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An Archaeological Reconnaissance Survey of the Proposed Santee Canal Sanctuary, Berkeley County, South Carolina

Tommy Charles
James O. Mills

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An Archaeological Reconnaissance Survey of the Proposed Santee Canal Sanctuary, Berkeley County, South Carolina

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Disciplines
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AN ARCHAEOLOGICAL RECONNAISSANCE SURVEY
OF THE PROPOSED
SANTEE CANAL SANCTUARY,
BERKELEY COUNTY, SOUTH CAROLINA

Research Manuscript Series 202
Compliance Edition

by

Tommy Charles and James O. Mills,
with contributions by Mark Newell

Principle Investigator:
Steven D. Smith,
Deputy State Archaeologist

for

SANTEE COOPER PUBLIC SERVICE AUTHORITY
through
KENNETH B. SIMMONS & ASSOCIATES

prepared by

THE SOUTH CAROLINA
INSTITUTE OF
ARCHAEOLOGY AND ANTHROPOLOGY

UNIVERSITY OF SOUTH CAROLINA
1321 Pendleton Street
Columbia, South Carolina, 29208

August 14, 1987

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ACKNOWLEDGEMENTS

Environmentally and historically, Stony Landing possesses unique and valuable resources that are now being defined, protected, and prepared by the South Carolina Department of Parks Recreation and Tourism (PRT) for presentation to the public in the form of a park/sanctuary. The South Carolina Institute of Archaeology and Anthropology (SCIAA), having conducted an archaeological reconnaissance survey and assessment of this proposed Santee Canal Sanctuary, extends gratitude and recognition to those who contributed to this study.

Kenneth B. Simmons Associates sponsored the South Carolina Institute of Archaeology and Anthropology's initial survey of the property. Their thoroughness and interest in the property's enhancement made our task a pleasure.

Pat Morris, of Santee Cooper Public Service Authority (SCPSA), acted as liaison between that group and the SCIAA field archaeologists. He made available the resources of SCPSA, and, through his familiarity with the property, aided in the logistics of the field survey. Others with Santee Cooper whose interest and effort contributed to the archaeological study include Milton Winslow, Senior Surveyor, Land and Property Division. Winslow provided map copies and background information to the cartographic records.

Nanci Bateman, Mike Foley, and John Rogers with the South Carolina Department of Parks, Recreation, and Tourism have supported our work and with us share their opportunity to create this park.

The professional competence of architect Meredith Drakeford and his willingness to review our conclusions on the construction of the Main House at Stony Landing greatly assisted our efforts.

In piecing together the scattered records of Stony Landing, the staffs of Moncks Corner Chamber of Commerce, Berkeley County and Charleston County Registers of the Mesne Conveyance, the South Carolina Historical Society in Charleston, the South Carolina Department of Archives and History, and the Caroliniana Library, University of South Carolina, were most helpful. We also thank Scott Copes for assisting in research through Charleston archives.

Local informants who shared considerable knowledge of the area with us included Charles Jones, whose family for several generations has owned the lands of old Epsom Plantation adjacent
to Stony Landing. Mr. Jones permitted us access through his land and spent a morning walking the property with us, telling us what he knew about the structures currently on Stony Landing property, and about changes he has seen in the area in his lifetime. Rembert C. Dennis, Jr., who spent most of his childhood at Stony Landing joined us for an afternoon and shared his knowledge of the land's history. Others, who lent their recollections and suppositions about the area's cultural landscape, include Gary LeCroy, Carl Walsh, and John Cross. Oliver Buckles, of the Berkeley County Historical Society, offered that organization's aid. Our sincere thanks to all and the many citizens of Berkeley County who welcomed us.

The staff of the South Carolina Institute of Archaeology and Anthropology contributed greatly to the success of the survey with their sound advice and help. Archaeologists James L. Michie, Stanley South, and Chester DePratter were frequently consulted on matters of historic interest.

Ann Salter, artist, prepared the maps for this report. Mark Newell, Joe Beatty, and Ashley Chapman, under the direction of Alan Albright, Head of SCIAA's Division of Underwater Archaeology, interrupted a busy schedule to dive in Biggin Creek and determine what information could be added to the data bank. Their findings from this preliminary and partial survey are included in this report as Appendix I, written by Mark Newell. Dot Alford, Fiscal Manager, facilitated the paper work so that the project could start on the desired date. Dr. Bruce E. Rippeteau, State Archaeologist and Director of the South Carolina Institute of Archaeology and Anthropology, supported the project in all phases of development. Thanks to all for their efforts, as well as the many who, although not directly involved, contributed indirectly.

Finally, our thanks go to Barbara Hiott, of the Archaeological Society of South Carolina. She was our lone volunteer for this project. To work without pay in weather that daily exceeded 100 degrees temperature is testimony to her love of South Carolina heritage.
INTRODUCTION

The decision to conduct an archaeological survey of the proposed Santee Canal Sanctuary was in keeping with a growing awareness among the citizens of South Carolina of the need to protect and enhance some of its historically and environmentally unique properties. The 224 acres to be incorporated into this proposed Santee Canal Park/Sanctuary are located at the confluence of the old Santee Cooper Canal (listed on the National Register of Historic Places in 1982) and Tailrace Canal just south of the town of Moncks Corner in Berkeley County. This particular piece of land has a rich history, being a natural landing for boat traffic on the Cooper River. Early settlers called this place "Stony Landing," a name it carries to this day, due to the rocky marl and limestone bluffs in the immediate area. Prior to the coming of the early European settlers, the Indians had their own path or road that passed nearby on its way to the northern regions of the state. The history of these aborigines lies buried in the soils in the form of bits and pieces of stone and pottery, scattered over small campsites throughout the area. More recently, the marl and limestone in bluffs along the waterways have contributed to the economic history of the area, supplying nitre for explosives for the Confederate Army, and phosphates for fertilizer. Perhaps the greatest notoriety attributable to Stony Landing is the construction on the property of the Confederate steamship C.S.S. David, a ship unique for its time, and said to have carried out the first successful torpedo boat attack in naval warfare.

The growth of South Carolina's population and the increased demand for industries, housing, roads, and services to support these people have taken a tremendous toll on the once abundant natural and historical resources. This trend of growth and the accompanying need to develop additional lands show no signs of abating. It seems to make economic sense that some of our natural and historic resources be protected. They are, after all, what attract many people to our state. Without these attractions, millions of dollars per year would be spent elsewhere in places considered more attractive by tourists. These resources have taken on the importance of an industry comparable to farming, textiles, and other facets of our economy. For those of us who live here, protected public lands mean a nicer place to live, work, and escape the pressures of modern society.

Stony Landing possesses environmental, archaeological, and historical qualities that present an excellent case for its protection. This report addresses primarily the archaeological aspects of the property.
Ken B. Simmons, Jr., acting on behalf of the Santee Cooper Public Service Authority, contacted Dr. Bruce E. Rippeteau, Director of SCIAA, and inquired about the possibility of SCIAA conducting an archaeological survey of the land portions of the proposed Santee Canal Sanctuary. This property was formerly owned by State Senator Rembert C. Dennis and was recently purchased by the Santee Cooper Public Service Authority for the purpose of creating an environmental and historical sanctuary. Dr. Rippeteau agreed to this request. Arrangements were made to begin the fieldwork July 15, 1986. This agreement allowed for two weeks of field survey and six weeks of archival research and writing of the report.

The survey's objectives were to, 1) verify and locate the presence of cultural resources, 2) assess the sites' research potential, and, 3) determine all discovered sites' eligibility for inclusion on the National Register of Historic Places, should such plans be called for by the South Carolina Department of Parks, Recreation and Tourism.

In order to accomplish these objectives, a visual inspection of all land areas would be conducted, and then subsurface testing would be employed to locate buried cultural remains. During the last two weeks of July, 1986, a pedestrian survey of all 224 acres was systematically conducted by Charles and Mills. Areas adjacent but outside of the proposed park boundaries were also surface surveyed with permission of respective property owners. Sub-surface testing, however, was conducted only within the park boundaries. The Santee Canal and other areas that were covered by water were not originally included in this particular survey. However, a one day exploratory dive was conducted by the Underwater Division of SCIAA in order to explore the boundaries of a garbage disposal area near the main house and a boat observed from the bank.

Thirteen archaeological sites were recorded. Three of these sites were prehistoric occupations. Three revealed evidence of both prehistoric and historic occupation. Six were associated with the industrial use of the land. The main house and its immediate surroundings were recorded as one site. The bluffs in back of the house, which were used extensively as a garbage dump, were assigned a site number as well. A large portion of this dump lies in Biggin Creek and was briefly explored by underwater archaeologists with the Institute. The remains of a sailing vessel were discovered in the canal; it too was given a site number. All field work was completed July 25, 1986, and a report was presented to Kenneth B. Simmons Associates and PRT through the SCIAA's Research Manuscript Series.
In early 1987, the U.S. Army Corps of Engineers submitted PN 87-3B-034-C for the construction of water facilities at Stony Landing. As part of the environmental review process required under section 106 of the National Historic Preservation Act of 1966 and Federal Regulations CFR800, the State Historic Preservation Office responded on March 16, 1987, recommending that the Corps take into account historic and archaeological resources affected by their undertaking. In response to this request our report was submitted and the State Historic Preservation Office (SHPO) expressed several concerns with the report in its original form. Based on the SHPO's recommendations SCIAA revisited the survey area and revised the original report into this compliance edition. This report meets the Secretary's Guidelines for Archaeology and Historic Preservation.
THE ENVIRONMENTAL SETTING OF
THE Santee Canal Sanctuary

Location

The proposed Santee Canal Sanctuary lies within the Cordesville Quadrangle of the U.S. Geological Survey seven minute series 1948 (photo revised 1979). The project area contains 224 acres of land, is elongated in shape, and oriented in a general north-south direction (Figs. 1 and 2). The property varies in width from approximately 115 m to 500 m at its widest point, and is approximately 2,300 m in length.

On the east it is bordered by the Tailrace Canal, which gives this side of the property a straight border. The western boundary follows an irregular course along limestone and marl bluffs. The boundary line follows the rim of these bluffs and bisects occasional ravines in the bluffs. The irregular path of this western boundary is dictated by the lay of the land.

The northern boundary is U.S. Highway 52, which runs east and west. County road S-8-343, the old road to Biggin Church, spurs off of U.S. Highway 52 at the northwestern edge of the property and isolates a small section of Sanctuary property as it continues to the Dock Restaurant located on the Tailrace Canal. At a point approximately 300-350 m west of the confluence of Biggin Creek and the Tailrace Canal, the boundary line departs its path along the bluff rim and turns slightly southwest, extending in a straight line for a distance of approximately 150 meters. This line crosses a dirt road, which is the only road entrance to the old Stony Landing house, and continues for another 60 m or so. At this point the boundary line turns east and continues in a straight line until it intersects with a small, modern canal; there, it makes a slight turn to the northeast and intersects with the Tailrace Canal approximately 60 m away. The area on either side of this dirt road, extending all the way to the Tailrace Canal, is the most consistently high and well-drained land within the proposed park boundaries. In addition to the Stony Landing Plantation house that still stands, there are several other related buildings in this area, as well as a trailer that is currently occupied.

Two pieces of private property protrude into the park boundaries; both are located on the east side of the property adjacent to the Tailrace Canal. One of these is the aforementioned Dock Restaurant. Located in the northeast corner of the survey area, this parcel of land measures approximately
Figure 1. Project Location Map, derived from U.S.G.S. Quadrangle Maps: Moncks Corner and Cordesville.
FIGURE 2: Boundary and site location map.

1 = 38BK878  
2 = 38BK879  
3 = 38BK880  
4 = 38BK881  
5 = 38BK882  
6 = 38BK883  
7 = 38BK884  
8 = 38BK885  
9 = 38BK886  
10 = 38BK887  
11 = 38BK877  
12 = 38BK876  
13 = 38BK893
125 m in an east-west direction and 150 m in an north-south
direction. The other area is approximately 30 m in a north-south
direction and 110 m in an east-west direction. Both of
these properties are bordered on the east by the Tailrace Canal
and on all other sides by Sanctuary property. Neither is
considered part of the Sanctuary and neither was surveyed.

The Sanctuary property is divided lengthwise by the old
Santee Canal and Biggin Creek, which runs in a north-south
direction for the entire length of the property, dividing it into
unequal halves. Most of the land adjacent to this canal is low
wetland. Some traces of the dirt excavated from the canal are
still evident along its banks; much, however, has been displaced;
it has been washed into the adjacent lowlands or back into the
canal, which has filled in to a considerable degree.

The eastern side of the property that parallels the Tailrace
Canal still retains the earth excavated from the canal in 1940,
with the exception of the two mentioned pieces of private
property, where the land has been leveled. For the rest of the
boundary this spoil pile towers over the floodplain that lies to
the west. The elevation of this embankment varies from
approximately 3 to 8 m in elevation. The width also varies
considerably. Erosion has altered its uniformity, creating
numerous "fans" that have spread over the adjacent floodplain.
Much of the western half of the Sanctuary consists of floodplain
identical to that of the eastern half. However, the western edge
of the property is bordered by relatively high bluffs composed
primarily of marl and limestone. These vary considerably in
height and degree of slope, with the steepest slope located from
about mid-point of the property to the southernmost point where
the east and west lines intersect with the Tailrace Canal. The
bluffs on the west, the spoil pile paralleling the Tailrace on
the east, and county road S-8-343 combine effectively to create a
wet basin of most of the park property.

The entire Sanctuary property is covered with mature forest
with the exception of the extreme southern area where the Stony
Landing house and the other buildings are surrounded by a grassy
area of several acres.

Geology, Geomorphology, and Soils

The park property contains two basic landforms: level to
gently sloping uplands underlain by a bed of hard marl or
limestone, and the low-lying wetlands known as Biggin Swamp.
These distinct areas are divided by bluffs of moderate to steep grade, which form the Summerville Scarp (U.S. Department of Agriculture 1980).

Four soil series are present at the park property: Meggett, Udorthents, Duplin, and Bonneau.

**Meggett:**

The Meggett series of the low-lying flats of Biggin Swamp are characteristic of the Pamlico Terrace which ranges from sea level to an elevation of 7.5 m (25 ft.). A typical horizon sequence for the Meggett is a surface layer of dark gray loam for 15 cm above 30 cm of dark grey clay which overlies mottled grey clay (we found the inclusions to be reddish brown and yellow in color). These soils formed during the Pleistocene Epoch from clayey Coastal Plain sediment (U.S. Department of Agriculture 1980:43). Meggett subsoils are non-acidic and account for the preservation of mammoth remains discovered in Biggin Swamp during excavation of the Santee Canal in 1795 (Drayton 1802:39). Although not depicted on the Soil Survey map we found soils in small areas of Biggin Swamp that match the description of the Pamlico series of soil. Pamlico soil is decomposed organic material that forms a stiff muck. We found such soil overlying Meggett soils.

**Udorthents:**

Spoil piles were formed during the excavation of the Tailrace Canal, which marks the eastern boundary of the park property. These soils are known as Udorthents and form ridges 15 to 60 m wide at the base. They vary greatly in texture but consist predominantly of sandy clay loam, sandy loam, and sandy clay (U.S. Department of Agriculture 1980:30). The southern portion of this formation on the property contains hard marl and limestone. Overall these soils are neutral or moderately alkaline. Today these ridges are fully vegetated.

**Duplin:**

The portions of plowed fields within the property and portions of the bluff rim along the western boundary of the property are comprised of soils of the Duplin series. They are generally found on gentle slopes of 2-6 degrees, and are deep and moderately well drained (U.S. Department of Agriculture 1980:17). In profile Duplin soils consist of grayish brown fine sandy loam soil 15 cm thick above yellowish brown clay loam above similar colored clay with red and gray mottling. These soils are prone to erode, as was evidenced when rain washed these soils into
Biggin Creek during the survey, turning the water a milky orange.

**Bonneau:**

The thin soil covering at limestone knoll at Stony Landing is comprised of the Bonneau series soils. They were formed in loamy Coastal Plain sediment and are moderately well drained (U.S. Department of Agriculture 1980:10). These loamy sands on the level and gentle slopes of Stony Landing form a shallow top layer, 5 cm deep, of very dark grayish brown loamy sand above yellowish brown loamy sand. Although elsewhere the series may continue to a depth of 2 m, here they terminate at between 0 and 25 cm due to a shallow bed of hard marl/limestone present on this knoll and along the bluffs extending the length of the property.

**Hydrology**

The largest body of water associated with Stony Landing today is the Tailrace Canal.

Construction of the Tailrace Canal was finished in 1942. Water from the Santee drainage basin had been diverted into Lake Moultrie, which, when sufficiently filled, discharged through the new Pinopolis Dam and into the Tailrace Canal. In 1979 a weekly average of 15,600 cfs of water was discharged from the Pinopolis Dam (S.C. Water Resources Commission 1983: 240). Last year (1985), construction of a re-diversion canal was completed that will re-divert into the Santee River much of the water previously intended for the Cooper River via the Tailrace Canal. Although discharge levels into the Tailrace will be reduced considerably, water levels in the Tailrace are not expected to drop significantly. An increase of sea water intrusion is expected to augment the reduction of discharge. The reduction in Tailrace Canal water levels will be greatest nearer the dam. (Stony Landing is approximately 6 k from the Pinopolis Dam.)

Construction of the Tailrace Canal cut a broad path over what was Biggin Creek (originally Bigging Creek [Waddell 1980: 310]), remnants of which today exist as fingers to the Tailrace, and, as still water, is entrapped by the spoil piles from the construction. These heaps of marl and sand, now covered with vegetation and rising 7 m or more above the surrounding area, have created artificial oxbows of the once meandering Biggin Creek, two such oxbows are on the property and have more recently been vented into the Tailrace Canal through corrugated pipes.
Although the Tailrace Canal has commanding influence over Biggin Creek, it is Biggin Creek which is of greater environmental and historical importance to the Stony Landing property. Today the vestiges of Biggin Creek at Stony Landing sustain diverse wetland environments throughout wetlands comprising roughly 60% of the project property. Those portions of Biggin Creek which are well vented with the Tailrace contain water of great clarity. During heavy rains, however, we noted that the orange soil of the uplands must wash over the bluffs and through the several ravines in the bluff because Biggin Creek then turns a milky orange. Another catalyst in the water system at Stony Landing is the tidal influence which twice daily reverses the flow in these portions of Biggin Creek.

Figure 3. View of Biggin Creek at low tide, looking south from mid-property.
Flora

The floral communities of the park property can be generally divided into upland and lowland environments. The limestone bluffs which separate these environments support a unique floral community. The following figure is a taxonomic listing of trees recognized by the survey team within the proposed park boundaries (Little 1980).

