-Middle Woodland shell midden with good site integrity. Four sites (38CH873, 882, and 886) were briefly tested and the cemetery (38CH877) was mapped. As a result of this work four sites (38CH875, 876, 877, and 884) are recommended eligible for inclusion in the National Register of Historic Places.

TABLE OF CONTENTS

## LIST OF TABLES



## LIST OF FIGURES

## ACKNOWLEDGMENTS

This work was funded by Longpoint Associates of Charleston, South Carolina in the amount of $9954. While the work was conducted at the behest of the S.C. Coastal Council and the S.C. Department of Archives and History, I wish to thank both David W. Ames and J. Thomas Dodson of Longpoint Associates for their support and interest in the history of the Palmetto Grove area.

Invaluable assistance was provided by Mitchel Bohanon and Jim Dupres with Thomas & Hutton Engineering during the course of the fieldwork. Langdon Edmunds, Patricia Cridlebaugh, and Nancy Brock, with the S.C. Department of Archives and History reviewed the original research plan and provided considerable assistance during the fieldwork and review phases. Martha Zierden, curator of Historical Archaeology at The Charleston Museum, searched that facility's files for information on previous archaeology in the area and assisted in arranging for the curation of the materials from this project. William Koob, also with the Charleston Museum, contributed information on previously recorded sites in the project area. Keith Derting, S.C. Institute of Archaeology and Anthropology, assisted in searching that institution's site files and assigned site numbers to the identified sites.

Betty Gross, James E. Thrower, and Jeff Shriver of the Charleston county Park and Recreation Commission provided considerable assistance in obtaining information on the nearby Palmetto Islands County Park (once part of Palmetto Grove Plantation). Gwen Fuller, with the Charleston County Council, directed me to the knowledgeable parties and was extraordinarily helpful.

Michael Thurmond, owner of an outparcel in the Longpoint Development, graciously allowed permission to collect from his property and showed considerable interest in the area's history.

I also wish to acknowledge the skill and dedication of my crew for this project, Debi Hacker, Elizabeth Pinckney, and Homes Wilson, who labored under cold and often wet conditions. Obviously much of this work should be credited to them. Debi Hacker also largely handled the laboratory analysis of the collections and made frequent trips to the Charleston RMC and Thomas & Hutton on my behalf.

I also gratefully acknowledge the review comments offered by my colleagues, Martha Zierden, Debi Hacker, Jack H. Wilson, Jr. and Michael Scardaville.

Finally, I wish to thank Mr. and Mrs. Jervey Royall for their interest and hospitality during my study. As descendants of the Palmetto Grove Plantation owner, they provided me with considerable family history and sources on the plantation. Without their interest and support my job would have been more difficult, less rewarding, and certainly less enjoyable. Jervey Royall also introduced me to an informant, Jesse Ellis, who lives in Snowden and who was able to add significant details to our understanding of the plantation in the twentieth century.

# INTRODUCTION

## Background

This investigation was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Longpoint Associates (David W. Ames and J. Thomas Dodson, principals), developer of the 275 acre (highland) Longpoint tract. This tract is situated about 7.5 miles (12 kilometers) northeast of Charleston and 1.0 mile (1.6 kilometers) northeast of the small Snowden community in Charleston County (Figure 1). The tract is bounded to the south by Long Point Road (S-97), the east by the marshes of Boone Hall Creek, to the north by Palmetto Island County Park (operated by the Charleston County Park and Recreation Commission), and to the west by Snowden Road and a north-northwesterly property boundary. Bisecting this tract is the paved access road for the Palmetto Islands County Park (Needlerush Road).

The proposed development plan involves approximately 12,000 linear feet (3690 meters) of marsh frontage and opening of approximately 800 1/4-acre (0.1 hectare) house lots. the subdivision would incorporate the SCE&G high tension powerline easement (15.6 acres or 6.3 hectares) as a "passive park" and approximately 9.4 miles (15 kilometers) of hard surface roads would be constructed. The development, consequently, has a high potential to impact archaeological sites through either direct road and support facilities construction or through eventual house construction activities.

Because the developers were notified rather late in the planning process that archaeological studies were to be required, work on the initial 50 acre tract of 149 lots was slated to begin in early November 1986. Based on discussions with David Ames and staff persons of the S.C. Department of Archives and History on October 28, 1986, it was determined that Chicora would conduct an initial assessment of the Phase 1 tract immediately and that a summary, intended to provide a synopsis of the preliminary archival research and the archaeological survey, would be reviewed by Archives and History. The study of the Phase 1 tract, however, would be incorporated into the final report (this document) for the entire 275 acre tract. This strategy ensured protection for the cultural resources contained in the Phase 1 development, while allowing the development construction to continue with a minimum of delay.

The Phase 1 background and archival research was conducted on October 30 - November 1, and the report preparation (including

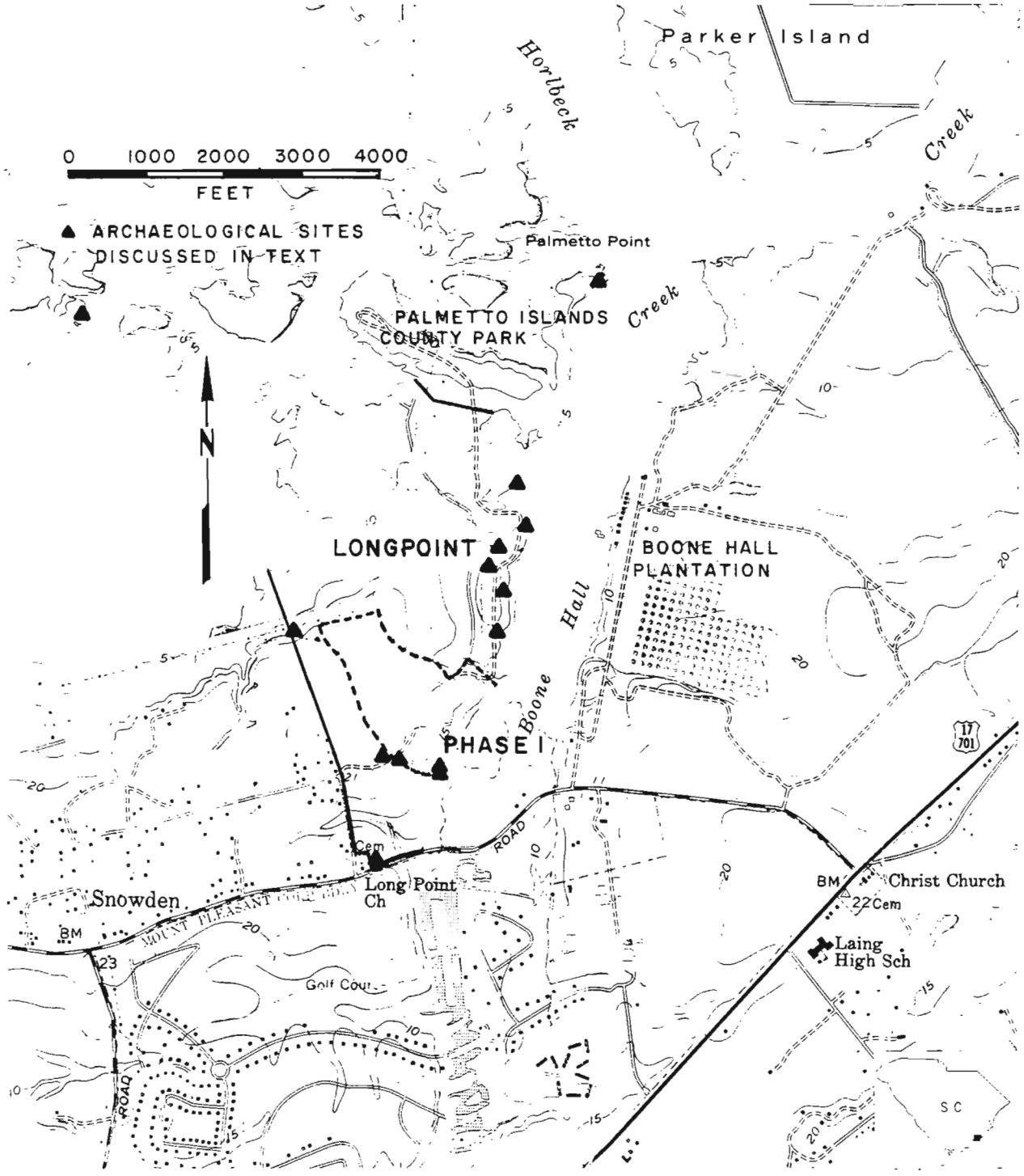



Figure 1. A portion of the Fort Moultrie 7.5' USGS topographic map showing the Longpoint development tract.

necessary laboratory studies) was conducted on November 1-2, 1986. A management summary was provided on November 2 (Trinkley 1986b), with three sites (38CH873, 874, and 878) identified in the Phase 1 50 acre survey tract. One of these sites (38CH873) required further subsurface testing to determine eligibility and that work was conducted on November 15, 1986. A management summary of the 38CH873 study was provided by Chicora on November 19, 1986 (Trinkley 1986c). The S.C. Department of Archives and History concurred with Chicora's assessment that none of the sites were eligible in their November 21, 1986 letter to the S.C. Coastal Council. The archaeological planning, survey, field studies, report production, and review process for the Phase 1 development, consequently, required only 24 calendar days.

The Phase 2 archaeological study, which involved the field survey of the remaining 225 acres and archaeological testing at sites 38CH882, 883, and 886 was conducted from November 24 through December 4, 1986, with additional archival research conducted intermittently in November and December. The field survey and site tests were conducted by a crew of two, including the author of this report at all times. Laboratory studies, including washing, cataloging, and the analysis of the collections, was conducted by Debi Hacker from December 18 through December 23. Conservation was conducted in Chicora's laboratories during the months of November and December 1986 and January 1987.

This document, as stipulated by the S.C. Department of Archives and History, provides a complete report of both the Phase 1 and 2 studies. Because consistent field and laboratory techniques were used throughout, no further distinction between the two phases will be maintained.

## Goals

The primary goals of this study were first, to identify the archaeological resources of the development tract and second, to assess the ability of these sites to contribute significant archaeological, historical, or anthropological data. The second aspect essentially involves the site's eligibility for inclusion in the National Register of Historic Places, although an opinion of eligibility is provided by the State Historic Preservation Officer at the S.C. Department of Archives and History. The secondary goals were, first, to examine the relationship between site location, soil type, and topography, extending previous work by Brooks and Scurry (1978) and Scurry and Brooks (1980), and second, to explore the economics and operation of what appeared to be an average (in both size and productivity) plantation, extending the previous work by Scardaville (in Brockington et al. 1985) and Trinkley (1985) in the project area.

To identify sites with the development tract a strategy of intensive, systematic shovel testing was undertaken adjacent to

the marsh edge and along transects through the interior of the development. This approach, which was required because of dense vegetation, is further discussed in the Methods section of this study. Combined with the field survey was a preliminary, yet intensive, examination of archival records pertaining to the tract. This archival study revealed several plats and a variety of early twentieth century maps which were useful in establishing the settlement and agricultural patterns on the property over the past several hundred years.

Once identified, the sites were evaluated for their potential eligibility for inclusion in the National Register of Historic Places. It is generally accepted that "the significance of an archaeological site is based on the potential of the site to contribute to the scientific or humanistic understanding of the past" (Bense et al. 1986:60). Site significance in this study was evaluated on the basis of five archaeological properties: site integrity, site clarity, artifactual variety, artifactual quantity, and site environmental context (Glassow 1977). These qualities stress properties of the archaeological record rather than a site's ability or potential to assist in providing data to a limited, and possibly transient, research design. Such an approach is particularly reasonable for evaluating a number of sites, from a limited geographic area, at one time. If a site exhibits integrity it is likely that it may address at least some research questions and contribute information, but to be eligible the contribution should be major. The use of Glassow's "archaeological properties" also ensures that factors beyond site integrity are considered.

The Longpoint survey was uniquely suited to contributing data to the secondary aspects of this study: site-soil correlations had been conducted at the Belleview Plantation, about 5 miles (8 kilometers) southwest of Longpoint (Scurry and Brooks 1980) and at the Amoco Realty property about 8 miles (13 kilometers) to the northwest (Brooks and Scurry 1978). Longpoint, therefore, offered an excellent location to test the implications of this previous research and refine the predictions for future studies in the Charleston area. Given the extensive development taking place in north Charleston County, this research could make a significant contribution to future studies.

In addition, previous work at the Sanders Plantation, about 3.5 miles west of Longpoint, had documented a historical development closely paralleled by Palmetto Grove. The Sanders Plantation was established in the eighteenth century and was apparently profitable. Occupation continued through a number of hands until the early 1800s when it entered the Venning family, where it was maintained until 1899. The main house stood until the late 1930s and was probably occupied into the twentieth century. The plantation declined in profitability in the mid-1800s, and in its later years produced primarily subsistence crops. Comparison of the Palmetto Grove and Sanders plantations

has the potential to yield significant information on our understanding of plantation economic practices.

## Curation

The field notes, photographic materials, and artifacts resulting from this study have been curated at The Charleston Museum as Accession Number 1987.2. The artifacts are cataloged as ARL-38476 through ARL-38560 (using a lot provenience system) and the photographic materials are cataloged as MK-34606 through MK-34716. All original records, and duplicates, were provided to the Museum in archival condition and will be maintained by that institution in perpetuity. The artifacts have been cleaned and/or conserved as necessary and further information on conservation practices may be found in the Research Strategy and Methods section.

## NATURAL SETTING

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). While elevations in the county range from sea level to about 70 feet (21 meters) mean sea level (MSL), elevations in the Longpoint tract range from 5 to 20 feet (1.5 to 6 meters) MSL. The mainland topography, which consists of subtle ridge and bay undulations, is characteristic of beach ridge plains (Mathews et al. 1980:133). The Longpoint tract exists as a narrow, north-south tending peninsula of forested land bordered to the east by the tidal Boone Hall Creek, a tributary of Horlbeck Creek, and to the west by the Wando River salt marshes (Figure 1). The western edge of the property, because of the low topography, is characterized by a series of low-gradient interior drains present primarily as flooded swales. An extensive lagoon system is planned for this area of the development to promote better drainage.

### Climate

The climate of Charleston County is subtropical, with long, hot, and humid summers and mild, dank winters (Hilliard 1984:13; Kronberg 1971:72; Landers 1970). The humidity ranges from a low of about 45% to a high of 92%, with a yearly average of 75%. Summer temperatures range in the high nineties, although a high of 104° F (40° C) has been recorded for Charleston. Winter temperatures range from the low sixties to thirties, and only rarely fall below 20 F (-7° C). The average growing season is about 266 days, with the average rainfall of 49.1 inches (122.8 centimeters) well distributed throughout the year. This mild climate, as Hilliard (1984:13) notes, is largely responsible for the presence of many southern crops, such as cotton and sugar cane.

Hilliard also points out that "any description of climate in the South, however brief, would be incomplete without reference" to a meteorological event frequently identified with the region -- the tropical hurricane. Hurricanes occur in the late summer and early fall, the period critical to antebellum cane, cotton, and rice growers. Hilliard notes,

> [t]he capricious nature of hurricanes precluded a given area's being hit every year, but no one could predict what areas were susceptible in any given year, and in

> some years several struck one area or another (Hilliard 1984:18)

This view was clearly stated in the nineteenth century by Ramsay,

> [i]n such a case between the dread of pestilence in the city, of common fever in the country, and of an unexpected hurricane on the island, the inhabitants . . . are at the close of every warm season in a painful state of anxiety, not knowing what course to pursue, nor what is best to be done (Ramsay, quoted in Calhoun 1983:2)

From 1670 to 1860 there were 10 major hurricanes, occurring at intervals ranging from 2 to 52 years, several of which caused extensive reported crop damages (Mathews et al. 1980:54).

Joyner (1984:35-37) discusses the common belief that the lowcountry's "marsh miasma" was responsible for considerable sickness and death among both the black and white populations during the antebellum period. Visitors frequently mentioned the stagnate air, noxious marsh gas, and abundant mosquitoes. by 1880, however, Harry Hammond commented that, "the sea islands enjoy in a high degree the equable climate peculiar to the islands generally" and that the seasonal variation in temperature "destroys the germs of disease, as of yellow fever and of numerous skin diseases that flourish in similar regions elsewhere" (Hammond 1884:472).

## Geology and Soils

Coastal Plain geologic formations are unconsolidated sedimentary deposits of very recent (Pleistocene and Holocene) age lying unconformably on ancient crystalline rocks (Cooke 1936; Hilliard 1984:6-7; Miller 1971:74). The Pleistocene sediments are organized into topographically distinct, but lithologically similar, geomorphic units, or terraces, parallel to the coast. The study area is situated on the Pamlico terrace which includes deposits that accumulated when the sea level was about 25 feet (7.7 meters) above its present level. Cooke (1936:149) notes that the formation consists chiefly of fine sand and blue or gray clay. The formation provides abundant "brick clay," usually found in former lagoons situated behind ancient barrier islands (Cooke 1936:160).

Two additional aspects of Sea Island geology should be briefly discussed. The first is groundwater availability, since water is of primary importance to both prehistoric and historic settlement criteria. The principal deep water aquifers are the limestone of Eocene age known as the Santee Formation and the sands of Cretaceous age known as the Pee Dee and Black Creek formations, although these are at depths of 400 to 500 feet (120

to 150 meters) and 1600 to 2000 feet (490 to 615 meters) respectively. The Santee Formation has been pumped so heavily that there is now a "cone of depression" with the result that chloride levels exceed 400 mg/l (S.C. Water Resources Commission 1973:100).

Lynch et al. (1982) note that colonial wells rarely exceeded 20 feet (6 meters) into the sands which were "everywhere saturated with the water which it received from a rainfall averaging 43.78 inches each year" (Lynch et al. 1882:258). Consequently, wells 12 to 15 feet (3.5 to 4.5 meters) deep provided "an unfailing supply of water of the very best quality" (Lynch et al. 1882:259). Water quality gradually declined as the population increased and antebellum wells became deeper, although they rarely exceeded 60 feet (18.5 meters) in downtown Charleston. One antebellum brick-lined well on Daniels Island, about 5.5 miles (8.8 kilometers) northeast of Charleston, was only 10.7 feet (3.3 meters) in depth (Zierden et al. 1986:4-44). it is therefore clear that during the historic period both deep and shallow wells were in common use, although shallow wells probably tended to be less healthy and more saline. While less information is available for the prehistoric period, it is likely that there were free-flowing aquifers or springs in addition to groundwater in shallow aquifers recharged by local rainfall.

The second aspect of Sea Island geology to be considered in these discussions is the fluctuation of sea level during the late Pleistocene and Holocene epochs. Prior to 15,000 B.C. there is evidence that a warming trend resulted in the gradual increase in Pleistocene sea levels (DePratter and Howard 1980). Recent work by Colquhoun et al. (1980) clearly indicates that there were a number of fluctuations during the Holocene. High stands are recorded at about 2050 B.C. (-3.6 feet [1.1 meters] MSL), 1650 B.C. (-1.9 feet [0.6 meter] MSL), 950 B.C. (-2.6 feet [0.8 meter] MSL), and 500 B.C. (-2.3 feet [0.7 meter] MSL). Low stands are recorded at 1850 B.C. (-10.4 feet [3.2 meters] MSL), 1250 B.C. (-10.1 feet [3.1 meters] MSL), 700 B.C. (-6.5 feet [2.0 meters] MSL), and 300 B.C. (-7.5 feet [2.3 meters] MSL). By A.D. 1650 the sea level was about 2.6 feet (0.8 meter) lower than present.

These data suggest that as the first Stallings phase sites along the South Carolina coast were occupied about 2100 B.C. the sea level was about 3.9 feet (1.2 meters) lower than present. However, by 1600 B.C., when a number of Thom's Creek shell rings were occupied, the sea level had fallen to a level of 7.2 feet (2.2 meters) lower than present levels. By the end of the Thom's Creek phase, about 900 B.C., the sea level had risen to a level of 2.6 feet (0.8 meter) lower than present, but over 4.5 feet (1.4 meters) higher than when the shell rings were first occupied. Quitmyer (1985b) does not believe that the lower sea levels at 2100 B.C. would have greatly altered the estuarine environment, although drops of 10 feet (3 meters) would have greatly reduced the available tidal resources.

Data from the nineteenth and twentieth centuries suggest that the level is continuing to rise. Kurz and Wagner (1957:8) report a 0.8 foot (0.2 meter rise) in Charleston sea levels from 1833 to 1903. Between 1940 and 1950 a sea level rise of 0.34 foot (0.1 meter) was again recorded at Charleston. These data, however, do not distinguish between sea level rise and land surface submergence.

The Longpoint tract is characterized by seven soil types: Charleston, Edisto, Hockley, Leon, Stono, Wagram, and Yonges (Miller 1971:Map 45). These seven series may be divided into three classes, based on drainage and the seasonal water table, although all are sandy soils usually underlain by a loamy subsoil (Miller 1971). The Edisto, Leon, Stono, and Yonges soils are all somewhat poorly to very poorly drained, have a seasonal water table no deeper than 3 feet (0.9 meter) below the ground surface, and account for 52.3% of the Longpoint tract. The Charleston and Hockley soils, which incorporate 44.1% of the acreage, have more variable drainage and a water table which ranges from 2 to 5 feet (0.6 to 1.5 meters) below the surface. For the most part these soils are better drained than the Edisto, Leon, Stono, and Yonges series, although there may be local "wet spots." The final soil series, Wagram loamy fine sand, is well drained and has a water table at least 5 feet (1.5 meters) below the ground surface. The Wagram soils are not common in the Longpoint tract, accounting for 3.6% of the acreage, and they tend to be droughty during periods of low rainfall.

North of the Longpoint tract, but within the boundaries of the antebellum plantation to be discussed in the following section of this study, are additional areas of Charleston, Hockley, and Yonges soils, as well as the Capers silty clay loams characteristic of hard tidal flats (Miller 1971:8-9).

Considerable research along the coast has employed soil types as an indication of site probability. The late Tucker Littleton found that North Carolina prehistoric sites in the vicinity of Onslow County had a near perfect correlation with high, excessively drained, sandy Wando series soils (Tucker Littleton, personal communication 1978). Moving southward to the Bulls Bay area of coastal Charleston County, Trinkley (1980:445-446) found a preference for the high, sandy Sewee and Lakeland soils. The Sewee soils, not as excessively drained and droughty as the Lakeland Series, were preferred. Work by Brooks and Scurry (1978) and Scurry and Brooks (1980) found that sites in the Charleston area are generally found on well drained soils, although slightly over 20% of the sites in one survey were found on poorly drained soils, leading to the conclusion that "although soil type seems to be a good general predictor for the presence of prehistoric sites, other variables," at present unrecognized, are also significant (Brooks and Scurry 1978:69; see also Trinkley 1981c).

For historic period sites, one settlement feature in addition to soil type, is access to deep water suitable for transport. South and Hartley (1980) and Hartley (1984) have demonstrated that major colonial plantation houses were located in areas where both deep water access and high ground are found. Another clear concern for historic period settlement would have been the suitability of the adjacent lands for agricultural activity.

Miller (1971:32-43) notes that five of the seven soils within the Longpoint tract have agricultural limitations imposed by wetness while all of the soils are low in organic matter and inherent fertility. On a more general level Hilliard observes that this region "was seldom well enough drained for most crops" (Hilliard 1984:11), while Ellerbe (1974:17-18) also comments on the large areas of poorly drained soils which characterize the Atlantic Coastal Plain.

Herein lies a paradox. The Charleston coast has a climate that is excellent for agriculture -- adequate rainfall, a summer growing season capable of producing two crops, and a mild winter season which supports crops such as cabbage, Irish potatoes, and peas. Yet the soils have generally low fertility and are poorly drained. Henderson and Smith note,

> [t]he favorable climate permits successful production of a variety of crops, even though many of the soils are inherently of low productivity. This fact tends to lessen the significance of soil differences and increase the importance of good soil management (Henderson and Smith 1957:596).

This situation consistently has affected Charleston's agricultural history and plantation economics by promoting the development of rice cultivation and restraining or hindering the development of cotton production. It is probable that soil fertility and drainage affected individual plantation owners by directing and limiting their agricultural options. Individuals who found themselves in areas unable to profitably support either rice or cotton may have been forced to turn to smaller scale vegetable or grain production as the land would support it, or to livestock production, which allowed the animals to forage on the natural vegetation. Soils, then may not only indicate areas of likely prehistoric and historic occupation, but may also provide an indication of plantation economic worth and agricultural productivity.

## Florestics

The project area is situated in the Atlantic Coast Flatwoods region. Cypress, blackgum, and tupelo were historically abundant on the poorly drained swamplands, while sweetgum, white oak,

wateroak, ash, and occasionally loblolly pine were found on the better drained alluvial river bottom areas. These same hardwoods competed with loblolly pine on the poorly drained flatwoods and on dry ridges longleaf pine was a common species (Ellerbe 1974:18). Kuchler (1964:111) broadly defines the area's potential natural vegetation as an oak-hickory-pine forest characterized by medium tall to tall forests of broadleaf deciduous and needleleaf evergreen trees.

The vegetation patterns of the Longpoint tract evidence considerable alteration by cultivation and other recent activities. There are several successful stands of loblolly pine which delineate agricultural fields visible on 1941 aerial photographs (photograph CDV-3A-124 shows at least six cultivated fields in the development tract that are now wooded). Most of the communities within the Longpoint tract may be classified as maritime forest or hardwood forest and these types have been discussed by Smith (1986).

Both subclimax and climax maritime forest communities exist in the areas bordering the salt marsh and are dominated by salt-tolerant, evergreen species. The subclimax maritime forest is maintained by frequent fires and consists of loblolly pine and cabbage palmetto. the dominant understory species is yaupon holly, although wax myrtle and southern red cedar are also present. Small quantities of black oak, live oak, and sweetgum may also be present in areas which have not burned within the past few years (Smith 1986:15-19). The climax maritime forest is typically dominated by large live oaks "whose wide spreading branches create an almost closed canopy" (Smith 1986:23). Associated species include the cabbage palmetto, hackberry, and yaupon holly.

The hardwood forest is found inland from the effects of the salt marsh spray, on higher ground where salt content is reduced, and where fire is infrequent. Smith (1986:25) suggests that a great deal of the area was originally in hardwood forest, which developed as tracts were taken out of agriculture in the 1920s. The hardwood forest contains sweetgum, cabbage palmetto, black oak, post oak, and southern red oak. A few pines (remnants from the preceding subclimax maritime forest) or magnolias may also be present. Smith (1986:26) characterizes the forest as a "lowland" type which occurs where there is abundant soil moisture. A less common, "upland," hardwood forest is rare in the area, but has been observed at the northern end of the peninsula, within the Palmetto Islands County Park. This is one of the highest areas (relatively speaking, the elevations range from 8 to 9 feet [2.5 to 2.8 meters] MSL) and the dominant species is the sweet pignut hickory, a very rare species in the "lowland" hardwood forest (Smith 1986:27-28).

In addition, the area contains high and low saltmarsh communities and freshwater communities in and around bogs and ponds. The low saltmarsh is dominated by cordgrass (Spartina

alterniflora) and is flooded twice daily. The high saltmarsh, being higher in elevation and further away from the tidal creek, is characterized by Juncas.

The following section will provide evidence that the vegetation by the Longpoint area was being somewhat affected by farming and logging by the eighteenth century and was intensively affected by the nineteenth century. The pollen record is somewhat useful for the prehistoric period. Wright states that,

> [t]he transformation to temperate deciduous forest similar to that of today occurred rapidly through a series of successional stages and in most of the area it was essentially completed by 9,000 years ago, with relatively minor changes since then in the proportion of the principal forest components (Wright n.d.:23).

Watts (1979:n.p.) would characterize the vegetation and climate after 7600 B.C. as being "rather similar to the present," and "essentially like the present" after 4000 B.C. One significant aspect of these palynological studies is that hickory is consistently a minor species, representing 5% or less of the recovered fossil pollen. Even today the two most common hickories -- mockernut and pignut -- are not very common. Fowells (1965:116) states that mockernut hickory can grow on sandy soil with pines and live oak, but it is best suited to moist, bottomland hardwood forests, while the pignut hickory is only a minor component in a limited number of forests (Fowells 1965:125). The relatively abundant bitternut hickory is likewise found on the richer, overflow bottoms of the coastal plains (Fowells 1965:112).

The presence and diversity of hickories is significant because of their suspected contribution to prehistoric diets (Harris and Sheldon 1982; Trinkley 1976, 1986a). It is probable that some prehistoric sites were located specifically to take advantage of the relatively uncommon stands hickory trees, regardless of the soil drainage characteristics. Such a settlement pattern would help to explain the small number of prehistoric site locations which Brook and Scurry (1978) found on poorly drained soils.

In fact, one of the largest prehistoric sites (38CH30) in the area was located on poorly drained Yonges Series soils in the immediate vicinity of the "upland" hardwood forest of hickories within the Palmetto Island County Park. This site, I speculate, was situated on the poorly drained, mucky soils not only to be close to a deep water source, but also to allow the exploitation of the hickory nut masts.

## PREHISTORIC AND HISTORIC OVERVIEWS

### Prehistoric Archaeology

There is sufficient coastal research to develop a sequence of occupation and at least some information on how the prehistoric occupants lived. This section is intended to provide only brief reviews of the various temporal periods. Several previously published archaeological studies are available for the Charleston area to provide additional background, including Anderson and Logan (1981), and Trinkley (1980). Specific area studies include work by Brooks and Scurry (1978) at the Amoco property about 8 miles (13 kilometers) to the northwest, survey by Scurry and Brooks (1980) at Belleview Plantation about 5 miles (8 kilometers) to the southwest, and research at the Sanders Plantation by Brockington et al. (1985) and Trinkley (1985) about 4 miles (6.5 kilometers) to the southwest. Other Charleston area research includes excavations at the Thom's Creek Lighthouse Point Shell Ring (38CH12) (Trinkley 1980) and the Thom's Creek Sol Legare midden (38CH779) (Trinkley 1984).