Table 1. Taxonomic List of Trees

<table>
<thead>
<tr>
<th>upland bluffs</th>
<th>lowland bluffs</th>
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<tbody>
<tr>
<td>loblolly pine</td>
<td>Pinus taeda</td>
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<tr>
<td>baldcypress</td>
<td>Taxodium distichum</td>
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<tr>
<td>eastern redcedar</td>
<td>Juniperus virginiana</td>
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<tr>
<td>willow</td>
<td>Salix caroliniana</td>
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<tr>
<td>bayberry</td>
<td>Myrica cerifera</td>
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<tr>
<td>bitternut hickory</td>
<td>Carya cordiformis</td>
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<tr>
<td>pignut hickory</td>
<td>Carya glabra</td>
</tr>
<tr>
<td>pecan</td>
<td>Carya illinoensis</td>
</tr>
<tr>
<td>mockernut hickory</td>
<td>Carya tomentosa</td>
</tr>
<tr>
<td>black walnut</td>
<td>Juglans nigra</td>
</tr>
<tr>
<td>beechnut</td>
<td>Fagus grandifolia</td>
</tr>
<tr>
<td>white oak</td>
<td>Quercus alba</td>
</tr>
<tr>
<td>red oak</td>
<td>Quercus falcata</td>
</tr>
<tr>
<td>laurel oak</td>
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<td>water oak</td>
<td>Quercus nigra</td>
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<td>chestnut oak</td>
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<td>Celtis occidentalis</td>
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<td>Ulmus americana</td>
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<td>sweetgum</td>
<td>Liquidambar styraciflua</td>
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<tr>
<td>sycamore</td>
<td>Platanus occidentalis</td>
</tr>
<tr>
<td>black cherry</td>
<td>Prunus serotina</td>
</tr>
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<td>redbud</td>
<td>Cercis canadensis</td>
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<tr>
<td>hoptree</td>
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</tr>
<tr>
<td>yaupon holly</td>
<td>Ilex vomitoria</td>
</tr>
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</tr>
<tr>
<td>red buckeye</td>
<td>Aesculus pavia</td>
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<td>tupelo</td>
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<td>Diospyros virginiana</td>
</tr>
<tr>
<td>carolina ash</td>
<td>Praxinus caroliniana</td>
</tr>
</tbody>
</table>
Fauna

The juxtaposed and very different environments of uplands and wet lowlands offer diverse animal habitats. Although a faunal inventory was not attempted the following figure lists the birds recognized within the proposed park boundaries during the reconnaissance survey (Peterson 1980).

Table 2. Avifauna

<table>
<thead>
<tr>
<th>Species</th>
<th>Common Name</th>
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</thead>
<tbody>
<tr>
<td>Anhinga anhinga leucogaster</td>
<td>water-turkey</td>
</tr>
<tr>
<td>Ardea occidentallis occidentalis</td>
<td>great blue heron</td>
</tr>
<tr>
<td>Hydranassa tricolor ruficollis</td>
<td>louisiana heron</td>
</tr>
<tr>
<td>Aix sponsa</td>
<td>wood duck</td>
</tr>
<tr>
<td>Cathartes aura</td>
<td>turkey vulture</td>
</tr>
<tr>
<td>Buteo jamaicensis</td>
<td>red-tailed hawk</td>
</tr>
<tr>
<td>Pandion haliaetus carolinesis</td>
<td>osprey</td>
</tr>
<tr>
<td>Colinus virginianus</td>
<td>bob-white</td>
</tr>
<tr>
<td>Meleagris gallopavo</td>
<td>turkey</td>
</tr>
<tr>
<td>Zenaidura macroura</td>
<td>mourning dove</td>
</tr>
<tr>
<td>Strix varia</td>
<td>barred owl</td>
</tr>
<tr>
<td>Archilochus colubris</td>
<td>ruby-throated hummingbird</td>
</tr>
<tr>
<td>Colaptes auratus</td>
<td>flicker</td>
</tr>
<tr>
<td>Hylatomus pileatus</td>
<td>pileated woodpecker</td>
</tr>
<tr>
<td>Centurus carolinus</td>
<td>red-bellied woodpecker</td>
</tr>
<tr>
<td>Dendrocopus borealis</td>
<td>downy woodpecker</td>
</tr>
<tr>
<td>Tyrannus tyrannus</td>
<td>eastern kingbird</td>
</tr>
<tr>
<td>Progne subis subis</td>
<td>purple martin</td>
</tr>
<tr>
<td>Cyanocitta cristata</td>
<td>blue jay</td>
</tr>
<tr>
<td>Corvus brachyrhynchos</td>
<td>crow</td>
</tr>
<tr>
<td>Corvus ossifragus</td>
<td>fish crow</td>
</tr>
<tr>
<td>Parus carolinensis</td>
<td>carolina chickadee</td>
</tr>
<tr>
<td>Parus bicolor</td>
<td>tufted titmouse</td>
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<tr>
<td>Thryothorus ludovicianus</td>
<td>carolina wren</td>
</tr>
<tr>
<td>Mimus polyglottos polyglottos</td>
<td>(eastern) mockingbird</td>
</tr>
<tr>
<td>Hylocichla mustelina</td>
<td>wood thrush</td>
</tr>
<tr>
<td>Sialia sialis</td>
<td>eastern bluebird</td>
</tr>
<tr>
<td>Poliopitla coerulea coerulea</td>
<td>blue-gray gnatcatcher</td>
</tr>
<tr>
<td>Protonotaria citrea</td>
<td>prothonotary warbler</td>
</tr>
<tr>
<td>Setophaga ruticilla</td>
<td>american redstart</td>
</tr>
<tr>
<td>Quiscalus quiscula</td>
<td>common grackle</td>
</tr>
<tr>
<td>Richmondena cardinalis</td>
<td>cardinal</td>
</tr>
</tbody>
</table>
AN ARCHAEOLOGICAL OVERVIEW OF SOUTH CAROLINA
WITH AN EMPHASIS ON
THE LOWER COASTAL PLAIN

Paleo-Indian Period

At a yet undetermined time prior to 12,000 years ago, nomadic Asian peoples made their way onto the North American Continent. They came to North America by way of the Bering Strait, a presently submerged land bridge that connects Asian Siberia with the State of Alaska. The Bering Strait has been alternately exposed and inundated by the rising and falling of the earth's seas. These fluctuations in sea level are caused by alternating periods of cooling and warming of the earth's atmosphere. During periods of extreme cold, known as glacial periods, enormous quantities of the earth's sea water are solidified in the form of thick ice caps that form at the earth's poles and glaciers in high land regions. The creation of these vast ice formations results in the lowering of the earth's seas to levels determined by the length and severity of cold. During the most recent "Ice Age", the Wisconsin glaciation in the late Pleistocene, oceans receded to a point several hundred feet below their present stage, thereby exposing large tracts of land formerly inundated by oceans and making it possible for plant and animal species to migrate between the continents. The land bridge was in existence during most of the Wisconsin Glaciation (though it was probably temporarily closed during the Woronzonfian transgression, about 33,000-45,000 years ago) and remained available to migrating plants and animals until it was covered by the rising sea level about 11,000 years ago (Pewe and Hopkins 1965).

It is unclear whether the first Americans came in small groups over an extended period of time or a more intense, short term migration. The catalyst for this migration can only be speculated on; but, perhaps it resulted from following game herds that also migrated across the Bering Strait.

In perhaps no more than 1,000 years they spread across all of North America and most of Central and South America. That these nomadic peoples could so rapidly disperse over both the North and South American Continents seems remarkable. If we were to assume that they ventured only ten miles farther each year from their point of entrance at the Bering Strait, then in 1,000 years they could have traveled 10,000 miles. When looked at from this standpoint the feat appears less impressive and quite credible. The catalyst for this dispersion to most parts of the
two continents is debatable; but, it is likely these small groups, unincumbered by permanent settlements or obligations to a large population, simply followed the game herds, depending on them for a substantial portion of their subsistence. Paleo-Indian's use of now extinct animals, such as Mammoth, Mastodon, Camel, Horse, Tapir, Long-horned Bison, and Ground Sloth, has been well documented in the American Southwest (Wormington 1957). Paleo Indian subsistence, however, was probably not limited to the procurement of mega-fauna; like most primitive peoples they probably made use of any obtainable foods to supplement their diet.

No direct association of Paleo-Indian with these extinct animal species has been made in South Carolina; although, the animal fossil remains are found here (Drayton 1802:39; Michie 1976; Wright 1976). It is most likely that these animals and Paleo-Indians in South Carolina co-existed, as did their counterparts in the American Southwest.

In South Carolina, no archaeological sites have been found that represent a pure Paleo-Indian site. The archaeological community's assumption, that these early people were in South Carolina, is based on typological similarities between stone tools found here and at archaeological sites, in other states, where reasonably reliable occupation dates have been established. Such sites include Blackwater Draw in New Mexico, with contexts radiocarbon dated to 9220 B.C. (Sel1erds 1952); the Dent site in Colorado, with contexts radiocarbon dated to 9200 B.C. (Agogina and Rovner 1964); and the Dumbeo Site in Oklahoma, with contexts radiocarbon dated to 9200 B.C. (Leonhardy 1966). The Naco and Lehner sites in Arizona have also provided dates in the range of 11,000-12,000 years ago (Haury et al. 1959). These tools are characterized as projectile points/knives, lanceolate in shape with a distinctive flute, or thinning flakes removed from either side beginning at the base and extending towards the tip. This fluting better facilitated hafting the point/knife to a shaft. Paleo-Indian lithic tools are further characterized by grinding of the lateral and basal edges in the area of hafting. This grinding dulls the edges of the tool and reduces cutting the materials used to lash the point/knife to the shaft. Well made unifacial tools, for working wood, bone, and hide, are another technological expression of the Paleo-Indians. But because the manufacture of these tool types continued into the Archaic Period they can not, by themselves, be identified to either the Paleo-Indian or Archaic Period.

Paleo-Indian fluted points/knives have been found and recorded in every county in South Carolina with the exception of Calhoun Co. (Michie 1977; Charles 1981). Their distribution, although broad, is sparse, represented by only 311 recorded
finds, only two of which were recovered from context. One was excavated from archaeological site 38AK4 in Aiken County, and the other from 38AN9 in Anderson County.

An argument has been made that Paleo-Indians in South Carolina occupied predominantly the Coastal Plain and preferred settlement along major rivers and streams (Michie 1977). This position may ultimately prove true; but, based on current data, this assumption may be premature. It is true that twice as many Paleo points/knives have been recovered from the Coastal Plain as from the Piedmont. But, the Coastal Plain has twice the land area as the Piedmont. On a finds per square mile basis the frequencies of Paleo-point/knives are roughly equal in both the Coastal Plain and Piedmont (Charles 1981). Relatively few Paleo point/knives can be plotted to the exact location where they were found, but based on the general area of recovery of such artifacts, approximately as many have been recovered from inter-riverine areas as from areas near rivers. Plotting of these Paleo/Indian artifacts on a topographical map of South Carolina does not indicate definitive settlement patterns oriented towards riverine or inter-riverine environments.

The basis for interpreting Paleo-Indian occupation of South Carolina is biased not only by small sample size but by problematic recovery methods. A majority of our data has come from collectors, whose choice of areas to survey is generally limited to areas of high visibility, i.e., lakes, plowed fields, eroded areas, and river banks. In recent years hobby divers have expanded these survey areas to include river bottoms. Data from areas having less visibility, such as forest lands, is obviously lacking. With this understood, the high frequency of points/knives occurring on riverine sites of the Coastal Plain would seem biased for suggesting settlement patterns. It may instead reflect the survey methods of collectors responding in part to our settlement patterns and land use.

In Berkeley County fifteen Paleo points/knives have been recorded, most of these were recovered from the beaches of Lake Moultrie or from the bed of the Cooper River. None have been recorded in the immediate vicinity of Stony Landing (Michie 1977; Charles 1981).

The paucity of Paleo-Indian data, and its biased recovery, severely limits interpretation of South Carolina's first inhabitants. If these problems persist, our knowledge of this intriguing epoch will remain speculative.
Archaic Period

As the Pleistocene Period ended, approximately 10,000 years ago, it also signaled the end of a cultural period in North and South America which archaeologists have named the Paleo Period (Fig. 3). The intense cold of the Pleistocene Period gave way to a warming trend. Already, the polar ice caps and mountain glaciers associated with the Pleistocene were retreating. This melting of ice raised the earth's seas to near their present levels. The world's biological changes kept pace with these climatic changes, and soon the semiboreal forests were replaced with northern hardwoods, which in the southeast were succeeded by forests of oak and hickory. These changes also marked the end of numerous species of animals, particularly large animals such as the Mammoth and Mastodon. These environmental changes continued until approximately 5,000 years ago. By that time this continent's forests and probably its animal life resembled that found by the first European explorers of the New World.

Adaptation to post glacial environments effected major changes in the lifeways of Native Americans. Unlike the preceding Paleo-Indian Period, with its apparent uniformity of tool technology and subsistence patterns which spread throughout most or all of North America, the Archaic Period was a time of regional adaptation. These changes are recognized in settlement patterns, implement technology, and subsistence strategies. The progression of the Archaic culture has been sufficiently outlined to distinguish three phases: Early, Middle, and Late (Griffin 1967)(Fig. 3).

The earliest expression of change from the Paleo-Indian Period to the Archaic Period is manifest in the technology of manufactured stone tools. Lanceolate points/knives of the Paleo-Indian Period gave way to points having notches chipped into the lateral edges of the blade at a point near its base. The reason for this change is unclear, but perhaps it allowed for better hafting. Another technological change was in the resharpening of stone tools: flakes were removed from along only one side of each edge, as opposed to both sides. This method conserved raw materials while achieving the same result of recreating a sharp edge. This process removed only half the amount of stone as the previous method. The removal of flakes form only one side of the blade caused the blade to have a beveled or twisted shape, a distinctive characteristic that, in the Southeast, occurs only in the Early Archaic Period. This particular technique was abandoned near the end of the Early Archaic Period along with the practice of notching the point/knife and grinding blade edges in the area of hafting (Coe 1964). Bevel sided and corner notched blades with
ground bases were replaced by blades having a stem fashioned in the center of their basal end, giving them a "Christmas tree" like symmetry. Occasionally these stems were ground, but most often they were not. In some regions these stems were bifurcated; that is, they had a rather deep notch chipped in the end of the stem, creating a divided stem. Bifurcation is a short lived regional expression in tool technology (Broyles 1971).

Other tools, designed for the purpose of scrapping hides or working wood and bone, remained virtually unchanged from those of the earlier Paleo-Indian Period.

The few Early Archaic sites that have produced well preserved faunal remains indicate a reliance on animals, primarily *Odocoileus virginianus* (white-tailed deer), as a subsistence base. This has been substantiated through the work of Dejarnette at the Stanfield-Worley Bluff Shelter (Dejarnette et al. 1962), Weigel at Russel Cave (Weigel et al. 1974), Adovasio at Meadowcroft (Adovasio et al. 1978), and others.

The transition from the Early Archaic to the Middle Archaic Period is expressed primarily by changes in tool technology, and site preference, and by an increase in number of artifacts recovered from sites. By the Middle Archaic Period point/knives were being fashioned in a lanceolate form easily distinguishable from the earlier Paleo-Indian lanceolate form; those of the Middle Archaic are thick and crudely formed by comparison. Most of these have rounded or slightly tapered, stemmed bases and lack the finely retouched blade edges. Furthermore, grinding of the hafting area had all but disappeared by this time. Well made scrapers, common during the Paleo-Indian and Early Archaic Period, ceased to be used during the Middle Archaic Period in southeastern North America (Coe 1964).

Scatters of stone tools left by these Middle Archaic peoples indicate intensified occupation, which may reflect an increase in population. The areas where they are found in greatest abundance indicates they had a preference for inter-riverine landforms as places of occupation. This may reflect a greater dependance on food sources found in those environments such as acorns, hickory nuts, and other vegetable matter.

Not until late in the Archaic Period is there a marked increase in the diversity of prehistoric cultural materials. This increase is evidenced by the appearance of ground and carved stone implements, such as axes, steatite bowls, and cooking stones.
Also a greater dependance on shellfish as a dietary supplement along the coast and some inland rivers is seen (Crusoe 1947; Ford 1978; Willey 1966). In these areas the Indians left numerous and often large deposits of shellfish remains. Those along the coast consist mostly of oyster, clam, whelk, and periwinkle. Those of the interior rivers consist of freshwater mussel shells. Both contain well preserved skeletal remains of animals consumed by the Indians (Stoltman 1974; Marrinam 1975; DePratter 1976; Trinkley 1980).

These shell middens create an alkaline condition not generally found in the moist South Carolina Soils. This alkalinity protects organic materials such as bone from rapid decay, and has allowed archaeologists an opportunity to learn more about the Indians' diet and their use of bone than would otherwise be possible (Claflin 1931; Trinkley 1980). Found within these shell middens are bone awls and sometimes elaborately carved bone pins. Perhaps tools such as these were used throughout the Archaic and even during the Paleo-Indian Period (Griggin 1967; Smith 1986). We can only guess at this possibility.

During the Late Archaic Period, lithic technology once again changed. Point/knives evolved from a thick lanceolate form into a large, relatively crude stemmed type that was made by simple percussion. These tools were broad in relation to their thickness, and the blade edges were seldom retouched to produce a fine edge. Although some variability in size, form, and degree of craftsmanship occurs over its range of distribution, it basically reflects craftsmanship decidedly inferior to most points/knives preceding it (Coe 1964; Charles 1981).

A marked increase in the ratio of drill/perforators to point/knives occurs during the Late Archaic Period. Most of these were apparently made by resharpening the point/knives until they could no longer function as such, at which time they continued to be used as drill/perforators (Coe 1964; Charles 1981).

The earliest clay pottery found along the coastal areas of Southeastern North America dates to approximately 4,500 years ago, during the Late Archaic Period (DePratter 1979; South 1973; Trinkley 1980). It was rather thick and, as a rule, not finely made. The temper consisted of plant fibers, and its earliest forms were undecorated. It is often found in association with shell middens but not exclusively. The manufacture of clay vessels in the Piedmont area did not begin at such an early date. In the Piedmont, the use of steatite, carved into vessels, continued well into the Woodland Period, probably for some time before it was replaced by clay vessel manufacturing.
This undecorated form of clay pottery soon evolved, and probably coexisted for a while, with a form having simple punctate decorations. These decoration were made by impression with reeds, sticks, shell, or fingernails. This punctate method of surface decoration continued until approximately 3,000 before present, by which time sand had replaced fiber in tempering pottery.

Woodland Period

The Woodland Period is considered to have begun in the Southeast approximately 3,000 years ago, (DePrattet, personal communication 1987; Griffin 1967; Willey 1966) and lasted until approximately 1,300 years before present (Fig. 3).

The Woodland Period was a time of considerable increase in the quantity and diversity of material goods. We see a greater trend towards localization of artifact types. This localization is most evident in the points/knives of the period (Charles 1981; Griffin 1967; Smith 1986). Numerous types, or shapes were being made. Some forms are limited to an area no larger than a few counties. Tool size is inconsistent, but in most cases Woodland Period tools are smaller than the preceding points/knives of the Late Archaic Period. At approximately 1,500 years before present small triangular points were being made, suggesting the first use of the bow and arrow.

Pottery of the Woodland Period becomes more diverse in form, temper, and decoration. Variability of surface decoration, form, and temper serves as reasonably reliable cultural markers for the Woodland Period. The earlier fiber temper was replaced by a variety of materials, such as sand, grit, shell, and crushed pottery (Anderson 1982; South 1973; Trinkley 1980). Decorative motifs became more complex and were accomplished by various methods, such as the previously mentioned punctation and finger pinching evidenced in the earlier forms. Decorations first appearing on Woodland pottery include cord, fabric, and net impressions. Others vessels were decorated by stamping the pot surface with a paddle carved with checks. This method of stamping with carved paddles evolved, late in the Woodland Period, into elaborate designing with curves, circles, or intricate lines or combinations thereof. Plain and burnished pottery was also made.

Smoking pipes, made of clay or carved from chlorite schist, were being made. Burial mounds and semi-permanent villages were constructed.
The Woodland Indians continued to make use of the shellfish along the coast and, to a degree, along the inland rivers. Hunting and gathering continued, as in the Archaic Period; but, cultigens were becoming an increasingly important source of food (Griffin 1967; Smith 1986). Important cultigens in the Eastern United States were gourd, squash, sumpweed, bean, maygrass, Chenopodium sp., and Iva annua (Ford 1978). The increased use of cultigens probably decreased the Woodland People's reliance on hunting as the major method of subsistence, and perhaps brought a degree of sedentism, previously unknown, into their lives.

Mississippian Period

The Mississippian Period, or the South Appalachian Mississippian Regional Complex as it is known in the Southeastern United States (Ferguson 1971; Smith 1986), began approximately 1,300 years ago and ended shortly after the arrival of Europeans into the Southeast (Griffin 1967; Smith 1986; Willey 1966)(Fig 3).

Cultural remains indicate that during the Mississippian Period the American Indians reached their cultural zenith. Agricultural technologies had reached a point where large tracts of corn and other cultigens could be cultivated. The people had also devised means to store large quantities of their harvest for the winter supply. Large scale harvests and storage facilities attest to the Mississippian culture's commitment to sedentism. The Mississippian people also constructed large, permanent villages to accommodate an expanding population.

In some of the larger villages the population numbered in the thousands. Such villages were typically constructed near the fertile floodplains along major rivers and streams. These flatlands adjacent to rivers were periodically inundated with floodwaters that replenished nutrients removed by farming. These floodplains were essential to the welfare of these large populations. The villages were often fortified with palisaded walls which would seem to indicate an increase in hostilities between populations (DePratter 1983; Smith 1986), perhaps brought about by a willingness to war over these desirable lands.

Sedentism, brought about by the transformation from a hunting/gathering to an agrarian subsistence, allowed for the production of non-essential goods. The relative importance of mobility to a hunting/gathering society would, by necessity, limit the amount of goods curated by that society. This appears to have been of little consideration to sedentary populations, as evidenced by comparison of archaeological remains as found on Archaic and Mississippian Period Sites. Large flat topped temple
mounds were constructed of earth by Mississippian peoples. These mounds, often impressively large, were sometimes associated with smaller burial mounds in a complex covering many acres. Mississippian society appears to have been more structured than those preceding, with well developed social, political and religious systems (Ferguson 1971; Willey 1986).

Pottery vessels of the period became increasingly larger. Surface decoration became more elaborate and was generally applied by impressing the wet clay with a paddle that had been carved with elaborate motifs of circles, rectangles, and/or other symmetrical designs. Free hand incising was another method of decoration. Plain and burnished forms were also made. Rims were sometimes decorated by application of clay strips and nodes. Reed punctuations near the rim were also common. Temper used in these vessels consisted of a variety of materials that included sand, shell, and occasionally plant fibers (Ferguson 1974; South 1976). These vessels were used for cooking and storage, and often for burying the dead.

The most visible expression of the Mississippian Culture in South Carolina occurs where the Santee River drainage system crosses the fall line. This is exemplified by an impressive complex of earthen mounds near the town of Camden in Kershaw County, two of the better known being Mulberry Mound (38KE12) and Adamson Mound (38KE11). Fort Watson Mound (38CR1) is located farther south, on the east side of Lake Marion in Clarendon County near the town of Santee. One or more mounds were inundated by the construction of Lake Wateree just north of the town of Camden. The Broad River, which joins the Wateree to form the Santee, has two recorded mounds on its east bank. One of these is the McCollum Mound (38CS2), located in Chester County near the town of Lockhart. The other is the Blair Mound (38FA48), located in Fairfield County. This mound is now inundated as a result of the recent construction of Lake Monticello.

Impressive as these mounds are, they and their associated village sites can not compare with those of the Mississippian River Valley and some other areas of the Southeast. Perhaps if the Europeans had not arrived when they did, these people might ultimately have later attained the population density of their counterpart parts to the West and rivaled their cultural achievements. This, however, was not to be. Their way of life collapsed shortly after the coming of the Europeans, who introduced them to disease and economic exploitation. By the mid-eighteenth century the Indians of South Carolina's coastal plain had ceased to have a distinct cultural identity.
### Table 3. Prehistoric Occupation Sequence

<table>
<thead>
<tr>
<th>Chronology</th>
<th>Cultural Sequence</th>
<th>Subsistence Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,000 + BC</td>
<td>Paleo-Indian</td>
<td>Hunting and gathering, probable emphasis on big game</td>
</tr>
<tr>
<td>8,000 BC</td>
<td>Early Archaic</td>
<td>Hunting and gathering</td>
</tr>
<tr>
<td>6,000 BC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4,000 BC</td>
<td>Middle Archaic</td>
<td>Hunting and gathering</td>
</tr>
<tr>
<td>2,000 BC</td>
<td>Late Archaic</td>
<td>Hunting and gathering, Increased use of shellfish along coast &amp; inland rivers</td>
</tr>
<tr>
<td>1,000 BC</td>
<td>Early Woodland</td>
<td>Hunting and gathering, Shellfish extraction, Possible agriculture</td>
</tr>
<tr>
<td>BC</td>
<td>Middle Woodland</td>
<td>Hunting and gathering, Shellfish extraction, Probable agriculture</td>
</tr>
<tr>
<td>AD</td>
<td>Late Woodland</td>
<td>Hunting and gathering, Shellfish extraction, Probable agriculture</td>
</tr>
<tr>
<td>500 AD</td>
<td>South Appalachian</td>
<td>Large scale agriculture, Continued hunting/gathering and use of shellfish</td>
</tr>
<tr>
<td></td>
<td>Mississippian</td>
<td></td>
</tr>
<tr>
<td>1,000 AD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,700 AD</td>
<td>Historic</td>
<td>Agriculture, hunting &amp; gathering, trade with European settlers, Demise of Indian</td>
</tr>
</tbody>
</table>
Proto-Historic Period

The archival records revealed no history of Indian tribes occupying the area of Stony Landing Plantation when the first Europeans settled there. Several small tribes were recorded as being in nearby areas (Waddell 1980). The Wando, from which the Wando River acquired its name, were 30 km to the southeast; the Etiwan occupied an area along the lower Cooper River; and the Santee Indians lived north of the Stony Landing area near the Santee River. These tribes, as well as other small groups, may have occasionally ventured into the Stony Landing area, but no records exist to verify this possibility.

Between the years 1562 and 1576 the Indian population of coastal South Carolina between the Savannah and Santee Rivers was said to be approximately 1,750. The interior between the coast and the fall line was largely uninhabited. During the summer, these small coastal tribes banded together along the coast, where they grew small plots of vegetables and fished and hunted. In the winter they split into small family units and moved inland from the coast, but seldom ventured more than eighty miles away from the coast (Waddell 1980).

In 1716 a small band of Kiawah was living north of Wappoola Creek in Berkeley County. They may have been on Mulberry Plantation. In 1724 forty members of the Etiwan tribe were living in Saint John's Parish in Berkeley County. The exact location, however, is unknown. From this time on, these people were gradually assimilated into the general population; they soon lost their Kiawah and Etiwan tribal identity (Waddell 1980).

Historic Overview of the South Carolina Coastal Plain

The historic genesis of South Carolina involved the Spanish attempts at settlement, San Miguel de Gualdape and Santa Elena, and their expeditions into the interior lead by Hernando de Soto and Juan Pardo.

The first European settlement in what is today the United States was attempted in 1526 by Vasquez de Ayllon. It was a miserably failure, lasting less than a year. Of the original seven hundred men, less than two hundred survived disease, starvation, and rebellion to return to Hispanola (Gomera 1932; Hoffman 1983; Quattlebaum 1956). Santa Elena, the second attempt
at settlement in South Carolina was largely successful, lasting from 1565 until 1587, during which time it served for several years as the Spanish capital of the new world (South 1979).

Hernando de Soto's epic journey through the southeast brought him, late in April of 1540, within some 80 km of the project area, to where the Congaree and Wateree Rivers meet (Hudson et al. 1984). Juan Pardo and his men, based out of Santa Elena, crossed this same point on their reconnaissance expeditions into the interior between 1566 and 1568 (DePratter 1980; DePratter et al. 1983; South 1979).

Through archaeological investigations we know Santa Elena is located on Parris Island in Port Royal Sound (South 1979). The location of San Miguel de Gualdape, however, is unknown. Various studies and suppositions place it in every major port of the Carolinas and Georgia (Quattlebaum 1956; Hoffman 1983). The Spanish settlement of San Miguel De Gualdape and Santa Elena, and the expeditions of de Soto and Pardo, probably did not directly affect the project area.

Restored to the throne, Charles II, in 1663, granted the lands of Carolina to eight nobles called the Lord's Proprietors (Drayton 1802). Under charter from the Lord's Proprietors a small settlement was made on the Cooper River at Albermarle Point in 1670, later known as Charles Towne (Orvin 1973: 18-20; Wood 1974: 22). With time, their meager subsistence methods improved, they gained wealth by trading with the Indians and selling furs, skins, and timber to England (Wright 1976: 46).

The successful introduction of rice to South Carolina around 1690 (Sellers 1934: 148) supplemented the colonists' income during this period of economic experimentation (Lees 1980). Large scale agriculture was encourage in part by the availability of large tracts of land. By the mid-1700s indigo was introduced as a cash crop. Although not as profitable as tidal rice agriculture, indigo was tolerant to a greater diversity of environments. With the potential for two highly profitable crops the plantation system was encouraged through-out the coastal area and interior riverine systems. Rice and indigo production dominated latter colonial and antebellum life along the west branch of the Cooper River, as evidenced by numerous plats and histories (Charleston RMC; Cross 1985; Drayton 1802; Smith 1900).

French Hugenots, fleeing religious persecution, immigrated to South Carolina. The Lord's Proprietors, eager to quickly establish their colony, advertised and produced various incentives which lured the Huguenots to Carolina. It is estimated that, in the year 1695, Huguenots numbered 500 of the 4000
inhabitants of South of South Carolina (Wright 1976:50-52). In the upper west branch of the Cooper River, the region the project area, Huguenots and their descendants comprised a majority of the influential land holders. They include St. Julien, Mouzon, Porcher, Gaillard, Moultrie, and Ravenel (Cross 1985).

Historic Overview of Stony Landing Plantation

The first European to see the upper west branch of the Cooper may have been one of the original settlers of Albemarle Point. A documentary description of the area near Stony Landing first appears in 1760, one year after the founding of the English settlement at Albemarle. The Journal of the Grand Council of the Province, dated March 4, 1672/3, designates 12,000 acres for Anthony Ashley Cooper, Lord Ashley on "The first bluff bank upon the first Indian Plantation on the right hand in the Western Branch of the North river commonly called ye Mullberry tree" (Cross 1985:31). The "Indian Plantation" is presumably an aborigines settlement, but mention of it is not found in later documents, nor has archaeological evidence been found to suggest such a settlement.

Sir Peter Colleton, another Lord's Proprietor, was granted through his father, Sir John Colleton, on September 7, 1678, the lands at the Mullberry tree called "Faire-lawne". This Barony of 12,000 acres included Stony Landing, which was retained by the Colleton family for nearly 140 years (Cross 1985:31-33).

Local historians of the upper west branch of the Cooper River (Smith 1900; Cross 1985) argue that in the colonial period, Stony Landing served as the juncture between Charleston, the only town of significance in Carolina during the eighteenth century, and the road which led to the Congarees (near present day Columbia) and points beyond.

The Santee River was an important transportation route to and from the interior. Navigation of 70 km of open sea between Charleston and the mouth of the Santee River was, however, often perilous (Porcher 1970:1). Not to be discouraged, many smaller boats chose alternative routes, combining land with river travel. Stony Landing, located just 35 km (22 miles) from the Santee and at the limit of navigable water in the Cooper River, may have served as a link to the interior. Small vessels from Charleston could sail up the Cooper's west branch to where it forks at
Wadboo and Biggin Creek. High ground could be reached in navigable water at Stony Landing on Biggin Creek or at Wadboo Barony on Wadboo Creek.

Peter Colleton's younger brother, James, was granted, in 1688, "Wattboe" Barony. This land is located across the Cooper River from Fairlawn Barony and came to be known as Wadboo Plantation. In 1686 James was commissioned Governor, but in 1690 he was banished by the acting Governor, Seth Sothell. James retreated to Barbados where he died in 1706. His successor, Landgrave John Colleton, may have resided at Wadboo Barony, for in 1712 he donated a parcel of land to St. John's Parish for the construction of Biggin Church (Smith 1900:331). The road leading north from Stony Landing and Wadboo Barony was probably joined when Biggin Church was built, if not earlier. The strategic location chosen for the church was between Wadboo and Biggin Creek along which the colonists were settling. The road leading west from Biggin Church, Old State Road 342, first crossed Biggin Creek far north of the present Stony Landing property. The route then crossed the road leading north from Stony Landing and continued some 30 km (20 miles) to Charleston. These crossroads, called "The Corner" up until the New Deal era, were also known as Moncks Corner, after its first merchant of the 1730s, Col. Thomas Monck (Cross 1985). The growth of this settlement was dependent upon Stony Landing, as was that of the interior.

After John's death Wadboo and other holdings transferred to his oldest son who was also named John. He resided in Middlesex, England and rarely visited South Carolina. During the American Revolution his properties were either seized or sold. Some slaves and a small tract of land called "Epsom" were, however, retained and bequeathed to his cousin, James Nassau Colleton. Shortly thereafter, in 1784, James Nassau relinquished these holdings. This lineage of James Colleton, brother of Peter and Thomas, to James Nassau Colleton is significant to this project because the northern portion of the present Stony Landing property was once a part of the Epsom tract. Epsom was originally purchased by Peter Colleton, younger brother of John of Middlesex. Peter willed it to his younger brother Robert (Smith 1900). How Epsom came to John of Middlesex from Robert is unknown.

Fairlawn Barony, granted to Sir Peter Colleton in September of 1678, was re-granted to him in 1685 and 1688. Why this was done is not known, (perhaps as a safeguard against dual claims or against possible annulment of his claim due to changing law). Regardless, Peter never came to Carolina.

After his death, Sir John Colleton, became the third Baronet of Fairlawn. As a minor, John received as executrix his paternal
aunt, Catherine. She designated, as agent to oversee Fairlawn, Robert Ball of Lincoln, who traveled to Carolina in 1694. When John attained legal age in 1702 he replaced Ball with Nathaniel Johnson. He then sold, six years later, the Mulberry tract of 4423 acres to Thomas Broughton (Cross 1985:31). In 1726 John gave to his son Peter the Devil's Elbow Barony; to his son John he gave Fairlawn Barony. John moved to Carolina in either 1726 or 1727, making Fairlawn his family residence.

Approximately 2 1/4 km south west of Stony Landing they built a large house, to the east of which, appears on the 1787 plat of Fairlawn (plat 4837, McGrady collection, S.C. Department Archives and History), a settlement of 34 structures. Although variance is known to be high, an average of 5.2 slaves per dwelling has been found to be a reasonable estimate of the number of slaves per dwelling on large plantations (Fogel and Engerman 1974). Applying this average to the number of clustered structures shown at Fairlawn gives us an estimate of 177 slaves.

During the American Revolution the British built a redoubt on the property line of the old "Stoney Landing" tract as marked on the 1787 plat; they also transformed the Colleton residence into a fort and later into a magazine. When they retreated in 1781 they burned Biggin Church, the Colleton home, and, as Mrs. Graves, daughter of John Colleton, states, they "destroyed every building including a Town built on the Barony for the Residence of several hundred people belonging to the estate, with the granaries, mills, &c." (Smith 1900:338). Mrs. Graves may have been exaggerating but there may have been a higher average number of slaves per dwelling than we estimated. Theplat of course might also be wrong. No documentary record exists of the architecture of slave cabins at Fairlawn and there has never been an archaeological attempt to recover this information. Although the lowlands of Stony Landing were not planted with rice until at least 1850, its uplands may have been cleared and cultivated by the work force of Fairlawn.

John Colleton died at Fairlawn in 1779 and is suspected to have been sympathetic with the American resistance (Smith 1900). Two years earlier he had sent his 14 year old daughter, Louisa Carolina, to France where she might be kept from the impending conflict. But, her ship, loaded with indigo to be sold for her support, was captured by the British before it could reach Bourdeaux.

Indigo had become a successful crop along the Ashley and Cooper Rivers in the 1740s, and it appears likely that it was grown at Fairlawn. Prior to its production in America, France
controlled the market and charged extraordinary prices to the English demand. The embargoes of the Revolution all but destroyed Carolina's indigo production, which after the war was supplanted by cotton production (Wright 1976: 78-81). With cotton the frontier was pushed west as upland farming became profitable.

The degree and rate of expansion into the interior of Carolina in the late 1700s prompted entrepreneurs and officials of the new government in Charleston to plan the building of a canal joining the Santee and Cooper Rivers. In 1775 Henry Mouzon drafted a map showing five proposed routes for the canal (Porcher 1970). In 1786 a charter was granted and 6 years later construction was begun under the direction of Col. John Christian Senf. Rather than choosing one of the five routes proposed by Mouzon, he selected to build it along the shortest path, taking it over 65 ft. of relief. The Santee Canal, completed in 1800, may have supplanted the function of Stony Landing. The new link to the interior was however, not the boon merchants and farmers had anticipated. The highland route of the canal required water from man-made reservoirs to fill the mid-canal locks; consequently, slight drought starved the water system (Porcher 1970).