The Paleo-Indian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Michie 1977; Williams 1968). The Paleo-Indian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124). No Paleo-Indian projectile points, however, have been recovered from the Charleston County area (Michie 1977).

Sea level during much of this period is expected to have been as much as 65 feet (20 meters) lower than present, so many sites may be inundated (Flint 1971). Unfortunately, little is known about Paleo-Indian subsistence strategies, settlement systems, or social organization. Generally archaeologists agree that the Paleo-Indian groups were at a band level of society (see Service 1966), were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

The Archaic period, which dates from 8000 to 2000 B.C., does not form a sharp break with the Paleo-Indian period, but is a

slow transition characterized by a modern climate and an increase in the diversity of material culture. The chronology established by Coe (1964) for the North Carolina Piedmont may be applied with little modification to the South Carolina coast. Archaic period assemblages are rare in the Sea Island region, although the sea level is anticipated to have been within 13 feet (4 meters) of its present stand by the beginning of the succeeding Woodland period (Lepionka et al. 1983:10). Brooks and Scurry note that,

> Archaic period sites, when contrasted with the subsequent Woodland period, are typically small, relatively few in number and contain low densities of archaeological material. This data may indicate that the inter-riverine zone was utilized by Archaic populations characterized by small group size, high mobility, and wide ranging exploitative patterns (Brooks and Scurry 1978:44).

Alternatively, the general sparsity of Archaic sites in the coastal zone may be the result of a more attractive environment inland adjacent to the floodplain swamps of major drainages. Of course, this is not necessarily an alternative explanation, since coastal Archaic sites may represent only a small segment in the total settlement system.

The Woodland period begins by definition with the introduction of fired clay pottery about 2000 B.C. along the South Carolina coast (the introduction of pottery, and hence the beginning of the Woodland period, occurs much later in the Piedmont of South Carolina). It should be noted that many researchers call the period from about 2500 to 1000 B.C. the Late Archaic because of a perceived continuation of the Archaic lifestyle in spite of the manufacture of pottery. Regardless of terminology, the period from 2500 to 1000 B.C. is well documented on the South Carolina coast and is characterized by Stallings and Thom's Creek pottery.

The subsistence economy during this early period was based primarily on deer hunting and fishing, with supplemental inclusions of small mammals, birds, reptiles, and shellfish. Various calculations of the probable yield of deer, fish, and other food sources identified from shell ring sites indicate that sedentary life was not only possible, but probable. Recent work at fiber-tempered sites on the southern Georgia coast has led Quitmyer to note that there was,

> a specialized economy heavily dependent on marine resources. Marine invertebrates, primarily oyster, were the most significant of the zoological resources. Marine vertebrates, primarily drum, accounted for another important aspect of the diet. To a

> lesser extent sea catfishes (Ariidae) and mullet were part of the diet. Terrestrial animals, like deer, represented only an occasional resource (Quitmyer 1985a:90).

Toward the end of the Thom's Creek phase there is evidence of sea level change and a number of small, non-shell midden sites are found. Apparently the increasing sea level drowned the tidal marshes (and sites) on which the Thom's Creek people relied.

The succeeding Refuge phase, which dates from about 1100 to 500 B.C., evidences the fragmentation caused by the environmental changes (Lepionka et al. 1983; Williams 1968). Sites are generally small and some coastal sites evidence no shellfish collection at all (Trinkley 1982). Peterson (1971:153) characterizes Refuge as a degeneration of the preceding Thom's Creek series and a bridge to the succeeding Deptford culture.

The Deptford phase, which dates from 1100 B.C. to A.D. 600, is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites. The coastal sites, which are always situated adjacent to tidal creeks, evidence a diffuse subsistence system and are frequently small. The inland sites are also small, lack shell, and are situated on the edge of swamp terraces. This "dual distribution" has suggested to Milanich (1971:194) a transhumant subsistence pattern. While such may be the case, it has yet to be documented on the coast. The Pinckney island midden, north of Hilton Head, evidences a reliance on shellfish and was occupied in the late winter (Trinkley 1981c). The Minim Island midden, on the coast in Georgetown County, indicates a greater reliance on fish and was apparently occupied in the fall or winter (Drucker and Jackson 1984).

The Middle Woodland occupations in South Carolina are characterized by a pattern of settlement mobility and short term occupation. On the northern coast it is associated with the Hanover and Mount Pleasant phases, which date from about 100 B.C. to as late as A.D. 900. This period is characterized by the use of sand burial mounds and ossuaries along the Georgia, South Carolina, and North Carolina coasts (Brooks et al. 1982; Thomas and Larsen 1979; Wilson 1982). Middle Woodland coastal plain sites continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the fall line, shell midden sites evidence sparse shell and few artifacts. Gone are the abundant shell tools, worked bone items, and clay balls.

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a

lifeway not appreciably different from that observed for the previous 500 to 700 years. This situation would remain unchanged until the development of the South Appalachian Mississippian complex.

The South Appalachian Mississippian is the most elaborate level of culture attained by the native inhabitants and is followed by cultural disintegration brought about largely by European disease. The period is characterized by complicated stamped pottery, complex social organization, agriculture, and the construction of temple mounds and ceremonial centers. The earliest phases include the Savannah, Irene, and Pee Dee (A.D. 1200 to 1650). A synopsis of Woodland phases and pottery designations has been provided in Figure 2.

The history of the numerous small coastal Indian tribes is poorly known. As Mooney noted, the coastal tribes,

> were of but small importance politically; no sustained mission work was ever attempted among them, and there were but few literary men to take an interest in them. War, pestilence, whiskey and systematic slave hunts had nearly exterminated the aboriginal occupants of the Carolinas before anybody had thought them of sufficient importance to ask who they were, how they lived, or what were their beliefs and opinions (Mooney 1894:6).

In truth, our knowledge of these groups has also been limited because too few scholars have taken an active interest in the primary sources and there has been too little desire to evaluate critically the early research by Mooney (1894) and Swanton 91952). Mooney (1894;78-79,84) briefly recounts the primary historical sources for the Sewee and Etiwan Indians and places them in the Siouan linguistic stock. The reasoning for this placement, which would be repeated by Swanton (1952:98), Milling (1969:203), and South (1972:3), was simply stated by Mooney,

> [n]othing is known of their linguistic affinities, but their alliances and final incorporation were with the Catawba (Mooney 1894:78),

and hence, they were Siouan. Waddell rather charitably observes,

> [t]here is no implication of an alliance, but if anything, the opposite. Since the Sewee did not incorporate with the Catawba, Mooney's assumption of a linguistic relationship is unsubstantiated (Waddell 1980:297).

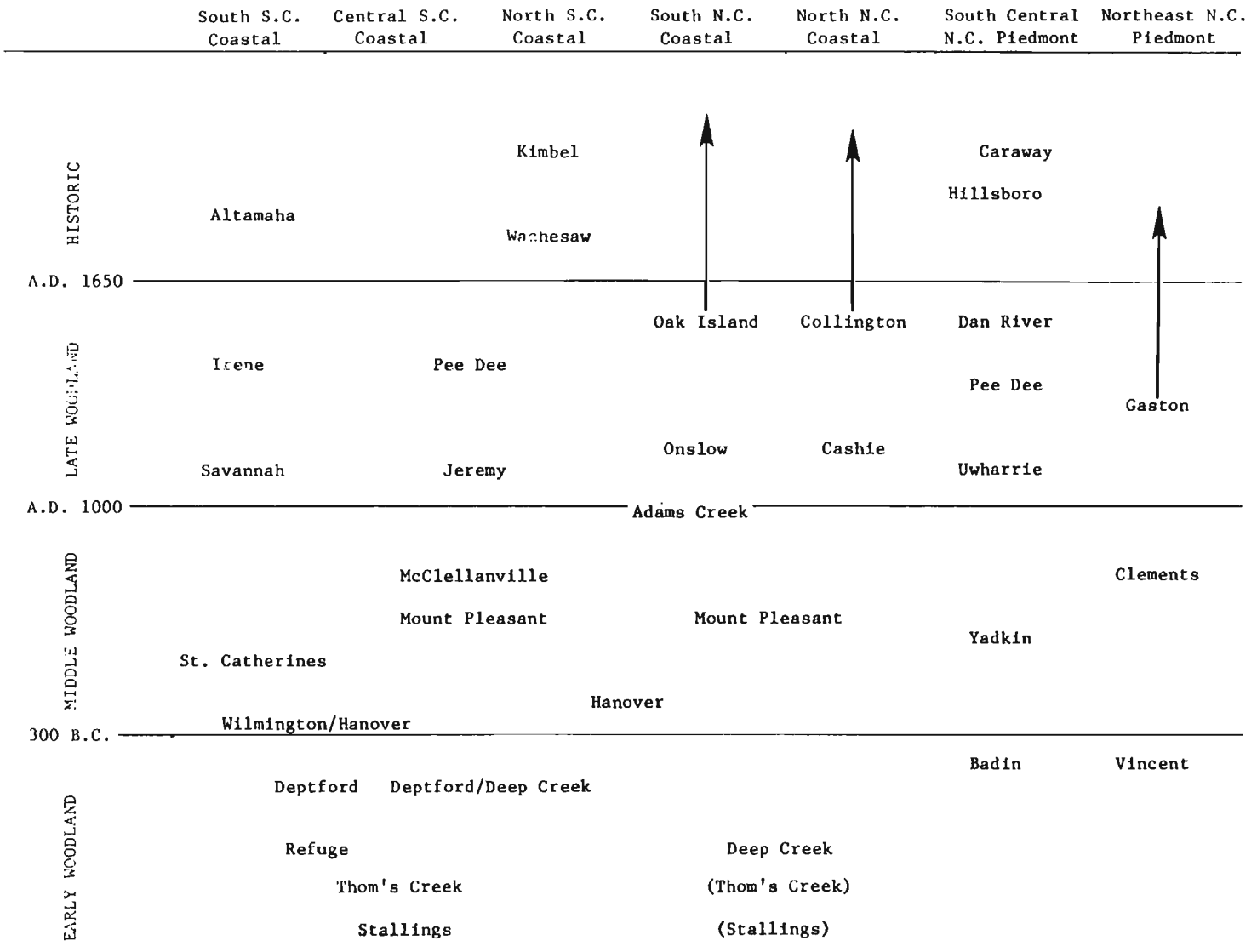



Figure 2. Chronology of the Woodland and Protohistoric periods in the Carolinas.

The extensive ethnohistoric documents reveal that the Sewee were residing in the Bull Bay area until 1670-1680 when they moved inland to the Wando River (Waddell 1980:289; White 1975:83-87). By the late 1690s the Sewee had moved to Mockand, a variation of Wadmacon (Waddell 1980:276, 291) and that island was deserted by 1698, possibly to escape from a smallpox epidemic (Waddell 1980:291; White 1975:110). Another Sewee town was located at Jeremy's Point (38CH3) (White 1975:125), but that area was deserted by 1701, as was Lawson's Avendaugh-bough. By 1715 the Sewee had found their way to the French settlements about 40 miles northwest of Charleston on the Santee River. In 1716 the Sewees turned on the Frenchmen, apparently as part of the more general Yemasee uprising (1715-1717). The French captured 22 men, and 40 women and children, all of whom were probably sold into slavery (Waddell 1980:297). Consequently, from an estimated population of 800 in 1600 (Swanton 1952:99) the more-or-less sedentary Sewee had been reduced to only 62 individuals in only 116 years.

The tribes to the north of the Santee River (Winyah, Waccamaw, and Cape Fear) are generally believed to be Siouan (Swanton 1952), although this too is based on poor circumstantial evidence. Recent osteological analysis adds support to the assumption that the southern North Carolina coastal plain groups were "Siouan" (Wilson 1982; see also Pollitzer 1971). The tribes to the south of Bulls Bay are strongly associated with the Muskhogean linguistic family (Swanton 1952). These people were frequently termed the Cusabo, although there is controversy regarding the meaning of this term. There is some evidence to support the idea that the Cusabo were a confederation united by the pressures of the Guale and Spanish to the south (Bull 1969:9-10). Gregorie (1925:13) suggests that the term Cusabo might have been applied indiscriminately to neighboring Indians, while Jones (1978) has suggested that the Cusabo may be a "watered-down" version of the Guala.

The Sewee, then, appear as a buffer between groups of more firmly documented Muskhogean and Siouan linguistic (and perhaps cultural) affiliation. There are some tentative suggestions in the historic documents that the Sewee were associated with the Cusabo tribes to the south. Gregorie (1925:12) notes that a 1707 act regulated trade with the Indians, "except those commonly called 'casabes, viz: Santees, Ittavans, Sewees'," and quotes Rivers as saying, "the Santees, Sewas, and Etiwans were commonly called Casabees." Bull (1969:10) notes that in 1670 the English colonists visited a Sewee village on Bulls Bay where "they picked up the chief of the Kiawah," a tribe of Cusabo affiliation. While the archaeological implications of Baker's (1974) cofitachique Chiefdom have yet to be studied, it appears that the Sewee are somehow united, along with the Kiawah, to the Muskhogean chiefdom of Cofitachique (Baker 1974:37).

While no firmly documented Sewee site has been identified, the now destroyed Jeremy's Point or Village site (38CH3) is

thought to have been a Sewee village, based on archival research. Recovered items included trade beads and Pee Dee-like pottery. In fact, the only known late pottery recovered from the Sewee heartland is the Pee Dee series (see Trinkley 1981a; Trinkley et al. 1983).

Several recent authors have attempted to locate the "Sewee Indian Fort" shown on Moll's 1715 map as on Boone Hall Creek (Gregorie 1925; McIver 1960:2). McIver notes that,

> Moll's Map of 1715 shows "Sewe Indian Fort" on a branch of the Wando River called Wampancheonee. This is the creek on which Boone Hall is located. The fort was on the west bank of the creek, on the plantation "Palmetto Grove," once the home of the late Dr. E. M. Royall. The remains of the fort may still be seen (McIver 1960:2).

This view was aided by a March 9, 1929 Charleston News and Courier article entitled, "Evidences of Indians Near Their Old Fort," written by Mrs. W. W. McIver. That article talks of,

> picnics at Landing Hill, where the children found pieces of broken pottery and occasionally an arrow head. Could Landing Hill be the site of the [Sewee] Indian Fort? . . . It is obviously an artificial embankment and on it [are] many pieces of pottery . . . . The mound had recently furnished clay for road surfacing and at the spot where this had been dug, the tide now comes in (Evidences of Indians Near Their Old Fort 1929).

In 1933 a John Freeman of Charleston donated 10 sherds to The Charleston Museum (Accession No. 1933.60, ARL-2226, ARL-2530) from the "'Clay Bank' opposite Boone Hall," almost certainly 38CH30. These remains, and others collected since that time, suggest the site was an Early Woodland (Thom's Creek and Deptford) shell midden. It was most certainly not the location of the Sewee Indian Fort.

Waddell (1980:323) notes that Wampanchecoone (a variation of Wampancheonee) is now called Horlbeck Creek. He, however, realizes that the 1715 Moll map is actually based on the Thornton-Morden map of ca. 1695, which was copied in turn from the slightly earlier Mathews map (Waddell 1980:290, 296). He suggests that based on the ca. 1685 Mathews map,

> "Sewee Indian fort" is marked on the S side of the Wando R., on (or near) the W side of Toomer Crk. at 32 55N 79 48W (Waddell 1980:290).

Toomer Creek is a little over 6.5 miles to the northwest of the Longpoint tract. This clearly illustrates the confusion which surrounds the location of protohistoric Indian sites.

## Historic Synopsis

In the past several years a variety of historical summaries for the Charleston area have appeared. All were prepared by thoroughly trained historians, although the purposes and orientations were distinct. Friedlander (in Wheaton et al. 1983:17-41) views the low country historical development from St. Stephens Parish, north of Charleston, in present day Berkeley County. Calhoun (in Zierden and Calhoun 1984:26-54) views the historical development of the Charleston area from Charleston and emphasizes the development of the urban city. Scardaville (in Brockington et al. 1985:30-78) emphasizes the agricultural history of the region, particularly for the postbellum period. Rather than attempt to recreate a historical summary, I will offer a very brief synthesis of these three sources, emphasizing those areas which may be of particular importance to this study.

### English Settlement

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 Lords Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop whose marketing would provide great wealth through the merchantile system.

By 1680 the settlers of Albermarle 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).

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 slave labor (Sirmans 1966).

Early agriculture experiments which involved olives, grapes, silkworms, and oranges were less than successful. 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. Consequently, the cultivation of cotton, rice, tobacco, and flax were stressed as these were staple crops whose marketing the proprietors could easily monopolize.

## Economic Development

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). Overproduction soon followed, with a severe decline in prices during the 1740s. This economic downswing encouraged planters to diversify and indigo was introduced (Honeycutt 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.

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 and by the 1730s slaves were beginning to be concentrated on a few, large slave-holding plantations. By the close of the eighteenth century some South Carolina plantations had a ratio of slaves to whites that was 27:1 (Morgan 1977). This imbalance between the races, particularly on remote plantations, may have lead to greater "freedom" and mobility (Friedlander in Wheaton et al.1983:34). By the antebellum period this trend was less extreme.

Scholars have estimated that at the end of the colonial period, over half of eastern South Carolina's white population held slaves, although few held very large numbers. Hilliard (1984:37) indicates that more than 60% of the Charleston slaveholders by 1860 owned fewer than 10 slaves.

From another perspective 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 (this mechanism continued 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 2-1/2 years between 1780 and 1782. The removal 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 and Cotton Production

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 benefited primarily through its role as a commercial center.

Cotton provided about 20 years of unparalleled 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 fluctuations over which the merchants and planters had no control.

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 (northeast of Charleston; it is in this parish that the Longpoint tract is situated) were below what would be expected. Rice was no longer an economically significant crop, although ranching and livestock production were emphasized as a substitute.

One result of these economic misfortunes was a decline in slave population, although slavery remained an essential institution. The Christ Church families owned an average of 17.1 slaves in 1860 compared to an average of 37.4 slaves held by St. Thomas and St. Denis families (Brockington et al. 1985:42).

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. These changes in the Charleston area are described in detail by Scardaville (in Brockington et al. 1985:53-78) and will note be discussed in this summary. Other, more general, sources include Williamson (1975) and Goldenweiser and Truesdell (1924).

## The Longpoint Tract

Turning from the general to the more specific, little data is available on the early activities on the Longpoint tract. The

plantation, which originally encompassed only 500 acres and did not extend northward to the Wando River, was apparently a Royal Grant made by William Bull to Ann (McGraw) Nichols (remarried to William Price) and Sarah McGraw (married to Benjamin Wilpley) on December 1, 1769 (Royal Grants, Book DDD, page 574; see Charleston County RMC Bk. D4, pp. 223-229). The reason that this tract, so near Charleston, was granted this late is not known. A copy of the plat for this grant found in Charleston County RMC Bk. H6, p. 488A reveals that the property had been held by Ann (McGraw) Nichols' grandfather, William Brown, and her father, James McGraw (Figure 3). On July 31, 1772, Benjamin Wilpley and his wife, Sarah McGraw, conveyed their "one full undivided Moity or half part of the . . . Plantation" to William Price and his wife Ann (McGraw) Nichols (Charleston County RMC Bk. D4, pp. 223-229). Within a year, Price and his sold the 500 acre tract to Peter Croft for £3000 (May 24, 1773; Charleston County RMC Bk. D4, pp. 225-229).

Croft held the property for nearly 20 years and may have been the first owner actually to reside on and farm the plantation. Unfortunately, Croft found himself indebted to several individuals who in 1788 took him to court for payment of the debts, which amounted to over £2077. Unable to pay the court judgement, Croft's plantation was sold by James Kennedy, Sheriff, to one of the complainants, Edward Blake, on March 29, 1793 for £301 sterling (Charleston County RMC Bk. H6, pp. 488-490). That Croft had built on the site is suggested by the recital, which states, "being the tract on which the said Peter Croft lately resided" (Charleston County RMC Bk. H6, p. 408).

Although there is no record of an executed deed, sometime between 1795 and 1801 the property was sold by Edward Blake's executors, John Blake and Charles Lining, to Angus Graham (Charleston County RMC Bk. 57, p. 167; Charleston County RMC Bk. S7, pp. 111-112; Charleston County Will Book C, p. 247). It was under Graham's ownership that the plantation grew to about 800 acres, with the purchase of several tracts bordering the Wando River from Barnard Elliott in 1804 (Charleston County RMC Bk. N7, pp. 92-95). Neither Graham, nor Blake, however, are listed in the 1800 census (National Archives 1958a); nothing is known of the plantation operation during this period.

In 1805 Graham sold the plantation to John Walker for $5600 (Charleston County RMC Bk. S7, pp. 111-112) and the 1810 census lists a John Walker, with 38 slaves (National Archives 1958b:219). Walker retained the plantation until May 18, 1819, when it was sold to Elnathan Haskell for $12,250, a 218% profit over the course of the 14 years Walker held the property (Charleston County RMC Bk. C9, pp. 353-355). The following year, on November 11, 1820, Haskell transferred the property to Charles B. Cockran and Peter Bacot, "Trustees of States Rutledge & his wife, Julia [Haskell] Rutledge," because,

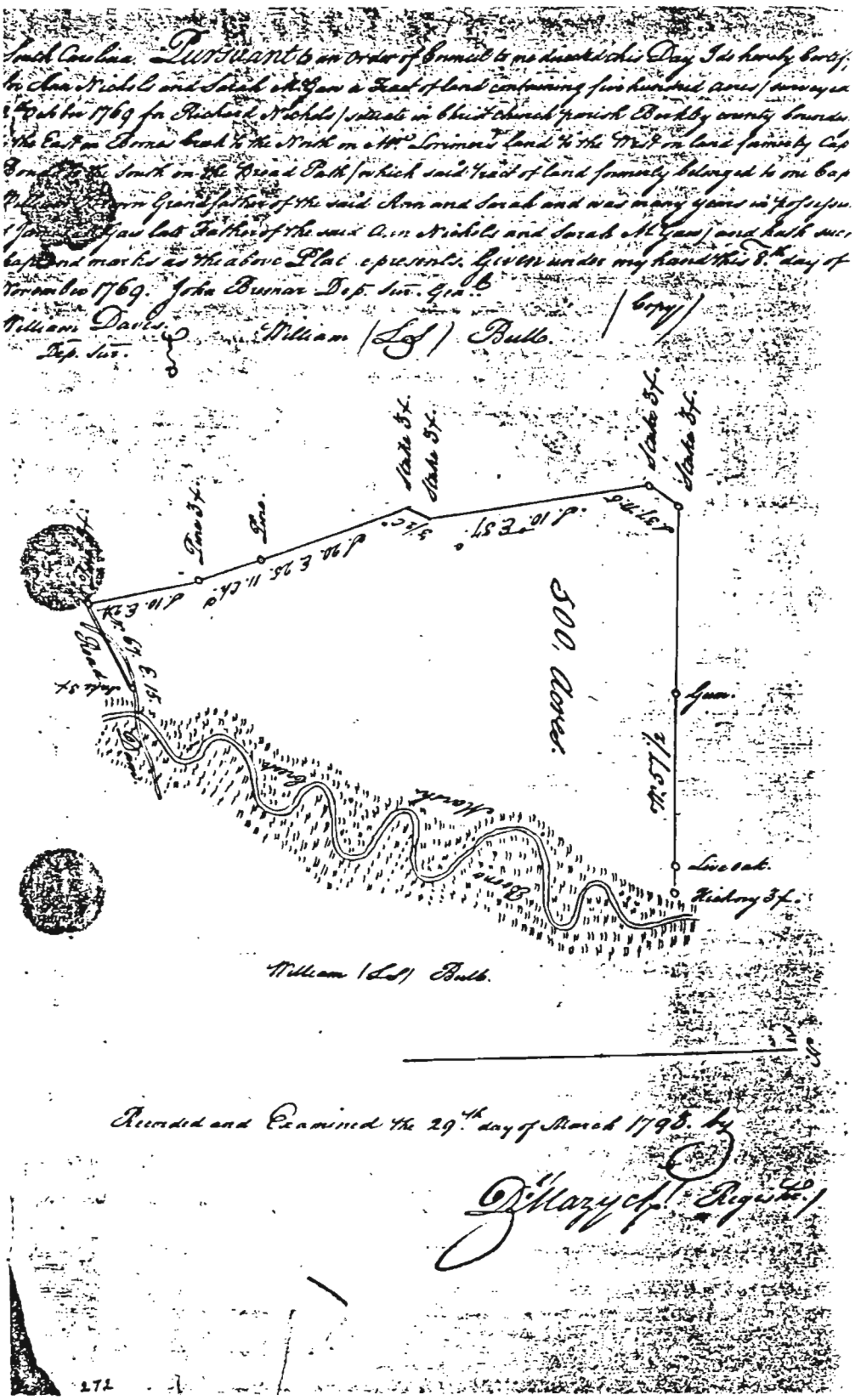



Figure 3. A 1769 plat of the Longpoint tract (Charleston County RMC Deed Book H6, p. 488A).

> of the natural love and affection which he [Elnathan Haskell] bears unto his daughter . . . Julia[,] is desirous of making a settlement of the Lands and negroes herein after described and named in order to provide a support and maintenance for his said daughter and her husband (Charleston County RMC Bk. G10, p. 190).

Haskell's trust specified that he purchased 36 black slaves from Walker, as well as the "stock of horses, cattle, sheep, [and] hogs."

In 1834, after the death of both Elnathan Haskell and States Rutledge, Julia Rutledge deeded her interest in the plantation to James Smith Rhett (formerly James H. Smith) for the consideration of $350 (Charleston County RMC Bk. H10, pp. 317-318). The other heirs of Elnathan Haskell, including Charles I. Haskell, William E. Haskell, Benjamin R. Smith and Pauline (his wife), Euginia Haskell, and Emma Haskell, sold their respective interests in the plantation for $50 each (Charleston County RMC, Bk. H10, pp. 316-317).

In 1854 James S. Rhett conveyed the plantation to Francis Q. McHugh for $4750 and in 1856 his wife, Charlotte Rhett, also conveyed the property to McHugh (Charleston County RMC Bk. H13, p. 217 and Bk. S13, p. 522). During McHugh's brief ownership a plat was drawn by Robert K. Payne, dated December 30, 1854, which shows the main house, outbuildings, the slave row, and a number of roads (Charleston County RMC, McCrady Plat 5946). Two landings appear to be shown, one north of the main house in the vicinity of the brick works and a second to the south with a causeway going into the marsh to Boons (sic) Creek (Figure 4). McHugh sold the tract on June 5, 1986 to Winborn Lawton, Jr. for $5100 (Charleston County RMC Bk. S13, p. 555). Perhaps because of the recently conducted survey, the McHugh-Lawton conveyance specified that the property contained 535 acres of highland and 750 acres of marsh.

Lawton retained the property for a little over seven months before selling it on December 20, 1856 to Dr. E. M. Royall (Charleston County RMC Bk. X13, p.33). It is for the Royal ownership that the most complete records have been found.

Edward Manly Royall was the seventh of seven children and was born in Edgefield, S.C. on December 2, 1827. He apparently moved to the Mount Pleasant area at the age of 12 and eventually attended the College of Charleston and the Charleston Medical College. On April 23, 1850 he married Anne Bailey Venning (daughter of Robert M. Venning; Venning is a prominent Christ Church Parish family) (S.C. Historical Society, McIver Collection, 11-285). The activities of E. M. Royall during these early days are unrecorded, although several letters to him from his parents in Georgia make reference to their finances and

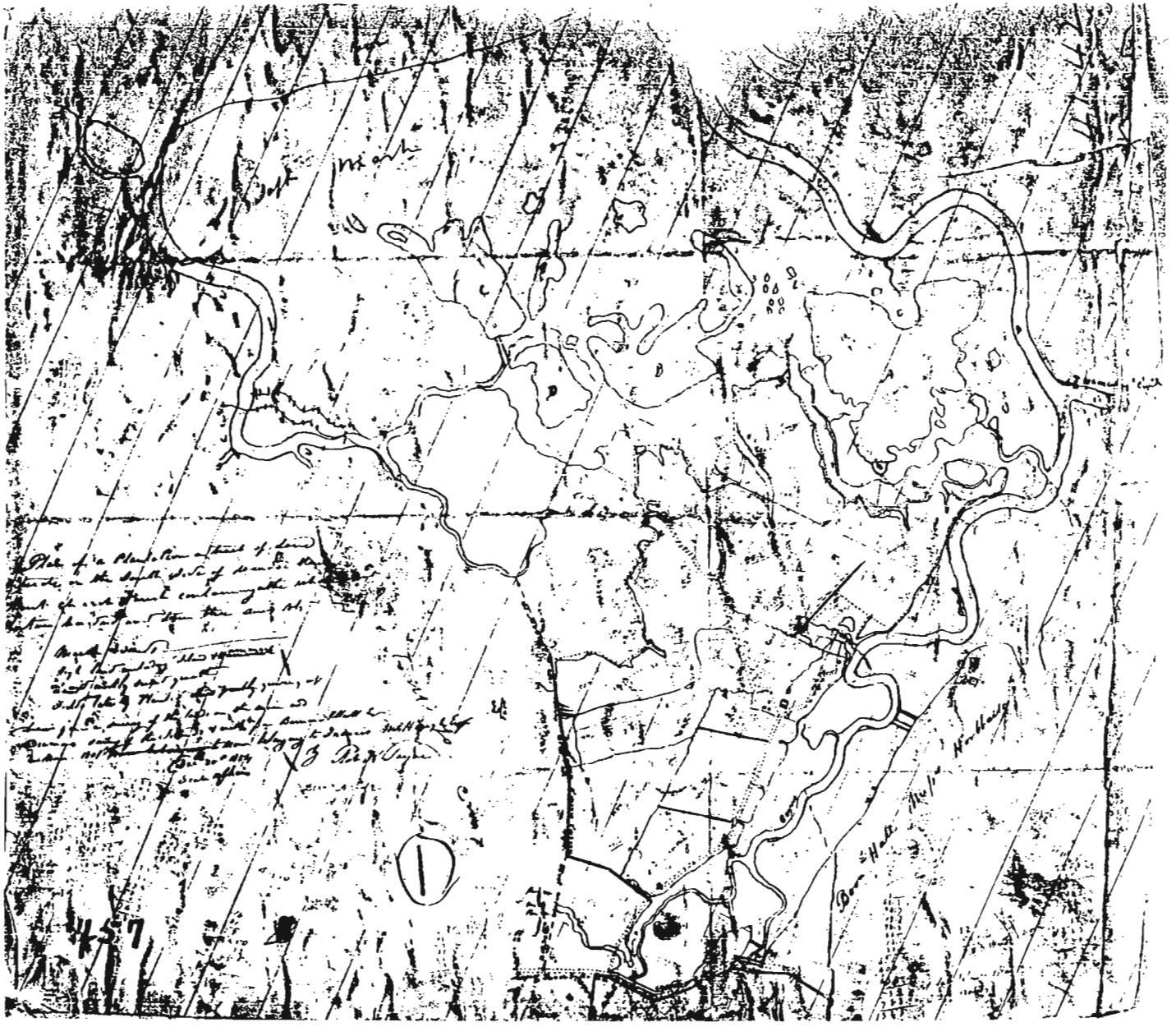


Figure 4. An 1854 plat of the McHugh plantation (McCrady Plat 5946).

cotton ventures in Georgia and Florida. In an October 14, 1856 letter from his mother, she states that if she had the money she would pay for his family to visit them in Georgia, but "money is still scarce with us" (Jervey Royall Collection, Mount Pleasant). The only antebellum mention of E. M. Royall's plantation activity comes from an August 30, 1860 letter from his father in Georgia, who says, "ah well, I am sorry to hear about your cotton I hope if we make short crops we may get good prices" (Jervey Royall Collection, Mount Pleasant).