After the war Louisa Carolina returned to Carolina as proprietress of a devastated Fairlawn Barony. The house was never rebuilt. Her visit was brief and she returned to England, where she married Captain Richard Graves. The couple later visited Fairlawn. Returning to England their ship was captured by French privateers and they were imprisoned in St. Sebastion. They escaped to Spain and made their way to England. Louisa Carolina never again returned to Fairlawn (Smith 1900).

Samuel Colleton Graves, son of Louisa Carolina Graves, inherited the Barony along with a great deal of debt. In 1819 he mortgaged a large tract of land including Stony Landing. The next year his creditors, Millsard Pagson, Mr. and Mrs. William Blamyer, N.G. Cloary and his wife Susan attempted to make a conditional sale of the land to Pagson. Ensuing litigation was eventually settled by the court of equity, which sold the land at public auction to John H. Dawson of Charleston for $2,500. The accompanying plat (Plat Book B 164, Charleston County RMC) shows the land as a corridor extending east from Biggin Creek. Bounding the property on the west is Black Tom's Bay; on the north are Epsom Plantation and lands owned by a Mrs Dawson, wife of L.M. Dawson; and on the South is The "Old House Tract" of Fairlawn Barony. Listed on the plat are the following divisions of land: uncleared swamp, 88 acres; oak and other, 790 acres; pine barrens, 1,440 acres. All land thus accounted for, there seems to be no cultivation of the property at this time. Three
major roads on the property are also depicted: one crossing the knoll at the landing leading north to Moncks Corner; one paralleling Biggin Creek at a distance of approximately 1/4 mile; and another leading from Moncks Corner south, dividing on the property, and leading into Fairlawn. This last road is called the Public Road which is today Hwy. 52.

John H. Dawson's father was born on Milton plantation in October of 1743 (Dawson 1969:44). Although there is a Milton plantation outside of St. John's Berkeley this may be a variation on Mitton, another name for the Epsom plantation, part of which is the northern portion of the present Stony Landing property.

John H. Dawson was born in November of 1796 in Charleston, where he became a merchant. Later he became a planter in St. John's parish and served as senator for that parish (Dawson 1969:44).

To whom John H. Dawson conveyed title is unknown at this time. The next reference to Stony Landing appears when George A. Trenholm, possessing title to the property, sold an undivided moiety (a half not necessarily equal) for $2,000 to J. Edward Dawson on the March 14, 1848. Less than two years later, in January of 1850, George A. Trenholm purchased and reclaimed his interest in Stony Landing for the same price (Deed Book D 12:554, Charleston County RMC).

In June of 1853, George A. Trenholm sold "the cleared Rice Land banked in next to Fairlawn also a slip of three hundred feet wide running" (Charleston Deed Book A-13:182) along the southern boundary of the property and containing most of the land across Hwy. 52. This land went to the executors of Solomon Clark's will: Samuel W. Palmer, Alex Coleman, and Joseph M. Clark. Accompanying this document is a plat dated April 10, 1850, drawn by Thomas O. Dawson, perhaps the same Dawson owning lands to the north of Stony Landing at this time. The plat shows no buildings but labels the road between "Stoney Landing" and the Public Road as "Road to House." Evidence of cultivation and reference to a house suggests that George Trenholm may have resided at Stony Landing and operated it as a plantation. But why would he sell the property's rice land? Two plats of Fairlawn, 1787 by Chas. Vignoles (plat #4837 McGrady collection, S.C. Dept. of Archives and History) and c.1800 (S.C. Historical Society), show the acreage Trenholm sold in 1850 to have been the northernmost tip of Fairlawn's wet cultivation. A strong argument could be made that Trenholm's 20 acre plot of rice land was too small to efficiently be worked, whereas it would be to Coleman's advantage to absorb the few additional rice acres.

On June 16, 1855, John S. Herrin is in possession of Stony
Landing. Having sold Fairlawn to Alex Coleman, Herrin purchases, for $1,000, the tract which Trenholm had sold to Coleman, Palmer, and Clark five years earlier. Stony Landing Plantation, now 935 acres, was conveyed by Herrin to St. Julien Ravenel on May 15, 1856 (Deed Book S 13:562-565, Charleston County RMC).

Sometime after Ravenel acquired the property, he began mining limestone from the bluffs adjacent to Biggin Swamp. The limestone was processed into nitre for gunpowder to supply the Confederate forces. Superintendent of the nitre works was David Chenoweth Ebaugh, a pioneer of the phosphate industry, as was Dr. Ravenel. Ebaugh was also given charge of the construction of three Confederate ships. Among these, the C.S.S. David was the first and most historically significant. It was the first successful semi-submersible torpedo boat.

Several accounts of the David's construction and service exist (Solomon 1970), but only those written by Ebaugh are primary sources on the involvement of Stony Landing Property. Ebaugh wrote, in a letter 28 years after he built the torpedo boat C.S.S. David:

I laid out the boat full size under a Nitre shed at Stoney landing. It was 5 feet in diameter and 48 1/2 feet long, 18 feet of the middle of the boat was same size tapering to a point at each end. The ends was made of large pine logs turned off with a grove to receive the ends of the planking, the timbers was made of 1 1/2 inch oak doubled and riveted together, they were placed about 15 inches apart, the planking was the whole length 1 1/2 inches thick hollowed on the inside to fit the timbers and rounded on outside, the planking was riveted to timbers, the whole was put together at Stoney Landing, corked and launched. It was sent to Charleston to have the machinery put in. It was there hoisted out of the water by a crane on the N.E.R.R wharf, put on a car and carried to the R. Road shop (Solomon 1970: 23).

The C.S.S. David successfully detonated a bomb against the underside of the formidable New Ironsides. This may have diverted Rear Admiral J. A. Dahlgren's efforts from the planned shelling of Charleston to the defense of the Union blockade:

The ironclads must have their fenders rigged out and their own boats in motion about them.
A netting must also be dropped overboard from the ends of the fenders, kept down with shot, and extending along the whole length of the sides; howitzers loaded with canister on the decks and a calcium for each monitor. The tugs and picker boats must be incessantly upon the lookout, when the water is not rough, whether the weather be clear or rainy (Solomon 1970: 40).

On August 24, 1867, St. Julien Ravenel sold to Henry Gourdin 5/22 interest in Stony Landing. St. Julien Ravenel also mentions that Stony Landing is valued at $44,000, a great appreciation, due in part to inflation caused by civil war, but also due to improvements: "There have been erected upon the said premises a Lime Kiln and Mill and divers other works ..." (Deed Book F 15:89-90, Charleston County RMC). It becomes apparent in this document that although Dr. Ravenel possessed title to the land, half of its value was contributed in two equal portions by Alfred F. Ravenel and Theodore Stony who he recognized as joint owners of the properties at Stony Landing.

On June 29, 1868, Alfred Ford Ravenel conveyed his quarter interest in the 935 acres called Stony Landing to M.K. Jessup.

We noted a 17 year gap in the record, during which the limestone industries began to fail. In August of 1885 Daniel S. Silcox applied for a warrant of judgement against the Cooper River Phosphate Company Limited for delinquent debts and defrauding its auditors. He demanded that by law the court must seize and protect properties and interest held by the Company. Among those listed is the right title and interest to the leases of Stoney Plantation. What came of these accusations is unknown.

In October of 1890 Robert N. Gourdin and Daniel Ravenel, trustees of the city of Charleston, foreclosed the mortgage of the Stoney Landing Company on request of a majority of the bonds held by Harriot Horry Ravenel, Alfred F. Ravenel, Daniel Ravenel, S. Prioleau Ravenel, C.A. Chisolm, Eugene P. Jervey, Frank J. Jervey, W. St. Julien Jervey, Charles Richardson Miles, C.J. Walker, Charles H. Drayton, T.D. Jervey, Valeria A Chisolm, B.H. Rutledge, and N.E. Young (Deed Book C 2:711, Berkeley County RMC). Their interests were sold at public auction in Charleston to the highest bidder, Caspar A. Chisolm. For the land he paid $844.50; for the machinery he paid $100; and, for the patent for making bricks he paid $20.50. At this time portions of the property had been sold to the west along the Public Road and the plantation had been reduced to 622 acres. Also mentioned is a list of the machinery associated with the limestone industries at Stony Landing:
One lime Kiln together with the necessary building and Machinery for grinding and Elevating the lime. One two story building for the brick factory with two drying sheds. two brick Molding Machines. two mixers. two Steam engines and One boiler. One Steam Pump, Cars and tram ways for brick and Sand, Shafting, pulleye belts +c and also for Machinery for barrel making, and also for United States Patents, covering the process of and machinery for making the bricks,...(Deed Book C 2:711, Berkeley County Court House)

On December 15, 1894, Caspar A. Chisolm sold these 622 acres and the industrial tackle to George B. Edwards for $525. Three days later Edward sold it back to Chisolm and Henry E. Young for a $60 profit (Deed Book A 11:17, Berkeley County RMC).

Chisolm and Arther R. Young on November 22, 1904, sold, for $3,500, the 622 acres except for 3 acres they granted A.D. Hare on March 2, 1883. These three acres contained the limestone mines and processing machinery. The deed makes provision that Hare might retain his lien to access his portion of the property (Deed Book A 24:55, Berkeley RMC).

Henry Edward Young sold his 1/2 interest in the 622 acres of Stony Landing along with other lands for $10,000 to Arthur Rutledge Young. One month later, on July 11, 1910, R.O.Winter is in possession of the property and sells it, excepting Hare's 3 acres, with an additional 46 acres adjoining the property, to the north along the "Monck Corner Road," for $5,000, to E. J. Dennis (Deed Book A 33:54, Berkeley County RMC).

Stony Landing remained in the Dennis family for three generations during which time parcels to the south and west were sold. The main house was occupied intermittently by the Dennis families and for some time the land was used for dairy farming. A derelict dairy barn is today just outside the property's southern boundary.

In 1940 the Tailrace Canal purchased right-of-way through and removed the majority of the peninsula at Stony Landing. During this period of drastically changing landscape, lands along the old Santee Canal were purchased for construction of the Tailrace Canal. Senator Rembert Dennis re-purchased his portion, along with additional wetlands to the north of Stony Landing. This new land was once a part of Epsom Plantation.

In 1984 Senator Rembert Dennis sold Stony Landing to the
State with the understanding that it would be transformed into a state park. Presently this land is being prepared for presentation to the public as an educational resource, stressing local history and unique environments of South Carolina's Coastal Plain.

Conclusions

Land use of the project property has been diverse throughout its history. It first functioned as a juncture between land and water routes during the colonial period. It may have later been a plantation and a mining and industrial site. During the Civil War it served as a construction site for war boats. After the Civil War it functioned as a vehicle for investors. During the twentieth century Stony Landing was used as a large dairy farm and a residence. Recently it became public property and will serve as an educational park.

Documentary research of the project property is far from exhausted. Documents may exist that could clarify specific uses of the land, and disclose who lived here, and what type of structures were on the property. The frequent change in ownership, evidenced above, suggests that Stony Landing was bought and sold on speculation. Perhaps its agricultural potential was relatively low compared to other properties in the region. Industrial use of the property did not stabilize ownership, perhaps because of the unstable southern economy before and after the Civil War. Further examination of these and other possibilities should be made, however, if a substantive history of Stony Landing is to be compiled.
RESEARCH OBJECTIVES

Introduction

The reconnaissance survey of the proposed Santee Canal Sanctuary was designed to facilitate a number of objectives. Of primary importance was locating all cultural resources in all land portions of the 224 acre property and supplying knowledge of these sites to the designers of the park. Our services were to assist them in avoiding disturbance of significant sites and in planning interpretive amenities for public use.

Through documentary research prior to field work and informant interviews during field work, we determined that four activities dominated the history of Stony Landing: 1) it probably served as a juncture between land and water routes to and from Charleston and the interior; 2) it possibly functioned as a plantation; 3) its geographical isolation during the Civil War prompted its use for construction of at least three Confederate war ships; and, 4) its limestone bluffs were mined northwest of the landing for the production of nitre, quicklime, mortar, and cement for some twenty years prior to and through the Civil War. During our survey we attempted to determine and/or confirm the location of sites associated with these activities and date their occupations.

Of equal importance was our general objective to contribute to historical and archaeological research in Berkeley County.

This Compliance Edition of RMS 202 in SCIAA's Research Manuscript Series has been prepared to fulfill cultural resource management needs mandated by the National Historic Preservation Act. Therefore, another objective of this report is to assess the significance of all discovered cultural resources to determine their eligibility for inclusion on the National Register of Historic Places.

Research Design

Prehistory

Although prehistoric settlement patterns have yet to be modeled in the coastal plain of South Carolina, we do have some
general expectations. Past research has demonstrated that areas with highly-drained soils which are adjacent to wetland environments are preferred as occupation sites (Michie 1980:73-74; Brockington 1980:15; and Michie 1984:40). Such areas lend access to both upland and wetland environments for subsistence exploitation (Michie 1980:73-74).

Furthermore, these areas, as found on the property, form a distinct ecotone between upland and wetland environments supporting a greater diversity of species than either wetlands or uplands alone. Brockington (1980) argues that with the intrusion of pine into the uplands and high moisture tolerant trees into the lowlands, about 5,000 years ago, the once pervasive dominance of oak and hickory was forced into the limited areas between upland and wetland environments. He argues that this ecotone, as found in Berkeley Co., is comparatively the richest in resources inviting human exploit (Brockington 1980:15). We would therefore expect a concentration of prehistoric activity to be evident along the Stony Landing bluff line.

**Stony Landing Plantation**

The historical documents thus far examined failed to confirm the exact nature of plantation activities within the confines of the proposed sanctuary. While the broad area encompassing the project area was part of Fairlawn Barony, documents do not point to the landing as ever being the central area of plantation activities. Still, the landing is a logical focal point for such operation because it is located on the highest ground locally available.

Therefore, we hoped our survey would provide evidence of plantation activities in and around the landing, such as planter, overseer, and slave occupation sites, and/or the arrangement of outbuilding (cf. Prunty 1955).

**Industrial Complex**

Documentary research at Berkeley County archives revealed that, in October of 1890, for failure to make good payment on public bonds, the Stony Landing Company was put up for public auction. Therein a list of equipment and facilities at Stony Landing plantation was presented which indicated that limestone industries were located on the property.

The objectives of our investigation of the industrial complex were to define the spatial limits of the mining area and
to locate the features and areas where various stages of industrial process occurred and where related equipment and material might rest. Furthermore, we might expect historic domestic sites found near the industrial area to be laborer and/or quarters.

**Ship Construction**

Three boats of consequence were built at Stony Landing, the most significant of which was the *C.S.S. David*. Solomon (1970) references several accounts of boat building at Stony Landing, none of which disclose the specific building site(s).

After reviewing the accounts of the ship building we could not eliminate any part of the project area as being totally unattractive for locating a shipyard. The most likely area, we believe, was Stony landing proper.

**Santee Canal**

While the canal proper was not investigated during this survey, we made specific attempts to survey the area immediately adjacent to the canal in order to discover any structural remnants associated with its construction, operation, or maintenance.

**Survey Limitations**

Several limitations were placed on our ability to answer all of our research questions. First, the majority of the upland property, once part of the historic location known as Stony Landing, is not within the confines of the proposed sanctuary. Furthermore, the Tailrace canal, built in the early 1940s, destroyed much of the actual landing. Still, a quick visual examination of the property noted a number of historic qualities which will allow for the development of a valuable historic park/sanctuary.

**Survey Methodology**

The state site files at the South Carolina Institute of Archaeology and Anthropology were investigated to determine if sites were already located in the project area. Two sites were
noted: site 38BK102 was the Santee Canal, listed on the National Register in 1982; and, 38BK170 was a small scatter of historic artifacts located in the Tail Race Canal off Stony Landing. This site was recorded in 1975 and is not in the project area.

Prior to physically surveying the property its history was pursued through archival research at the following offices: Moncks Corner Chamber of Commerce; Berkeley County and Charleston County RMC; the South Carolina Historical Society in Charleston; the South Carolina Department of Archives and History; and the Caroliniana Library, University of South Carolina. Although we recovered nearly a complete chain of title for Stony Landing Plantation, archival research pertaining to the properties of the proposed Santee Canal Sanctuary is far from exhausted.

Local informants were invited into the field and interviewed during the survey to gain knowledge of the property and its history.

A 100% pedestrian survey was conducted of the property beginning with a general walkover for familiarization. The elongate shape of the property prompted us to divide it into a northern and southern part. For ease of surveying, further divisions were made according to significant relief and environmental changes.

We examined all areas of high surface visibility, i.e., road beds, foot paths, plowed fields and clearings. From these surface surveys, 100% of the cultural material found was recorded and returned to place. Such areas adjacent to the park property were also surface surveyed with permission of the landowner but we were unable to subsurface test these areas.

Because the western property line skirts the bluff top for most of its length a running series of subsurface test excavations comprised upland testing. Transects were used to investigate the fields, knolls, and bottoms around Stony Landing proper. The orientation of all transects was established and maintained with a Brunton compass. Test units along the bluff were oriented with the permanent survey markers of the property line.

Soil was removed with a posthole digger along transects at 20 m intervals measured by pacing. Each test unit was excavated to a depth of 60 cm unless sterile subsurface (either marl, limestone, or sand) was first encountered. All test unit soil was sifted through .635 cm (1/4") screen and all cultural material was recorded and returned to the test unit along with the soil. Depths of visible soil change in each test unit were also recorded.
When cultural material was found in a test unit, intervals between units were reduced to 10 m and a perpendicular transect was implemented. Further, perpendicular transects were implemented when test units along the original perpendicular line tested positive. Testing terminated when a test unit proved culturally sterile. In this matter, site areas were delineated.

Throughout the vast bottomlands, which are normally wet, we also ran a series of test units. Their orientation was established with a Brunton compass and constant test unit intervals were maintained at 20 m by pacing. Artifact recovery was attempted by screening 100% of test unit soils through .635 cm (1/4") screen, but due to the gummy soil this was not possible in places. The use of post hole diggers was abandoned in the wetland due to the gummy soil and instead we used a square-nosed shovel. Test units, therefore, measured 25 cm (10") square and were taken to a depth of at least 60 centimeters.

In all cases where a new soil environment was detected or suspected an effort was made to determine stratigraphic succession, the vertical position of each horizon, and the point of cultural sterility.

For two sites, 38BK885 and 38BK886, within the industrial complex, our objectives dictated we apply different methods.