The 1860 census provides some additional information on the Royalls and plantation activity immediately prior to the Civil War. In 1860 E. M. Royall, who listed his occupation as "Farmer," had four children: Mary E. (8 years old), Robert (6 years old), Basil (2 years old), and Edwin (4 months old). Royall listed the value of his real estate at $10,000 and his own personal estate at $15,000 (National Archives 1967a:108). Royall owned 28 slaves, evenly divided between males and females (National Archives 1967b:278).

The 1860 agricultural schedules reveal that Royall's plantation was small compared to his Christ Church parish neighbors, but not unprofitable. His plantation consisted of 130 acres of improved land (compared to a Christ Church average of 217 acres) and 350 acres of unimproved land (CC average of 603 acres). The cash value of Royall's plantation was $10,000 (nearly one-third higher than the Christ church average of $7714) and the implements were valued at $200 (CC average of $480). The plantation had $1500 worth of livestock (CC average of $1325), including 7 horses (CC average of 5), 2 mules, 25 milk cows (CC average of 17), 20 cattle (CC average of 32). Royall produced no rice, but did post a harvest of 16 bales of cotton (CC average of 8), 800 bushels of corn (CC average of 632), 100 bushels of oats (CC average of 49), 50 pounds of wool (CC average of 58), 600 bushels of sweet potatoes (CC average of 716), 60 pounds of butter, and 12 tons of hay (Bureau of Census 1850:313-316).

Scardaville, in Brockington et al. (1985:39-41), notes that Christ Church was suffering economically in the mid-nineteenth century, primarily because of the 81.2% decline in rice production from 1850 to 1860. In addition, output of such items as oats, Irish and sweet potatoes, and butter also declined. The apparent solution to this economic slump was to increase the number of improved acres and to increase ranching activities. Scardaville suggests that cotton was never particularly successful in the Christ Church parish and that the economic decline,

> led to a conscious attempt to lessen dependence on the declining fortunes of one cash crop and expand into an area, particularly ranching, which could take maximum advantage of their proximity to the

> Charleston urban market (Brockington et al. 1985:42).

Royall does not appear to have followed that exact path, since his plantation produced twice the average amount of cotton for the parish and slaughtered only half the amount of livestock ($45 compared to an average slaughtered value of $89). In spite of the plantation's small size, its output compares favorably with that of Bermuda Plantation, the homestead for the principal head of the Venning clan in the parish (Table 1). The Royall tract was also clearly more profitable that the marginal operation of Sanders' Longpoint Plantation (Brockington et al. 1985; Trinkley 1985).

It was assumed that soil drainage would be linked to overall plantation productivity, especially if cotton was the principal cash crop. Allston, in his Essay on Sea Coast Crops, specifically states that, "[w]ithout good draining, the most thorough preparation of the surface, and the subsoil, the most diligent labor after careful sowing, and the highest degree of manuring, will fail to produce the desired result" (Allston 1854:38). Seabrook, several years earlier, had carefully stated the same concern, noting that some soils had,

> 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 the growth of course and sour grass and brown sedge . . . acid and antiseptic qualities of the soil . . . sponge-like power to absorb and retain water . . . . [The soil] is barren, (for useful crops) from two causes - excessive wetness and great acidity (Seabrook 1848:36-37).

Cotton required a light sandy soil, so most successful planters constructed extensive drainage, at times almost as elaborate as required for rice cultivation (Hammond 1884:507; Mason 1976:63). Mason notes that,

> [m]ost Sea Island fields had main ditches to facilitate water run-off. The low-lying fields also had one-half and one-quarter acre drains cutting into the ditches to prevent water from collecting in pools (Mason 1976:63).

Smith (1986:8) notes that evidence of marsh reclamation for cotton production is present on the Royall plantation in the vicinity of Palmetto Island County Park. She also notes that a

| | Royall | Bermuda | Longpoint |
|---|---|---|---|
| Value of Farm ($) | 10000 | 10000 | 5000 |
| Value of Farm Implements ($) | 200 | 600 | 100 |
| Value of Livestock ($) | 1500 | 1200 | 500 |
| Value of Animals Slaughtered ($) | 45 | 200 | 100 |
| Value of Market Produce ($) | 0 | 0 | 0 |
| Value of Orchard Products ($) | 0 | 0 | 0 |
| Indian Corn (bushels) | 800 | 400 | 300 |
| Oats (bushels) | 100 | 0 | 0 |
| Irish Potatoes (bushels) | 0 | 0 | 0 |
| Sweet Potatoes (bushels) | 600 | 1000 | 1000 |
| Peas and Beans (bushels) | 0 | 0 | 100 |
| Butter (pounds) | 60 | 0 | 100 |
| Wool (pounds) | 50 | 100 | 0 |
| Ginned Cotton (bales) | 16 | 19 | 0 |
| Slaves | 28 | 35 | 12 |
| Acres (highland) | 500 | 261 | 360 |

Table 1. Agricultural production at Royall Plantation in 1860 compared to Bermuda and Longpoint (Sources: Brockington et al. 1985:87; Bureau of Census 1850:313-314).

ditch network is still visible within the park (Smith 1986:10). Both filled and open ditches are also present in the Longpoint tract.

Although it was expected that there would be a correlation between soil drainage and plantation productivity, no such correlation is obvious at the Royall, Sanders, or Bermuda plantations. For example, the least productive Sanders Plantation contains the lowest percentage of very poorly drained acreage (21.6% compared to 49.5% at Bermuda and 52.3% at Royall Plantation). The Sanders Plantation also contained four times as much well drained acreage than did the Royall Plantation. As previously discussed, it appears that in an area where poor drainage was ubiquitous, it was proper soil management that was the deciding fact in plantation productivity.

With the outbreak of the Civil War E. M. Royall enlisted as an Assistant Surgeon in the Confederate Army, serving at Sullivans Island, in Tennessee and Virginia, and finally surrendering at Appomatox. There is some evidence that during this time both his own and his wife's health suffered (S.C. Historical Society, McIver Collection, 11-285; an 1863 request for a furlough from the Santee Artillery noted that his wife was "seriously ill"). Since Royall's wife moved upstate during the war, it is likely that plantation upkeep also suffered.

Postbellum accounts include family memories and legend, a few account records, and federal census records. It is in the postbellum period that the plantation becomes known as Palmetto or Palmetto Grove. The 1870 agricultural census clearly reveals the economic condition of most planters. Royall continued to list the value of his real estate at the pre-war level of $10,000 and indicated that implements were valued at $500, an increase of $300 from the 1860 census. Royall also lists 150 acres of improved land and 600 acres of unimproved land, more than the total highland, yet less than the combined highland and marsh acreage. The stock was valued at $450 and the farm production was valued at $5000. In that year 10 bales of cotton were produced, although the Christ Church Parish average was only 2 bales per farm (Brockington et al. 1985:51; Bureau of Census 1870:15-16). It seems clear from these accounts that in the early postbellum years the plantation did not operate with tenant labor.

In 1871 Royall sold almost 13 bales of cotton through M. Gourdin & Co. for $4861.73. There are records of Royall purchasing $360 of fertilizer in 1873, in addition to rice flour, corn, meat, herrings, flour, sugar, coffee, salt, hard tack, potatoes (possibly as seed), matches, soap, hoes, chains, and "1 pr. Mill Stones" (Jervey Royall Collection, Mount Pleasant). Given the amounts involved (120 bushels of rice flour, 20 pounds of tobacco, 72 pounds of salt), it is likely that Royall was operating a plantation store and was selling the goods to local blacks. In fact, a 71 year old black informant, Jesse Ellis,

remembers E. M. Royall's son, Basil, operating a store along Long Point Road prior to 1915.

In spite of this appearance of prosperity, there were signs of economic difficulties. On December 28, 1870 Robert W. Moulson wrote E. M. Royall regarding a sizeable debt, noting, "you have had this money nearly three years that I have recd no interest" (Jervey Royall Collection, Mount Pleasant). In 1872 H. W. Bosworth (an attorney in Springfield, Massachusetts) requested, concerning another note, "if you cannot pay all of the debt now, please pay as large a part as possible" (Jervey Royall Collection, Mount Pleasant). Economic conditions were difficult for even the factor and commission merchants. In 1873, Thomas P. Smith wrote Royall that,

> [a]s to money it is extremely difficult to get on any terms . . . . you must make your drafts on us for cash, as light as possible (Jervey Royal Collection, Mount Pleasant).

In 1878 the precarious economic structure of Palmetto Grove collapsed and Royall, in an attempt to avoid foreclosure by Robert W. Moulson and J. N. Robson, placed the plantation under the trusteeship of Augustine T. Smythe in 1877. In exchange for periodic payments Royall was to continue residing at Palmetto Grove. Royall was not able to make the required payments, however, and in December 1878 the plantation was sold by Smythe to Martin Luhrs, a Charleston merchant who frequently loaned money to planters, for $900 (Charleston County RMC Bk. L17, pp. 302-305). One year later, on January 7, 1880, Luhrs sold the plantation to Ann B. Royall (E. M. Royall's wife) for $900 (Charleston County RMC Bk. A18, pp. 97). The plantation continued to be mortgaged to Luhrs for $1200 and this mortgage was not satisfied until 1901 (Charleston County RMC Bk. M17, p. 270.

Royall appears to have been doing what most other planters close to Charleston were doing -- trying to keep their farms together and operating as a single unit. By 1880 there is a clearer picture of events at Palmetto Grove. Scardaville, in Brockington et al. (1985:88-89) speculates that black wage labor was the common practice in the Wando Neck area, with leasing of land to the freedmen found further away from Charleston. The 1880 census reveals that Royall had 21 rents for fixed money rental, but also paid $416 to hire black laborers for 26 weeks and also hired 2 weeks of white labor. The farm value had declined to $2500, although there were 800 acres of improved land. The farm implement value also declined to a mere $70. Fertilizer costs declined from $360 in 1873 to only $70 in 1880. Royall was again active in livestock (which had a value of $600) and produced 70 pounds of wool. He produced 20 bales of cotton on 50 acres (Royall's 2.5 bales per acre was only slightly better than the Christ Church average of 2.4 bales per acre; Hammond 1884:477). He was also raising corn, oats, cow peas, beans,

Irish potatoes, and sweet potatoes. In addition, 200 cords of wood were cut from the plantation (Bureau of Census 1880b:1). The 1880 census also listed his sons Basil (21 years old) and William S. (18 years old) as single farmers (Bureau of Census 1880a:271).

A series of interview in November 1986 with Jervey Royall, a grandson of Dr. E. M. Royall, supplied some additional information on the postbellum Palmetto Grove Plantation. Apparently, E. M. Royall operated the plantation, with the help of his sons Basil and William, into the twentieth century. About 1910, however, E. M. Royall and his wife moved to Mount Pleasant, and the main house fell into decay. Farming operations continued to be directed by Basil, who lived in a smaller, postbellum house, south of the main structure. In 1915 E. M. Royall died and his wife, Ann B., died in 1920. In her will, Ann B. directed that "Palmetto Grove" be devised to "my two daughters, Emily M. and Annie C. Royall, being single and dependent on me, while my other children have married and settled in life for themselves" (Charleston County Probate Court, Will Bk. Z, p. 599).

The two daughters apparently operated the plantation for about four years, until ca. 1925 when a Mr. Berry was employed to oversee plantation operations and the farm emphasized a small production of truck crops. Apparently one of those crops was asparagus (Horse and Buggy Days in Old Mount Pleasant 1985), which was packed in a wood frame building raised off the ground on posts, situated just south of the main house. Other efforts to achieve a profit included the selling of borrow from the area below Landing Hill to construct the original Sullivans Island Bridge causeway and the selling of palmetto trees (Royall et al. 1982:8; Smith 1986:10).

Jervey Royall remembers that the main house was two stories and of frame construction with a brick cellar. The house was "L"-shaped with this cellar under the short arm of the "L." There were three slave cabins, of brick construction, still standing in the early twentieth century. Jervey Royall remembers a black field song which made reference to picking cotton for "Massah Lawton." This is apparently a retention of an antebellum slave song making reference to Winborn Lawton. Curiously, Lawton held the plantation for only five months, although those few months incorporated the cotton harvesting period of August through November (Hammond 1884:511).

In the nearby Snowden community (formed in the postbellum by freedmen from local plantations), 71 year old Jesse Ellis vividly recalls the early twentieth century at Palmetto Grove. He noted that Basil lived in a house on the road to the lower landing, and that there was a cotton gin and a "long house" adjacent to the west. There was a school house on Long Point Road, situated in a very low, poorly drained area. This school house, for the local blacks, was apparently constructed in the late nineteenth century and was taught in by Petrona Royall McIver. Prior to 1915 there

was the previously mentioned general store operated by Basil Royall, which was also just off Long Point Road. After 1915 this building was apparently reused as a domestic structure for a black family. Jesse Ellis's memory has allowed many of the structures shown on the 1919 Fort Moultrie USGS topographic map to be identified (Figure 5).

In 1937 the Royall sisters, Annie C. and Emily M., decided to sell the plantation, noting that,

> the said property is burdened with sundry indebtedness, secured by two mortgages, that are liens thereon, and is yielding insufficient revenue to sustain the burden of taxes and interest on the mortgages (Charleston RMC Bk. K39. p. 405).

The purchaser was a wealthy Canadian diplomat, Thomas A. Stone, who had previously purchased Boone Hall. At Palmetto Grove, as at Boone Hall, Stone's first action was to have the main house razed. In addition, Stone apparently tore down the Palmetto Grove school and a number of the dwellings, allowing the Snowden residents to reuse whatever could be salvaged (Jesse Ellis, personal communication 1986).

In July 1940 the property accumulated by Stone, including Palmetto Grove, was sold to Dimitri and Audrey Djordjadze, for $160,000. A reputed Russian prince, Djordjadze made few changes to the property, although he did dredge a channel to bring deep water to the main house bluff during high tide (Jervey Royall, personal communication 1986). An October 4, 1940 plat of the property by J. T. Kollock (Charleston County RMC Plat Bk. G, p. 51-A) provides an interesting view of the area in the mid-twentieth century (Figure 6). The property is largely wooded, with only one field adjacent to Long Point Road. The "Site of Old House" is shown, although the main house has been torn down. Five brick slave cabins are shown at the Upper Landing. At Landing Hill the plat shows "Site of Seewee Indian Fort" which continued to perpetuate the myth.

Although the brick works are not found mentioned in the earlier historic documents, I speculate, based on brick size (which is recognized as being largely unreliable) that the kilns were begun at least in the early antebellum period and may even be colonial in origin. Smith also reports that,

> [s]everal large piles of bricks on the east side of Island One (west of the Nature Island) mark the site of a brickyard (Smith 1986:10).

In 1945 the property was sold by Djordjadze to P. O. Mead, Jr. and A N. Manucy (Charleston County RMC Bk. J45, p. 277). During the period of their ownership the plantation was largely

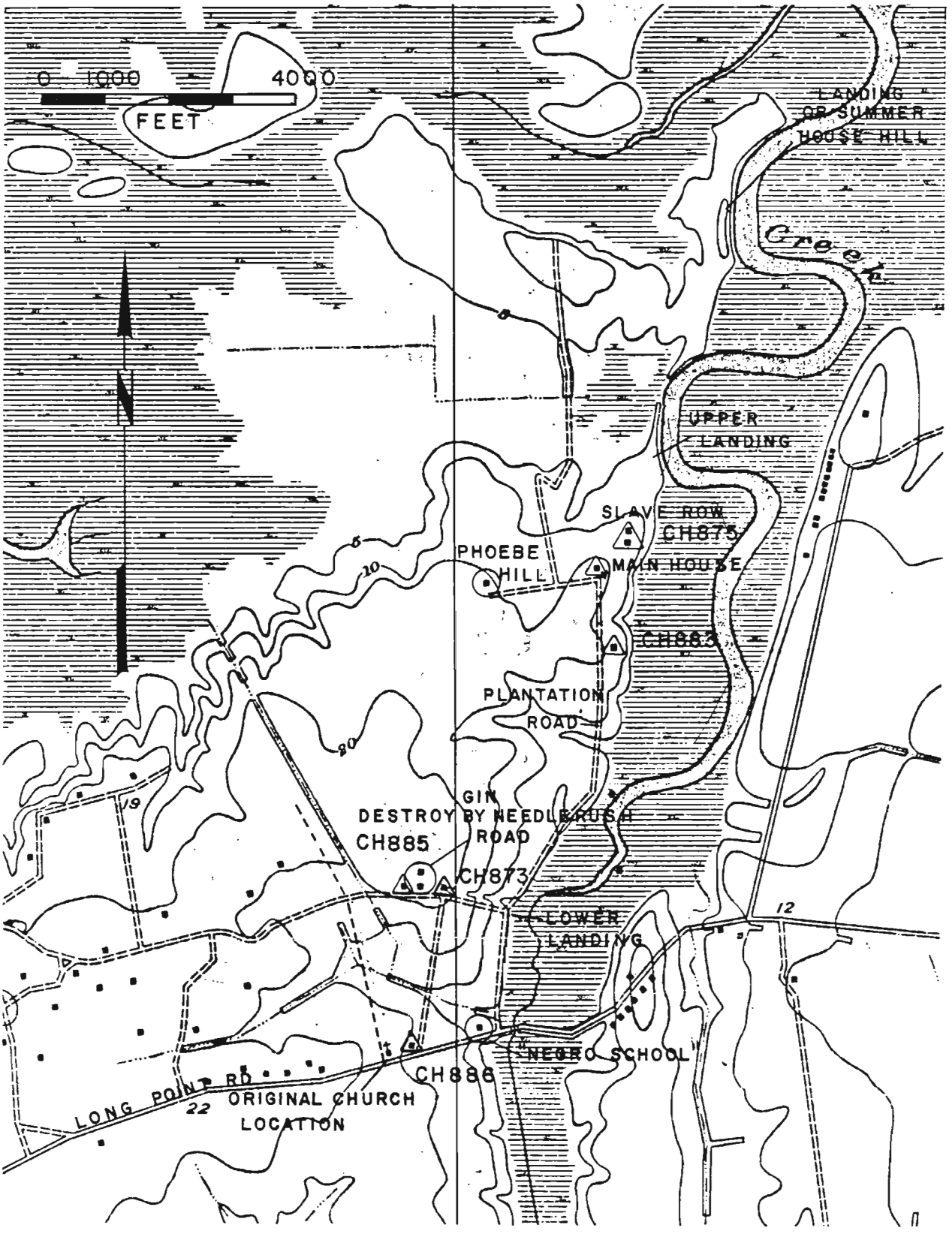



Figure 5. A portion of the 1919 Fort Moultrie USGS topographic map, with structure identifications provided by Jesse Ellis and Jervey Royall.

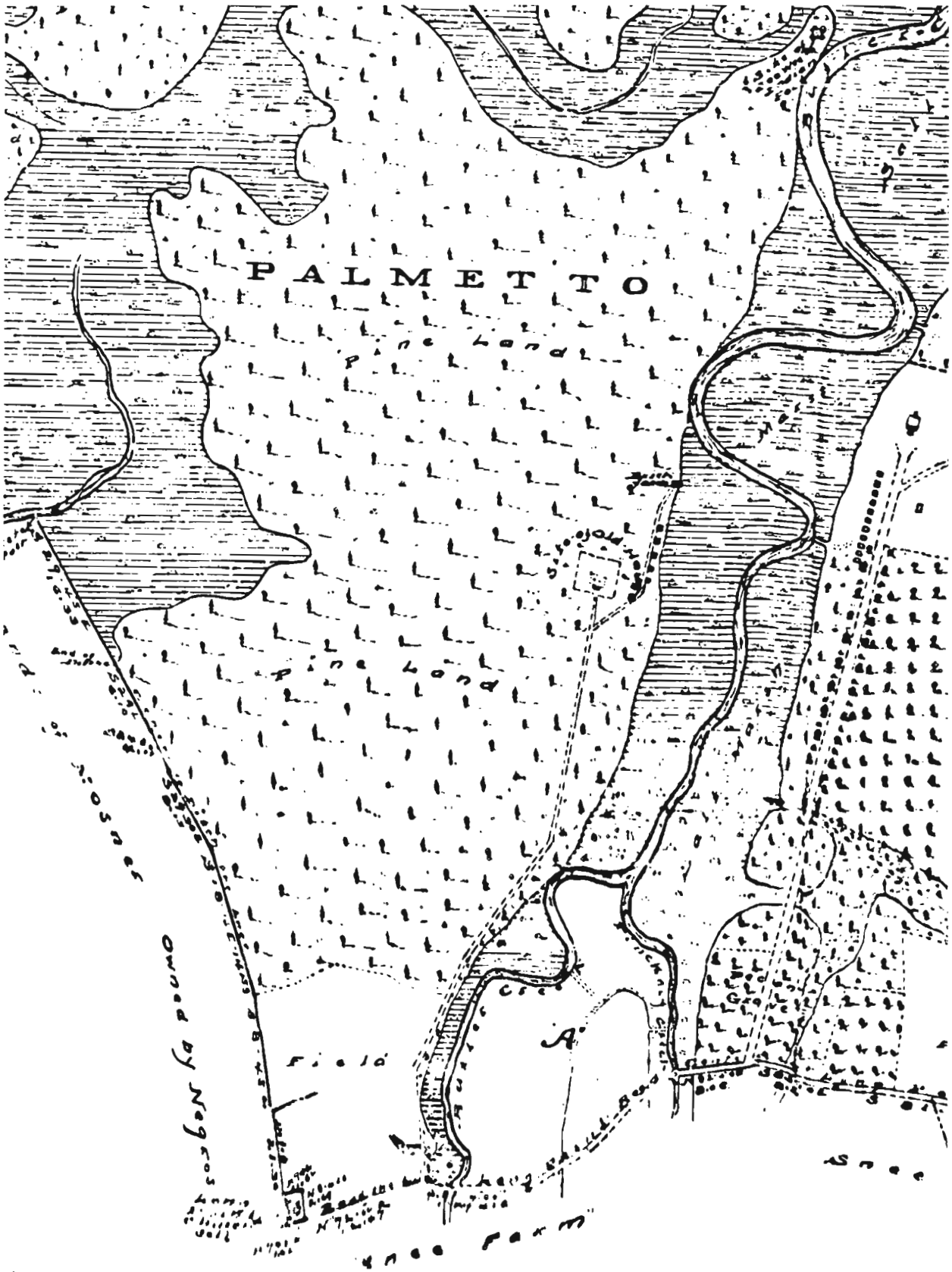



Figure 6. A portion of the 1940 J.T. Kollock plat showing Palmetto Grove plantation (Charleston County RMC Plat Book G, p. 51A).

timbered, which partially accounts for the few areas of climax forest on the tract today (Smith 1986:11). Mead and Manucy sold the tract in 1945 to Robert c. MacNeal (Charleston County RMC Bk. J44, p. 353) who sold it to real estate investor Dewitt W. King, Jr. in 1948 for $200,000 (Charleston County RMC Bk. W48, p. 227). King in turn sold the Palmetto Grove tract to Joseph P. Griffith in 1972 for $850,000 (Charleston County RMC Bk. E99, p. 62).

In summary, the Palmetto Grove Plantation was organized in the colonial period and the main house may have been built by 1793. The plantation achieved its full size of about 800 acres by 1804. Between 1769 and 1856 the plantation was owned by 11 individuals, with the longest tenures by Peter Croft (1773-1793) and James S. Rhett (1834-1854). Beginning in 1856, under the ownership of the Royall family, we begin to have more complete information on the planting practices and wealth of the tract. In spite of its poor drainage characteristics the tract was largely profitable in the late antebellum period. The Royall plantation, in terms of size, number of slaves, and profit, seems to be typical of the larger Christ Church parish plantations and, as such, offers a clear contrast to the Sanders plantation. Royall emphasized cotton production and does not seem to have diversified into ranching as had many of his neighbors. After the Civil War the Royall tract continued to plant Sea Island cotton and probably shifted to truck crops only after the boll weevil invasion in 1918. Unlike many of his neighbors, Royall reported 21 renters operating on a fixed money rental system in 1880. These individuals may largely represent the freed Royall slaves, although this is speculation and no Royall account books have been identified. There is ample evidence, however, that Royall was purchasing large quantities of subsistence stores (above his own family's needs) in the 1870s, perhaps for a plantation store.

## RESEARCH STRATEGY AND METHODS

### Introduction

As was previously indicated, the primary goals of this survey are to identify, record, and assess the significance of archaeological sites within the 275 acre Longpoint development. Secondary goals include an examination of soils, drainage, and site locations and an examination of the Royall plantation activities and economics. No major analytical hypotheses were created prior to the fieldwork and data analysis, although certain expectations regarding the secondary goals will be outlined in these discussions. The research design proposed for this study is, as discussed by Goodyear et al. (1979:2), fundamentally exploratory and explicative.

The previous discussions regarding soils and drainage lead to the conclusion that prehistoric sites will be found in areas of moderately to well drained soils. Further, the bulk of the site components will be Middle to Late Woodland, since the high sea level stands during these periods are thought to have restricted the dispersion of resources such as large mammals and forest products. Finally, sites are expected to be small and exhibit low artifact diversity since the use of extractive sites is brief, the sites represent a narrow range of activities, and group size was small (Brooks and Scurry 1978). Previous research has also clearly exhibited a non-random pattern to prehistoric site settlement. Even when vast areas of well drained soils are available for settlement, the sites will be found clustered around small tidal inlets and marsh areas (Scurry and Brooks 1980:77; the Mark Clark Expressway survey in the vicinity of the Sanders Plantation revealed a similar distribution, with sites clustered adjacent to the Rathall Creek marsh drainage). Based on these data, prehistoric sites at Longpoint were expected on the better drained Wagram, Charleston, or Hockley soils, but were not anticipated in the areas of Edisto, Leon, Stono, or Yonges soils. Prehistoric sites, however, were not expected inland, away from marsh or tidal creeks. This situation is anticipated because of the "edge effect" where a variety of resources are brought into close proximity. At the Belleview survey tract (Scurry and Brooks 1980:23) 63% of the sites are within 150 feet (46 meters) of a marsh inlet and the average distance was 163 feet (50 meters). It may prove significant for future archaeological research on the coast, particularly when conducted as a requirement of the S.C. Coastal Council, that 89% of the prehistoric sites (34 of 38) were found within 300 feet of the marsh or tidal creek.

Turning to historic site locations, previous research has suggested that the main house or major plantation complex will be situated in areas of "high ground and deep water," which incorporates the positive attributes of well drained soils and immediate access to water transport (Hartley 1984; South and Hartley 1980). As plantation crops and owners changed during the colonial and antebellum periods it is possible that settlement areas might change location. Additionally, it might be impossible to locate the plantation complex in an area which was healthful, centrally located, and adjacent to a deep water access. In such cases compromises on the ideal would be made, but the weight give to each of the various attributes is unclear. While the health and well-being of the owner's slave chattle was of considerable concern, slave rows were not commonly situated on the best land, and in some cases were located on very poorly drained soils (Singleton 1980; Zierden and Calhoun 1983).

The historic documentation, previously discussed, revealed the location of the antebellum plantation complex (main house, out buildings, and slave row), in addition to the location of several landings and the main roads. The plantation complex, while in an area of relatively well drained soils and adjacent to a bluff to take advantage of the healthful breezes, was not located next to a deep water access. Apparently, such access was less significant than a central location, healthful climate, or other as yet undetermined attributes. One research question for the historic period involves the choice of the site location.

Also of interest is whether the plantation complex changed location from the colonial to antebellum periods. Previous research at the Belleview and Sanders plantations has suggested that colonial occupation may leave little archaeological record. At Belleview only 20.5% of the ceramics (N=654) were eighteenth century (Scurry and Brooks 1980:72), while 32% of the Sanders' ceramics (N=654 were eighteenth century (Trinkley 1985:62). At the Elfe Plantation, which was occupied into only the first quarter of the nineteenth century, colonial ceramics dominate the collection (93% of the 168 ceramics), yet the eighteenth century wares occur at a fairly low density. This suggests that colonial sites may have a lower archaeological visibility than antebellum sites, either because of an increased access to ceramics and other goods in the nineteenth century or because the nature of the plantation concept was gradually being modified.

Finally, based on the historical research, it appears that the Royall plantation was an active, productive economic unit and the antebellum owners were probably wealthy members of society. It would be useful to compare the archaeological remains from the nearby Sanders plantation, an obviously marginal plantation, to those from Royall's settlement. The archaeological record may also provide evidence of the Royall family's response to postbellum economic decline.

## Archival Research

This study incorporated a review of the site files at the South Carolina Institute of Archaeology and Anthropology and The Charleston Museum. In addition, archival and historical research was conducted at the S.C. Historical Society, the Charleston County RMC office, the Charleston County Probate Court, the South Caroliniana Library, and the South Carolina Department of Archives and History. Throughout this historical research an emphasis was placed on the primary, rather than secondary, sources as the appropriate level of initial study. While the historical research is not exhaustive, it does provide a clear background and is a sufficient base for future work in the project area. This historical and archival research was conducted by the author of the report.

## Field Survey

The initially proposed field techniques (discussed with the staff of the S.C. Department of Archives and History) involved (1) an intensive survey of the marsh edge with shovel testing and screening of the soil through 1/4 inch (0.6 centimeter) mesh, (2) a pedestrian survey of open or disturbed ground areas, and (3) shovel testing of the interior portions through the use of transects spaced 500 feet (154 meters) apart and with shovel tests at 100 to 200 foot (31 to 62 meter) intervals. The emphasis on shovel testing is required by the tract's extensive woods coverage, which was anticipated to severely restrict surface visibility. The intensive study of the marsh edge is consistent with previous findings that sites tend to cluster adjacent to the marsh (although usually on better drained soils than found over much of the Longpoint tract). The transect survey, with similar test placements, was successfully used by Scurry and Brooks (1980) at the Belleview tract on Long Point Road. This methodology was accepted by the S.C. Department of Archives and History as appropriate to the nature of the tract.

Should sites be identified by the shovel testing, further tests at closer intervals (15 to 20 feet or 5 to 6 meters) would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. The information required for completion of S.C. Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigator.

All soil would be screened through 1/4-inch (0.6 centimeter) mesh, with each shovel test numbered sequentially. Each test would measure about 0.8 foot (24 centimeters) square and would be excavated to at least the base of the A or Ap horizon (normally 1.0 foot or 0.3 meter). All cultural remains, except obviously recent twentieth century inclusions such as aluminum, plastic, and rubber, would be collected. Brick, mortar, and shell, during

the shovel tests would be noted with occasional samples collected. Periodic notes would be made of soil profiles for comparison with the county soil survey (Miller 1971).

These plans were put into effect, with one exception. The density of project vegetation was grossly underestimated and in most areas the transect surveys required a tremendous expenditure of time to cut lines through the woods. As a result, rather than use the proposed transect lines in Phase 1 survey with the resultant 50 shovel tests, the methodology was altered to make use of the existing centerline road survey lines. These areas, about 5.0 feet (1.5 meters) in width, had been cleared of heavy vegetation for use as sight lines, but no ground disturbance had taken place. These lines bisected the tract and outlined the northern and southern boundaries of the Phase 1 survey. By using these lines, a considerable savings in time was allowed, while still allowing fairly even coverage of the tract. The bias of periodicity was avoided and there is no reason to believe the use of the sight lines has introduce any other bias (they do not, for example, follow only high or low ground areas, but rather are laid out to maximize access to the entire tract). Instead of the maximum of 50 shovel tests which would have been used, 70 shovel tests were actually dug. The coverage by shovel tests is shown in Figure 7. Spacing was usually at 100 feet, although in no case (excepting very wet, low areas with standing water) was the spacing greater than 200 feet. Not unexpectedly, the Phase 1 shovel tests revealed the accuracy of the soil survey and only those tests on the south side of the Phase 1 tract, east of Needlerush Road, revealed well drained soils.

In the Phase 1 tract the marsh edge was examined by a series of 26 shovel tests, spaced 100 feet apart (except for one area where tests were 200 feet or 61 meters apart). A second series of tests were placed along a site line parallel to the marsh about 150 feet (46 meters) inland. The only pedestrian survey was conducted on about 700 feet (215 meters) of woods road which did have good surface visibility.

These sight lines were not available for the remainder of the tract, so the initial plan of transects was implemented on a reduced scale. This reduction, while necessary because of time limitations, was also based on the findings of the Phase 1 survey. The interior tracts, being largely poorly drained and distant from water sources, revealed few archaeological remains. Consequently, the Phase 2 tract was shovel tested using a single transect along its west edge and another north-south transect through the center of the property. Shovel tests were continued along the eastern and western marsh boundaries, although the western boundary was very low and the soils were poorly drained (drainage in this area is to be improved by the excavation of lagoons during development). During the course of this work 270 shovel tests were excavated and screened. Although this yields only one test per acre, the tests were largely placed in areas of high archaeological probability based on previous work.

## Site Tests

Because the additional work conducted at 38CH873, 882, 884, and 886 was directed not only toward obtaining a larger and hopefully more representative, collection of artifacts, but also toward identifying and interpreting in situ remains and features, 5 foot (1.5 meter) square excavation units were selected for the study. Each unit was tied into a permanent site datum for horizontal control. The choice to use bearing and distance from these reference points rather than a formal grid was made to minimize site preparation time. Because all of the sites were largely wooded, laying out a grid would have been a relatively labor intensive activity. Vertical control was maintained through the use of either pre-existing bench marks with mean sea level (MSL) elevations (for 38CH873 and 38CH886) or the establishment of reference points with arbitrary elevations. Elevations are expressed as either feet MSL, or feet AE (assumed elevation). The use of these horizontal and vertical controls ensures that the location of the excavated test pits may be reconstructed if necessary.

Excavation proceeded by hand with all soil screened through 1/4-inch mesh. Screen loads were sorted in the field with all materials from a single provenience bagged together. All brick, mortar, and shell was collected and retained. Stratigraphy and unit placement will be discussed in the following section of this report.

Each unit was troweled, photographed in B/W print and color slide film, and plotted at the base of the deepest excavation level. Plot sheets are at a horizontal scale of 1 inch - 2 feet (2.5 centimeters - 0.6 meter) and an exaggerated vertical scale of 1 inch - 1 foot (2.5 centimeters - 0.3 meter). All units were backfilled at the completion of the study.

## Laboratory and Analysis Methods

The cleaning and cataloging of artifacts was conducted in Charleston and at the Chicora laboratories in Columbia during November and December 1986. All artifacts except brass and lead specimens were wet cleaned. Brass and lead were dry brushed and evaluated for further conservation. 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 4 hours. Hand cleaning with soft brass brushes or xxxx-grade steel wool followed the electrolysis. Afterwards the surface chlorides were removed with distilled water baths and the items were dried in a series of alcohol baths. The conserved cuprous items were coated with a 50% solution of Incralac in toluene. Ferrous objects (except nails, which were so numerous as to require sampling) were treated in one or two ways. After the mechanical removal of gross encrustations the artifact was tested for sound metal by the use of a magnet. Items lacking

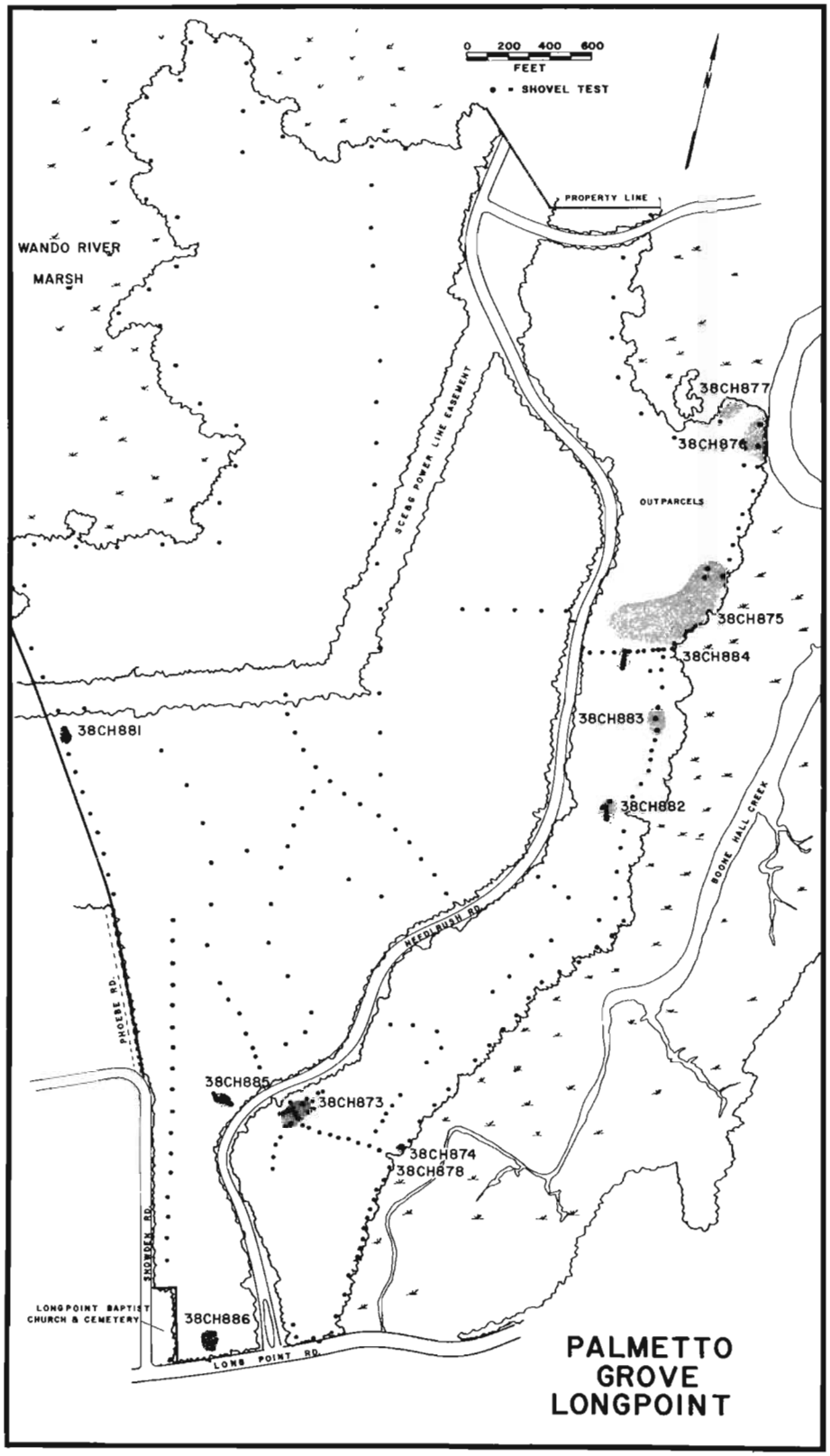



Figure 7. Longpoint development tract, showing shovel tests and identified sites.

sound metal were subjected to multiple baths of tap and distilled water to remove chlorides. The baths were continued until a conductivity meter indicated a level of chlorides no greater than 1.0 ppm. This technique was also used on fragile metal artifacts, such as tin can fragments. These items were eventually given a micro-crystalline wax coat, not only to seal out moisture, but also to provide some additional strength. Items which contained sound metal were subjected to electrolytic reduction in a bath of sodium carbonate solution in currents no greater than 5 volts for periods of 5 to 20 days. When all visible corrosion was removed, the artifacts were wire brushed and placed in a series of tap and distilled water soaks, identical to those described above, for the removal of chlorides. When the artifact tested free of chlorides, it was air dried and a series of phosphoric (10%) and tannic (20%) acid solutions were applied. The artifacts were oven dried at a temperature of 200° F (93°C) for 20 minutes, then dipped in molten micro-crystalline wax solution and then placed back in a heated oven for 5 minutes to allow the excess wax to drip off.

As previously discussed, the materials have been accepted for curation by The Charleston Museum and have been lot cataloged using that institution's accessioning practices. Specimens were packed in plastic bags and boxes. Insect control is maintained through the use of vapona, which is not allowed to come into direct contact with the specimens. Because the artifacts are being stored in a controlled museum environment, no items were packed with silica gel; periodic inspection of the conserved artifacts is, however, advisable.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. Prehistoric ceramics were classified using common coastal South Carolina types (Trinkley 1983). The temporal, cultural, and topological classifications of the historic remains follow Noel Hume (1970), Miller (1980), Price (1970), and South (1977).

## IDENTIFIED SITES

### 38CH873 - Basil Royall Farmhouse

Site 38CH873 is situated about 100 feet (31 meters) east of Needlerush Road at the southern edge of the Phase 1 tract and, at the time of the initial survey, appeared to represent a domestic site of the late nineteenth and/or early twentieth century. Based on a series of 18 shovel tests the site was estimated to be about 100 feet (31 meters) north-south and 50 feet (15 meters) east-west, for a total of 5000 square feet (465 (square meters). The site was situated in an area of fairly open hardwood forest, immediately north of a proposed development road. About 80% of the site appeared to be on a lot, while the remaining 20% is within the right of way of the proposed road (Figure 8).

Based on the collection obtained during the initial survey (the initial collections from the surface and the shovel tests are detailed in Table 2), it suggested that the site probably dated from 1880 to 1920 and that it represented a wooden domestic structure with a brick chimney or piers. The site was noted to be situated adjacent to a previously cleared field and I suggested that it might represent a black tenant occupation from the Royall postbellum plantation, a period of reduced economic activity.

In a November 6, 1986 letter, Mr. Charles Lee, State Historic Preservation Officer, stated that, "[i]n our opinion, limited testing of 38CH873 is necessary for a final Register assessment of either eligible or not eligible as a portion of the site will be affected by the development project." The archaeological testing discussed in this report was undertaken as a result of the SHPO's opinion, with the purpose of obtaining sufficient additional information on the site to allow a determination of eligibility.

#### Field Methods

A series of three 5-foot squares were excavated at the site by a crew of two on Saturday, November 15, 1985. A total of 16 person hours were expended at the site and the three units (representing a 0.02% sample of the site universe) yielded a total of 47 cubic feet (1.3 cubic meter) of soil. The investigations were constrained by intermittent rain and moist sand which was difficult to sift.

The units were tied into the proposed road station 1+50 (Reference Point [RP] 1). Vertical control was maintained

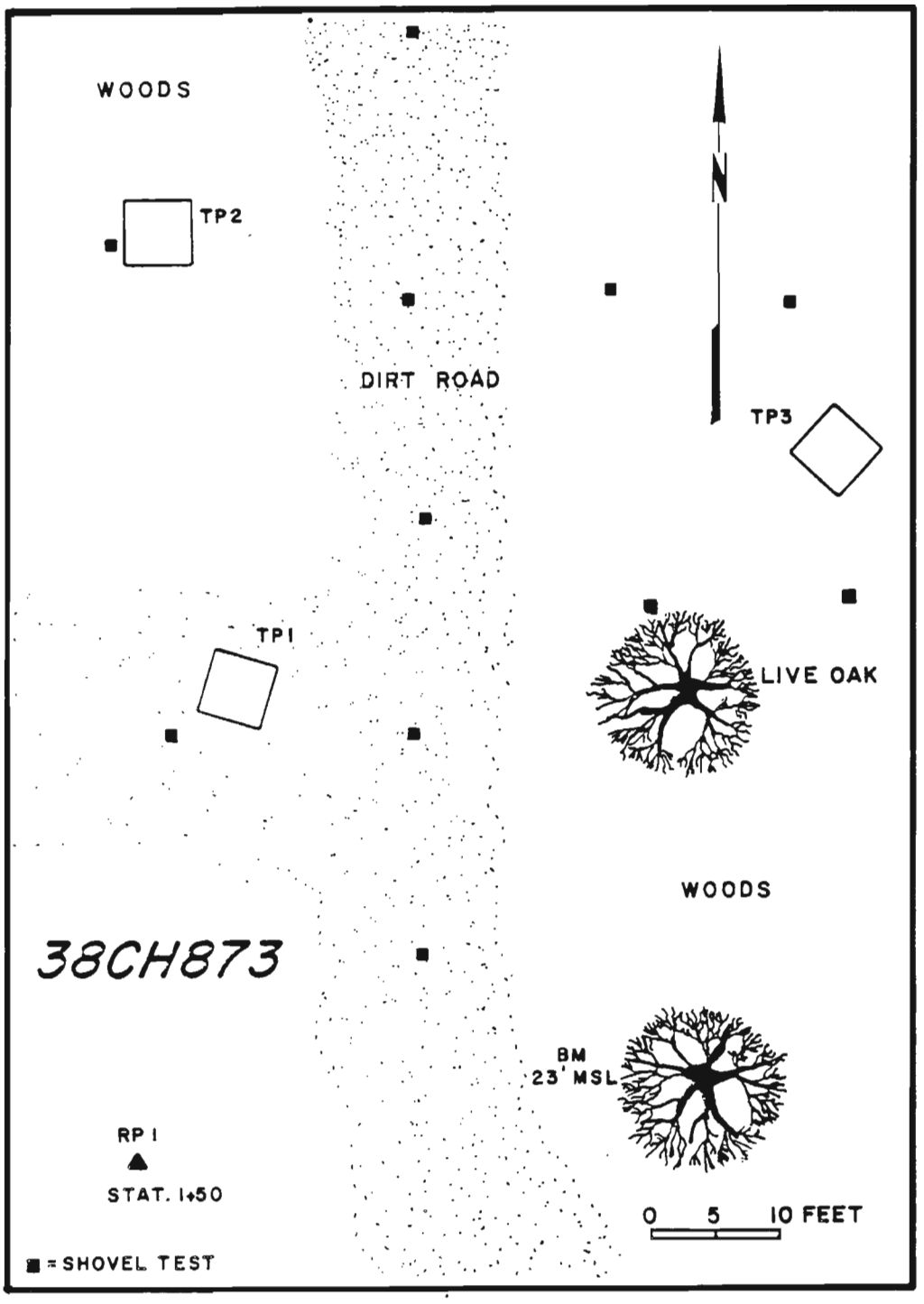



Figure 8. Site 38CH873, showing shovel tests and excavation units.

through the use of a pre-existing bench mark (23.00 feet [7.01 meters] MSL) established by Thomas and Hutton Engineering Company in a large live oak tree to the side of the proposed road.

Stratigraphy throughout the site area was fairly simple and generally uniform. Zone 1 consists of a brown sand which varied from 0.4 to 0.5 foot in Test Pits (TPs) 1 and 2 to 0.9 foot in TP3. This zone grades into a yellow to tan subsoil. Only in TP 1 was another soil zone, termed Zone 2, observed. In this unit there was 0.1 foot of heavily mottled tan sand which graded into the subsoil. Artifacts were largely confined to Zone 1, and Zone 2 appears to be the result of traffic and leaching -- it was not found elsewhere during these excavations or during the previous shovel testing.

Test Pit 1 is situated 35 to 40 feet (10.8 to 12.3 meters) N15°E of RP 1, with the unit laid out to the west. The square is within the proposed road right of way at the southern site edge. Zone 1 consists of a brown sand which appears to be a plowzone. There is an indistinct boundary between the upper zone and the lower zone of mottled tan sand, which in turn grades into a yellow sand subsoil. Plowscars are indistinct, but present at the base of Zone 2. No features were noted at the base of Zone 2 and the mottling may be caused by the roadbed in which the unit is located.

Test Pit 2 is situated 70 to 75 feet (21.6 to 23.1 meters) N1°W of RP 1 with the unit laid out to the east. This pit was placed to investigate the right of way edge at the western site periphery. Zone 1 consists of a brown plowzone overlying a yellow sand subsoil. Again plowscars are indistinct, which suggests a light cultivation, probably by a mule or horse drawn plow. No features were identified.

Test Pit 3 is laid out 75 to 80 feet (23.1 to 24.6 meters) N42°E of RP 1 with the unit positioned to the right of this sight line. The unit was placed to investigate the area north of the oak trees in the suspected site core. Based on the line of oaks and the dirt bank, this unit is outside the plowed area. Zone 1 was much thicker in this unit, 0.9 foot in depth, and was a gray humic sand with abundant roots. The subsoil is a yellow sand. No features were encountered.

## Historic Background

Subsequent to the archaeological testing, oral history from 71 year old Snowden resident Jesse Ellis, as well as from Jervey Royall, the grandson of Dr. E. M. Royall, revealed this site to be the location of Basil Royall's house, probably built in the last quarter of the nineteenth century and occupied into the 1930s by the farm overseer, Mr. Berry.

Basil Royall was largely responsible for the plantation's operations in the late nineteenth century and it was probably

during this period that the farmhouse was built. Basil took over the operations entirely when his father retired to Mount Pleasant around 1910. Perhaps significant to our understanding of the resultant artifact pattern is that Basil never married and a local black woman cooked for him and took care of the house. This structure was apparently used by the overseer until 1937 when the property was sold to Stone and was shortly thereafter torn down.

## Results

The excavations, shovel tests, and surface collections have yielded 404 historic artifacts (Table 2), six fragments of UID mammal bone, 16 prehistoric sherds, and collections of brick and oyster shells. The historic artifacts allow dating within only broad perimeters, although taken as a whole the collection is representative of the early twentieth century. The decalcomania ceramic provides a TPQ of 1901, while the tinted whiteware indicates a post-1911 date (Bartovics 1978). As previously discussed (Trinkley 1986b), one aqua soda bottle (containing "Caro-Cola") was manufactured by the American Glass Works and provides a tentative TPQ of 1880 (Toulouse 1071:43). A brown bottle fragment was produced by the Illinois Glass Company between 1916 and 1929 (Toulouse 1971:264) and an aqua "Ball" canning jar fragment post-dates 1890 (Toulouse 1977:5). The presence of amethyst glass provides a date range of 1880 to 1925 and a three piece mold bottle would have been popular from 1810 to 1890 (Newman 1970). The almost equal numbers of machine cut and wire nails suggests a date range similar to these other artifacts. A clear glass toiletry bottle, molded with "HOYT'S/56/GERMAN/COLOGNE" was also recovered from the site. Worrell (n.d.:36) notes that cologne, a perfume containing a large quantity of alcohol, became popular in the early twentieth century. An earlier (ca. 1870-1890) example of F. Hoyt & Company's products is illustrated by Wilson (1981:71).

The site, based on the artifact pattern analysis (South 1977; see Table 2) is definitely domestic, although it does not resemble the Revised Carolina Artifact Pattern (Garrow 1982; South 1977) as first thought (Trinkley 1986b). Rather, it most closely resembles the Piedmont Tenant/Yeoman Farmer Artifact Pattern as proposed by Drucker et al. (1984). While I take no position on the appropriateness or viability of this pattern, its present range seems to reduce its heuristic value (for example, while no ranges are offered by Drucker et al. [1984], they may be partially reconstructed for the Kitchen and Architectural Groups -- 40.0 to 61.2% and 35.8 to 56.3% respectively). Any pattern analysis of this assemblage, however, would be suspect because of the small artifact sample size and the limited area of the site tests. The historical data suggest that the site was extensively scavenged by the local Snowden population after the property was purchased in 1937. It is also likely that the Berry family removed all serviceable items from the structure prior to leaving. Both events have had largely unknown effects on the

| | Surface | ST | TP1 | TP2 | TP3 | Total | |
|---|---|---|---|---|---|---|---|
| KITCHEN | | | | | | | |
| whiteware, undec | 3 | 3 | 2 | 1 | 2 | 11 | |
| whiteware, tinted | 1 | | | | | 1 | |
| semi-porc., undec | 4 | 1 | | | | 5 | |
| semi-porc., decal | 1 | 1 | | | | 2 | |
| lead glazed slipware | | | 1 | 1 | | 2 | |
| clear bottle glass | 2 | 6 | 4 | 49 | 31 | 92 | |
| manganese bottle glass | | | 2 | 1 | | 3 | |
| lt. green bottle glass | 1 | | 1 | 10 | 2 | 14 | |
| green bottle glass | 1 | | 3 | | | 4 | |
| brown bottle glass | | 1 | | 20 | | 21 | |
| milk glass | | | | 17 | | 17 | |
| aqua bottle glass | | 5 | | 20 | | 25 | |
| tin can frags | | | | | 1 | 1 | |
| | | | | | | 198 | 49.0% |
| ARCHITECTURAL | | | | | | | |
| window glass | 4 | 10 | 8 | 100 | | 123 | |
| wire nails | | 10 | | 3 | 1 | 14 | |
| machine cut nails | | 3 | 4 | 4 | 1 | 12 | |
| UID nails | | 8 | 16 | 5 | 3 | 32 | |
| spike | | 1 | | | | 1 | |
| | | | | | | 182 | 45.0% |
| FURNITURE | | | | | | | |
| chimney glass | | 2 | 4 | 3 | | 9 | |
| | | | | | | 9 | 2.2% |
| ARMS | | | | | | | |
| shotgun shell | | 1 | | | | 1 | |
| | | | | | | 1 | 0.3% |
| CLOTHING | | | | | | | |
| plastic hook | | | 1 | | | 1 | |
| | | | | | | 1 | 0.3% |
| PERSONAL | | | | | | | |
| Hoyt's cologne bottle | 1 | | | | | 1 | |
| | | | | | | 1 | 0.3% |
| TOBACCO PIPE | | | | | | | |
| kaolin pipe bowl | | 1 | 1 | | | 2 | |
| kaolin pipe stem | | | 1 | | | 1 | |
| | | | | | | 3 | 0.7% |
| ACTIVITIES | | | | | | | |
| red signal lamp glass | | | 1 | | | 1 | |
| lead fishing weight | | | | 1 | | 1 | |
| carriage bolts | | | | 1 | 1 | 2 | |
| UID iron | | | | 1 | | 1 | |
| UID brass | | | | | 1 | 1 | |
| terracotta pipe frags | | | | | 2 | 2 | |
| marble (w/Rockingham glaze) | | | | | 1 | 1 | |
| | | | | | | 9 | 2.3% |

Table 2. Historic artifacts recovered from 38CH873.

archaeological record of the site. The relatively low percentage of kitchen artifacts may be related to Basil's single status or possibly to unknown refuge disposal practices. The ceramic to glass ratio of 1:8.4 is probably the result of the increased availability and decreased cost of glassware in the late nineteenth and early twentieth century.

The collection of prehistoric sherds is too small to allow any meaningful conclusions. All of the sherds are small (most are under 1-inch [2.5 centimeters] in diameter) and undecorated. Several are similar in paste and surface finish to historic period Catawba (Wheaton et al. 1983), while several others are somewhat similar in paste to Pee Dee series (Reid 1967).

Summary

The archaeological testing conducted at 38CH873 revealed an assemblage suggestive of lower to middle economic status domestic site of the very late nineteenth and early twentieth centuries, although a minor prehistoric component is also present. Historical date contributes significantly, revealing that the site was occupied by a farm overseer from 1925 to 1937. Prior to that time the house was occupied by the plantation owner's unmarried son, who operated as a farm foreman. The archaeological record, I believe, represents a status lower than in fact may have existed. Partially this is the result of the small sample size, the placement of test units, and the scavenging at the site after its abandonment. Further complicating site interpretation and study is the use of the site area as a recent garbage dump, which has perhaps contributed non-domestic refuse or refuse from other domestic sites, to this archaeological assemblage. Site testing failed to yield evidence of in situ remains (such as architectural features, features, or pits).

Although the study of middling status sites such 38CH873 are significant to a complete understanding of past lifeways (see, for example, the study by Brockington et al. [1985] of 38BK397, a middle status nineteenth century farm overseer site), and although 38CH873 represents a period in the history of Palmetto Grove Plantation about which we have few data, this site does not appear to possess the integrity necessary to make a significant contribution to archaeology or history.

38CH874

Site 38CH874 is situated adjacent to the marsh on a slight rise, immediately north of the existing dirt road to marsh at the southern boundary of the Phase 1 development ("Lower Landing"). The environs are characterized by salt-tolerant species such as live oak and palmetto. The site consists of a small mound of primarily burnt, crushed oyster shells and based on topography

the site measures about 25 feet (8 meters) in diameter and 1.0 to 1.5 feet (0.3 to 0.4 meter) in depth.

The site was tested by two shovel tests (ST 15 and 16) which did not penetrate the shell to sterile sand, but which did indicate the composition of the mound. No strata were apparent and the only artifacts recovered were small quantities of charcoal and fired clay daub. The marsh edge, where the site evidenced erosion, was examined, but only a few small pieces of daub were recovered. Based on the absence of temporally diagnostic artifacts, no further tests were placed in the mound.

The site is not within a proposed road construction zone, but is within one, and possibly two, individual lots. Based on its location adjacent to the marsh, it is unlikely that it will be damaged by development, although it may be attractive for fill. The remains suggest above-ground burning of shell to produce lime or possibly the site represents only the storage of burnt shell. No kiln remains were observed in the vicinity and the material observed is almost exclusively small, burnt shell fragments (there is no evidence of intermingled slaked lime or quicklime). This suggests that the shells were being reduced elsewhere and the material at this site represents charcoal and improperly burned pieces, which were removed from the quicklime after firing and discarded (see McKee 1973:63).

The site appears to represent a secondary disposal area of improperly burnt shell. It is possible that the material was intended to be added to the fields or was to be used for road repair. It is unlikely that temporally sensitive artifacts will be found in the shell (Noel Hume 1974:174; South 1963). Absent any structural remains of a kiln, this site is unlikely to yield significant technological details.