Because of pervasive disturbance, due to mining of the entire area, prehistoric sites were not expected to be found. Therefore, our primary objectives were to locate features and areas where various stages of industrial process occurred and where related equipment or material might rest. For this purpose we used a Fisher vlf 555-D metal detector. Ample battery strength was monitored and maintained, and maximum sensitivity and refractory settings were held constant. A cursory scan with the metal detector enhanced our survey methods. All detection signals were followed by exposure of artifacts for inspection. This was accomplished with a square-nose shovel and trowel. All soil removed was sifted through .635 (1/4") screen and note was taken of any artifacts, industrial-related or other (no domestic material was found). Industrial hardware or related material was then measured and left in place, except for those listed in Appendix II, which were retrieved for identification and/or the dating of a particular feature. (These artifacts are presently being conserved by the South Carolina Institute of Archaeology and Anthropology and will be returned to the property owner).

The dimensions and orientations of industrial structures and features were measured with a Brunton compass and a metric tape. The relative proximity of these features to one another and the
landforms was measured with a Brunton compass and meter pacing. This information was then translated onto a map (Fig. 4).

The architecture of the extant main house was examined for indications of its construction date(s). Additions were identified and the primary structure isolated. Variant carpentry methods, indicative of various periods, were identified and recorded. Transects beneath and to each side of the structure were implemented to substantiate or refute architectural date indicators. These transects also served to test for the possibility of multiple occupation, monitor the intensity and duration of occupation(s), and monitor relative status. C. Meredith Drakeford of Drakeford-Jackson Associates Architects was consulted to review our conclusions concerning the main house. In a letter dated July 31, 1987, Mr. Drakeford concurred with our findings.

We revisited the property, along with the Principal Investigator, in July of 1987 to confirm our previous findings for this current report. During this confirmation survey each site was revisited and random profile test units, 25 cm by 25 cm wide, were excavated to an average depth of 45 cm for identification of stratigraphy. Munsell Soil Color Charts was consulted. At this time soil at all known sites was in a dry condition and the colors were coded by the same individual.

These various methods should allowed for the comprehensive survey of the proposed Santee Canal Sanctuary and enable the archaeologists to address the specific objectives previously discussed.
SITE DESCRIPTION AND EVALUATION

Introduction

Thirteen archaeological sites were discovered during the terrestrial survey (Fig. 2). Three sites had combined historic and prehistoric components and three sites had only prehistoric components, while seven sites were solely historic in nature.

During the terrestrial survey, the discovery of two sunken vessels in the low water of the southern extremes of Biggin Creek prompted the involvement of the Institute's Division of Underwater Archaeology. A very limited one day underwater reconnaissance was conducted at Stony Landing plantation on August 6, 1986. One of the vessels was delineated as an extension of a land site, and the other was given a separate site number.

38BK878 (North Site)

Site 38BK878 is a thin scatter of lithic debris and small, highly weathered pottery sherds. The majority of this cultural material is concentrated just outside of the parks western boundary in the cultivated field owned by the Jones family. This artifact scatter extends at least 100 m beyond the park. There is some possibility that the site is related to another prehistoric site, 38BK366, located some 600 m to the west. However, we were unable to establish a continuous link between them. The extreme eastern tip of this site lies within the bounds of the park property and terminates at the apex of a limestone bluff that drops sharply into the lowlands of Biggin Creek.

That portion of 38BK878 which lies within the park boundary forms a narrow strip of undulating land under mature forestation, and has dimensions that vary from three to five meters in width on an east-west orientation, and 60 m in length on a north-south orientation along the bluff (the east/west dimensions are, artificial, representing that portion of the park between the steep bluff and the park property's western boundary). This small portion of land slopes slightly down towards the east.

Three subsurface test units produced cultural remains. These test units were located on the highest and most level parts of the bluff top. Recovered were, three unidentified sherds of undetermined date, one Deptford bold stamped sherd dating to the Middle Woodland Period, and one Bifacial thinning flake of
coastal plain chert of undetermined date. In addition, one tertiary flake of orthoquartzite was recovered.

These cultural materials were recovered from between 10 and 45 cm below ground surface and appear to be redeposited materials from the western portion (upland) of the site. Because of its topographic location that portion of the site which lies within the park boundary has probably suffered ground disturbance. Although now wooded, it is highly likely the area has been logged in the past and perhaps cultivated to the edge of the bluff. The entire site slopes slightly down to the bluffs edge, inviting sheet-wash and colluvial deposition of materials originating from the higher elevated field to the west. Soil stratigraphy taken from a shovel test unit along the bluff indicated some 30 cm of yellowish brown (10YR5/4) silt loam followed by 30 cm of dark yellowish brown (10YR4/4) sand. Below this, soils were yellowish brown (10YR5/6) sandy subsoil.

In our opinion, this site does not meet the criteria of eligibility for nomination to the National Register. There is evidence of much disturbance, and in fact, the small portion of the site inside the park probably represents wash from the main occupation off the property.

38BK879 (Tree Fall Site)

This site is located on a slope of a wooded hillside that visually gives the impression of having little potential for human occupation. This particular landform, like most along the parks western boundary, appears to have suffered considerable disturbance by human activities during historic times.

38BK879 originally was discovered as an isolated find. However, during our revisit we discovered two additional artifacts in our shovel tests and now find that the site covers an area 10 m in diameter. All artifacts consisted of small, highly eroded, unidentifiable pottery sherds, recovered from between 15 to 30 cm below ground surface.

Stratigraphy at the site consisted of 16 cm of dark brown (10YR3/3) gritty loam, followed by the same type soils to a depth of 40 cm, changing only in color to a yellowish brown (10YR5/6). At 40 cm below the surface the soils become more coarse and light yellowish brown (10YR6/4).

In our opinion, this site does not meet the criteria for eligibility for inclusion on the National Register because of site disturbance.
38BK882 (Bluff Road Site)

The major portion of site 38BK882 lies to the west and outside of the park property in an open field that until recently was cultivated. A small portion of this site intrudes into park property and terminates at the apex of a steep limestone bluff that drops into the adjacent lowlands to the east. The portion of this site located within the park bounds measures 10 m in diameter, is covered by mature forest, and is gently sloped down towards the east. This upland margin appears to have suffered erosion and further disturbance of colluvial wash from adjacent fields.

A series of subsurface test units were excavated in a north-south direction along the narrow strip land between the park boundary and the precipice of the bluff. Three of these test excavations produced cultural materials in the form of four small highly eroded, unidentifiable prehistoric pottery sherds. In addition, two secondary orthoquartzite flakes were recovered along with two tertiary orthoquartzite flakes. Soils here are Bonneau loamy sands, and consist of 25 cm of dark yellowish brown (10YR3/4) coarse loams followed by up to 25 cm of culturally sterile coarse dark yellowish brown soils (10YR4/6). Test excavations in the lowlands east of and adjacent to the site were culturally sterile.

A pedestrian inspection of that portion of the site lying outside park property revealed no additional information with which the site might be further evaluated.

In our opinion, this site does not meet the criteria for eligibility for inclusion on the National Register because of site disturbance.

Industrial Complex

In accordance with our objectives we confirmed the presence of limestone mining and industry on Stony Landing property. In addition we found three sites (38BK883, 38BK884, and 38BK886) adjacent to, and two sites (38BK880 and 38BK881) distant from, the 38BK885 (Industrial Site), which may be associated with this complex.

38BK885 (Industrial Site)

Had not mining and subsequent erosion commingled the various soils of this area they would occur as follows: Meggett loam in the low lying areas, separated by limestone bluffs from Duplin fine sandy loam of the uplands. Portions of the natural bluffs
NOTE: CONTOURS APPEARING ON THIS MAP ARE DERIVED FROM BASIC TOPOGRAPHIC INTERPOLATION AND VISUAL FIELD ESTIMATES TO EMPHASIZE SPECIFIC AREAS. INTERVALS OCCUR EVERY 3 FT. THE LOCATION, ORIENTATION, AND DIMENSIONS OF MAN MADE FEATURES ARE ACCURATE.

FIGURE 4. Map of Industrial area.
along the west side of Biggin Creek have been changed by mining activities into nearly vertical faces which extend for approximately 270 m south and 180 m north of a gully which bisects the bluff. This entire area, the disturbed bluff line, lowlands, and gully contained evidence of mining and processing features. Therefore the site is defined as being 490 m north-south by 340 m east-west at its widest extent. A surface survey of this site led to the discovery of various remnant structures, all of which were concentrated within and around the gully. Dimensions of these cultural features were measured with a cloth tape and their orientation was determined with a Brunton compass. Their relative location within the site was determined by use of meter pacing and a Brunton compass, using as a datum point the site's dominant hackberry tree, located approximately mid-way between the bluffs (Fig. 4). The southwest corner of each feature was the point used to determine location relative to the datum point. These features include a slab foundation, two cisterns, a kiln and a circular foundation.

Slab Foundation. The location of this structure is central to the others and is atop a 1 m rise 11 m and 304 degrees from the datum point.

Figure 5. Side view of Slab Foundation.
It may have been a shelter and vantage point for management, or the housing for machinery. The foundation consists of brick (9 1/4 x 3", 3/4 x 2 1/2" and 9 x 4 x 2 2/3") and mortar paving atop a concrete setting. The whole was plastered over with concrete which sufficed as a floor (Fig. 5). The slab is oriented 80 degrees from MN (magnetic north) and measures 2.68 m x 1.52 m. The form and material of the structure's above ground construction is unknown at this time.

High Cistern. This clay brick and cement plastered cistern is situated atop the northern bluff, 50 m and 343 degrees from the datum point. The top of the cistern is two meters beneath ground surface. The cistern's sides have bowed inward and its eastern quarter is filled with soil, leaves, and pine straw. Interior dimensions of the cistern are 2.44 m x 1.58 m; its exterior length is 2.83 m; and its depth is 1.47 m. Its corners are reinforced by additional masonry that forms 45 degree facings in each corner (Fig. 6).

![High Cistern, Buttressed Corner](image)

Buried in the southern wall of the excavation is what appears to be an iron sluice approximately 1.8 m long and 45 cm wide. Also to the south of this cistern are two clay brick footings. The footing to the east is the more substantial of the two. Ground cover and loose soil were cleared from its eastern face to reveal construction: 2 courses wide, 5 courses high, and 8 brick lengths long (bricks measuring 9 x 4 x 2 1/4"). Between
the third and fourth courses, from the base, a double layer of mortar testifies to discontinued then resumed construction. All that remains of the western footing is a bottom course of seven headers (9 1/4 x 4 1/4 x 3""). The orientation of the east and west footing is 141 degrees, and 150 degrees, respectively. They are approximately 7 m apart and both are on the edge of the bluff. If they supported a square structure it would have incorporated the cistern into its northern wall. Four roughly shaped granite slabs, found east of and adjacent to the western footing, may have supported heavy machinery associated with this structure and the cistern.

Using a probe rod, we tested the subsurface for additional footings at 20 cm intervals along extended lines from both footings perpendicular to their base line. Although single bricks and brick fragments were found along these transects, no intact footings were discovered. One concentration of separated bricks was found directly north of and approximately 2 m from the cistern. Its presence can not be explained at this time.

Kiln. Located 35 m and 35 degrees from the datum point are the remnants of what might be a limestone kiln (Fig. 4). The square foundation measures an average 1.2 m above the surrounding area; its northwest wall is level with the ground surface and its southeast wall is 1.8 m above the large clay-brick and cement-brick scatter adjacent the canal. This foundation, now covered with soil and ground cover, is made of clay bricks measuring ? x 4 1/2 x 2 1/4", and is oriented 17 degrees from MN (magnetic north). Six iron studs anchored vertically into three corners, two opposing per corner, support horizontal iron bars which framed the structure (four bars per wall, evenly spaced, and attaining a height of 2.90 m)(Fig. 7). Iron studs from the fourth, southwest, corner were probably scavenged.

A test unit was excavated in the southwest corner of the structure's interior. It was full of brickbat. However, we were able to determine that the first 23 cm of the soils consisted of very dark brown loam (10YR2/2) followed by 5 cm of dark yellowish brown (10YR4/6) loam. The test unit was discontinued at that point because of the brickbat.

Low Cistern. Located 18 m and 20 degrees from the datum point is a cistern excavated into the slope of the mine bed. Its well-sealed, plaster lined, clay brick construction is still capable of holding rain water. Bricks used in its construction are mostly half bricks. Orientation of the low cistern is 15 degrees from MN. Its interior dimensions are 3.35 m x 1.52 m, its exterior dimensions 3.63 m x 2.01 m, and its depth is 1.60 m.
Figure 7. Iron studs in S.W. corner of probable kiln.
Circular Foundation. The function of this structure is unknown. Its interior and exterior diameters measured 1.37 and 2.47 m respectively. Its exterior height ranges from 0-10 cm above ground and its interior depth measures 10 cm. It is located 22 m and 184 degrees from the datum point (Fig. 4). This is the only structure on the south slope of the gully and the only structure of cement-brick construction. This may indicate some association separate from mining activities and/or a different construction date.

When we excavated a test unit in the southeast interior portion we found the stratigraphic sequence to be similar to undisturbed areas along the bluffs. From the surface to 10 cm the soil was dark yellowish brown (10YR4/4) sandy soil and one part detritus of mortar, limestone, and cement-brick. At 10 cm we encountered very pale brown (10YR7/4) marl which continued for at least 40 centimeters. This test unit produced no artifacts. However, just beneath the decaying leaves within the structure we found a hoe (Appendix II).

The area immediately surrounding this feature was scanned with a metal detector. One meter directly south of the feature there was positive detection. This method isolated an area approximately one meter square and one meter from the feature in which was centered a test unit. It produced 20 cut nails (18, 2" and 2, 3" nails) and 1 pale green bottle neck. This concentration of nails may suggest that the extant feature supported a wooden structure.

Also associated with this feature is a pile of cement bricks located 6 m and 150 degrees from the circular foundation. Aside this pile of bricks and on the ground surface we found a smoothing trowel (Fig. 4. and Appendix II). The dimensions of these bricks match those in the circular foundation. It is quite possible that this material and the trowel were used in the construction of this feature. Why they were abandoned is left to speculation.

Within the area outlined by these cultural features, approximately 3,800 sq. m, we conducted a 100% subsurface survey by slow scanning with a metal detector. Objects located by this method were identified in the field and left in place (exceptions listed in Appendix II and plotted in Fig. 4). The Provenience of all cultural objects was recorded using measurements taken in the field with a Brunton compass and meter pacing.

Additional Considerations. Mounds and ridges of soil are omnipresent below the bluffs within the site. In several places there are piles of unprocessed limestone and broken bricks. The
limestone in these piles appears to be from the original exposed bluff surface which, as witnessed outcropping on undisturbed bluffs to the north, is gray in color, has a pitted surface, and is comparatively hard due to patination. These piles may be of culled material saved for a separate use or process. It is more likely, however, that it was waiting to be discarded. The amount of this material present is far too small to have been the facing to the entire bluff, suggesting that either the majority of the facing rock was processed or removed from the area, or that the soil cover, characteristic of these bluffs, allowed only very small quantities to become hard and pitted.

These bluffs were chosen in the mid-nineteenth century by the Stony Landing Mining Co. for excavation because they provided easy access to the limestone underlying the upland fields (1875 plat, Charleston PB B:65).

Although their methods for removing the rock are unknown it seems likely that, in plantation tradition, labor gangs would be employed with pick and maddox. The softness of the limestone has allowed weather, over 150 years time, to scrub the mined surface smooth; however, one group of hack scars (Fig. 8) was discovered beneath the large live oak (03 degrees and 60 meters from the datum point and depicted in Fig. 4). The antiquity of this tree may be attributed to its intentional preservation by the miners whose excavations cut around the bluff that supports the tree.

Possible evidence of dynamiting as a mining technique was found in the northern extremes of the site, where the mined face is concave along a regular curve both vertically and horizontally. This scooped shape measures approximately 21 m across, 3 m high, and 4 m deep. Cut into this wall is a rectangular hole measuring approximately 60 cm high and wide and 25 cm deep. Tool scars, here protected from the effects of weathering, are well preserved. A maddox or tool with a similar cutting edge length (10 cm) was used. Why this hole was made is unknown. Tenable postulates include: 1) a shelf for a lantern or dry storage, 2) the beginning of a cavity into which a dynamite charge would be placed, or 3) an abandoned test to determine the depth of the limestone deposit.

A tentative estimate of the volume of limestone removed by mining at the industrial site can be obtained by projecting onto its existing land forms the position of fall line and the slope of similar bluffs to the north, taking into consideration their proximity to the bottom land. A conservative estimate by these methods is:
length x depth x height - 2 = volume
(270+180) x 7.6 x 3.7 - 2 = 6327 cu.meters

(It was assumed that mining did not exceed the bluff's fall line.)

Figure 8. Tool scars in limestone beneath live oak.
38BK884 (Overseer's Site)

The center of this site is located on the border between the field and woods and is approximately 40 m and 325 degrees from the high cistern. The dimensions of this site, 45 m. X 55 m., were defined by a surface survey of the field and by subsurface testing of its forested areas which extend to the bluff's edge overlooking the Industrial Complex. Soil throughout this site consists of fine sandy loam of the Duplin series and our test unit indicated that the first 25 cm were of a dark yellowish brown (10YR3/4). Below this soils changed color, but not texture, to a brownish yellow (10YR6/6) and were culturally sterile.

Within the overall site area, several components were observed. The prehistoric component of this site is spatially limited to an area ten meters in diameter, the center of which is located 18 m. southeast of the site's center. Prehistoric cultural materials were recovered from only three test units, each was five meters apart, and included three sherds of undetermined temporal affiliation, Two cord impressed pottery sherds of the Cape Fear series (400 A.D. - 1,300 A.D.) were also found. All prehistoric artifacts were recovered from the top 30 cm of soil. A visual survey of the adjacent cultivated field produced no prehistoric artifacts.

One historic component of this site is that of a nineteenth century domestic occupation. Although the status of site's historic occupant(s) is unknown at this time, its strategic location, above and adjacent to the Industrial Complex, makes it a likely spot for an overseer or industrial foreman.

A surface survey of the field demonstrated that this portion of the site measures 40 m north-south and 30 m east-west. The ceramic assemblage from this portion of the site produced a mean ceramic date (South 1977:217-218) of 1834.74 (Table 4), with median dates extending from 1805 to 1860. The non-ceramic artifacts from this site (Table 4) reinforced these dates.