38CH875 - Palmetto Grove Plantation

Site 38CH875 is situated on high ground (14 to 16 feet [4.3 to 4.9 meters] MSL) adjacent to the marsh of Boone Hall Creek about 200 to 500 feet (61.5 to 154 meters) east of Needlerush Road. The site includes the remains of the main house, at least one known postbellum outbuilding, a postbellum well, the slave row, and abundant refuse disposal along the bluff edge (Figure 9). These loci are found over an area of about 6 acres (2.4 hectares) which encompasses two privately owned outparcels. The northern outparcel, which contains the bulk of the slave row, is the lower of the two and is vegetated in dense subclimax maritime forest. The southern outparcel, which incorporates the bulk of the bluff edge refuse, one slave house foundation, the well, the main house, and the outbuilding, has been largely cleared of vegetation for the construction of a house.

The main house area is situated on a slight rise and is best evidenced by the intact remains of a partial cellar and attached

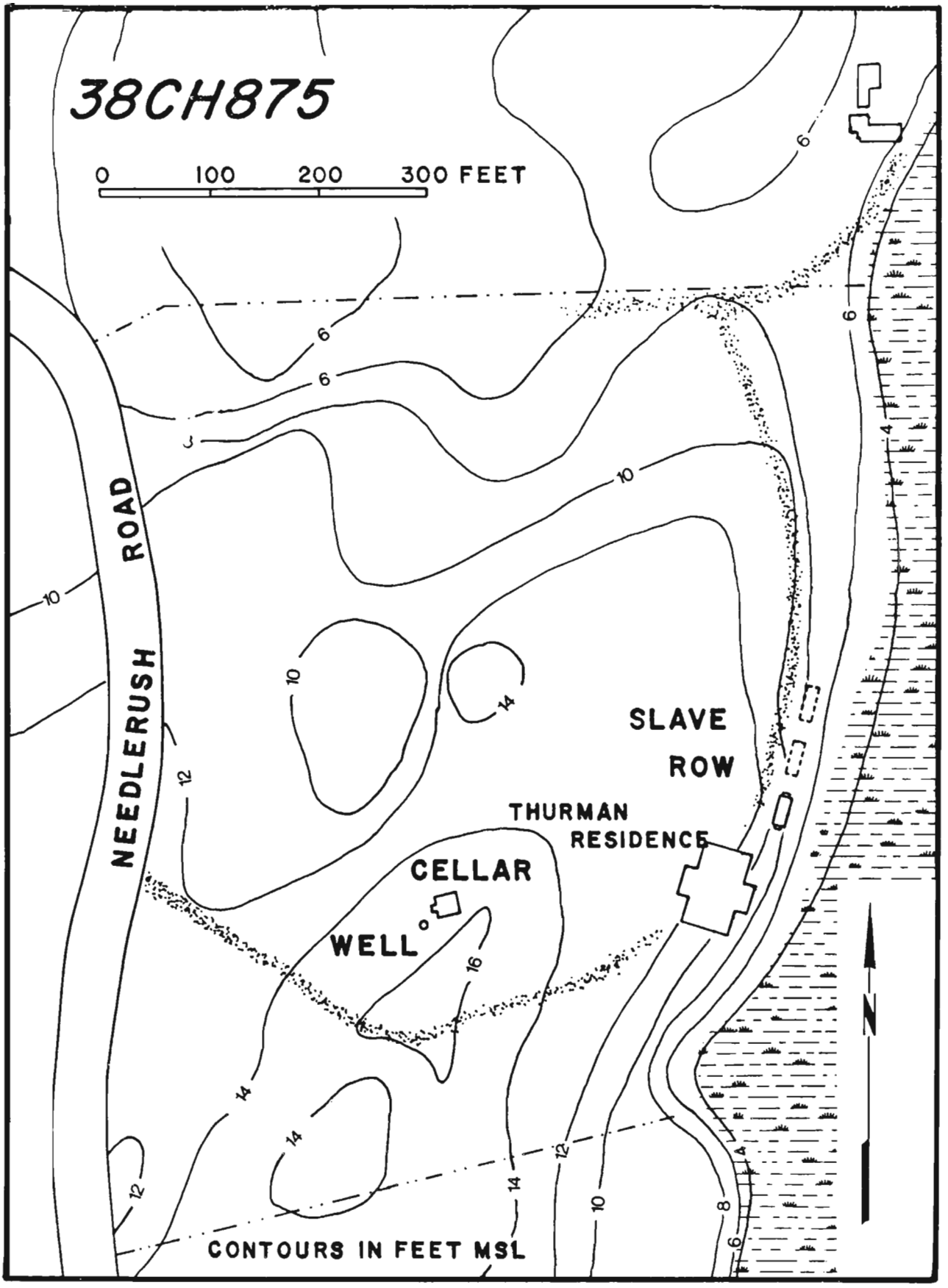



Figure 9. 38CH875, Palmetto Grove Plantation.

chimney footing. The cellar, reported by Jervey Royall to have been used in the twentieth century for root storage, measures 20.3 feet (6.2 meters) square and is estimated to be about 3 to 4 feet (0.9 to 1.2 meters) below grade. The 0.75 foot (9 inch or 22.5 centimeters) walls are constructed of hand made bricks laid in English or common bond. Common bond, because of its strength and ease of construction, continued to be used for foundations even after Flemish bond achieved ascendancy in the mid to late eighteenth century (McKee 1973; see also Hollings 1978). It is therefore not possible, based on these remnant architectural features, to speculate on the period of construction.

Jervey Royall notes that the structure was "L"-shaped, with an attached front porch, and of 2-story frame construction. It was standing, albeit in dilapidated condition, until 1937 when it was torn down by Stone. Additional leveling took place within the last 10 years, when the current owner cleared the property. Further damage was undoubtedly caused by periodic clearing of the utility right of way which is adjacent to the structure. A recent terra cotta lined well is situated about 25 feet (8 meters) west of the main house. This is the only well ever known to Jervey Royall, although it seems likely that earlier wells probably exist on the property.

There are at least three well preserved slave house foundations situated northeast of the main house toward the bluff edge. Additional foundations may well exist, but the extensive understory vegetation discouraged intensive investigation. Each of the three discovered cabins are 33.3 feet (10.2 meters) in length (including chimney footings at each end of the structure) and 10 feet (3.1 meters) in width. The brick foundations are 1.2 foot (0.3 meter) in width. Jervey Royall remembers these structures standing in the early twentieth century, prior to their removal. Although they no longer had roofs, the walls were entirely of brick with holes for doors and windows. These slave cabins were of double pen construction with end chimneys and served to house two separate family units under one roof. The size of these structures (each room approximately 10 by 14 feet [3.1 by 4.3 meters]) is fairly typical. Vlach comments that,

> De Bow's Review, a journal commonly read by slave owners, encouraged the building of small slave quarters with statements like this: "One sixteen or eighteen feet square is not too large for a man and woman and three or four small children." Since these dimensions are the top range suggested, it is understandable why slave houses in South Carolina and Georgia were often not more than twelve feet square (Vlach 1978:135).

Vlach (1978), however, suggests that the size may also be an intentional choice on the part of the blacks and that it may reflect an African understanding of family proximics.

Of considerable interest is the use of brick for the construction of these quarters. Genovese notes that there was "strong opposition to brick cabins for the slaves; they were considered too damp and dangerous to health" (Genovese 1972:773 n.11). McDaniel, however, notes that brick structures with brick fireplaces and thick, solid walls "provided living conditions superior to those of log or frame houses" (McDaniel 1982:96). Yet, "brick slave quarters were the rarest type of all, for brick was more expensive than wood or even stone, which was available from nature" (McDaniel 1982:94; see also Hollings 1978:38). The expense of brick at a plantation with a large brick yard, operated with slave labor, however, was negligible, particularly if rejected or broken fragments were used and the prime bricks were collected for sale. Interestingly, Boone Hall Plantation, to the east of Palmetto Grove across Boone Hall Creek, contains a brick slave row and also produced brick during the antebellum period.

The architectural remains of the brick cabins at Palmetto Grove do not allow the structures to be dated. Chappell notes, however, that "well-built slave housing was largely a nineteenth century phenomenon, experienced by a minority of slaves" (Chappell 1982:2). It seems likely that these structures are antebellum in origin, replacing earlier, and presumably less substantial, slave houses. The location of the colonial slave row has not been identified.

## Artifacts

Collections from various site areas are detailed in Table 3. A pattern analysis is not appropriate because the collections are almost entirely collected from brief, non-intensive surface surveys which tend to collect only the more highly visible artifacts (notice that no items of clothing or furniture hardware are represented in Table 3).

The ceramics are useful for dating the period of site occupation. Materials from the early eighteenth through late nineteenth centuries are present. The application of South's (1977) Mean Ceramic Date Formula yields a date of 1814.8 (Table 4). A number of the ceramics, such as the westerwald, white salt-glazed stoneware, and lead glazed slipware, are colonial wares probably dating from the earliest extensive occupation by Peter Croft from 1773 to 1793. Royall's late antebellum and postbellum occupation is probably typified by the whitewares (which represent 41.7% of the earthenwares collected).

The two fragmentary hoes recovered from the site are both examples of Type III broad hoes which post-date 1775. These specimens have a collar which completely closes around the eye,

| | Gen. Surf. | Main House | Slave Row | Bluff | Totals | |
|---|---|---|---|---|---|---|
| KITCHEN | | | | | | |
| creamware, undec | 2 | 1 | | | 3 | |
| annular | 1 | | | | 1 | |
| pearlware, undec | 1 | | | | 1 | |
| edged | 1 | | | | 1 | |
| tp | 3 | | 2 | 1 | 6 | |
| blue hp | | 2 | 1 | 1 | 4 | |
| whiteware, undec | | 6 | | 2 | 8 | |
| tp | 3 | | 2 | | 5 | |
| stripe | | | | 1 | 1 | |
| edged | | 1 | | | 1 | |
| semi-porc., undec | | 1 | | | 1 | |
| porcelain, Canton | 3 | | | | 3 | |
| recent | | | 1 | | 1 | |
| astbury | | 1 | | | 1 | |
| lead glazed slipware | | | | 1 | 1 | |
| lead glazed coarse red | 1 | | | | 1 | |
| tortoiseshell | | 2 | | | 2 | |
| black basalt sw | 1 | | | | 1 | |
| westerwald sw | 1 | 1 | | | 2 | |
| other sw | 1 | | 2 | 3 | 6 | |
| colono ware | | 1 | 2 | | 3 | |
| black bottle glass | | | 10 | 9 | 19 | |
| aqua bottle glass | | | 4 | 4 | 8 | |
| clear bottle glass | | 7 | | 2 | 9 | |
| brown bottle glass | | 4 | | | 4 | |
| blue bottle glass | | 1 | | | 1 | |
| kettle frags | | | 1 | 1 | 2 | |
| | | | | | 96 | 66.2% |
| ARCHITECTURAL | | | | | | |
| window glass | | 17 | | 1 | 18 | |
| nails | | | 21 | | 21 | |
| shutter pintle | | 1 | | | 1 | |
| | | | | | 40 | 27.6% |
| TOBACCO PIPE | | | | | | |
| pipe stem | | | 1 | 2 | 3 | |
| | | | | | 3 | 2.1% |
| ACTIVITIES | | | | | | |
| harmonica reed | | | | 1 | 1 | |
| hoe frags | | 1 | | 2 | 3 | |
| wheel rim | | 1 | | | 1 | |
| | | | | | 5 | 3.4% |

Table 3. Historic artifacts recovered from surface collections and shovel tests at 38CH875.

| Ceramic Type | Median Date | Freq | Product |
|---|---|---|---|
| Creamware, undec | 1791 | 3 | 5373 |
| annular | 1798 | 1 | 1798 |
| Pearlware, undec | 1805 | 1 | 1805 |
| edged | 1805 | 1 | 1805 |
| tp | 1818 | 6 | 10908 |
| blue hp | 1800 | 4 | 7200 |
| Whiteware | 1860 | 15 | 27900 |
| Porcelain, Canton | 1815 | 3 | 5445 |
| White Salt-Glazed sw | 1753 | 1 | 1753 |
| Black Basalt sw | 1785 | 1 | 1785 |
| Westerwald sw | 1738 | 2 | 3476 |
| Astbury | 1738 | 1 | 1738 |
| Lead Glazed Slipware | 1725 | 1 | 1725 |
| Tortoiseshell | 1755 | 2 | 3510 |
| | | 42 | 76221 |

$$76221 \div 42 = 1814.8$$

Table 4. Mean ceramic date for the 38CH875 collection.

the lap seam is located on the top of the collar, and a spine is present (Egloff 1980:11). Both are examples of weeding hoes, which came to be known simply as "planters' hoes" by the mid-nineteenth century (Egloff 1980:58; Russell and Erwin 1980:298).

### Summary

The state of site preservation, coupled with the historic documentation present for Palmetto Grove Plantation, suggests that this site is very significant. Research beyond the minimal level indicated in this synopsis has not been conducted because the site, situated on several privately owned outparcels, is not endangered by the Longpoint development. Future research on plantation organization, settlement, and lifestyle; rural and urban comparisons; and changing dietary patterns could profitably be undertaken. Of specific interest would be comparing indicators of planter and slave wealth and status to other sites with lower projected economic wealth, such as the Sanders Plantation.

## 38CH876 - Brick Kiln

The Brick Kiln site is situated adjacent to Boone Hall Creek 900 feet (277 meters) northeast of Palmetto Grove Plantation and about 800 feet (246 meters) east of Needlerush Road. The site is evidenced by a large quantity of brick rubble which ranges from about 2 feet (0.6 meter) in depth at the creek bank to about 0.3 foot (9 centimeters) in depth about 100 feet inland, as well as a series of clay extraction pits which are found over a somewhat more scattered area. The clay pits vary in both size and depth, but are found from Boone Hall Creek west to a tidal creek and north to 38CH877. Site dimensions, based on the distribution of this brick rubble and the presence of several small, low brick mounds, is estimated to be about 200 feet (60 meters) along the edge of Boone Hall Creek and 130 feet (40 meters) inland. No surface collections were made and the shovel tests were used only to reveal site depth. The brick rubble is primarily composed of "samel" or "sandal" bricks which, being poorly fired, are unfit for sale. Neve's Builder's Dictionary notes that these bricks, "when they come to be exposed to the Weather for some Time, will moulder away like Dirt" (quoted in Noel Hume 1974:174).

### Historical Data

Site 38CH876 is identified as a brick kiln through three lines of reasoning. One is fundamentally inductive, based on the abundance of bricks and brick bats, the scarcity of other artifacts, and the site's proximity to water transportation. The second is comparative, based on the examination of this site in relation to other, known brick kilns. A third line of reasoning involves the identification of the site as a "brick yard" on a 1940 plat.

There are a variety of eighteenth and nineteenth century accounts of brick making, available from both primary and secondary sources. The 1736 edition of Neve's Builder's Dictionary and the 1738 edition of Chambers' Cyclopaedia are both quoted at length by Noel Hume (1974:172-174). Postelthwayt offered an essentially identical description in 1774. Nineteenth century descriptions are offered by Ure (1840), Reese (1847), and Appleton (1852). The technology of manufacture and firing apparently changed little until the mid- to late nineteenth century when brick making machines became common and round kilns replaced rectangular varieties (Butterworth 1892).

The activities leading up to the firing were fairly standardized. Most sources specify that the clay should be collected in the autumn and allowed to stand in heaps during the winter. Appleton states that this allows the clay to be "well penetrated by the air, and particularly by winter frosts, which by pulverizing the more tenacious particles, greatly assists the operations of mixing and tempering" (Appleton 1852:1:184). Ure (1840:184) adds that the clay should also be worked with a spade during this time. When the brick making season arrived, apparently in the spring, the clay was soaked in shallow pits, tempered through treading of either man or animals (or the use of a plug mill in the nineteenth century). When properly prepared the clay was "taken to the moulder's bench," (Reese 1847:50) where it was placed in a prepared wooden or iron mold. The surplus of clay was removed with a stick and the brick was turned out of the mold and allowed to air dry at the "hacks" (Appleton 1852:1:184; Ure 1840:184; Reese 1847:50). The bricks were restacked after several days and were ready for firing after about 10 days. The use of 25 workers would produce about 19,000 bricks a day (Butterwork 1892:89).

Two types of kilns are found throughout the literature: a temporary "structure" composed of the bricks to be fired called a clamp or scove, and a permanent kiln. The clamps were temporary and, according to the literature, most frequently used in London. Neve (1736; quoted in Noel Hume 1974:173) described the construction of an eighteenth century clamp, while Ure, over a century later, describes clamps in almost identical terms, as,

> made of the bricks themselves, and generally of an oblong form. The foundation is laid with the place brick, or the driest of those just made, and then the bricks to be burnt are built up, tier upon tier, as high as the clamp is meant to be, with two or three inches of breeze or cinders strewed between each layer of bricks, and the whole covered with a thick stratum of breeze. The fireplace is perpendicular, about three fee high, and generally placed at the west end; and the flues are formed by gathering or arching the bricks over, so as to leave a

> space between each of nearly a brick wide. The flues run straight through the clamp, and are filled with wood, coals, and breeze, pressed closely together. If the bricks are to be burnt off quickly, which may be done in 20 or 30 days, according as the weather may suit, the flues should be only at about six feet distance; but if there be no immediate hurry, they may be placed nine feet asunder, and the clamp left to burn off slowly (Ure 1840:185).

Several authors discuss the plastering of the clamp with clay to seal out excessive air inlets and to provide a slower, hotter fire. This type of "kiln" is a simple up draft variety and did not represent a very effective use of fuel.

Reese (1847:50) notes that "[k]ilns are generally used in the country for burning bricks, which is a more perfect mode." Appleton (1852:1:184) states that bricks "are more expeditiously burned" in a kiln. An eighteenth century burn is described by Chambers (1738; quoted in Noel Hume 1974:173). Ure states that the kiln,

> is usually 13 feet long, by 10-1/2 feet wide, and about 12 feet in height. The walls are one foot two inches thick, carried up a little out of perpendicular, inclining towards each other at the top. The bricks are placed on flat arches, having holes left in them resembling latticework; the kiln is then covered with pieces of tiles and bricks, and some wood put in, to dry them with a gentle fire. This continues two or three days before they are ready for burning . . . The mouth or mouths of the kiln are now dammed up with a shinlog, which consists of pieces of bricks piled one upon another, and closed with wet brick earth, leaving above it just room sufficient to receive a faggot . . . . [the burn is complete in about] 48 hours. One of these kilns will hold about 20,000 bricks (Ure 1840:185).

This type of crossdraft arrangement was known as a Cassal kiln in Germany and a Newcastle kiln in England (Rhodes 1968:44-47). The descendants of the Newcastle kiln are the "ground hog" kilns used by Southern folk potters.

## Previous Research

Previous archaeological investigations at brick kilns (or clamps) are not well represented in the literature. Some of the earliest work is found at Jamestown, Virginia, where J. C.

Harrington excavated a well preserved kiln in 1941 (Cotter 1958:96-98). Structure 102 represents a semi-permanent clamp which was constructed slightly below ground level and which contained "permanent benches between the fire chambers" (Cotter 1958:96). These benches, according to Cotter, were constructed to prevent moisture from rising from the ground and preventing the brick to harden. A semi-permanent clamp has a number of advantages and it may be that many brickmakers used a similar concept. Another kiln at Jamestown, Structure 127, is a classic small clamp. Its significance lies in its secondary use to fire brown clay pipes (Cotter 1958:145-146).

A probable brick kiln was investigated by the S.C. Department of Highways and Public Transportation in 1978 at Brickyard Yard in Colleton County (Trinkley et al. 1979). Because of extensive erosion little was found intact and no work beyond limited testing was conducted. Another brick kiln previously had been located by a Department of Highways sponsored survey of the now constructed S.C. 802 bridge across the Beaufort River between Port Royal and Ladies Island (Bianchi 1974). That site appears to have represented a large mid- to late nineteenth century site utilizing brick making machines. A future study of the remaining portions of this site may provide a view of mechanized brick making to complement studies of smaller kilns and clamps.

Several brick kilns have been identified on the Francis Marion National Forest, although none have been excavated. Two (38BK379 and 38BK402) are found in the Cainhoy Study Area on tributaries of Guerin Creek. Both sites are much larger than 38CH876 (covering up to 20 acres) and probably represent major, long-term kiln operations (Zierden 1981).

Stanley South's excavations at the Town Creek kiln in Brunswick County, North Carolina provide a clear, concise discussion of a clamp kiln operated during the eighteenth century (South 1963). At least three firing episodes are in evidence and South notes the presence of a subsidiary structure north of the kiln. He notes that the kiln was clay mortared, that there were numerous piles of brick rubble in the vicinity (perhaps representing "samel" or "sandel" bricks which were poorly fired and which were discarded), and that an attempt had been made to burn limestone in the kiln.

Hollings' (1978) study of the brick "industry" in colonial South Carolina documents its overall importance to the economy of the State (see also Whipple 1957). Little effort, however, has been directed toward understanding the importance of brick production to the planter class. Was brickmaking such a lucrative activity that it would be undertaken by any planter whose plantation contained the necessary raw materials? Or was it undertaken as a secondary activity when the market conditions were particularly good, such as after major Charleston fires, hurricanes, or earthquakes? Or was brick production only

undertaken when the plantation land was thought to be so poor that no other activity would succeed?

Further research questions at 38CH876 involve the nature of the technological activities present at the site and the date of the site's operation. The goals of most archaeological research may be characterized as historical and explanatory, in ascending order of complexity. While explanatory goals seek to explain how and why, the historical goals answer the more basic questions who, what, when, and where. Many of the questions concerning 38CH876 are primarily historical. They are, however, of extraordinary significance for two reasons. First, since the site will be damaged by development, it is essential that the archaeological data observations be preserved. Second, the data obtained to answer these questions represents the foundation for future explanatory research.

38CH877 - Palmetto Grove Cemetery

This site, situated north of 38CH876 at the south edge of a small marsh cove, represents a small black cemetery which probably was begun during at least the antebellum period and continued in use until the early twentieth century. Four stones are still present and a total of 17 probable graves could be identified based on rectangular depressions. The site is estimated to cover an area of at least 120 feet (40 meters) by 70 feet (22 meters) or minimally 0.2 acre (0.08 hectare). The site is bounded to the north, east, and west by marsh, and to the southwest by clay pits from the Brick Kiln site (38CH876).

The four stones include one for "RUTLEDGE ELLIS/SOUTH CAROLINA/PVT. 345 LABOR BN/JANUARY .. 1930" which was provided by the Federal Government, another for "MONDAY KIRK/CO. B/21 U.S.C. INF," which was also provided by the government, and a third for "MS/Dd 1879/Agd/25 YRS" which includes a foot stone marked only "MS." The last example was privately provided, but the stone was not originally intended to be used in this fashion so it is likely that it was obtained at a reduced cost. Discussions with Snowden blacks revealed that they were familiar with this cemetery and could remember some of the individuals who had been buried there over the years. This cemetery was used prior to burying individuals at the Long Point Baptist Church. The earliest grave in the church cemetery is that of Lizzie Singleton, which dates to 1897. It is apparent that there was a period of overlapped use, although the local blacks indicate the Palmetto Grove Cemetery was not used after about 1930.

I speculate that the cemetery was begun by slaves during at least the antebellum period based on its proximity to the slave quarters and previous association of similar, small black cemeteries with specific and individual antebellum plantations. The earliest graves were probably unmarked or marked with wood

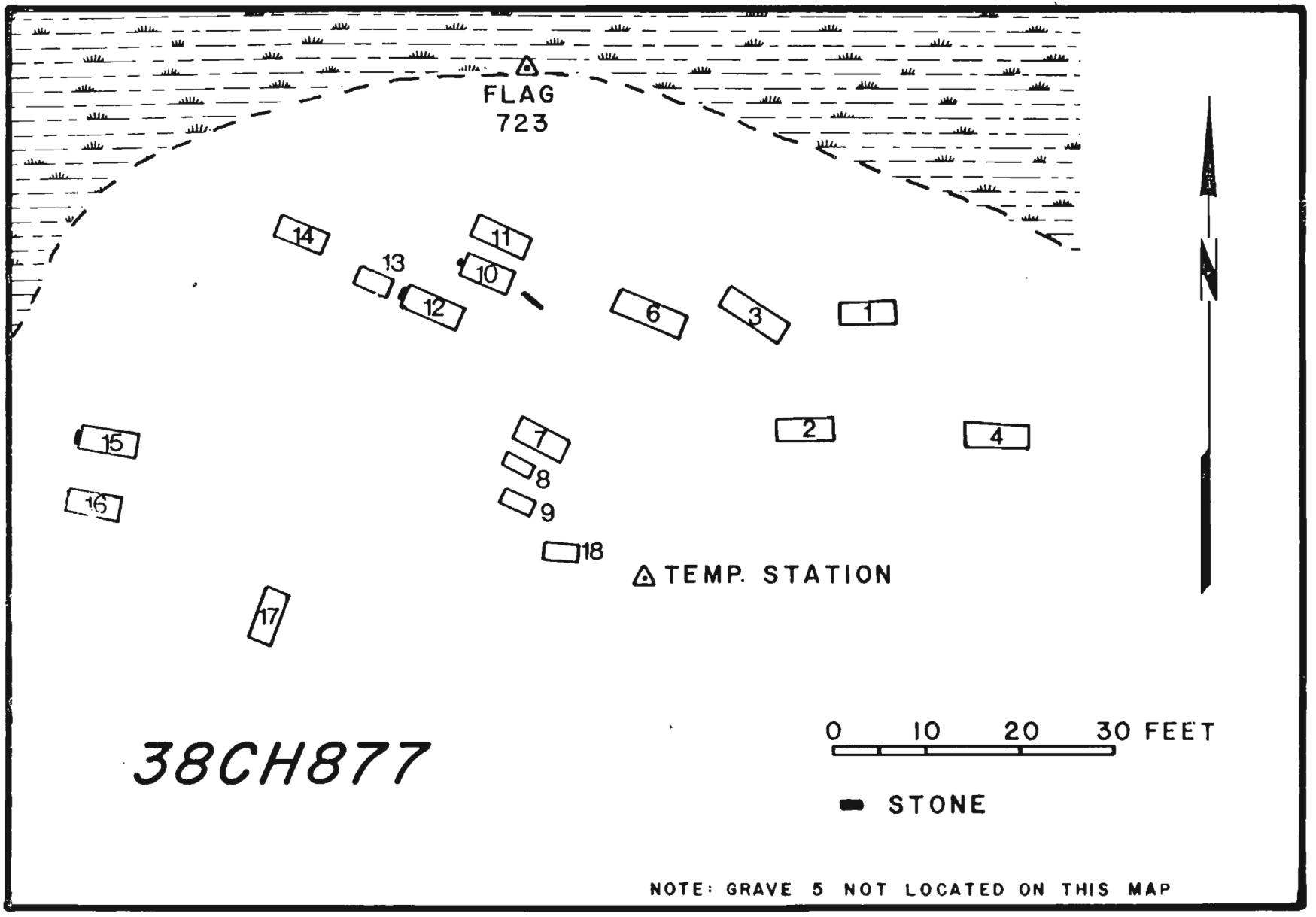



Figure 10. Site 38CH877 - Palmetto Grove Cemetery.

slabs (see De Forest 1968:92), so only the most recent graves are going to be visible.

## Previous Research

Previous research on black cemeteries has emphasized the association of grave goods with the burial, in addition to the varied grave marking practices. The suggestion has been made that both are African retentions. More recent work has also examined the burial hardware as an indication of status, wealth and date of burial, and has focused on the forensic study of the skeletal remains to yield information on demography, diet, and disease characteristics of the population. Cemeteries, such as 38CH877, have the potential to yield significant anthropological data.

Archaeologists first became aware of black mortuary patterns through the work of John Combes (1972) on the South Carolina coast. That work was largely based on previous anthropological or folklore studies such as Parsons (1923:214), Michael (1943), Glave (1891), Georgia Writers' Project (1940), and Puckett (1926:103-107). More recent discussions include those by Fenn (1985), Thompson (1983), and Vlach (1978). These studies describe the black practice of placing items on graves and attribute the practice to African beliefs. Various forms of grave decoration and marking are also discussed. These practices have not been observed at Palmetto Grove, although no intensive examination of the leaf litter has been undertaken. Given the vandalism to several of the stones, it is likely that whatever grave goods may have been placed there have been either removed or destroyed.

Recent work such as that by Trinkley and Hacker-Norton (1984), Rose (1984), and Garrow et al. (1985) has emphasized the study of coffin hardware and osteological remains to make major contributions to our knowledge of black lifeways. These studies, undertaken when the cemetery is to be relocated, are a necessary adjunct to the formal and legal routine of relocation by a licensed undertaker. While cemeteries are not <u>generally</u> considered eligible for the National Register, when they "will produce important information <u>not available elsewhere</u>, they may be eligible" (Keel 1985:215). Rathbun details the position in more depth, noting that,

> cemetery data are extremely important above and beyond the usual categories associated with distinctive persons, design features, and association with historic events. This narrow definition of historic importance fails to recognize that human remains provide data of considerable historic importance. Not only are many segments of the population omitted from typical historical sources, but the skeletal remains provide empirical

> evidence directly relevant to broad historical issues in health, nutrition and social customs. The biological history of our nation has received insufficient attention . . . . Even if some of the information inferred from bioarchaeological analysis is available from other sources, validity and accuracy of other records can be evaluated through comparison with the physical evidence (Rathbun 1985:208).