Table 4.
38BK884 (Overseer's Site)
Field Assemblage

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grey salt-glazed stoneware</td>
<td>-</td>
<td>-</td>
<td>(3)</td>
<td>-</td>
</tr>
<tr>
<td>Albany slip ware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Brown stoneware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
</tbody>
</table>

54
Throughout this portion of the site artifacts were concentrated in the top 25 cm of medium-dark brown sandy loam. Below this horizon we encountered tan sand, which, with increasing depth, became lighter and orange. Between 60 cm and 70 cm either orange clayey sand, whitish orange sand, or limestone was reached.

The ceramic assemblage from these transects produced a mean ceramic date (South 1977:217-218) of 1836.2, with median dates ranging from 1805 to 1857 (Table 5). The low number of datable ceramics [5] from this sample is insufficient to reliably determine a mean ceramic date. The other artifacts from the wooded portion of the Overseer's Site, however, support these dates and are also listed in Table 5.

Table 4. (cont.)

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue edged pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>1</td>
<td>1,805</td>
</tr>
<tr>
<td>Undecorated pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>7</td>
<td>12,635</td>
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<tr>
<td>Transfer printed pearlware</td>
<td>1795-1840</td>
<td>1818</td>
<td>3</td>
<td>5,454</td>
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<tr>
<td>Transfer printed whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>1</td>
<td>1,860</td>
</tr>
<tr>
<td>Ironstone whiteware</td>
<td>1813-1857</td>
<td>1857</td>
<td>5</td>
<td>9,285</td>
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<tr>
<td>Blue banded yellow ware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated yellow ware</td>
<td>-</td>
<td>-</td>
<td>(2)</td>
<td>-</td>
</tr>
<tr>
<td>Felspathic stoneware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Annular whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>1</td>
<td>1,860</td>
</tr>
<tr>
<td>Undecorated whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>5</td>
<td>9,300</td>
</tr>
</tbody>
</table>

Mean ceramic date = 1834.74

Although occasional fragments of brick were found in the field, no indication of footings or other foundations was apparent.

The other portion of this site is in the wooded area between the field and the mined bluff (Fig. 4). A concentration of brick was found 10 m from the field's edge and 37 m and 340 degrees from the high cistern. Two transects were placed over the center of this brick scatter, one extended 25 m north and 20 m south; the other extended 15 m east and 10 m west. At these distances sterile test units defined the site's spatial limits. The test unit intervals were reduced to 5 m to increase data recovery.

Throughout this portion of the site artifacts were concentrated in the top 25 cm of medium-dark brown sandy loam. Below this horizon we encountered tan sand, which, with increasing depth, became lighter and orange. Between 60 cm and 70 cm either orange clayey sand, whitish orange sand, or limestone was reached.

The ceramic assemblage from these transects produced a mean ceramic date (South 1977:217-218) of 1836.2, with median dates ranging from 1805 to 1857 (Table 5). The low number of datable ceramics [5] from this sample is insufficient to reliably determine a mean ceramic date. The other artifacts from the wooded portion of the Overseer's Site, however, support these dates and are also listed in Table 5.
Table 5.
38BK884 (Overseer’s Site)
Transect Assemblage

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undecorated white porcelain</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Rockingham</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>2</td>
<td>3,610</td>
</tr>
<tr>
<td>Ironstone whiteware</td>
<td>1813-1900+</td>
<td>1857</td>
<td>3</td>
<td>5,571</td>
</tr>
</tbody>
</table>

Mean ceramic date = 1836.2

Non-ceramic material

33 Machine cut nails (2")
1 Kaolin pipe stem
3 Brown bottle glass fragments
2 Blue/green"
6 Black "
9 Clear "
1 Amethyst "
1 Window glass fragment (.060")
1 Granite stone, 45 cm square with 2" bore hole
Abundant iron sheet metal fragments
Abundant clay brick fragments

A combined mean ceramic date (South 1977: 217-218) of 1835.00, with median dates ranging from 1805 to 1860, was calculated and appears in Table 6.

Although the size of the ceramic samples from these two areas are small and disproportionate, 23 out of 32 ceramics were usable from the field compared to 5 out of 6 from the transects, and the mean ceramic dates (1834.74 and 1836.2) are within an acceptable range of tolerance to infer that occupation of these loci was chronologically the same. As indicators of economic status, no distinction can, at this point, be discerned between these areas. These areas were most likely parts of the same occupation. A reliable interpretation of status and occupation dates, however, cannot be discerned without further testing.

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Table 6.
38BK884 (Overseer's Site)
Combined Ceramic Assemblage

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
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</thead>
<tbody>
<tr>
<td>Grey salt-glazed stoneware</td>
<td>-</td>
<td>-</td>
<td>(3)</td>
<td>-</td>
</tr>
<tr>
<td>Albany slipware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated white porcelain</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Rockingham</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Brown stoneware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Blue edged pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>-1</td>
<td>1,805</td>
</tr>
<tr>
<td>Undecorated pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>-9</td>
<td>16,245</td>
</tr>
<tr>
<td>Transfer printed pearlware</td>
<td>1795-1840</td>
<td>1818</td>
<td>-3</td>
<td>5,454</td>
</tr>
<tr>
<td>Transfer printed whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>1</td>
<td>1,860</td>
</tr>
<tr>
<td>Ironstone whiteware</td>
<td>1813-1900+</td>
<td>1857</td>
<td>8</td>
<td>14,856</td>
</tr>
<tr>
<td>Blue banded yellow ware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated yellow ware</td>
<td>-</td>
<td>-</td>
<td>(2)</td>
<td>-</td>
</tr>
<tr>
<td>Felspathic stoneware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Annular whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>1</td>
<td>1,860</td>
</tr>
<tr>
<td>Undecorated whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>5</td>
<td>9,300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>51,380</td>
</tr>
</tbody>
</table>

Mean ceramic date = 1835.00

38BK883 (Twin Oak Site)

This site measures 32 m X 32 m. Soil stratigraphy consists of coarse sandy loams throughout, separated only by color changes. From the surface to 26 cm, soil has a dark brown (10YR3/3) color, below this to 45 cm soils were dark yellowish brown (10YR4/6), and below this culturally sterile soils were very pale brown (10YR7/3). This site is situated adjacent to the wooded bluff and in the eastern margin of the same plowed field as 38BK884 (Fig. 9). These sites are separated by some 120 m.

Whereas this portion of the park appears to be among the most suitable for human occupation (high, level land with well drained soils adjacent bluffs) evidence of only a light Indian occupation was found. Of four pottery sherds found, two were of undetermined cultural period, and two were decorated with cord impressions, probably of the Cape Fear series (400 A.D. - 1,300 A.D.). Prehistoric cultural materials were excavated from depths of 18 cm to 45 cm below ground surface in soils cultivated in recent years.

A visual survey of that portion of the field outside of the property boundary produced only a few random examples of pottery
FIGURE 9: Enlarged map of southern sites.
sherds, some cord impressed sherds such as those excavated, but most were unidentifiable. Evidence indicates this site to be predominantly, if not totally, Middle Woodland.

The historic occupation of this site was domestic in nature, evidence of which is scattered over an area 32 m. in diameter. The ceramics produced a mean ceramic date (South 1977: 210-212) of 1821.42 with median dates ranging from 1805 to 1860 (Table 7).

A comparative analysis with 38BK884 (Overseer's Site) demonstrates 38BK883 (Twin Oak Site) to have: 1) approximately 1/2 the artifact density, 2) a strictly low status ceramic assemblage, and 3) a mean ceramic date 13 years younger.

The ceramic types in this assemblage, as demonstrated by Otto (1984), are typical of lower status occupation, e.g., slaves. The relatively low artifact density at this site also suggests low economic status. The scarcity of artifacts may, however, be due to a relatively short occupation and/or biases produced by plowing.

Table 7.
38BK883 (Twin Oak Site) Artifact Assemblage

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown stoneware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Blue edged pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>1</td>
<td>1,805</td>
</tr>
<tr>
<td>Undecorated pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>3</td>
<td>5,415</td>
</tr>
<tr>
<td>&quot;Annular wares&quot; pearlware</td>
<td>1790-1820</td>
<td>1805</td>
<td>3</td>
<td>5,415</td>
</tr>
<tr>
<td>Transfer printed pearlware</td>
<td>1795-1840</td>
<td>1818</td>
<td>1</td>
<td>1,818</td>
</tr>
<tr>
<td>Underglaze polychrome pearlware</td>
<td>1820-1840</td>
<td>1830</td>
<td>1</td>
<td>1,830</td>
</tr>
<tr>
<td>Undecorated ironstone whiteware</td>
<td>1813-1900</td>
<td>1857</td>
<td>2</td>
<td>3,714</td>
</tr>
<tr>
<td>Undecorated whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>1</td>
<td>1,860</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12</td>
<td>2,1857</td>
</tr>
</tbody>
</table>

Mean ceramic date = 1821.42

Non-ceramic materials

2 Black glass bottle fragments
1 nineteenth century type hoe (Shoulder 6 1/2", heel 2", loop 2 1/4", hole 2 1/4")
occasional clay brick fragments
A mean ceramic date thirteen years earlier for 38BK883 (Twin Oak Site) may represent a bias sample for either and/or both sites; but, if correct, it may indicate that this site was in use before but not during the mining operations, and that 38BK884 (Overseer's Site) persisted as an active site through the mining period, as the presence of higher artifact density supports. Higher status ceramic types (Table 6) and greater overall ceramic abundance at 38BK884 (Overseer's Site) may indicate that the site was reoccupied by someone with higher status, perhaps someone who managed the industrial complex; hence, the site's name.

38BK881 (Box Mine Site) and 38BK880 (Pit Mine Site)

Cut into the limestone bluffs approximately 930 m from 38BK885 (Industrial Site) is a small rectangular mine, 38BK881 (Box Mine Site), measuring approximately 7 m wide, 6 m deep and 3 m high. A similar, even smaller mine, 38BK880 (Pit Mine Site), is situated another 660 m to the north along the bluff and measures approximately 5 m wide, 5 m deep and 2 m high. Surface surveys within and around both sites revealed no associated cultural features or artifacts.

Three explanations for their remote location and small size are:

1) In choosing a mining site, small test mines may have been excavated along the bluffs to sample the materials. Large samples would be taken since full processing was necessary to determine the quality of the raw material.

2) During the construction of the Santee-Cooper canal, 1794-1800, needed material may have been mined from convenient spots along the bluff.

3) With the realization that limestone is a good fertilizer, planters with fields adjacent to the bluff may have excavated, crushed, and sown the limestone over tired soil. Charles E. Jones, whose property line bisects 38BK880 (Pit Mine Site), had no explanation for these mines but showed us where his father, Frank J. Jones (b.1896, d.1981) cleared a field adjacent and central to 38BK880 (Pit Mine Site) (Fig. 2). The field was abandoned when Frank's father, Addington J. Jones, died.

As at 38BK885 (Industrial Site), mining at 38BK881 (Box Mine Site) and 38BK880 (Pit Mine Site) has mixed the Meggett soils of the lowlands with the mined limestone, and subsequent erosion has added to this confusion the Duplin soils of the uplands. This mixed stratigraphy made Munsell color coding meaningless, although we did note that the limestone marl was a very pale brown (10YR7/4).
38BK886 (Ebaugh Site)

This site is located on the western bank of Biggin Creek and immediately south of 38BK885 (Industrial Site) (Fig. 9). It measures 75 m north-south and 10 m wide from the limestone bluff on the west to the wet bottomland on the east. A subsurface survey was taken by slow scanning 100% of the area with a metal detector. Detected pieces were partially or wholly exposed with a square-nosed shovel and trowel, identified, and measured. The soil of this site, Meggett loam, is dark yellowish brown (10YR4/2) and humic, always damp, and probably inundated at times (Fig. 10).

Figure 10. View of 38BK886 (Ebaugh Site).

All soil was sifted through .635 cm (1/4") screen and all large cultural materials were left in place (nails etc., were
FIGURE 11. Map of 3BBK886 (Ebaugh Site).
returned to place) after their position was noted relative to the datum line (established with a Brunton compass and extending in the direction of 324 degrees from a large walnut tree at the site's southern limit, through a hop tree amid-site, and then through a swamp maple at the point where mine excavations begin [Fig. 11]).

Clay-brick (\(? x 4 x 5"\) and \(? x 4 3/8 x 2 1/4"\)) scatters and cement brick (\(? x ? x 2 1/2"\)) scatters traverse the site, and a few dense yellow clay-bricks (\(? x 4 1/4 x 2 1/4"\)) are in the very south of the site.

Metal pieces recovered from this site (Table 8) have been divided into three categories: 1) those which are associated with trash and spent farm equipment thrown down the bluff, 2) those which are like materials found at 38BK885 (Industrial Site), and 3) those which are exclusively unique from those recovered from the 38BK885 (Industrial Site).

Table 8.
38BK886 (Ebaugh Site) Metal Assemblage

Farm Related Material
1 "V" plow bit
1 Carriage wheel rim
1 Tin tub handle
1 Maddox (blade 4 1/2 x 2 1/2 x 7", heel 2 1/2", hole 1 3/4")
1 Wire nail (7")
Abundant sheet tin fragments

Material Also Found at
38BK885 (Industrial Site)
2 Square spike (6")
1 Tapered spike (4")
2 Unidentifiable

Unique Material
7 Rings (4 x 2 x 3/8")
1 Windlass (6" base diam., 4 3/8" crest diam., 4 1/8" high, & 7/8" top hole)
1 Pintle plate, one piece cast (6 x 6 x 3/4 x 5")
2 Chain Link, square and connected (6 x 2 1/2" x 1/2")
1 Strap, metal (2 1/4 x 4 1/4 x 1/4")
1 Strap, metal w/ eye (12 x 5/8 x 1/8")

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The presence of pieces for this last category suggests that activity at 38BK886 (Ebaugh Site) was distinct from that on the higher ground to the north. As discussed in our research design, 38BK886 (Ebaugh Site) is a likely area for the location of a ship building site. Possible support for this was found in the archaeological record. Near the southern extreme of the site we found what appears to be a windlass or wench, which would enable a man to control a rope or line carrying a heavy purchase. However, the three boats documented as having been built at Stony Landing were powered by steam and may have had no use for a windlass. Included in the list of industrial equipment belonging to Stony Landing Mining co. is "...Shafting, pulleye belts +c and...". Also of possible association with ship building are seven iron rings evenly spaced across the site and each of the same dimensions: 120 cm (4'0") external diameter, 110 cm (3'8") interior diameter, and 1 cm (3/8") thick. Although their function is unknown, they may be traverse circles, which were inlaid into the deck of a ship to prevent the travelling wheel of a swiveling cannon carriage from destroying the deck (Warren 1970). Typically traverse rings are at least twice this size, however. A one piece cast pintle plate, found near the windlass, measures 6" square, 3/4" thick, and has near each corner a threaded eye (too corroded to measure). The pintle rises 5" and is rounded. Perhaps this functioned as a pivot for a cannon carriage (Warren, 1970).

At this time we can not confirm or deny boat building activities at this site.

Recommendations

Eligibility determinations for the preceding six sites need to be considered as a whole. None of the sites, except the actual industrial processing area (38BK885), individually appear to meet the criteria for eligibility for inclusion on the National Register. However, as a complex of sites all may relate to the limestone processing industries at Stony Landing. We suggest that 38BK885 be considered eligible for the register and that sites 38BK880, 38BK881, and 38BK886 be considered as contributing sites. Historic domestic and prehistoric site 38BK883 does not, in our opinion, meet the criteria for eligibility because it lacks subsurface integrity. Site 38BK884 however, needs further consideration. The historic component of this site may be related to the industrial complex, and furthermore, there appears to be some integrity to the wooded portion of this site. We therefore recommend that further testing be conducted at this site in conjunction with archival research to determine its possible association with the industrial complex. If association of this site with the industrial complex is confirmed we believe that it would be a contributing site.
Plantation Complex

38BK887 (Pecan Field Site)

As with the Twin Oak Site (38BK883) and the Overseer's Site 38BK884) the location of the Pecan Field Site (38BK887) was not revealed by documents or informers, but through test unit excavations conducted during transect survey. Both historic and prehistoric materials were found along these transects. When cultural materials were found, test unit intervals of 20 m were reduced to 10 m along the plowed field transect and to 5 m along the wooded bluff transect. Our testing revealed the site dimensions to measure 75 m east-west along the bluff and 45 m north-south from the bluff's edge into the field. The site's center is approximately 220 m and 315 degrees from the Main House.

This site appears to have the most intense occupation of any prehistoric site found on the property. Six of twenty test units produced prehistoric cultural materials, including six unidentifiable pottery sherds, one cord impressed pottery sherd of the Cape Fear series (400 A.D. - 1,300 A.D.), four flakes of coastal plain chert, one flake of orthoquartzite, and one rhyolite biface tip. Prehistoric materials were found predominantly in two small loci, each measuring approximately ten meters in diameter, one adjacent the bluff, and the other in the field. No evidence was found to indicate occupation during any other than the Middle Woodland Period.

While prehistoric materials were found in both the field and wooded bluff areas, the historic materials were restricted to the wooded bluff with the exception of one transfer-printed pearlware sherd found at the field's edge. The scatter of historic materials is contained within a linear area 10 m wide, bounded on the north by the bluff and on the south by the plowed field, and 30 m long. The eastern limit of its length is 20 m short of the field's corner. Although now wooded, half of the historic portion bounding the existing field was once plowed, evidenced by lighter brown and sandier soils from the surface to 30 cm, and by a deflated spoil ridge which typically borders a cultivated area.

All portions of this site are comprised of fine sandy loam of the Duplin series and our shovel tests revealed 15 cm of dark brown (10YR3/3) loam followed by a coarse yellowish brown (10YR5/8) sand to a depth of 45 cm.

Testing both disturbed and non-disturbed portions of the site revealed a low ceramic density and moderate amounts of architectural materials (Table 9). Four ceramics were recovered:
a transfer-printed pearlware, a ironstone whiteware, a hand painted polychrome whiteware, and a red glazed earthenware. Two window glass fragments were found, measuring .065" and .085", which suggests dates from 1845-1885 (Roenke 1978). Although these are very small samples of ceramics and window glass the presence of machine-cut nails suggests contemporaneity with the main house, which has a tentative date of mid-late nineteenth century.

Table 9.
38BK887 (Pecan Field Site) Historic Assemblage

1 Transfer-printed pearlware
1 Ironstone whiteware
1 Hand painted polychrome whiteware
1 Red-glazed earthenware

1 Window glass (.065")
1 " " (.085")

6 Machine-cut nails
1 Wire nail

1 Metal sheeting fragment, non-ferrous
2 Molar fragments, non-human
3 Mortar fragments

Brick fragments

Although 38BK887 (Pecan Field Site) is not suggestive of a cluster of slave quarters its artifact assemblage places it temporally within the era of the plantation system. And, the site is located adjacent the work area, i.e., fields on John K. Gourdin's 1875 plat (Fig. 13), and relatively close (170 m) to the main house. According to Prunty's (1955) spatial model this site might be the residence of a slave, driver, or overseer.