38CH878 - Roadway Dam

Site 38CH878 is situated immediately south of the burnt oyster mount (38CH874) and north of the dirt road leading from Needlerush Road to "Lower Landing." Remains at this site consist of what appear to be a dam at a major drainage ditch into Boone Hall Creek. The dam consists of two parallel logs (visible on the surface), each about 1.0 foot (0.3 meter) in diameter, spaced about 4.0 feet (1.2 meters) apart. Between the two logs (or sets of logs) is brick rubble. The bricks appear to be colonial and have adhering shell mortar. An alternative explanation for this feature is that it may represent a bridge between the two sites of the drainage ditch. While water could pass through the unconsolidated rubble, it would still provide a firm path.

No collection was made at this site, although the feature was photographed. The dam is outside the vicinity of road construction and, if not disturbed by the cleaning of drainage ditches, will not be affected by the development plans. Regardless, the site is an industrial feature with limited integrity and limited potential to contribute to further research.

38CH881

This site, situated immediately south of a major powerline easement at the western edge of the Longpoint tract, is characterized by a thin scatter of oyster shell and prehistoric pottery. The site is found just south of a low wet spot and is in an area of maritime forest. The site appears to have been bisected by a property ditch line and shell was first observed eroding from the ditch banks.

A series of seven shovel tests were excavated in the vicinity of this shell to examine the site density, integrity, and boundaries. Only four of these tests yielded cultural remains: two yielded a total of four sherds, and two yielded only oyster shell. The shovel tests, excavated to a depth of about 0.9 foot (0.3 centimeter), revealed a dark brown Ap horizon overlying a yellowish-brown loamy sand. It appears that the shell and the prehistoric pottery are contained within a mixed

plowzone context. Too little shell was left in the ditch bank to determine whether the material represented a lens or a possible feature; however, no pottery was found in the associated shell fill or soil. Site boundaries, based on the shell scatter, are estimated to be no more than 100 feet (30 meters) north-south and 50 feet (15 meters) east-west, although the extent of the site off the Longpoint tract (to the west) was not extensively examined.

The four prehistoric sherds are all under 1.0 inch (2.5 centimeters in diameter and have plain surface treatments, but they appear to represent an Early Woodland ceramic, perhaps Deptford based on the temper. The site may therefore date from 2000 to 300 B.C.

38CH882 - Spring Site

Site 38CH882 is situated around the head of a possible fresh water spring adjacent to Boone Hall Creek, about 250 feet east of Needlerush Road and was originally discovered in heavy woods through the shovel test survey. The site is characterized by a subclimax maritime forest and the low, wet spring area today contains plants indicative of brackish water. The site will be largely destroyed by the construction of a subdivision road that is to parallel the creek in this area.

The original survey excavated a series of six shovel tests, each of which produced some cultural remains. The collection included a shell sample (shells, including oyster and periwinkle, were recovered with sporadically heavy density), a single brick fragment, 15 sherds, and two chert flakes. The pottery is largely under 1.0 inch (2.5 centimeters) in diameter, but two sherds were tentatively identified as Mount Pleasant Cord Marked and Catawba Plain. These remains suggested a multicomponent site with both Middle Woodland and historic occupation. While the site boundaries were established at about 200 feet (60 meters) by 100 feet (30 meters), little information was immediately available on site integrity. As a result, archaeological testing was conducted.

Field Methods

A single 5-foot square was excavated at the site by a crew of two on Sunday, December 12, 1986. A total of 14 person hours were spent at the site and this test unit yielded a total of 37.5 cubic feet (1.1 cubic meters) of soil. The southeastern corner of the unit was tied into a survey flag, numbered 682 (Reference Point 1), situated 158 feet (48.6 meters) N78°30'E. Vertical control was maintained by establishing a bench mark on a shelf of an oak tree about 3.0 feet (0.9 meter) north of Reference Point 1. This bench mark was assigned an assumed elevation of 10.0 feet (3.05 meters).

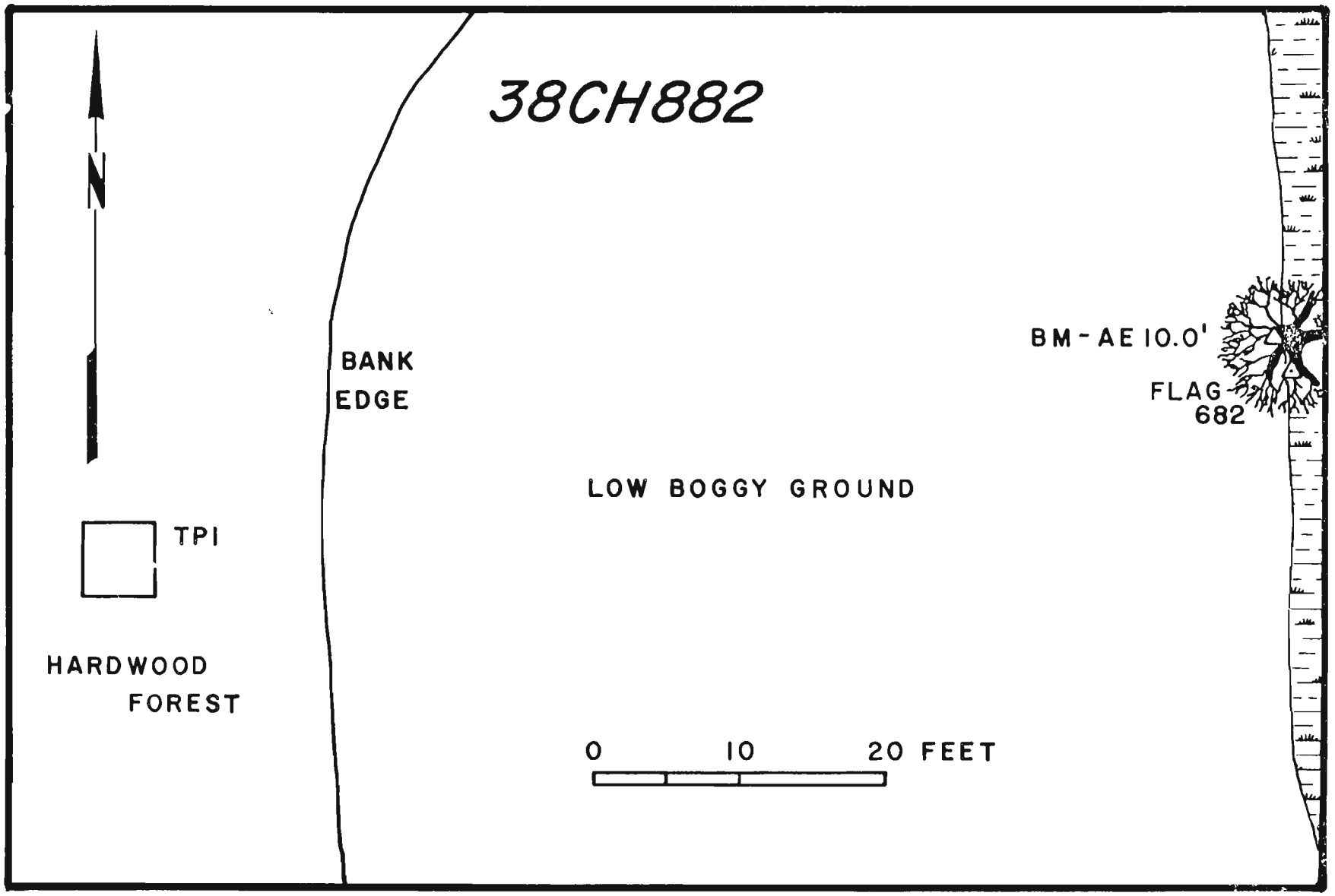



Figure 11. Site 38CH882, showing excavation unit placement.

Both the shovel tests and the test unit revealed a plowzone of brown loamy sand up to 1.2 feet (0.4 meter) in depth overlying a mottled yellow sand subsoil. Although the testing program excavated 0.4 foot (0.1 meter) of this subsoil, artifacts were confined to the upper plowzone soil. At the base of the plowzone the unit revealed a 3.0 foot (0.9 meter) wide ditch oriented northeast-southwest and probably draining into the spring area. It is expected that this ditch represents a historic drainage feature, probably for cotton cultivation, dug sometime in the antebellum period. The ditch fill below the plowzone is somewhat lensed, but the ditch appears to have been filled primarily with plowzone soil over a short period of time. The depth of the ditch was about 10.10 feet (3.11 meters) AE, or about 1.7 feet (0.5 meter) below the ground surface.

## Results

The 5-foot unit produced a much smaller collection than was anticipated based on the shovel tests. Recovered was a small collection of historic items (one undecorated whiteware ceramic and six brick fragments). Shell, while present, was not abundant and consisted primarily of oyster with occasional periwinkle. Two chert thinning flakes were recovered using 1/4-inch screening. Of the 44 recovered sherds, 30 (68%) are under 1.0 inch (2.5 centimeter) in diameter. The remainder include three Deptford Check Stamped, four Deptford Simple Stamped, two Deptford Cord Marked, and five Deptford Plain. No additional Middle Woodland Mount Pleasant remains were found and it may be that the small cord marked sherd simply had an atypical Deptford paste. In any event, this study suggests that the site was occupied during the late Early Woodland, perhaps to take advantage of the edge effect typical of springs. The only food remains collected are the shellfish.

This site has yielded a component (Deptford) about which there is little archaeological knowledge in the project area, yet the remains at this site are very sparse, exhibit a low diversity, and have poor integrity. As a result, it is unlikely that further research at 38CH882 is likely to yield significant archaeological data.

### 38CH883

This site is situated about 50 feet (15 meters) west of Boone Hall Creek between 38CH875 and 38CH882. The area is heavily wooded subclimax maritime forest and cultural remains were identified in a series of three shovel tests. The site is estimated, based on these tests, to measure a maximum of 100 feet (30 meters) north-south and 50 feet (15 meters) east-west. The three shovel tests yielded a total of six prehistoric sherds. These sherds, while small, suggest a Deptford phase occupation (one Deptford Check Stamped sherd was recovered, and all have a tendency toward a gritty paste). No shellfish remains were

identified from the testing and it appears that all of the remains are found within the site's plowzone.

This site evidences low artifact density and variety. Site integrity is judged to be low because the remains were collected exclusively from the plowzone and all appear to be heavily worn. The absence of shell midden indicates that it is unlikely that faunal remains would be preserved at the site.

38CH884

Site 38CH884 is situated about 200 feet (61 meters) east of Needlerush Road, immediately south of 38CH875 and in the vicinity of a utility easement. The site, discovered through shovel testing, represents a prehistoric shell midden which has been scattered by plowing over an area about 200 feet (61 meters) in diameter. The site core, based on the shovel tests, is estimated to be about 50 feet (15 meters) in diameter, although there may be several sources (or concentrations) of shell midden which are contributing to the plowzone scatter. The site is contained in two lots and is found scattered northward on the southern outparcel (Figure 12).

Based on the collections obtained during the initial survey, it appeared that the site contained an Early Woodland occupation with a thin smear of plantation artifacts being incorporated in the plowzone. The shell was thinly distributed at the site periphery, but was fairly dense toward the center. Of the original 16 shovel tests, 15 contained cultural material, including six historic specimens, 42 prehistoric sherds and four animal bones. The quantity and diversity of remains suggested that further subsurface examination was necessary to better determine site type and site integrity.

## Field Methods

A series of two 5-foot squares were excavated at the site by a crew of two on Wednesday, December 3 and Thursday, December 4, 1986. A total of 32 person hours were spent at the site and the two units (representing 0.002% of the total site area) yielded a total of 59.1 cubic feet (1.7 cubic meters) of soil.

The units were tied into the metal pipe which serves as the southeastern corner of the southern outparcel. Vertical control was maintained by assigning this property stake an assumed elevation of 10.0 feet (3.05 meters). Stratigraphy in the site area was similar in both units, with one exception. In TP 1 (the northernmost unit) Zone 1 consisted of a brown sandy clay plowzone up to 0.9 foot (0.3 meter) thick, overlying a mottled yellow sand subsoil. Plowscars were present at the interface between Zones 1 and 2. The situation in TP 2 was made more complex by a cap of up to 0.6 foot (0.2 meter) of plowzone-like soil (Zone 1) overlying the actual plowzone (Zone 2). This cap

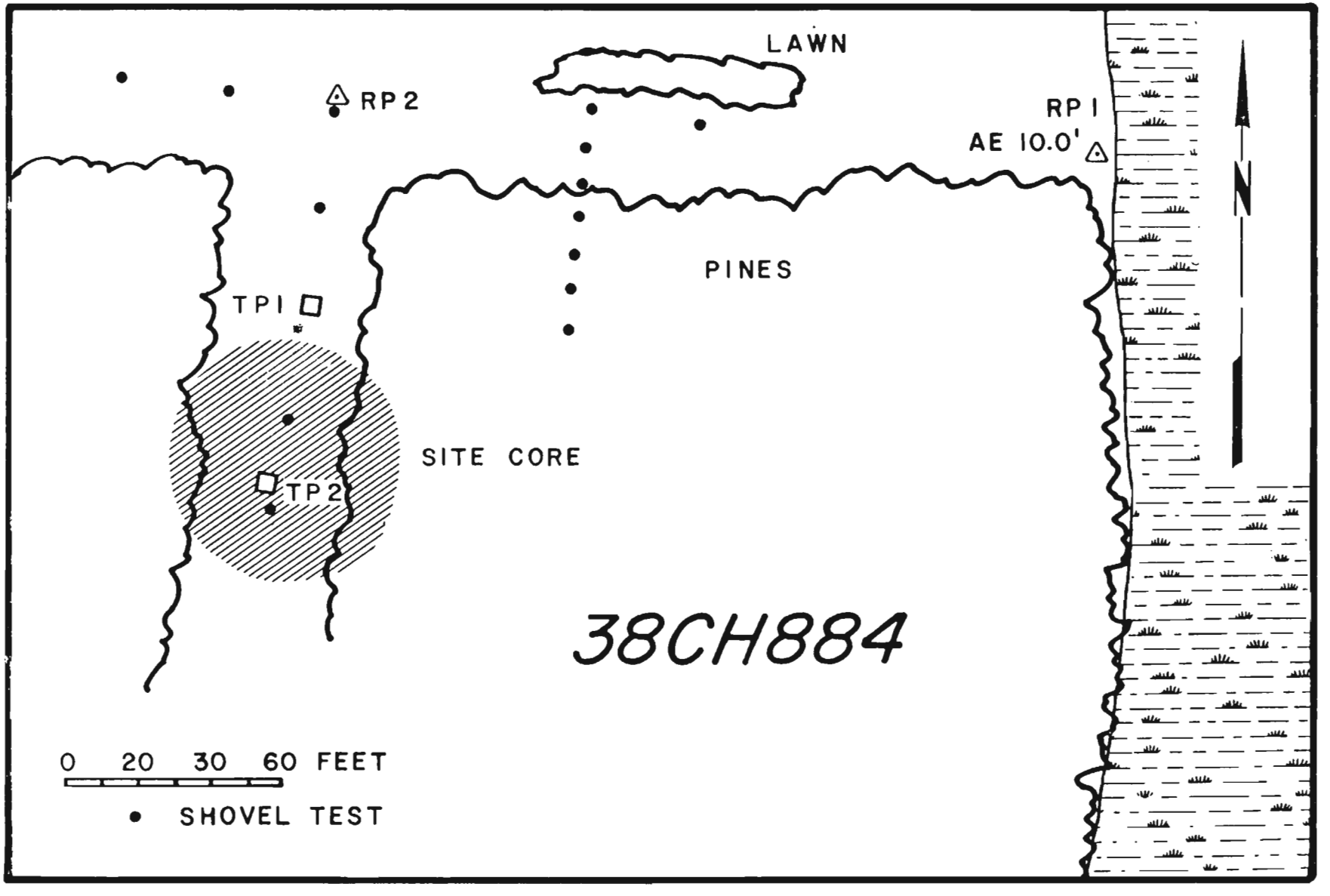



Figure 12. Site 38CH884, showing shovel tests and excavation units.

probably represents soil scraped up and spread over the area during the clearing for the powerline easement. It contains materials identical to the lower plowzone, although in reduced frequencies, which suggests the material is from the site periphery. TP 2 was also placed directly over an antebellum drainage ditch similar to the one encountered at 38CH882. This ditch was also filled with plowzone-like soil which evidenced no lensing or other signs of gradual filling. The ditch fill was designated Zone 3, although it actually represents feature fill rather than a zone (and should be assigned a feature number in future studies at the site).

Test Pit 1 was laid out by first establishing Reference Point 2, 210 feet (64.6 meters) N85° 21'W of RP 1. From RP 2, TP 1 is situated 55 to 60 feet (16.9 to 18.4 meters) along the bearing S5 W. The unit was laid out to the east and is at the posited northern edge of the site core. At the base of the plowzone two postholes, each 0.6 foot (0.2 meter) in diameter and no more than 0.2 foot (0.1 meter) in depth, were discovered. Zone 1 contained 20.5 pounds 7.6 kilograms) of shell, primarily fragmented oyster shell (90% by weight). About 10% of the shell (by weight) consisted of periwinkle.

Test Pit 2 was situated 105 to 110 feet (32.3 to 33.8 meters) S5° W of RP 2 and was laid out to the west. Below the plowzone (Zone 2) was a large drainage ditch, which measured about 4.7 feet (1.5 meters) in width and 2.6 feet (0.8 meter) in depth. The shell from Zone 2 weighed 102 pounds (38.0 kilograms) and contained more intact shells than did TP 1. This unit clearly appears to be in the vicinity of the site core.

## Results

The shovel tests and excavations yielded a small quantity of eighteenth and nineteenth century remains, including four ceramics, six glass fragments, a brass and lead candlestick holder, a kaolin pipe bowl fragment, and a short length of chain. These items probably represent scatter from the adjacent Palmetto Grove Plantation (38CH875).

The prehistoric remains include 533 sherds, 13 chert flakes, and three pieces of worked animal bone (Table 10). Also recovered from the 1/4-inch (0.6 centimeter) screening was a large quantity of animal bone (3.8 ounces [108.08 grams] were recovered from TP 2, Zone 2 alone), primarily fish (such as drum and catfish), turtle, and a small quantity of mammal.

While at least four pottery series are present at 38CH884, 69.9% (N=102) of the identifiable pottery is classified as Deptford/Deep Creek, 0.7% (N=1) is Thom's Creek, 15.8% (N=23) is McClellanville, and 13.0% (N=19) is Pee Dee. The Deptford Deep Creek Series of the central South Carolina coast have been previously discussed by Trinkley (1983:45-46) and it represents the period from about 1200 B.C. to A.D. 200. Drucker and Jackson

(1984) have recently discussed these pottery types from their work at the Minim Island midden in Georgetown County, South Carolina. The McClellanville Series (Trinkley 1981b, 1983) is not very well understood or dated, but appears to post-date Deptford and pre-date Pee Dee. It bears strong typological resemblances to the Santee Series (Anderson et al. 1982), which dates to about A.D. 1100, and the Mount Pleasant Series (Phelps 1984; Trinkley 1983:47), which dates about A.D. 200 to 1000. The Pee Dee Series is not well represented at the site and tends to have a coarser paste than normal (see Reid 1967). This ware dates about A.D. 1250 to 1450.

Summary

Site 38CH884 represents a relatively small, late Early Woodland shell midden with some evidence of Middle Woodland and South Appalachian Mississippian occupation. The midden has been affected by extensive plowing and at least a small area has been disturbed by the excavation of a nineteenth century drainage ditch which was subsequently filled in the plowzone material. In spite of these disturbances, the site has yielded evidence of postholes, extensive shell midden deposits, and quantities of animal bone in excellent condition.

The potential for feature preservation and the presence of well preserved animal bone greatly enhances the significance of this plowed site. 38CH884 has the potential to contribute to a more complete understanding of late Earl Woodland subsistence questions, most notably the dual roles of shellfish and fish collection. It is probable that most of the site core is relatively intact and worthy of study. The site appears to be able, with a larger collection, to assist in refining the Deptford/Deep Creek/McClellanville pottery typologies. Finally, the site may contribute to our understanding of settlement patterns in the late Early Woodland since it represents a site type which has never been extensively studied.

38CH885

This site, identified to the west of Needlerush Road and southwest of 38CH873, represents a domestic site of the late nineteenth and early twentieth centuries. Based on a series of seven shovel tests the site dimensions are estimated to be about 50 feet (15 meters) north-south and 65 feet (20 meters) east-west, for a total of 3250 square feet (302 square meters). The site is largely contained within a single development lot according to the preliminary plans. The site area is heavily vegetated in yaupon holly and palmetto and the overstory is largely live oak.

The shovel tests revealed very sparse remains, including four fragments of clear bottle glass, one window glass fragment, eight UID nails, one UID flat iron fragment, brick, and oyster

Figure 13. View of the Palmetto Grove Cemetery (39CH877), facing southwest.

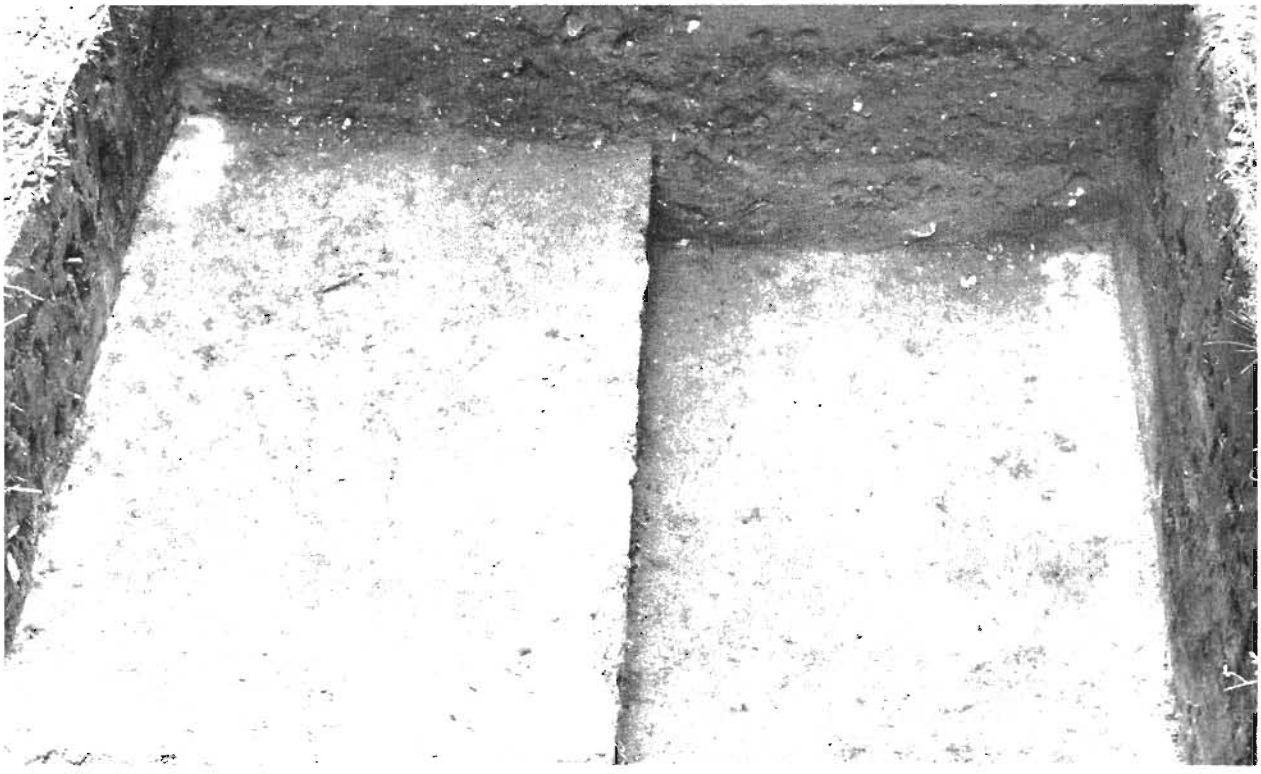


Figure 14. Test Pit 2, base of excavations, view to the south. Note upper cap (Zone 1), plowzone (Zone 2) and ditch fill (Zone 3).

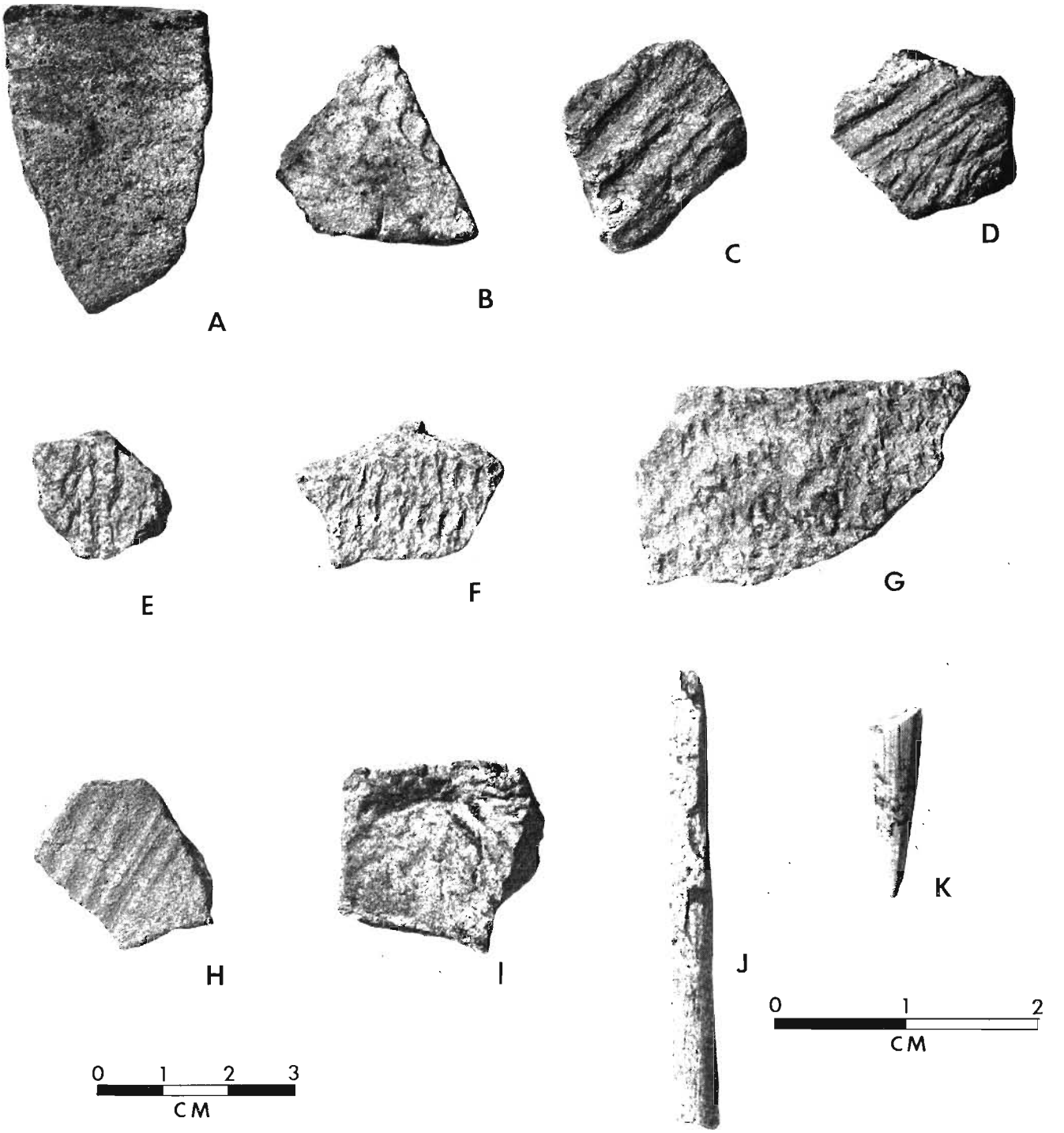



Figure 15. Prehistoric Artifacts. A, Deptford Plain; B, Deptford Check Stamped; C-D, Deptford Simple Stamped; E, Deptford Cord Marked; F, Deep Creek Fabric Impressed; G, Mount Pleasant Fabric Impressed; H, McClellanville Simple Stamped; I, Pee Dee Complicated Stamped; J-K, worked bone.

| | ST | TP1 Z 1 | TP1 ph | TP2 Z 1 | TP2 Z 2 | TP2 Z 3 | Total |
|---|---|---|---|---|---|---|---|
| HISTORIC | | | | | | | |
| Delft, undec | | 1 | | | | | 1 |
| Lead glazed slipware | 1 | | | | | | 1 |
| Porcelain, Canton | | 1 | | | | | 1 |
| Astbury | | 1 | | | | | 1 |
| Black glass | 1 | 2 | | | | | 3 |
| Clear glass | | 1 | | | | | 1 |
| Lt. green glass | | 1 | | | 1 | | 2 |
| Candlestick holder | | | | | | 1 | 1 |
| Kaolin pipe bowl | 1 | | | | | | 1 |
| Chain links | 9 | | | | | | 9 |
| PREHISTORIC | | | | | | | |
| Thom's Creek Plain | | | | | 1 | | 1 |
| Deptford Plain | 6 | 12 | 3 | 14 | 19 | 3 | 57 |
| Deptford Check Stamped | | 3 | | 1 | 1 | | 5 |
| Deptford Simple Stamped | 3 | 2 | | 3 | 6 | 2 | 16 |
| Deptford Cord Marked | 4 | 2 | | 3 | 4 | 1 | 14 |
| Deep Creek Fabric Imp. | | 3 | | | 4 | 3 | 10 |
| McClellanville Plain | | 3 | | | 2 | | 5 |
| McClellanville Simple Stamped | | 5 | | | 6 | | 11 |
| McClellanville Fabric Imp | | | | 1 | | | 1 |
| McClellanville UID | | | | | 3 | 3 | 6 |
| Pee Dee Plain | 2 | 2 | | | 6 | 3 | 13 |
| Pee Dee Comp. Stamped | | 1 | | | 1 | 3 | 5 |
| Pee Dee Corn Cob Imp | | | | | 1 | | 1 |
| Other sherds | | 1 | | | | | 1 |
| Small sherds | 27 | 131 | 2 | 82 | 115 | 30 | 387 |
| Flakes | | 5 | | | 7 | 1 | 13 |
| Worked bone | | 1 | | 1 | | 1 | 3 |

Table 5 . Artifacts recovered from 38CH884.

shell. All of these remains were found in the upper 0.8 foot (0.3 meter) of soil and no evidence of features was encountered in the shovel tests.

Jesse Ellis, a 71 year old Snowden resident, indicated that this site is the probable location of a cotton gin and a "long house" situated next to it. Both structures were north of the old road which ran east-west toward Basil Royall's house (38CH873) and to the "Lower Landing." It appears that the construction for Needlerush Road destroyed the cotton gin site, but the archaeological remains encountered at 38CH885 represent the "long house" occupied within Mr. Ellis's memory by black laborers on the plantation. This structure, like others of the plantation, was torn down when Stone purchased the property in 1937.

The damage caused by Needlerush Road, and the scavenging and destruction of the site in 1937, suggest that the site has low integrity. Artifact quantity and variety are likewise quite low. These considerations suggest that the site has a very limited potential to contribute significant archaeological data.

38CH886 - Basil's Store

Site 38CH886 is situated about 100 feet (30 meters) north of Long Point Road and about 175 feet (50 meters) east of Snowden Road in an old field grown up in grass and young pines, and bordered by live oaks. A portion of the area, within the past 5 or 10 years, has been used for illegal dumping and is littered with construction debris and appliances. The site, first identified on the basis of three shovel tests, is estimated to be about 65 feet (20 meters) in diameter and is situated just south of a single, large live oak.

Subsequent to identifying the site, but prior to more intensive tests, Jesse Ellis, a Snowden resident, indicated that the site was that of Basil Royall's general store, which was located "under the old live oak tree." Basil apparently operated the store prior to about 1917 and after that time the abandoned building was taken over by a local black family and used as a house until 1937 when it was torn down. It may be that this general store, operated in the twentieth century, was first begun by Dr. E. M. Royall in the 1870s, based on previously discussed invoices from Thomas P. Smith, Factor and Commission Merchant. Based on the oral history documentation for this site and the quantity of remains identified from the shovel tests, a limited testing program was initiated.

Field Methods

Two 5-foot squares were excavated at the site by a crew of two on Tuesday, December 3, 1986. A total of 16 person hours were spent at the site and the two units (representing 0.01%

sample of the site universe) yielded a total of 45 cubic feet (1.3 cubic meters) of soil.

The units were tied into a nail placed in the center of Long Point Road (Reference Point 1). Vertical control was maintained through the use of a pre-existing bench mark (4.87 feet [1.48 meters] MSL) established by Thomas and Hutton Engineering Company at the Boone Hall Creek culvert crossing at Long Point Road.

Stratigraphy at the site was uniform and consisted of a dark brown sandy A horizon (termed Zone 1) overlying a mottled light yellow sand. The Zone 1 soil was 0.9 foot (0.3 meter) in depth and the artifacts were contained entirely in this zone.

Test Pit 1 is situated 110 to 115 feet (33.8 to 35.4 meters) N16`52'W of RP 1, with the unit laid out to the east. The square was situated on the suspected southern site edge, within a utility easement which crosses the site from west to east. No features were noted at the base on Zone 1.

Test Pit 2 is situated 149 to 154 feet (45.8 to 27.4 meters) N16`52'W of RP 1, with the unit laid out to the east. The square is situated under the large live oak which apparently serves as a "marker" for the old store. The unit was anticipated to be in the immediate vicinity of the store.

## Results

The excavation at this site has produced 1155 historic artifacts (Table 6), 31 small prehistoric sherds, a small quantity of animal bone, and brick and shell samples. The artifact pattern (South 1977; see Table 6) from the site appears to reflect a domestic configuration and is similar to both he Revised Carolina Artifact Pattern (Garrow 1982; South 1977) and the Piedmont Tenant/Yeoman Artifact Pattern (Drucker et al. 1984). An examination of the collection fails to yield clear evidence of any commercial activity. There is no abundance of any particular artifacts which suggest their having been offered for sale, there is no evidence of any clearly non-domestic material, nor is there evidence of unusual discard behavior. That this site exhibits a strong domestic pattern is not unexpected, since work in Charleston has revealed that the refuse at combined domestic and retail commercial establishments of the eighteenth and nineteenth centuries is "overwhelmingly domestic" (Calhoun et al. 1984:61). Obviously, the very small sample size makes any conclusions tentative.

While the bulk of the assemblage dates from the mid-nineteenth through early twentieth centuries, a few ceramics suggest the possibility of an earlier component. The mean ceramic date of 1888 (or 1891 if the few eighteenth century ceramics are excluded; Table 7) provides considerable support for the speculation that the general store was begun in the postbellum and continued into the early twentieth century. Other

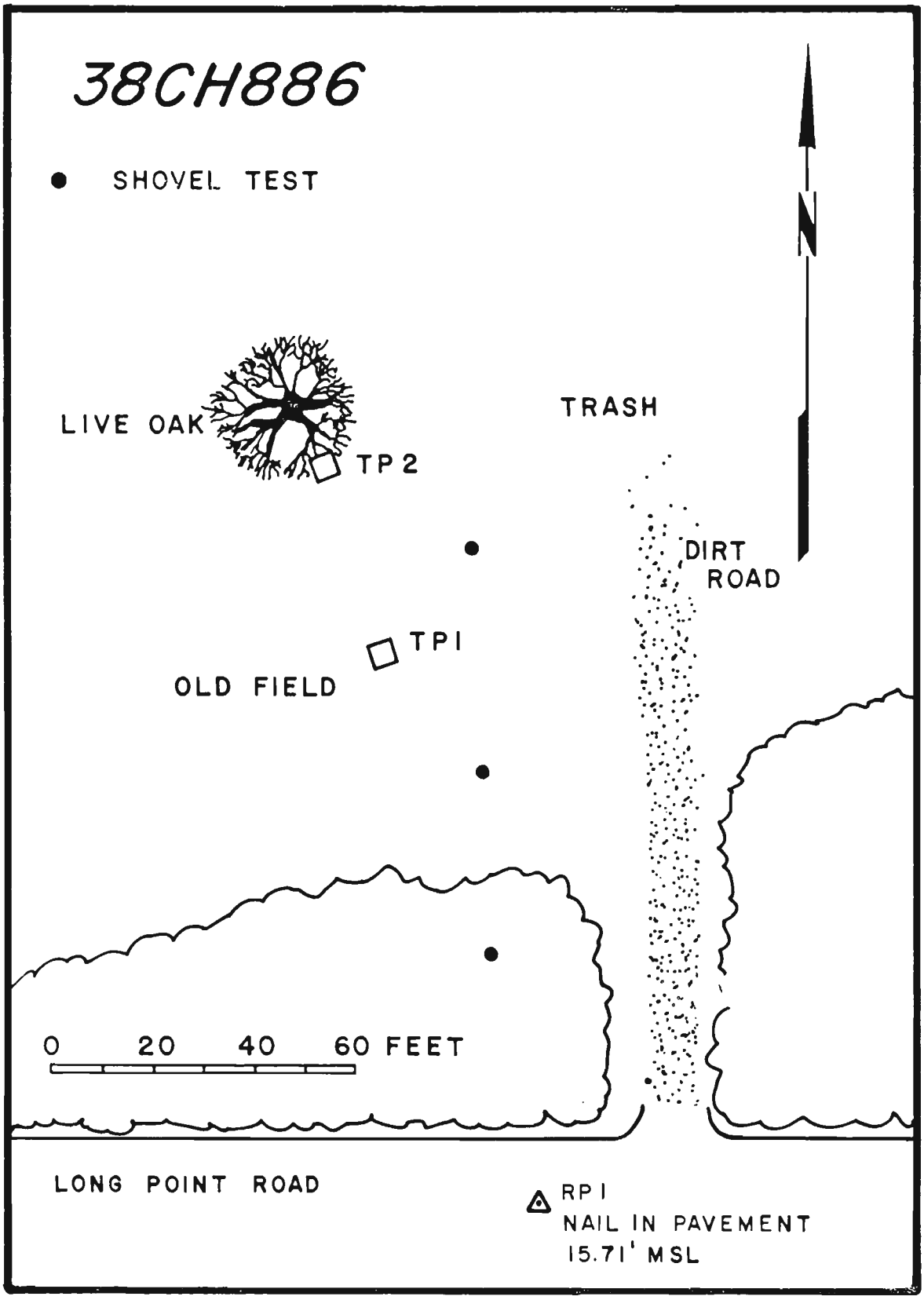



Figure 16. Site 38CH886, showing shovel tests and excavation units.

| | ST | TP1 | TP2 | Total | |
|---|---|---|---|---|---|
| KITCHEN | | | | | |
| whiteware, undec | 3 | 71 | 57 | 131 | |
| blue tp | | 2 | 1 | 3 | |
| non-blue tp | | 2 | | 2 | |
| flow blue | | 3 | | 3 | |
| annular ware | | 1 | | 1 | |
| blue hp | | | 2 | 2 | |
| polychrome hp | | 4 | 4 | 8 | |
| sponge dec | | 1 | | 1 | |
| tinted | | 3 | | 3 | |
| decalcomania | | | 1 | 1 | |
| yellow ware | | 7 | 2 | 9 | |
| lead glazed slipware | | 2 | | 2 | |
| porcelain, white | | 7 | 3 | 10 | |
| hp overglaze | | | 1 | 1 | |
| bisque | | 1 | 3 | 4 | |
| delft, undec | | | 1 | 1 | |
| brown stoneware | | 1 | | 1 | |
| burnt ceramics | | | 2 | 2 | |
| clear bottle glass | 6 | 127 | | 133 | |
| clear pressed glass | | 16 | 74 | 90 | |
| manganese bottle glass | 1 | 58 | 22 | 81 | |
| black bottle glass | | 2 | | 2 | |
| green bottle glass | | 2 | 1 | 3 | |
| blue bottle glass | | 2 | 1 | 3 | |
| amber bottle glass | | 2 | | 2 | |
| brown bottle glass | | 23 | 10 | 33 | |
| lt. green bottle glass | | 56 | 51 | 107 | |
| aqua bottle glass | | 11 | 11 | 22 | |
| milk glass | | 1 | 3 | 4 | |
| melted glass | | | 2 | 2 | |
| crown bottle cap | | | 1 | 1 | |
| jar lid, zinc | | 1 | | 1 | |
| iron stove parts | | 2 | | 2 | |
| | | | | 671 | 58.1% |
| ARCHITECTURAL | | | | | |
| window glass | | 106 | 17 | 123 | |
| cut nails | | 11 | | 11 | |
| wire nails | | 14 | | 14 | |
| UID nails | 9 | 138 | 133 | 280 | |
| spike | | | 1 | 1 | |
| staple | | | 2 | 2 | |
| keyhole surround | | 1 | | 1 | |
| | | | | 432 | 37.4% |
| ARMS | | | | | |
| shells | | 2 | | 2 | |
| | | | | 2 | 0.2% |
| CLOTHING | | | | | |
| porcelain buttons (South's #23) | | 8 | 3 | 11 | |
| brass/iron buttons (South's #25) | | 1 | | 1 | |
| brass snap | | | 1 | 1 | |
| safety pin head | | 1 | | 1 | |
| | | | | 14 | 1.2% |
| PERSONAL | | | | | |
| blue bead | | 1 | | 1 | |
| brass heart locket | 1 | | | 1 | |
| slate pencil | | | 1 | 1 | |
| slate frags | | 3 | 1 | 4 | |
| coins | | | 1 | 1 | |
| | | | | 8 | 0.7% |
| TOBACCO PIPE | | | | | |
| kaolin pipe stems | | 5 | 3 | 8 | |
| kaolin pipe bowls | | 1 | 1 | 2 | |
| | | | | 10 | 0.8% |
| ACTIVITIES | | | | | |
| eye bolt | 1 | | | 1 | |
| wire frags | | 1 | | 1 | |
| washer | | 1 | | 1 | |
| UID iron | | 9 | 5 | 14 | |
| plow part | | 1 | | 1 | |
| | | | | 18 | 1.6% |

Table 6. Historic artifacts recovered from 38CH886.

| Ceramic Type | Median Date | Freq | Product |
|---|---|---|---|
| Whiteware, undec | 1897.5 | 131 | 248572.5 |
| blue tp | 1840 | 3 | 5520.0 |
| non-blue tp | 1885.5 | 2 | 3771.0 |
| flow blue | 1870.5 | 3 | 5611.5 |
| annular ware | 1865.5 | 1 | 1865.5 |
| blue hp | 1840.5 | 2 | 3681.0 |
| polychrome hp | 1848 | 8 | 14784.0 |
| sponge dec | 1853 | 1 | 1853.0 |
| tinted | 1940.5 | 3 | 5821.5 |
| decalcomania | 1925.5 | 1 | 1925.5 |
| Yellow ware | 1853 | 9 | 16677.0 |
| Lead glazed slipware* | 1733 | 2 | 3466.0 |
| Porcelain, white | 1883 | 10 | 18830.0 |
| overglaze hp | 1908 | 1 | 1908.0 |
| bisque | 1908 | 4 | 7632.0 |
| Delft, undec* | 1720 | 1 | 1720.0 |
| | | 182 | 343638.5 |

343638.5 ÷ 182 = 1888.1

*excluded - 338452.5 ÷ 179 = 1890.8

Table 7. Mean ceramic date for the 38CH886 collection.

items in the collection, such as several fragmentary South Carolina Dispensary bottles (1893-1907; Huggins 1971), and the zinc canning jar lid (post 1860; Toulouse 1977) suggest a similar mid- to late nineteenth century period.

## Summary

Oral history documents a structure on this site which served as Basil Royall's general merchandise store until 1917 and then for the next 20 years as a domestic structure for a local black family. The archaeological remains are consistent with a site first occupied in the mid-nineteenth century, so this may also be the location of a posited store operated by Dr. E. M. Royall in the postbellum period. The site, then, may represent almost 50 years of commercial and 20 years of domestic activity prior to its abandonment and dismantling.

The site has produced a quantity of archaeological remains and the density and variety of those remains is high compared to sites of a similar time period on the Longpoint tract (25.7 artifacts per cubic foot [888.5 artifacts per cubic meter] compared to 8.5 artifacts per cubic foot [310.8 per cubic meter] at Basil Royall's house - 38CH873). Yet the site's research potential appears severely constrained by the blending of commercial and domestic activities. While research at nineteenth century general merchandise stores offers the potential to study buying and selling patterns, the apparent status of materials offered for sale to a limited range of clients and the temporal patterns of such items, render it impossible at 38CH886 to separate the commercial from the domestic refuse. This inability may drastically limit the range of possible studies and the validity of the conclusions.

## Nearby Sites

I have previously mentioned that 38CH30 is situated north of the Longpoint tract on land belonging to the Charleston County Parks and Recreation Commission. The site, long popularly thought to be the location of a "Sewee Indian Fort," was extensively damaged by borrowing activities in the early twentieth century. Since that time the site has been further damaged by the construction of Palmetto Islands County Park. An examination of The Charleston Museum collection from this site indicates an Early and Middle Woodland occupation (1 Thom's Creek Shell Punctate, 1 Thom's Creek Reed Punctate, 3 Deptford Check Stamped, 1 Deptford Cord Marked, 1 Mount Pleasant Fabric Impressed, and 3 McClellanville Simple Stamped sherds). Sherds observed at the site and in the possession of the county support the general validity of the Museum's collection. Site 38CH30 was probably a major shell midden on the marsh with occupation areas ranging inland. Today, it is unlikely that more than 20% of the site is still extant, and much of that has been further damaged

by the county's construction activities. This site warrants immediate archaeological testing and evaluation by the county.

Also north of the Longpoint tract and adjacent to the Palmetto Islands County Park property William Koob identified a small collection of prehistoric pottery. This site, which has been improperly recorded as 38CH30, is a small Early Woodland midden.

An examination of the Longpoint tract adjacent to Long Point Road at the Boone Hall Creek crossing failed to identify any remains of the "negro school." The area is quite low and in a stand of pines, aspects of the site description specifically mentioned by Jesse Ellis. It is probably that the small building, set on piles, left a faint archaeological impression. No domestic activities apparently took place at the school and the building was torn down in 1937.

## SITE SIGNIFICANCE AND RECOMMENDATIONS

This section of the report, in conjunction with the previous discussions, fulfills the primary goals of the Longpoint survey to identify and assess the archaeological resources of the tract. I have previously noted that identified sites would be assessed in terms of Glassow's (1977) five archaeological properties: site integrity, site clarity, artifactual variety, artifactual quantity, and site environmental context.

Integrity refers to the degree of preservation or potential to identify in situ remains. Integrity relates to the site's condition and the likelihood that midden and features will be recovered. While integrity is best determined by the excavation of 5-foot squares, sometimes shovel testing can contribute to a more complete understanding. Because of the costs associated with more extensive testing, shovel tests were frequently used as a preliminary tool. Clarity indicates how well strata or subsurface features may be distinguished. Again, clarity is best examined through the excavation of 5-foot squares. Variety refers to the qualitative variability in the archaeological remains found at a site. The subsurface investigations (either 5-foot squares or shovel tests) provide a more thorough method of gauging variability than simple surface surveys. Quantity refers to the frequency or density of the artifacts and/or features. While this is the easiest criterion to quantify, it is the most difficult to interpret since the quantity of artifacts is closely tied to site function and temporal period (a village site has a greater density of artifacts than a shellfish collection station, yet both are part of a single settlement and subsistence system and both must be studied in order to understand the total system). Finally, environmental context is useful only when sites are found in a variety of ecological zones. Since all of the Longpoint sites are found in similar environmental settings, this criterion will not be used.

38CH873 is the nineteenth and early twentieth century house site of Basil Royall which was subsequently used by the plantation overseer. In 1937 the structure was torn down and was salvaged by the local blacks. Site integrity and clarity have been damaged by the activities associated with its abandonment in 1937. Site clarity has also been impaired by the area's use as a recent dump site. Artifactual variety and quantity are both low. Consequently, this site does not appear to be eligible for the National Register.

38CH874 is a small mound of burnt and crushed oyster shell, and while the exact nature of the site has not been determined,

it appears to be the by-product of lime production. No lime kiln, however, was identified by this survey. While site integrity and clarity are expected to be high, this site appears to represent a secondary deposit of an industrial activity and therefore even high integrity and clarity are not likely to be important to the site's ability to contribute significant information. Artifactual variety and quantity are both very low (in fact, only daub and charcoal were recovered from the site). This site does not appear to be eligible for inclusion in the National Register of Historic Places.

38CH875 consists of colonial through antebellum plantation remains including a main house, slave row, and at least one associated postbellum structure. Historical sources are available, as are a variety of oral history sources. Site integrity is high, with foundations of the main house cellar and three slave cabins clearly visible. Likewise, I anticipate that site clarity, while damaged by recent clearing, will also be high. Artifactual variety and quantity are both high, based on this limited study. This site is clearly eligible for inclusion in the National Register of Historic Places. This site, which is located on two 5-acre outparcels, will not be affected by the Longpoint development and no work is therefore required at the site. The plantation remains, however, are a significant archaeological resource and further study should be initiated in order to place the site on the National Register.

38CH876 is a brick yard of probable antebellum (or even possibly colonial) origin. The site's integrity is expected to be high since little activity has taken place on the site since its abandonment (although integrity has been damaged in the vicinity of a house and trailer). The clarity is expected to be typical of this type of site and while the site's size greatly increases its complexity, it also increases the chance of kilns being present. The categories of artifactual variety and quantity are both expected to be low, typical of this type of industrial site. This site is eligible for inclusion in the National Register.

Future work at this site might profitably be divided into three phases. The first phase involves a more thorough examination of the historical sources to determine if additional information concerning the site exists. The second phase involves a controlled 3% sample excavation of the site (which would equal 31 5-foot squares) to determine if intact kiln or other structural remains can be identified at the site. The use of unit excavations rather than large scale stripping operations is suggested to minimize damage to the valuable waterfront property. The choice of a 3% sample is based on the work by South (1984) at Fort San Felipe, which found that a 3% sample of an area roughly the same size as 38CH876 was adequate to project artifact and feature distribution. The third phase involves the partial or complete excavation of any intact structures identified based on the 3% sample. This phase, of course, would

be undertaken only if intact remains were identified by the previous sampling.

38CH877 is a historic black cemetery which dates from the nineteenth and twentieth centuries. Site integrity is expected to be high, although site clarity is largely undocumented at the present time. Artifactual variety and quantity are anticipated to be normal for this type of site. The cemetery's primary significance is a result of the bioarchaeological data it is expected to contain. Since this data cannot be realistically obtained from other sources, the site is recommended to be eligible for inclusion in the National Register of Historic Places. If the site cannot be set aside as open space or deeded to the nearby Long Point Baptist Church for upkeep, and the burials must be removed, extensive bioarchaeological analysis of the osteological and artifactual remains is recommended.

38CH878 is a probable nineteenth or early twentieth century roadway dam. Glassow's archaeological properties cannot easily be applied to this feature. The site has been photographed and recorded by this study. Further work does not seem likely to yield significant archaeological, architectural, or engineering data. This site does not appear to be eligible for the National Register.

38CH881 is a small scatter of prehistoric material dating to the Early Woodland. The site appears to have been plowed and a large ditch has been dug through the site, so integrity and clarity are considered to be fairly low. Likewise, artifactual variety and quantity are low. No further work is recommended for this site, which does not appear eligible for inclusion in the National Register.

38CH882 is a prehistoric occupation found situated around the head of what appears to be an old fresh water spring, although today the area has been invaded by brackish water. The prehistoric remains appear to date from the Early Woodland and are associated with some shell deposits. Site integrity has been damaged by cultivation and the single 5-foot square excavated to test the site revealed a historic drainage ditch, probably part of the field drainage for cotton cultivation in the antebellum period. Site clarity is fair, although both artifactual variety and quantity are low. Although this site is situated in a unique environmental context, the archaeological remains are rather sparse. This site, especially compared to 38CH884, appears to warrant no further investigation. The site is not thought to be eligible for the National Register.

38CH883 represents a sparse scatter of Woodland period ceramics adjacent to Boone Hall Creek. Although the site was studied only through a limited number of shovel tests, site integrity is judged to be low since the area has been heavily cultivated. Site clarity, based on the available information, is difficult to evaluate, but is expected to be average for this

type of site. Artifact quantity and variety are both very low. This site does not appear to be eligible for the National Register and consequently, no further investigations are recommended.

38CH884 is an Early to Middle Woodland shell midden situated just south of the main plantation complex (38CH875). The site was examined through a series of shovel tests and several 5-foot squares which revealed that while the site had been plowed, the dense shell midden had preserved a large quantity of faunal remains. In addition, two postholes were revealed by the work. Site integrity, in spite of plowing, is ranked high, as is site clarity. These high rankings, however, are expected to be most characteristic of the site core. Artifactual variety is greater at this site than any of the other prehistoric sites on Longpoint. Recovered items include not only pottery, but also lithics, abundant shellfish remains, and faunal and floral remains. The site also yielded three specimens of worked bone. These date are useful for seasonality studies, subsistence reconstructions, and environmental research. Artifactual quantity is considerably greater than the other studies sites on this tract and may be average for this type of site. Site 38CH884 is considered to be capable of yielding significant archaeological data and is therefore eligible for inclusion in the National Register of Historic Places.

Site investigation may profitably involve a controlled sampling strategy, such as auger testing, to verify the location of the site core. Data recovery should concentrate on the excavation of the site core, estimated to require a block excavation of about 20 feet (6 meters) square. Particular attention will be required to the collection and quantification of subsistence data.

38CH885 represents the remains of a cotton gin site (largely destroyed by Needlerush Road) and an adjacent black laborer's house situated west of Basil Royall's house (38CH873). This site was examined only through a series of shovel tests, but artifactual quantity and variety were found to be low. Site integrity and clarity are thought to have been damaged by the construction of Needlerush Road. The identified remains do not appear sufficient to warrant further study and the site does not appear to be eligible for the National Register.

38CH886 is a general merchandise store operated in the nineteenth and early twentieth centuries which was later used as a house by a black family. The structure was torn down in 1937. Archaeological studies have relied on two 5-foot squares and a brief oral history collected from a Snowden resident. Site integrity appears to be moderate. There was no evidence of plowing, although the razing of the structure is thought to have affected the quality of site integrity. Clarity cannot be readily evaluated since no features were encountered during the work. Artifactual variety and quantity are both very high for

this site. In the absence of the brief oral history, this site would have been interpreted as a domestic site and would have probably been thought to be eligible. Knowing, however, that 38CH886 represents a combined domestic and commercial site, its "research clarity" is greatly reduced since it may be impossible to clearly and convincingly separate the two assemblages. For this reason, I do not believe the site is eligible for inclusion in the National Register.

# CONCLUSIONS

The previously stated secondary goals of this study were, first, to examine the relationship between site location, soil type, and topography, and second, to explore the economics and operation of what appeared to be an average antebellum plantation. The completed study provides some input in both areas.

It was anticipated that the prehistoric sites would be found in areas of moderately to well drained soils. Of the seven prehistoric assemblages, five are located on moderately well drained Charleston soils and two are found on moderately well drained Hockley soils. No prehistoric remains were found on the poorly drained soils. In fact, 100% of the prehistoric sites are found on 44.1% of the soils in the study area. In addition, no prehistoric sites were identified on the very well drained Wagram soils, possibly because those soils are located about 1600 feet (500 meters) from any tidal or fresh water source, whereas no prehistoric assemblage was discovered more than 600 feet (185 meters) from a water source.

It may be questioned whether the soil drainage present today can be extended back in time to a period of lower sea levels. Although sea levels may have an affect on the water table, Edminster and Reeve note that the "ability of soils to transmit water has primary importance in the drainage of . . . lands" (Edminster and Reeve 1957:380). Yonges series soils with abundant clays have permeability rates of 0.2 to 0.6 inch per hour, while the sandy Charleston series soils have rates of up to 6.3 inches per hour. The permeability of most soils is not likely to be altered by sea level changes. Consequently, areas which are poorly drained today were probably equally poorly drained prehistorically.

As discussed by Scurry and Brooks (1980), the bulk of the site components are clearly late Early Woodland through Middle Woodland. Early Woodland Stallings and Refuge assemblages are absent from the study area and Thom's Creek is represented by only two sherds from two sites (although a more noticeable component may have been present at 38CH30). The major components, Deptford, Mount Pleasant, and McClellanville, are reported by Scurry and Brooks (1980) as Deptford and Cape Fear. South Appalachian Mississippian components are present a consistent minority, but are sufficiently uncommon as to support the contention that these sites are concentrated in riverine areas which contain broad floodplains. No evidence was observed of any protohistoric pottery wares.

Also as projected by previous studies (Brooks and Scurry 1978; Scurry and Brooks 1980) the sites are small and exhibit a low artifact diversity. Only one site, 38CH884, contains a diverse artifact assemblage, but even there the site was probably little larger than 1000 square feet (93 square meters). The average site size from the Belleview survey on the Wando River was 1750 square feet (162 square meters).

Overall, the prehistoric site patterning predicted by Scurry and Brooks (1980) has been documented at every Wando area survey tract where it has been tested. Although certain aspects of the predictive model might be intuitively predicted (such as sites will be located on better drained soils), the benefit of this well tested model is that it may now be used to allow more effective budgeting of time and effort in coastal surveys of northern Charleston County. At the present time, however, its extension south of Charleston or north of the Santee River will yield uncertain results since it has been extensively tested only in the Wando area.

In the Wando region previous surveys of wooded tracts have yielded one site per 45 acres at the Amoco tract (Brooks and Scurry 1978; 5 sites were identified in the 225 acres of the sampled tract) and one site per 44 acres at Belleview (Scurry and Brooks 1980; 11 sites were found in the 486 acres of wooded land). The Longpoint survey yielded 12 sites in 275 wooded acres, or one site per 23 acres. While it may appear that site density is higher in the Longpoint area than elsewhere, data from the cleared portion of Belleview cautions otherwise. After clearing, the Belleview tract yielded one site in every 2.5 acres. Obviously, site density is largely dependent on surface visibility and the cleared Belleview property suggests that large numbers of sites in wooded tracts are not being recorded by even the most rigorous survey techniques. With this in mind, the proposed predictive model of site settlement becomes even more significant to future research and planning since it allows certain high potential areas to be targeted for more intensive survey.

Turning to the historic settlement expectations, it is observed that the plantation tract offered three areas of access to the deep waters of Boone Hall Creek: one within the present Palmetto Islands County Park, one in an area of private houses just south of the park, and a third in the vicinity of the brickyard site, 38CH876. At least two of these, the northern area within the park and the southern area at 38CH876, are known to be historic landings, although no extensive plantation development occurred at either location. A fourth landing, in operation at least by the early nineteenth century, used a causeway through the marsh to reach the creek at the southern end of the plantation, although again, no extensive plantation development took place at that spot.

An examination of these four areas reveals features which may have made them unsuitable for the plantation complex. At the northern landing (known as "Landing Hill"), although elevations range up to 9 feet (2.8 meters) MSL, the area is a narrow peninsula which would have severely constrained expansion and exposed the settlement to severe weather. In addition, the location was difficult to reach, was not centrally located, and was available only after Walker acquired the 326 acres of "backlands."

The area north of 38CH876 has elevations similar to "Landing Hill" and is somewhat more centrally located, but would still have been on the fringe of the original plantation tract. Further, the area is characterized by poorly drained Yonges series soils. The brickyard area has elevations of only 6 to 7 feet (1.8 to 2.1 meters), although the soils are better drained than the area to the north. The area's clay deposits may have been recognized as too valuable to allow removal from productive use for the plantation complex. The final area, at the south end of the plantation, required a causeway to reach the creek and the high ground has elevations of only 6 to 7 feet (1.8 to 2.1 meters) MSL. The soils are somewhat poorly drained.