The true nature of historic occupation at this site is unknown and the indications we have are based on a very small sample. Further testing would be necessary to determine relative dates, recognize status, and/or confirm spatial patterns.
Rather extensive preliminary document research has produced seven plats, but one, ca.1850 (Charleston deed book A-13 pg. 181), confirms that a house was on the property. The archaeological record, however, revealed that four structures were present, one possibly of eighteenth century construction and the others from the nineteenth century. These may be the four buildings mentioned in the Berkeley County tax records of 1885 for Stony Landing Plantation. No visible remains exist of these original buildings except possibly in the foundation and underframing of the Greek revival style main house atop the knoll at Stony Landing.

On the apex of the hill at Stony Landing there are two extant structures (Figs. 9 and 12), the smaller of which will be addressed at the end of this section along with other associated structures which lie south and west of the knoll. The land on which all these structures are found is designated the Main House Site and includes approximately 1.4 ha (3.5 acres).

Figure 12. William Dawson's House and Main House on knoll at Stony Landing.
The main house is of the Greek revival style, popular between 1825 and 1860 (McAlester and McAlester 1984:179). This house is characterized by 1 and 1/2 stories, a side gabled roof, and a massed plan including two chimneys. It rests 2.1 m (7') above the ground on clay brick (7 3/10 x 3 1/2 x 2 1/2") piers, and faces 212 degrees from MN in the direction of the old rice fields, shown on John K. Gourdin's 1875 plat of Stony Landing (Charleston PB B p.65)(Fig. 13).

An examination of the structure revealed three additions: 1) a side porch, originally attached to the front then moved by Senator Rembert Dennis in the 1950s (Rembert Dennis Jr., personal communication), 2) a kitchen, dining area, and stoop with steps in the rear, and 3) a pair of opposing, stair cases beneath a porch supported by four circular columns.

We were able to distinguish the primary structure from later additions by examining the pier foundations and support timbers. The pier foundations of the primary house were found to have dimensions and contain bricks distinct from those of the additions. They also have more layers of paint than those of the additions. (Measurements of the primary structure's foundations were taken in the field and are translated into a plan drawing which appears as Figure 14.)

The frame support beneath the house simply rests on the brick piers. Those of the addition are recognized as recent by their mill-saw marks and their smaller dimensions. The beams supporting the primary house are more deserving of the term timbers. They are irregular in size, approximately 7"x 6".

Various tool marks on beams, and different carpentry methods of joining beams suggest conflicting dates for construction of the primary house. In colonial times timbers were shaped with a broad axe, resulting in chiseled surfaces; the pit saw, in use in the 1600s, left parallel saw marks at a slant across the surface of the finished timber; by 1700 the up-and-down mill came into use producing beams marked with uniform vertical cuts. (Pit sawing persisted until the 1750s and up-and-down milling was not replaced until c.1860). The circular saw blade, first used around 1840, was driven by water or steam and left crescent and often irregular lines on a beam (Sloane 1965: 26).

Timbers under the primary house are generally of two types. Those resting on interior piers and extending from the front to the back of the house are modern circular blade saw-cut and are joined above piers by dapped joints. Those timbers extending between sides of the house, however, are broad axe-cut and in most cases are broad axe-cut top and bottom but mill-sawn on the
FIGURE 14.

FOUNDATION PLAN OF MAIN HOUSE PRIMARY STRUCTURE
sides. They are joined by the same overlapping, dapping, technique, but while the short cut is axe-cut the long cut is hand-sawn. Another indication of chronology is the pegged mortise and tenon joints (Fig. 15), which may suggest eighteenth century construction, although this method was used throughout the nineteenth century too.

This menagerie of date indicators could be explained as: 1) the house may have been partially destroyed, e.g., burning, and then rebuilt with surviving materials, 2) the materials could have been scavenged, an economically sensible and prevalent practice (Deetz 1977: 94), from older, derelict buildings on the property, and then partially modified with newer carpentry techniques for construction of the new house.

Figure 15. Mortise & Tenon joint construction, Main House.
Architecturally this house seems relatively late, compared to the early use of this locale as a transportation juncture. One of our objectives was to determine the potential for the existence of an earlier structure on or near the knoll at Stony Landing. A potential location for an early site includes the area beneath the main house and the area extending for approximately 10 m from each side of the main house (the back of the house is only 10 m from the bluff). Transects with test unit intervals of 5 m were placed beneath and along side the structure. Testing revealed artifacts concentrated around the house in an area 30 m north-south and 20 m east-west.

Cultural materials were recovered from the dark brown (10YR3/3) loamy sand of the Bonneau series from 13 to 20 cm deep above limestone marl, and are listed in Table 10. The ceramic assemblage of 16 pieces produced a mean ceramic date (South 1977: 210-212) of 1842.813, with a median range from 1725 to 1860 (Table 10). One anomalous sherd of mimosa pattern delft has a median date 80 years earlier than any other in the assemblage, and if excluded from calculations perhaps allows for a more accurate mean ceramic date of 1850.667, with a median range of 1805-1860. The anomalous delft sherd may be associated with the early use of the landing.

Table 10.
38BK893 (Main House Site) Assemblage

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mimosa pattern delft</td>
<td>1710-1740</td>
<td>1725</td>
<td>1</td>
<td>1,725</td>
</tr>
<tr>
<td>Red slipped earthenware</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>-</td>
</tr>
<tr>
<td>Undecorated Pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>2</td>
<td>3,610</td>
</tr>
<tr>
<td>Undecorated ironstone whiteware</td>
<td>1813-1900</td>
<td>1857</td>
<td>9</td>
<td>16,713</td>
</tr>
<tr>
<td>Transfer-printed ironstone whiteware</td>
<td>1813-1900</td>
<td>1857</td>
<td>1</td>
<td>1,857</td>
</tr>
<tr>
<td>Undecorated whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>3</td>
<td>5,580</td>
</tr>
</tbody>
</table>

Mean Ceramic Date = 1842.813

(Exclusion of the anomalous delft sherd produces a Mean Ceramic Date = 1850.667)
Table 10. (cont.)

Non-Ceramic Material

Glass:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pale green bottle glass</td>
<td></td>
</tr>
<tr>
<td>2 Lavender &quot; &quot;</td>
<td></td>
</tr>
<tr>
<td>3 Black &quot; &quot;</td>
<td></td>
</tr>
<tr>
<td>1 Amber &quot; &quot;</td>
<td></td>
</tr>
<tr>
<td>2 Green (Coke) &quot; &quot;</td>
<td></td>
</tr>
<tr>
<td>1 Brown (beer) &quot; &quot;</td>
<td></td>
</tr>
<tr>
<td>2 Lantern mantle glass</td>
<td></td>
</tr>
<tr>
<td>6 Goblet glass</td>
<td></td>
</tr>
<tr>
<td>1 Table top glass (0.225)</td>
<td></td>
</tr>
<tr>
<td>1 Gaming marble, green</td>
<td></td>
</tr>
<tr>
<td>181 Window glass (Fig. 17)</td>
<td></td>
</tr>
</tbody>
</table>

Other:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Unidentified long bone fragments</td>
<td></td>
</tr>
<tr>
<td>1 .410 gauge brass</td>
<td></td>
</tr>
<tr>
<td>2 12 gauge brass (1 New Rival, Winchester)</td>
<td></td>
</tr>
<tr>
<td>1 Ceramic doll arm</td>
<td></td>
</tr>
<tr>
<td>1 Kaolin pipe stem fragment (.325&quot; thick)</td>
<td></td>
</tr>
<tr>
<td>1 Oyster shell</td>
<td></td>
</tr>
<tr>
<td>1 Copper sheet fragment</td>
<td></td>
</tr>
<tr>
<td>2 Slate fragments, thin (writing?)</td>
<td></td>
</tr>
<tr>
<td>1 Coal fragment</td>
<td></td>
</tr>
<tr>
<td>4 Plastic comb fragments</td>
<td></td>
</tr>
<tr>
<td>Occasional plaster fragments</td>
<td></td>
</tr>
<tr>
<td>Abundant clay brick fragments</td>
<td></td>
</tr>
</tbody>
</table>

Karl G. Roenke (1978) demonstrates that window glass was produced in increasing thickness throughout the nineteenth century, and that specific thicknesses are relative to specific periods of time. The uneven surfaces produced of early glass technology caused visual distortion. To minimize this, glass was made thin even though it broke more easily. For these reasons the ability to make smoother glass surfaces lead to the production of thicker glass.

The thickness of window glass from test units at 38BK893 (Main House Site) was measured in the field with calipers to the nearest five thousandths of an inch. The figures were then compressed into ten thousandths of an inch, such as .070"-.079". The new figures, when applied to Roenke's (1978: 116) model, which uses class marks of .065",.075",.085",etc., produce two modes, of .095" and .105" (Fig. 16). Suggested dates for these class marks are 1870-1900 and 1900-1915 respectively. These dates represent a rough estimate for the mid-occupation date of 38BK893 (Main House Site).

The earliest suggested dates for frequencies present, represented by the class mark .065" (Fig. 16), are 1845-1855. These are important because they match the earliest known date for a house at Stony Landing of 1850 (Charleston plat book A-13 pg.#181).
Figure 16.
Suggested Age Range for Primary Modes of Window Glass Thickness
(See Roenke 1978: 116)

<table>
<thead>
<tr>
<th>Dates (ca.)</th>
<th>Approximate Primary Mode in Use (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1810-1825</td>
<td>0.055</td>
</tr>
<tr>
<td>1820-1835</td>
<td>0.055</td>
</tr>
<tr>
<td>1830-1840</td>
<td>0.045</td>
</tr>
<tr>
<td>1835-1845</td>
<td>0.045-0.055</td>
</tr>
<tr>
<td>1845-1855</td>
<td>0.065</td>
</tr>
<tr>
<td>1850-1865</td>
<td>0.075</td>
</tr>
<tr>
<td>1855-1885</td>
<td>0.085</td>
</tr>
<tr>
<td>1870-1900</td>
<td>0.095</td>
</tr>
<tr>
<td>1900-1915</td>
<td>0.105</td>
</tr>
</tbody>
</table>

MODE = .095 & .105
The mean ceramic date of 1842.813 (or 1850.667, excluding the anomalous delft sherd) should reflect the chronologic mid-point of occupation activity. But, when compared with the document and window glass dates, the mean ceramic date suggests that occupation activity was at its peak when the house was built (probably sometime just prior to 1850). There are several possible explanations: 1) bias sampling may have occurred, 2) an earlier structure (of which there is no suggestion by window glass dating) may have been present, 3) the assemblage may be partially comprised of ceramics from earlier activity at the landing, or 4) perhaps in its later history the site was cleaned and/or new trash was disposed of over the bluff rather than in the yard.

William Dawson's house (Figs. 9 and 12), which lies 50 m and 350 magnetic degrees from the south west corner of the main house, was moved from Cotesba, S.C., in the early 1950s to replace an earlier structure that burned (Gary Le Crois, personal communication). William Dawson was caretaker for the property during the mid 1900s. His surname, being that of a former owner of Stony Landing (John H. Dawson), intimates that he may be descended from black slaves who worked the property. Transects behind and in front of this structure produced no artifacts.

Seven twentieth century structures, four of which are extant, lie south and west of the knoll at Stony Landing, and form a complex for farm and recreational activities. Three of these structures lie outside the property bounds: an "I" house, most recently used to store fodder; a brick and clapboard barn in the latter stages of decay; and, a 5 stall row of horse stables.

Of those structures lying within the property two seem closely related and are represented by cement foundations which lie 32 m and due west of the main house. One of these structures measures 5.28 m by 9.02 m, and is positioned 2.22 m east of the second structure, which measures 3.1 m by 9.04 meters. These structures are longitudinally parallel and very similar; but, the foundation of the eastern structure is interrupted by two door and two window sills in its eastern face, whereas the western structure bears no mark of a portal. Because of their construction and juxtaposition to the barn we consider it possible that these structures served as a milk processing house and a milk storage house.

The foundations of another structure lie 55 m west-southwest of the other foundations and are comprised of six cement piers, each measuring 22 cm square and each reinforced with a thin iron band in its center. There are three such piers per side of the structure which measures 9.90 m by 9.22 meters. Subsurface
testing within the structure revealed a bed of gravel just below the surface, suggesting that this structure may have served as a shed for tractors and other farm equipment.

The other structure in this complex is a barbecue shed located 60 m south of the main house and at the bottom of Stony Landing knoll. It measures 3.10 meters square, is of clapboard construction with three sides open and screened, and has a pyramidal shaped tin roof with a large aluminum vent or chimney with a rain cover in its center. An exterior stove chimney of brick was added to its southern face in its conversion to a barbecue shed. Its earlier function may have been as a well house. Of all the structures on the property it elevation is nearest the water table, and within we found a cement cistern 2.6 m by .8 m and of undetermined depth over which had been constructed a shelf. Directly in front of and north of the central and single door is located a trough with interior measurements of 1.2 X .6 X .3 meters.

38BK876 (Trash Disposal Site)

This site measures 60 m east-west and 40 m north-south. It extends east-west along the steep grade of the bluff on the north side of the knoll at Stony Landing (Fig. 9). It extends north-south from the bluff's edge to base and across the bed of Biggin Creek. This entire area is littered with discarded cultural materials, most of which are concentrated in three areas: 1) behind the main house, 2) behind William Dawson's house, and 3) west of area 2. Each area measures approximately 5 m in diameter. We also noticed a wooden barge half submerged in the underwater portion of this site.

Marking the eastern extremity of the site is a water level gauge. This datum is located on the edge of Biggin Creek near where it joins the Tailrace canal. From this point west we conducted a surface survey and found that the vast majority of visibly cultural material dates to the twentieth century. Observed were: a 1928 S.C. licence tag, a stove element, numerous catsup bottles, whiskey bottles, Tropicana juice bottles, a few light bulbs, oil cans, aerosol and beer cans, a coffee can, a muffler, seat belt, a pie tin, one tin bucket, one cold cream jar, one leather shoe, a garden hose, toilet seat, plunger, an enameled kettle, a grease gun, medicine bottle, some chicken wire and screen wire, a set of bed springs, a Darling aluminum cup, a clay flower pot, and a 1936 penny.

In all three concentrations, predominantly areas 2 and 3, we discovered nineteenth century ceramics. A total of 24 pre-
twentieth ceramics were found, 20 of which we were able to use in calculating a mean ceramic date (South 1977: 210-212) of 1836.10 with median dates ranging from 1733 to 1860 (Table 11).

Table 11.
38BK876 (Trash Disposal Site) Ceramic Assemblage

<table>
<thead>
<tr>
<th>Ceramic Type</th>
<th>Range</th>
<th>Median</th>
<th>No.</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead glazed slipware</td>
<td>1670-1795</td>
<td>1733</td>
<td>1</td>
<td>1,733</td>
</tr>
<tr>
<td>Blue &amp; green edged pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>2</td>
<td>3,610</td>
</tr>
<tr>
<td>Undecorated pearlware</td>
<td>1780-1830</td>
<td>1805</td>
<td>3</td>
<td>5,415</td>
</tr>
<tr>
<td>Transfer-printed pearlware</td>
<td>1795-1840</td>
<td>1818</td>
<td>2</td>
<td>3,636</td>
</tr>
<tr>
<td>Undecorated ironstone whiteware</td>
<td>1813-1900</td>
<td>1857</td>
<td>4</td>
<td>7,428</td>
</tr>
<tr>
<td>Undecorated whiteware</td>
<td>1820-1900+</td>
<td>1860</td>
<td>8</td>
<td>14,880</td>
</tr>
<tr>
<td>Floral painted gold-edged whiteware</td>
<td>-</td>
<td>-</td>
<td>(4)</td>
<td>-</td>
</tr>
</tbody>
</table>

Mean ceramic date = 1836.10

(Exclusion of the anomalous lead glazed slipware ceramic renders the mean ceramic date = 1840.47)

Excluding the anomalous eighteenth century lead glazed slipware ceramic the mean ceramic date is 1840.47 and median date range becomes 1805 to 1860. These ceramics may be representative of cultural material disposed from either the main house and/or the structure predating the William Dawson house.

The Institute's underwater reconnaissance survey of the underwater portions of this site (discussed more fully in Appendix I), recovered a representative sample of artifact types. Although the frequency of ceramic types was not systematically quantified it was visually estimated. The relatively low frequency of eighteenth to the frequency of nineteenth century ceramics on the floor of Biggin Creek might suggest that activity at Stony Landing was marginal before the early-mid nineteenth century. However, bottles recovered from Biggin Creek floor were numerous and predominantly of the eighteenth century type. Excavations of the underwater portion of this site might reveal stratigraphic integrity, which may indicate successive episodes of activities at Stony Landing from colonial through present times.
How much of the underwater deposition of cultural materials at this site is the product of surface creep and erosion down the steep grade of the bluff is unknown. Separate examination and comparison of each area of artifact concentration and their corresponding underwater portions might reveal the nature of deposition and subsequent disturbance. Separated activities, e.g., early tavern versus late house, might be responsible for deposition at this site.

Recommendations for the Plantation Complex

The eligibility of the Plantation Complex is not clear cut. Based on this preliminary work, we have determined the following:

1) Stony Landing proper has probably been destroyed.

2) The deposition around the Main House site 38BK893 is very shallow. The house itself is built on top of limestone bedrock. Therefore, the archaeological potential of the site is questionable. However, since written documents pertaining to this site do not provide a clear history of the house and its surroundings, our best chance of learning more about the Stony Landing property may be from archaeological research. The eligibility of the standing structure needs to be assessed by a qualified architect.

3) Our historic document study was inconclusive in determining if the Main House area was the center of a major functioning plantation. Stony Landing may have been simply a small farm (see discussion below).

4) No outbuildings appear archaeologically, except possibly 38BK887. This site can not be positively identified as part of a plantation complex. The historic component of this site would not, in isolation, be eligible in our opinion. The prehistoric component of 38BK887 is not eligible.

5) None of the extant twentieth century outbuildings at 38BK893 are eligible.

6) The land portion of 38BK876 is not eligible for the National Register. Further work in the underwater portion of 38BK876 is recommended because artifacts here probably reflect activities at the Main House and possibly at the colonial landing.

In summary then, we recommend further testing of the main house area and the underwater portion of site 38BK876, no other
archaeological sites within the plantation complex meet the criteria for eligibility for inclusion on the National Register.