The area chosen for the plantation complex is characterized by moderately drained soils, an extensive flat area, and elevations of about 13 to 14 feet (4.0 to 4.3 meters) MSL. These factors appear to have been of greater importance than adjacent deep water, which suggests that while "deep water and high ground" was the preferred settlement location, high ground may have been considered of greater importance for health and safety than deep water was to transportation. In other words, although deep water access was important, as long as it was available there might have been no reason to locate the main house at that access point. A similar situation is observed a the Sanders Plantation (Trinkley 1985).

A second research topic for the plantation on the Longpoint tract was whether the settlement changed location from the colonial to antebellum period. The bricks in the main house cellar suggest colonial construction, as do the bulk of the rubble associated with 38CH876, although the brick slave cabins suggest a nineteenth century construction. The ceramics collected from 38CH875 reveal eighteenth century wares and an early nineteenth century date. The available evidence suggests that the nineteenth century plantation settlement began in the eighteenth century, although some structures (such as the slave cabins) may have been rebuilt.

Unfortunately, the bulk of the research questions proposed for this plantation can be studied only through more extensive investigation and particularly excavation. Text excavations at the plantation settlement, for example, would be needed not only to yield collections suitable for comparing the wealth and status of Palmetto Grove to Sanders Plantation, but also to study the

Royall family's response to postbellum economic conditions. Excavation would be required to gain further insight on colonial period operations and lifestyle. Excavation is also needed to determine the construction period of the slave row and whether there are archaeological indicators of atypical wealth among the plantation's slaves (in other words, do brick cabins suggest a level of care which might also be reflected in the material culture of slavery?)

An interesting feature of the Wando neck area noted by Scurry and Brooks (1980:80) is the virtual absence of Colono ware ceramics for the Belleview Plantation. They suggest possible explanations might include the general availability of European ceramics through the nearby Charleston market, the housing of the slaves off the plantation, some undetermined difference in the plantation economy of Belleview when compared to other plantations, or possibly a sampling bias.

At the Sanders Plantation Colono ware accounted for only 2.1% of the ceramics (N=18) (Trinkley 1985:60) and at the Palmetto Grove Plantation this ware accounts for 5.7% of the collection (N=3; based only on surface collections). These figures appear to represent a relatively low percentage of Colono ware, especially when Colono accounts for over 33% of the ceramics from the Lesesne and Fairbank plantations on nearby Daniels Island (Zierden et al. 1985:7-11 - 7-12) and about 39% of the ceramics from Limerick(Lees 1980). Since Colono wares in downtown Charleston have a mean of only 5.7% (Calhoun et al. 1984:63) it may be that proximity to Charleston markets may be responsible for the low incidence of this ware in some areas. Obviously, the variable occurrence of the pottery is a topic which requires considerable future attention.

While the present survey has not been capable of answering many of the questions associated with the historic occupation, considerable information has been presented on both historic and prehistoric site patterning in the study area which should be applicable to the general vicinity. This preliminary study of the Palmetto Grove Plantation provides a foundation for future work on the tract and better defines some of the research questions for the study area.

REFERENCES


Allston, R.F.W.
1854 Essay on Sea Coast Crops. A.E. Miller, Charleston.

Anderson, David G. and Trisha Logan
1981 Francis Marion National Forest: Cultural Resources Overview. U.S.D.A., Forest Service Columbia.

Anderson, David G., Charles E. Cantley, and Andrea Lee Novick
1982 The Matassee Lake Sites: Archaeological Investigations Along the Lower Santee River in the Coastal Plain of South Carolina. Commonwealth Associates, Jackson, Michigan. Submitted to Interagency Archaeological Services, National Park Service, Atlanta.

Appleton, D.
1852 Dictionary of Machines, Mechanics, Engine-Work and Engineering. D. Appleton, New York

Baker, Steven G.
1974 Cofitachique: Fair Province of Carolina. Unpublished M.A. Thesis, Department of History, University of South Carolina, Columbia.

Bartovics, Albert
1978 The Archaeology of Daniels Village: An Experiment in Settlement Archaeology. Ms. on file, Department of Anthropology, Brown University, Providence.

Bense, Judith A., Hester A. David, Lorraine Heartfield, and Kathleen Deagan
1986 Standards and Guidelines for Quality Control in Archaeological Resource Management in the Southeastern United States. Southeastern Archaeology 5:52-62.

Bianchi, Travis L.
1974 Archaeological Investigation of South Carolina Highway Department's Proposed Connector from Port Royal to Ladies Island. Research Manuscript Series 59. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Brockington, Paul, Michael Scardaville, Patrick H. Garrow, David Singer, Linda France, and Cheryl Holt
1985 Rural Settlement in the Charleston Bay Area: Eighteenth and Nineteenth Century Sites in the Mark Clark Expressway Corridor. Garrow and Associates, Atlanta. Submitted to the S.C. Department of Highways and Public Transportation, Columbia.

Brooks, Mark J. and James D. Scurry
1978 An Intensive Archaeological Survey of Amoco Realty Property in Berkeley County, South Carolina with a Test of Two Subsistence-Settlement Hypotheses for the Prehistoric Period. Research Manuscript Series 147. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Brooks, Mark J., Larry Lepionka, Ted A. Rathbun, and John Goldsborough
1982 Preliminary Archaeological Investigations at the Callawassie Island Burial Mount (38BU19), Beaufort County, South Carolina. Research Manuscript Series 185. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Bull, Elias
1969 The Problem of the Cusabo. S.C. Institute of Archaeology and Anthropology Notebook 1(6-9):8-12.

Bureau of Census
1850 Seventh Census of the United States - 1850. Manuscript Agricultural Schedules, South Carolina. S.C. Department of Archives and History, Columbia.

1870 Ninth Census of the United States - 1870. Manuscript Agricultural Schedules, South Carolina. S.C. Department of Archives and History, Columbia.

1880a Population Schedules of the Tenth Census of the United States - 1880, vol. 7, South Carolina, pt. 2, Charleston County. S.C. Department of Archives and History, Columbia.

1880b Tenth Census of the United States - 1880. Manuscript Agricultural Schedules, Charleston County, South Carolina. S.C. Department of Archives and History, Columbia.

Butterworth, Benjamin (compiler)
1892 The Growth of Industrial Art. Government Printing Office, Washington, D.C.

Calhoun, Jeanne A.
1983 The Scourging Wrath of God: Early Hurricanes in Charleston, 1770-1804. Leaflet Number 29. The Charleston Museum, Charleston, South Carolina.

Calhoun, Jeanne A., Elizabeth J. Reitz, Michael B. Trinkley, and Martha A. Zierden
1984 Meat in Due Season: Preliminary Investigations of Marketing Practices in Colonial Charleston. Archaeological Contributions 9. The Charleston Museum, Charleston, South Carolina.

Carpenter, James G.
1973 The Rice Plantation Lands of Georgetown County, South Carolina: A Historical Geographic Study. Unpublished M.A. Thesis, Department of Geography, University of South Carolina, Columbia.

Chappell, Edward
1982 Slave Housing. Fresh Advice. Colonial Williamsburg, Williamsburg, Virginia.

Charleston County Probate Court
1671-1968 Record of Wills.

Charleston County Register of Mesne Conveyances
1680-1926 John McCrady Plat Collection. S.C. Department of Archives and History, Columbia.

1784-1986 Conveyance and Mortgage Books.

Coe, Joffre L.
1964 The Formative Cultures of the Carolina Piedmont. Transactions of the American Philosophical Society 54(5).

Colquhoun, D.J., M.J. Brooks, W.H. Abbott, F.W. Stapor, W.S. Newman, and R.R. Pardi
1980 Principles and Problems in Establishing a Holocene Sea-Level Curve for South Carolina. In Excursions in Southeastern Geology, edited by James D. Howard, Chester B. DePratter, and Robert W. Frey, pp. 143-159. Guidebook 20. Geological Society of American, Atlanta.

Combes, John D.
1972 Ethnography, Archaeology and Burial Practices Among Coastal South Carolina Black. Conference on Historic Sites Archaeology Papers 7:52-61.

Cooke, C. Wythe
1936 Geology of the Costal Plain of South Carolina. Bulletin 867. U.S. Geological Survey, Washington, D.C.

Cooter, John L.
1958 Archaeological Excavations at Jamestown. Archaeological Research Series 4. National Park Service, U.S. Department of the Interior, Washington, D.C.

DeForest, John William
1968 A Union Officer in the Reconstruction. Archon Books, New York.

DePratter, Chester and J.D. Howard
1980 Indian Occupation and Geologic History of the Georgia Coast: a 5000 Year Summary. In Excursions in Southeastern Geology, edited by James D. Howard, Chester B. DePratter, and Robert W. Frey, pp. 1-65. Guidebook 20. Geological Society of America, Atlanta.

Drucker, Lesley and Susan Jackson
1984 Shell in Motion: An Archaeological Study of the Minim Island National Register Site, Georgetown County, South Carolina. Carolina Archaeological Services, Columbia. Submitted to Charleston District, U.S. Army Corps of Engineers, Charleston.

Drucker, Lesley, Ronald Anthony, Susan Jackson, Susan Krantz, and Carl Steen
1984 An Archaeological Study of the Little River-Buffalo Creek Special Land Disposal Tract. Carolina Archaeological Services, Columbia. Submitted to U.S. Army Corps of Engineers, Savannah District, Savannah.

Edminster, T.W. and Ronald C. Reeve
1957 Drainage Problems and Methods. In Soil: The Yearbook of Agriculture - 1957, edited by Alfred Stefferud, pp. 378-385. Government Printing Office, Washington, D.C.

Egloff, Keith
1980 Colonial Plantation Hoes of Tidewater Virginia. Research Report Series 1. Virginia Historic Landmarks Commission, Yorktown.

Ellerbe, Clarence M.
1974 South Carolina Soils and Their Interpretations for Selected Uses. S.C. Land Resources Conservation Commission, Columbia.

Evidences of Indians Near Their Old Fort
1929 Charleston News and Courier, March 9.

Fenn, Elizabeth A.
1985 Honoring the Ancestors. Southern Exposure, September/October: 42-47.

Flint, Richard F.
1971 Glacial and Quaternary Geology. John Wiley and Sons, New York.

Fowells, H.A.
1965 Silvics of Forest Trees of the United States. Agricultural Handbook No, 271. U.S.D.A., Forest Service, Washington, D.C.

Garrow, Patrick (editor)
1982 Archaeological Investigations on the Washington, D.C. Civic Center Site. Soil Systems, Inc., n.p. Submitted to Historic Preservation Office, Department of Housing and Community Development, Government of the District of Columbia.

Garrow, Patrick H., Steve A. Symes, and Henry W. Case
1985 Physical Anthropology and Archaeological Investigations of the Nancy Creek Primitive Baptist Church Cemetery, Chamblee, Georgia. Garrow and Associates, Atlanta, Georgia. Submitted to Parsons, Brinckerhoff, Quade & Douglas, Atlanta.

Genovese, Eugene D.
1972 Roll, Jordon, Roll: The World the Slaves Made. Random House, New York.

Georgia Writers' Project
1940 Drums and Shadows: Survival Studies Among the Georgia Coastal Negroes. Savannah Unit, Work Project Administration, Savannah.

Glassow, Michael A.
1977 Issues in Evaluating the Significance of Archaeological Resources. American Antiquity 42:413-420.

Glave, E.J.
1891 Fetishism in Congo Land. The Century Magazine 41:825-836.

Goldenweiser, E.A. and Leon E. Truesdell
1924 Farm Tenancy in the United States. Bureau of the Census, U.S. Department of Commerce, Washington D.C.

Gregorie, Anne King
1925 Notes on Sewee Indians and Indian Remains. Contributions 5. The Charleston Museum, Charleston, South Carolina.

Hammond, Harry
1884 Report on the Cotton Production of the State of South Carolina. In Report on the Cotton Production in the United States, edited by Eugene W. Hilgard, pp. 451-526. Census Office, Department of the Interior, Washington, D.C.

Harris, Suzanne E. and Elizabeth Sheldon
1982 Ethnobotanical Analysis of Carbonized Plant Remains from the Mattassee Lake Sites (Cooper River Rediversion Project, Berkeley County, South Carolina). In The Mattassee Lake Sites: Archaeological Investigations Along the Lower Santee River in the Coastal Plain of South Carolina, edited by David G. Anderson, pp. 337-352. Commonwealth Associates, Inc., Jackson, Michigan. Submitted to National Park Service, Interagency Archaeological Service, Atlanta, Georgia

Hartley, Michael O.
1984 The Ashley River: A Survey of Seventeenth Century Sites. Research Manuscript Series 192. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Henderson, J.R. and F.B. Smith
1957 Florida and Flatwoods. In Soils: The Yearbook of Agriculture - 1957, edited by Alfred Stefferud, pp. 595-598. Government Printing Office, Washington, D.C.

Hilliard, Sam B.
1984 Atlas of Antebellum Southern Agriculture. Louisiana State University, Baton Rouge.

Hollings, Marie F.
1973 Brickwork in Charleston to 1780. Unpublished Master's thesis, Department of History, University of South Carolina, Columbia.

Horse and Buggy Days in Old Mount Pleasant
1985 Charleston New and Courier, June 16.

Huggins, Phillip K.
1971 The South Carolina Dispensary: A Bottle Collector's Atlas and History of the System. Sandlapper Press, Columbia.

Huneycutt, Dwight J.
1949 The Economics of the Indigo Industry in South Carolina. Unpublished Master's thesis, Department of Economics, University of South Carolina, Columbia.

Joyner, Charles
1984 Down by the Riverside: A South Carolina Slave Community. University of Illinois Press, Urbana.

Keel, Bennie
1985 Peer Review. In Gone to a Better Land: A Biohistory of a Rural Black Cemetery in the Post-Reconstruction South, edited by Jerome C. Rose, pp. 214-215. Research Series 25. Arkansas Archaeological Survey, Fayetteville.

Kronberg, Nathan
1971 Climate. In Soil Survey of Charleston County, S.C., edited by E.N. Miller, Jr., pp. 72-74. U.S.D.A., Soil Conservation Service, Washington, D.C.

Kuchler, A.W.
1964 Potential Natural Vegetation of the Conterminous United States. Special Publication 36. American Geographical Society.

Kurz, Herman and Kenneth Wagner
1957 Tidal Marshes of the Gulf and Atlantic Coasts of Northern Florida and Charleston, South Carolina. Florida State University Studies 24. Florida State University, Tallahassee.

Landers. H.
1970 Hilton Head and the Sea Islands of South Carolina. Climatography of the United States Number 21-38-3. Environmental Science Services Administration, Washington, D.C.

Lees, William B.
1980 Old and In the Way: Archaeological Investigations at Limerick Plantation, Berkeley County, South Carolina. Anthropological Studies 3. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Lepionka, Larry, Donald Colquhoun, Rochelle Marrinan, David McCollum, Mark Brooks, John Foss, William Abbott, and Ramona Grunden
1983 The Second Refuge Site: Location 22 (38JA61), Savannah national Wildlife Refuge, Jasper County, South Carolina. University of South Carolina, Beaufort. Submitted to National Park Service, Interagency Archaeological Service, Atlanta.

Lynch, P.N., J.F.M. Geddings, and C.U. Shepard
1882 Artesian Wells - 1823-2879. Yearbook - City of Charleston, Charleston, South Carolina.

Jones, Grant D.
1978 The Ethnohistory of the Guale Coast Through 1684. In The Anthropology of St. Catherines Island: Natural and Cultural History, edited by David H. Thomas, Grant D. Jones, Roger S. Durham, and Clark S. Larsen, pp. 178-210. Anthropological Papers 55(2). American Museum of Natural History, New York.

McDaniel, George W.
1982 Hearth and Home: Preserving a People's Culture. Temple University Press, Philadelphia.

McIver, Petrona Royall
1960 History of Mount Pleasant, South Carolina. Ashley, Charleston, South Carolina.

McKee, Harley J.
1973 Introduction to Early American Masonry. The Preservation Press, Washington, D.C.

Mason, Robert E.
1976 A Historical Geography of South Carolina's Sea Island Cotton Industry. Unpublished Master's thesis, Department of Geography, University of South Carolina, Columbia.

Mathews, Maurice
1954 A Contemporary View of Carolina in 1680. South Carolina Historical Magazine 55:153-159.

Mathews, Thomas D., Frank W. Stapor, Jr., Charles R. Richter, John V. Miglarese, Michael D. McKenzie, and Lee R. Barclay
1980 Ecological Characterization of the Sea Island Coastal Region of South Carolina and Georgia, vol. 1. Office of Biological Services, Fish and Wildlife Service, Washington, D.C.

Michael, Dorothy H.
1943 Grave Decoration. In Backwoods to Border, edited by Mody C. Boatright and Donald Bay, pp. 129-136. Publication 28. Texas Folk-Lore Society, Austin.

Michie, James
1977 The Late Pleistocene Human Occupation of South Carolina. Unpublished Honor's thesis, Department of Anthropology, University of South Carolina, Columbia.

Milanich, Jerald T.
1971 The Deptford Phase: An Archaeological Reconstruction. Ph.D. dissertation, University of Florida. University Microfilms, Ann Arbor.

Miller, E.N., Jr.
1971 Soil Survey of Charleston County, South Carolina, U.S.D.A., Soil Conservation Service, Washington, D.C.

Miller, George C.
1980 Classification and Economic Scaling of 19th Century Ceramics. Historical Archaeology 14:1-40.

Milling, Chapman J.
1969 Red Carolinians. University of South Carolina Press, Columbia.

Mooney, James
1894 The Siouan Tribes of the East. Bulletin 22. Bureau of American Ethnology, Washington, D.C.

Morgan, Phillip D.
1977 The Development of Slave Culture in Eighteenth Century Plantation America. Unpublished Ph.D. dissertation, University College, London.

National Archives
1958a Population Schedules of the Second Census of the United States - 1800. Roll 48 - South Carolina. General Services Administration, Washington, D.C.

1958b Population Schedules of the Third Census of the United States - 1810. Roll 60 - South Carolina. General Services Administration, Washington, D.C.

1967a Population Schedules of the Eighth Census of the United States - 1860. Roll 1215 - South Carolina, vol. 2. Microcopy 653, National Archives Microfilm Publications, Washington, D.C.

1967b Population Schedules of the Eighth Census of the United States - 1860. Roll 1232 - South Carolina Slave Schedules, vol. 2, Charleston District. Microcopy 653. National Archives Microfilm Publications, Washington, D.C.

Newman, T. Stell
1970 A Dating Key for Post-Eighteenth Century Bottles. Historical Archaeology 4:70-75.

Noel Hume, Ivor
1970 A Guide to Artifacts of Colonial America. Alfred A. Knopf, New York.

1974 Historical Archaeology. Alfred A. Knopf, New York.

Parsons, Elsie Clews
1923 Folk-Lore of the Sea Islands, South Carolina. Memoirs of the American Folk-Lore Society 16. Cambridge.

Peterson, Drexel
1971 Time and Settlement in the Archaeology of Groton Plantation, South Carolina. Unpublished Ph.D. dissertation, Department of Anthropology, Harvard University, Cambridge.

Phelps, David S.
1984 Archaeology of the Tillett Site: The First Fishing Community at Wanchese, Roanoke Island. Archaeological Research Report 6. Archaeology Laboratory, Department of Sociology, Anthropology and Economics, East Carolina University, Greenville.

Pollitzer, William s.
1971 Physical Anthropology of Indians of the Old South. In Red, White, and Black: Symposium on Indians in the Old South, edited by Charles M. Hudson, pp. 31-43. University of Georgia Press, Athens.

Price, Cynthia R.
1979 19th Century Ceramics in the Eastern Ozark Border Region. Monograph Series 1. Center for Archaeological Research, Southwest Missouri University, Springfield.

Puckett, Newbell N.
1926 Folk Beliefs of the Southern Negro. University of North Carolina Press, Chapel Hill.

Quitmyer, Irvey
1985a Aboriginal Subsistence Activities in the Kings Bay Locality. In Aboriginal Subsistence and Settlement Archaeology of the Kings Bay Locality, vol. 2, edited by William H. Adams, pp. 73-91. Reports of Investigations 2. Department of Anthropology, University of Florida, Gainesville.

1985b The Environment of the Kings Bay Locality. In Aboriginal Subsistence and Settlement Archaeology of the Kings Bay Locality, vol. 2, edited by William H. Adams, pp. 1-32. Reports of Investigations 2. Department of Anthropology, University of Florida, Gainesville.

Rathbun, Ted A.
1985 Peer Review. In Gone to a Better Land: A Biohistory of a Rural Black Cemetery in the Post-Reconstruction South, edited by Jerome C. Rose, pp. 208-211. Research Series 25. Arkansas Archaeological Survey, Fayetteville.

Reese, D.M.
1847 An Encyclopedia of Domestic Economy. Harper and Brothers, New York.

Reid, J. Jefferson, Jr.
1967 Pee Dee Pottery from the Mount at Town Creek. Unpublished Master's thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

Rhodes, Daniel
1968 Kilns: Design, Construction, and Operation. Chilton Book Company, Radnor, Pennsylvania.

Rose, Jerome C.
1985 Gone to a Better Land: A Biohistory of a Rural Black Cemetery in the Post-Reconstruction South. Research Series 25. Arkansas Archaeological Survey, Fayetteville.

Royall, Jervey D., Mary Julia c. Royall and Ann DuPre Royall
1982 General Information about Palmetto Grove Plantation. In History of Palmetto Island County Park, edited by Betty Gross, pp. 1-10. Ms. on file, Charleston County Park and Recreation Commission, Charleston.

Russell and Erwin
1980 Illustrated Catalogue of the American Hardware of the Russell and Erwin Manufacturing Company, 1865. Association for Preservation Technology, Ottawa.

Scurry, James D. and Mark J. Brooks
1980 An Intensive Archaeological Survey of the South Carolina State Ports Authority's Belleview Plantation, Charleston, South Carolina. Research Manuscript Series 158. S.C. Institute of Archaeology and Anthropology, Columbia.

Seabrook, Whitemarsh B.
1848 An Essay on the Agricultural Capabilities of South Carolina. John G. Bowman, Columbia.

Service, E.R.
1966 The Hunters. Prentice-Hall, Englewood Cliffs.

Sirmans, H. Eugene
1966 Colonial South Carolina: A Political History, 1663-1763. University of North Carolina Press, Chapel Hill.

Smith, Gretchen P.
1983 A Master Interpretative Plan for Palmetto Islands County Park, Charleston, South Carolina. Ms. on file, Charleston County Park and Recreation Commission, Charleston.

Smith, Mary M.
1986 A Floristic Study of Palmetto Islands County Park, Charleston County, South Carolina. Unpublished Master's thesis, Department of Botony, Clemson University.

South Carolina Historical Society
1700-1960 McIver Collection. Ms. on file, S.C.H.S., Charleston, South Carolina.

South Carolina Water Resources Commission
1973 Wando River Environmental Quality Studies, An Interim Report. Columbia.

South, Stanley
1963 Exploratory Excavation of a Brick Kiln at Town Creek, Brunswick County, North Carolina. Ms. on file, N.C. Department of Archives and History, Raleigh.

1972 Tribes of the Carolina Lowland. Research Manuscript Series 20. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

1977 Method and Theory in Historical Archaeology. Academic Press, New York.

1984 Testing Archaeological Sampling Methods at Fort San Felipe 1983. Research Manuscript Series 190. S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

South, Stanley and Mike Hartley
1980 Deep Water and High Ground: Seventeenth Century Low Country Settlement. Research Manuscript Series 166, s.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Swanton, John R.
1952 The Indian Tribes of North America. Bulletin 145. Bureau of American Ethnology, Smithsonian Institution, Washington, D.C.

Thomas, David H. and Clark S. Larsen
1979 The Anthropology of St. Catherine's Island: The Refuge-Deptford Mortuary Complex. Anthropological Papers 56(1). American Museum of Natural History, New York.

Thompson, Robert F.
1983 Flash of the Spirit: African and Afro-American Art and Philosophy. Random House, New York.

Toulouse, Julian H.
1971 Bottle Makers and Their Marks. Thomas Nelson, New York.

1977 Fruit Jars - A Collector's Manual with Prices. Thomas Nelson, Nashville.

Trinkley, Michael
1976 Paleoethnobotanical Remains from Archaic-Woodland Transitional Middens Along the South Carolina Coast. Southeastern Archaeological Conference Bulletin 19:64-67.

1980 Investigations of the Woodland Period Along the South Carolina Coast. Ph.D. dissertation, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor.

1981a Archaeological Testing of the Awendaw Shell Midden (38CH300), Located on the Wambaw District, Francis Marion National Forest, Charleston County, S.C. U.S. D.A., Forest Service, Columbia.

1981b Archaeological Testing of the Walnut Grove Shell Midden (38CH260), Charleston County, S.C. U.S.D.A., Forest Service, Columbia.

1981c Studies of Three Woodland Period Sites in Beaufort County, South Carolina. S.C. Department of Highways and Public Transportation, Columbia.

1982 A Summary Report of the Excavations at Alligator Creek, Charleston County, S.C. U.S.D.A., Forest Service, Columbia.

1983 Ceramics of the Central South Carolina Coast. South Carolina Antiquities 15:43-54.

1984 The Archaeology of Sol Legare Island. Research Series 1. Chicora Foundation, Columbia.

1985 A Historical and Archaeological Excavation of the Elfe and Sanders Plantations, Berkeley and Charleston Counties, South Carolina. Research Series 5. Chicora Foundation, Columbia.

1986a Indian and Freedmen Occupation at the Fish Haul Site (38BU805), Beaufort County, South Carolina. Research Series 7. Chicora Foundation, Columbia.

1986b Management Summary of An Archaeological Survey of the Longpoint Phase 1 Development Tract, Charleston, County, South Carolina. Research Contribution 12. Chicora Foundation, Columbia.

1986c Management Summary of Archaeological Testing Conducted at 38CH873, Longpoint Phase 1 Development Tract, Charleston County. Research Contribution 13. Chicora Foundation, Columbia.

Trinkley, Michael and Debi Hacker-Norton
1984 Analysis of Coffin Hardward from 38CH778, Charleston County, South Carolina. Research Series 3. Chicora Foundation, Columbia.

Trinkley, Michael, Elizabeth F. Mallin and Newell O. Wright
1979 Archaeological Investigations of Brickyard Landing, Colleton County, S.C. S.C. Department of Highways and Public and Transportation, Columbia.

Trinkley, Michael, S. Homes Hoque, Martha Zierden and Jack H. Wilson, Jr.
1983 Test Excavation at the Wachesaw Landing Site, Georgetown County, South Carolina. Publication 20. N.C. Archaeological Council, Raleigh.

Ure, Andrew
1840 Dictionary of Arts, Manufacture, and Mines. Longman, Orme, Brown, Green and Logmans, London.

Vlach, John M.
1978 The Afro-American Tradition in Decorative Arts. Kent State University Press, Kent, Ohio.

Waddell, Gene
1980 Indians of the South Carolina Low Country. Reprint Company, Spartanburg, South Carolina.

Walthall, John A.
1980 Prehistoric Indians of the Southeast: Archaeology of Alabama and the Middle South. University of Alabama Press, University.

Watts, W.A.
1979 A Pollen-Analytical Study of White Pond, Elgin, Near Columbia. In An Archaeological Survey of the U.S. 151 Widening. Ms. on file, S.C. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Wheaton, Thomas R., Amy Friedlander and Patrick Garrow
1983 Yaughan and Curriboo Plantations: Studies in Afro-American Archaeology. Soil Systems, Inc., Marietta, Georgia. Submitted to National Park Service, Archaeological Services Branch, Atlanta.

White, Wes, Jr.
1975 The Sewee and Santee Indians of South Carolina. Ms. on file, South Carolina Historical Society, Charleston.

Williams, Stephen (editor)
1968 The Waring Papers: The Collected Works of Antonio J. Waring, Jr. Papers 58. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge.

Williamson, Joel
1975 After Slavery: The Negro in South Carolina During Reconstruction, 1861-1877. W.W. Norton, New York.

Wilson, Homes H.
1982 An Analysis of Skeletal Material from Bw`67, Brunswick County, North Carolina. Unpublished Master's thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

Wilson, Rex
1981 Bottles on the Western Frontier. The University of Arizona Press, Tuscon.

Worrell, Rob
n.d. Thomas Wolfe Cistern Bottle Analysis. Ms. on file, Historic Sites Section, N.C. Department of Cultural Resources, Raleigh.

Wright, H.E., Jr.
n.d. Environmental Change and the Origin of Agriculture in the Old and New Worlds. Ms. on file, Research Laboratories of Anthropology, University of North Carolina, Chapel Hill.

Zierden, Martha
1981 Preliminary Management Report: Archaeological Survey of Compartment 117, Francis Marion National Forest. Ms. on file, U.S.D.A., Forest Service, Columbia.

Zierden, Martha A. and Jeanne A. Calhoun
1984 An Archaeological Preservation Plan for Charleston, South Carolina. Archaeological Contributions 8. The Charleston Museum, Charleston.

Zierden, Martha A., Lesley M. Drucker and Jeanne Calhoun (editors
1986 Home Upriver: Rural Life on Daniel's Island, Berkeley County, South Carolina. Carolina Archaeological Services, Columbia and The Charleston Museum, Charleston. Submitted to S.C. Department of Highways and Public Transportation, Columbia.

**Archaeological Investigations**

**Historical Research**

**Preservation**

**Education**

**Interpretation**

**Heritage Marketing**

**Museum Support Programs**

**Chicora Foundation, Inc.**
PO Box 8664 ▪ 861 Arbutus Drive
Columbia, SC 29202-8664
Tel: 803-787-6910
Fax: 803-787-6910
www.chicora.org