38BK877 (Biggin Creek Ship Site)

This site measures 11 m east-west and 7 m north-south. It includes a sunken ship, first observed from the bank during the survey, and debris from its degeneration in the surrounding area. The Institute's Underwater Division was contacted and they conducted a one day reconnaissance of this site. This work is discussed in Appendix I. In summary, the site was considered an important find and further documentation was recommended for determining its eligibility to the National Register.

Discussion of Research Questions

Prehistoric

As discussed in detail in our research design we expected to find prehistoric occupation to be concentrated in the uplands where they join low lying wetlands. Prehistoric sites were indeed found in the upland areas which border the bluffs overlooking Biggin Swamp. As defined within the property, these sites are relatively small and contained low artifact densities, with the possible exception of 38BK887.

If Brockington's hypothesis (Brockington 1980:15) about the desirability of this type of environment to prehistoric peoples is correct, we might expect evidence of more intensive occupation. However, the property line, edging along this bluff, did not allow us to fully explore the uplands. More than likely, the sites discovered on the property are but peripheral extensions of larger sites off the property (like site 38BK366).

Industrial Complex

We were able to locate and spatially define areas where limestone was mined and processed. We first became aware that such activities occurred at Stony Landing through archival research. Various features in the Industrial Site were located, described, and mapped in relation to one another. Although we are unable at this time to define how these features functioned in the limestone industries at Stony Landing, the information we gathered and assimilated might serve further interpretation and investigation.
In addition, we located five sites which may be associated with the industrial site: two were smaller area of limestone mining, one might be associated with the limestone industries and/or boat building, and two are domestic sites, which may have served as residences for the industries labor force and/or management.

**Plantation Complex**

Stony Landing does not, on first glance, stand out in classic plantation style with great house, slave cabins, and other distinguishing outbuildings or history. Thus, to discover whether or not Stony Landing actually functioned as a plantation, we had to examine archival documents and the archaeological record very carefully.

As a part of Fairlawn Barony, the Stony Landing tract was part of a functioning plantation; but, it may not have actually produced crops or housed those who worked on the plantation. Historical records show that before the Stony Landing tract was sold from the Barony in 1820 its lowlands were uncleared. It is therefore unlikely that rice or indigo were grown on these portions of the Barony. A large portion of the Stony Landing Tract's uplands, however, depicted as "Old Fields" ca. 1800 (Map of Fairlawn Barony, South Carolina Historical Society), probably produced crops for Fairlawn Barony.

One way to determine if it was a plantation in the classical sense was to look at it in terms of Prunty's model (Prunty 1955). Of the six interdependent characteristics which typify a southern plantation (Prunty 1955) the first four could be addressed exclusive of field work.

Prunty proposes that southern plantations are, by nature of their infrastructure, economically limited in size to between 260 and 1000 acres (Prunty 1955: 461). Documentary research revealed that, except in recent years, the property including Stony Landing was within these areal limits. Because of their relatively large size, plantations supported specialized agricultural production (Prunty 1955: 489). We found that whereas Dawson's 1850 plat of Stony Landing shows the bottom land south of the landing as "uncleared swamp," J.K. Gourdin's 1875 plat shows this same area as "rice field, 20 acres" (Fig.13). Although 20 acres of cultivation is insufficient to make Stony Landing a plantation, it may suggest that between 1850 and 1875 a plantation system was initiated at Stony Landing with upland crops comprising the preponderance of production. Plantations exist only within an area of plantation tradition (Prunty 1955: 489).
460). By this he means the south. However, Stony Landing further qualifies on this point, for it is at the juncture of Biggin Creek and the west branch of the Cooper River, along both sides of which most properties were called plantations and are recorded as producing rice, indigo, and cotton on a large scale (Cross 1985). A relatively large input of cultivating power per land unit was required to efficiently operate a plantation (Prunty 1955: 460). In researching the slave ownership dockets for St. John's Parish, the name of every Stony Landing owner was sought and most of these were found. Of those found, the number of slaves owned was listed but no breakdown of associated plantations was available. Each of these owners possessed other properties in St. John's. We found no proof of any slaves being associated with Stony Landing. By testing of Prunty's model against archival records we were unable to prove that Stony Landing functioned as a plantation, nor were we able to prove that it did not.

Prunty's fifth and sixth tenants could be tested with archaeological data recovered from the survey. Prunty's fifth tenant, that there is a distinct labor/management division on a plantation (Prunty 1955: 460, 465), was not confirmed by preliminary archival research for Stony Landing. However, archaeological evidence was found which might reflect status hierarchy between occupation sites 38BK883 and 38BK884, and between 38BK887 and 38BK893. Prunty's sixth and final criteria for a southern plantation proposes that on a plantation the spatial proximity of various buildings and complexes affects the efficiency of crop production. Specifically, in order to maximize production, a plantation's layout is strategically patterned. Furthermore, Prunty infers that these patterns are predictable (Prunty 1955: 465,466). Spatial relationships in accordance with Prunty's model were tentatively identified between 38BK883 and 38BK884, and between 38BK887 and 38BK893.

Despite some positive feedback from testing Prunty's model against the archaeological record, our findings were inconclusive in proving that Stony Landing Plantation indeed functioned as a plantation. Additional archival research and archaeological investigations might however resolve this question.

Ship Building

According to historical accounts, at least three Confederate military boats were constructed at Stony Landing Plantation. The survey did not find conclusive physical evidence of this. One possible site for ship building, 38BK886 (Ebaugh Site), was located adjacent Biggin Creek and just south of the 38BK885 (Industrial Site). Iron Machinery found at 38BK886 is distinct
from that found at 38BK885, and some of it is suggestive of ship building. This material may, however, be associated with one of the several industries, other than boat building, that took place on the plantation. No other evidence was found during the survey which could suggest ship building activities. The most likely place on the property for ship building would have been Stony Landing proper, the vast majority of which was destroyed in the construction of the Tail Race Canal during the early 1940s. Neither historical documents nor local informants could recall any evidence suggestive of ship building on Stony Landing proper. Subsequent testing of the remaining portions of the landing produced no material culture.

Although the archaeological evidence for boat construction at Stony Landing may be irretrievable the nature of these boats' construction and their histories might be found through documentary research in various naval, and maritime archives. There is also a possibility that 38BK886 was a location of ship construction. As a site potentially associated with 338BK885 we have recommended that it be a supporting site in nominating 38BK885 to the National Register of Historic Places. Further archaeological investigations at 38BK886 might test whether or not it was a site of ship construction.

Santee Canal

The remnant channel of the Santee Canal runs through the center of the property. According to Senf's ca. 1800 map of the Santee Canal (SCDAH, SC Maps Collection MB 11-11), the last of the canal's eleven locks was located near the mid property point of the proposed park. The survey crew was unable to find remnants of this or any other structures associated with the Santee Canal. They might, however, be found in the canal bed. It seems most likely, however, that any existing remains of this wooden lock would be found where the canal ends and the natural coursing of Biggin Creek begins. Unfortunately, this juncture is buried somewhere beneath the sluff from the spoil ridge along the Tailrace Canal.
RECOMMENDATIONS

To summarize the results of our survey for the purposes of compliance with the National Historic Preservation Act and the regulations under CFR 800 and CFR 60, we have recommended that the following sites need no further consideration because they do not appear to meet the criteria for eligibility for inclusion on the National Register of Historic Places:

- 38BK878 North--prehistoric,
- 38BK879 Tree Fall--prehistoric,
- 38BK882 Bluff Road--prehistoric,
- 38BK883 Twin Oak--prehistoric/historic,
- 38BK887 Pecan Field--prehistoric/historic.

Archaeological sites which, in our opinion, do meet the criteria of eligibility include:

- 38BK885 (and contributing sites 38BK880, 38BK881, 38BK886) Industrial Complex--historic,
- 38BK877 Biggin Creek Vessel--historic.

We recommend further investigations, in the form of archaeological test excavations at:

- 38BK884 Overseer's--prehistoric/historic (archaeological test excavations at historic area only),
- 38BK876 Trash Disposal--historic (test excavations at underwater portion only, and documentation of barge),
- 38BK893 Main House--historic (test excavations in immediate vicinity of house, and architectural assessment by architect).

In addition to these recommendations concerning the eligibility we would like to offer some considerations as to the future of archaeological work in the project area. As we understand the current plans for the development of this Sanctuary, many of the archaeological sites discussed above will not be adversely impacted by the park's development. In fact, the impact to these sites may be beneficial in that, as the park project continues, the sites will be preserved, used for interpretive purposes, and protected by the personnel who will staff the park.

For these reasons, we recommend that further archaeological work be carefully considered in relation to the South Carolina Department of Parks, Recreation, and Tourism's plans for park
development. This may include mitigation of adverse impact at sites which are eligible for the register and are to be destroyed. But, preservation in place may be the best option for those non-endangered sites which are either eligible or need further testing.

The best solution to these problems would be for the SHPO and PRT to enter into a Memorandum of Agreement (MOA) whereby the preservation of eligible sites is safeguarded with a provision for future excavation if and when it is necessary. This provision could also include the sites recommended for further testing. The MOA would state PRT and SHPO's desire to use the sites for interpretive purposes, and outline steps to be taken to enhance their interpretive value, which could include limited excavations, trail markers, and artifact exhibits.

In this regard, we would like to reiterate that while many sites have not been recommended for inclusion on the Register, all of the archaeological sites on the property can be important assets to park development, interpretation, and public enjoyment.

Finally, SCIAA must note that some very valuable cultural resources have not been addressed to date. They are the underwater portions of the Santee Canal (now on the Register) and Biggin Creek. These resources, some discovered and some yet to be found through a systematic underwater survey, may be the most valuable interpretive resources within the park's boundaries, and should be addressed pursuant to the South Carolina Underwater Antiquities Act of 1982. The South Carolina Institute of Archaeology and Anthropology now has an Underwater Antiquities Management Program, which can address this survey at the convenience of PRT.
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APPENDIX I

PRELIMINARY RECONNAISSANCE OF
BIGGIN CREEK AND STONY LANDING CANAL
(OLD SANTEE CANAL SURVEY PROJECT)

by Mark Newell

A one day preliminary survey of the mouth of Biggin Creek and the Stony Landing canal area was conducted by staff members of the Division of Underwater Archaeology of the South Carolina Institute of Archaeology and Anthropology on August 6, 1986, as part of the general archaeological survey of the Old Santee Canal/Stony Landing.

A two part reconnaissance was planned, the first being the Stony Landing shore area to the north of the House site, the second being in the mouth of Biggin Creek. The intention was for three divers to measure and document a barge at 38BK876, and then to search for diagnostic material from the creek bottom opposite three trash concentrations identified by the land crew on the creek shoreline below the 38BK893 (Main House Site) (Fig. 9). The divers would then move to the Biggin Creek area to survey a wooden vessel (38BK877) noted by the land crew. (While the site areas were measured in metric, we used the U.S. Customary System for recording the shipwrecks).

38BK876 (Trash Disposal Site)

This site measures 60 m east-west and 40 m north-south. The portion of the site which is underwater measures 46 m east-west and 30 m north-south. A pre-dive survey of this area indicated clear water conditions with depths ranging from four to five feet over a bottom of sand, gravel, and shell. A large barge was found in an approximate north-south orientation with a 30 degree list to the east side approximately 20 m from the water gauge (Fig. 9), which was used as a datum point.

Barge

The overall dimensions of the barge are 40'2" x 16" x 3'6" deep. Exterior construction is of 2 x 10" pine planking with deck planks of average 1 x 12" size. The deck planking is supported by 2 x 14" beams, sistered by 3 x 4" boards where they are butt jointed. Three deck beams appear to have been used, spaced approximately 30" apart (Fig. 17). A 1/2 x 6" strake is used as a fender at the gunnel and a 7 x 7" batten used for interior planking supports. A rough cut log about 3" in diameter is used as a rub rail on both ends of the vessel. Fastenings throughout
FIGURE 17 Construction details of 20th century barge.
the structure are iron drift pins and wire nails. A large ring bolt is attached to one side 36" from the end rub rail. A similar mooring fixture was probably attached to each corner at this point. The interior of the vessel is heavily silted, making observation of internal structure difficult. The exterior is heavily tarred and encrusted, and will have to be cleaned before further details on planking lengths, scarfs, and fastenings can be recovered. Based on fastening type and lumber size, the barge appears to be an early twentieth century vessel of the type used in the construction of the Santee-Cooper Dam (Newell 1986).

Its current condition is poor, with deck areas severely eroded. The hull structure appears to be intact, however, and further structural detail could be recovered after pumping silt from the interior. Further erosion and damage is likely because the vessel lies across the current flow from Biggin Creek into the Cooper River.

Artifact Scatter

A survey of the canal bed adjoining the three refuse disposal areas of the site on land revealed an artifact scatter extending approximately 46 m along the shoreline from the datum point at the water meter. The concentrated scatter area was generally 4.5 m in width, although the entire creek bed from bank to bank was found to contain a light density of artifacts.

Four distinct concentrations of artifacts were observed. These represent a concentration of early to mid-nineteenth century artifacts 13.5 m from the datum point, a concentration of eighteenth century artifacts 23 m from the datum point, a concentration of late-nineteenth century artifacts and twentieth century artifacts 46 m from the datum point.

A biased, non-aligned selection of diagnostic artifacts was made from the first three areas, the twentieth century artifact concentration being documented but left in situ. In the three selection areas, twentieth century artifacts were also generally ignored, the intention being to recover material indicative of the earliest Colonial occupation of the site. Three assemblages were recovered. The artifacts were predominantly ceramics with a temporal range of ca 1775 (two creamware sherds) to the present. Glass artifacts consisted of bottle fragments, bases, and necks, with a temporal range of 1730 to the present.

One sherd of particular interest is a small rim sherd of sand tempered, hand molded clay with a flared rim. It was recovered from an eighteenth century context and exhibits an
extremely coarse punctate or impressed pattern of an unidentifiable type. It is possible this is of the Late Woodland Period or Colono ware (personal communication, James L. Michie).

The multi-component area, the scatters and the barge, have been designated site 38BK876 by the Institute.

38BK877 (Biggin Creek Ship)

The second vessel structure reported by the land survey crew proved to be a ship-built vessel lying in an approximate east-west orientation in the mouth area of Biggin Creek (Fig. 9). Some of the vessel's remains are scattered about the hull, extending the dimensions of the site to 11 m east-west and 7 m north-south. The remains of the hull are in about 3' of water and consist of the keel, most of the major floor timbers and futtocks, the garboard strakes, some bulwark strakes, the keelson and remnants of the sternpost and deadwood. Approximately 31' of length is visible, the forward portion of the wreck disappears into the east bank of the creek. Many structural timbers and strakes are separated from the hull and are lying in the vicinity of the wreck (Fig. 18).

The exposed portion of the keel was slightly tapered ranging from 8" sided, 6" molded at the stern, to 10" sided, 6" molded at a point 6' forward of the stern (Fig. 19). The keelson is extensively shaped, the sides being shaped to produce a thinner center section, giving the timber an hour-glass shape in cross section above the deadwood. The remaining section of deadwood was 5" thick and was fastened to the keelson by three 1" iron drift pins spaced 18" and 11 1/2" apart.

The mast step is located 16' 2" from the stern section. In most single masted vessels the step is forward of the midship area. The location of the documented step suggests that the vessel may, in fact, have had two masts, indicating a ship of considerable size. The step dimensions are 8 x 4 1/2" and 3 1/2" deep. A number of floor timbers are in place 6' forward of the sternpost. These have average measurements of 4" sided and 6" molded. Several knees, which may indicate the existence of a deck at one time, were documented. These also averaged 4" sided 6" molded.

On both sides of the stern were strakes and frames that had fallen away from the main structure. These planks ranged in size from 6" to 10 x 1 1/2" thick. The garboard strakes were attached
FIGURE 18. Construction details of Biggin Creek ship.

- COOPER RIVER
- STONY LANDING
- Loose futtocks planking
- Bank (Tailrace fill)
- Bricks
- Keelson 31' exposed
- Mast step
- 8 x 4 1/2 x 3 1/2
- Large Plank
- 12 x 8"
- 5" thick deadwood
- 8 x 6"
- 6 x 5" molded
FIGURE 19. Significant details of Biggin Creek ship.

- Iron drift pins
- Mast step
- Loose strakes
- Brick
- Maritime construction details:
  - Notched to keelson
  - Square notch above keel
  - Vertical notch
  - Lightly constructed knees
  -钉子作为楔子
  - 8 x 4 1/2 3 1/2" Mast step
  - 16' 2" to sternpost
  - 36' Triple notch above keel
to frames and the keel at the maststep area. These planks ranged in size from 5 1/2" to 11 1/2" in width. The frames were centered roughly on 30". There was no evidence of scarfs, stopwaters, or watercourses. Fastenings throughout the vessel were treenails, those observed being 1" in diameter. One treenail had a wrought iron nail driven into the end as a wedge; no other treenails appeared to have been wedged.

The only artifacts present on the vessel were large low fired brick measuring 9 x 4 1/2 x 3".

The age of this vessel is difficult to determine from the data recovered to date. Vessels of this type, with extensive use of treenails, generally date to the mid-nineteenth century. The vessel site has been designated by the Institute as site 38BK877.

Recommendations

38BK876

Barge. The barge is the third example of early twentieth century barge building technique to be found in the Cooper River-Wadboo Creek drainage system. It may well be impacted by planned development of this area of the Canal, and for this reason should be fully documented. This would require some exterior cleaning and excavation of the interior. After which, the structure could be removed; although, if left in place, it might provide a focal point for the park’s interpretive purposes. This barge, however, is not eligible for the National Register.

Artifact Scatter. The artifact scatter along the south shoreline has the potential for yielding significant diagnostic material. The ceramics, wrought iron and glassware could provide a broad range of artifacts which could aid in the interpretation of occupational activities, lifestyles, and cultural status of the occupants of the site from the time of first occupation to the present. Several test squares should be excavated to determine the extent and value of this potential. The possibility of yielding museum quality exhibit material is also high.

38BK877

Biggin Creek Ship. The remains of this vessel represent a significant find that may well be eligible for the National Register. Full documentation of the structure should be
completed; the loose structural debris should be collected, marked, and secured; and, excavation should be conducted to determine the extent of the wreckage beneath the east bank of the Canal. Furthermore, archival research should be conducted to determine the origins of the vessel. If possible the vessel should be moved to a less exposed area of the canal, perhaps where it may be viewed by visitors.
APPENDIX II

METAL OBJECTS RECOVERED FROM
38BK886 (INDUSTRIAL SITE)

1) Sadiron, no handle
2) Buggy spring
3) Mule shoe
4) Field hoe, in association
    with circular foundation (loci 5)
5) Spreading trowel, masonry,
    with tang for wooden handle
6) Monkey wrench, not stilson