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In years to come, when all the present
generation have gone, the stranger and the
wayfarer — passing along these mighty rivers,
seeing the great dikes and innumerable canals
and ditches large and small, the fields divided
into various sizes, or perhaps, roaming amongst
the piles of
bricks, all that
remains of the
old homes, driving up the old avenues of oaks
and magnolias which led to them — will muse
and wonder what race of man dwelt here and what
all these works meant in and near the swamps.

David Doar
INTRODUCTION

The Francis Marion National Forest (Figure 1), located in Berkeley and Charleston Counties, probably contains the highest density of cultural resources of any National Forest in the Southeastern Region. This area of approximately 250,000 acres represents a kaleidoscope of human occupation. This overview will present a synthesis of cultural resource knowledge on the Francis Marion National Forest, named after the "Swamp Fox," the Revolutionary War hero who fought the British in and around the Forest boundaries.

The Forest was created in 1905 with most of the land purchased in the 1930's after being cut over by private individuals and lumber companies. Since this time the management of the National Forests has become increasingly complex and diverse. The need for the integration of sometimes competing programs within the Forest Service has been recognized since the formative years. Gifford Pinchot, the first Chief Forester made the following observation in 1907:

There are many great interests on the National Forest which sometimes conflict a little. They must all be made to fit into one another so that the machine runs smoothly as a whole. It is often necessary for one man to give way a little here, another a little there. But by giving way a little at present they both profit by it a great deal in the end.

Cultural resources is the most recent variable to be fitted into the Forest Service machine. Interest in cultural resources management has greatly expanded in the last decade.

The preparation of this overview represents a major step in the development of an active cultural resource program on the Francis Marion National Forest. It will be used in the preparation of land management plans to integrate cultural resources management with other Forest Service programs. The overview will serve as a foundation for future cultural resource investigations.

The overview is a dynamic document, subject to change, as our data base grows. Cultural resource reports prepared by Forest Service archeologists will supplement the overview as additional work is conducted.

The Francis Marion Study Area, as defined in the overview, includes all lands within the National Forest and lands included within the following United States Geological Survey topographic quads:

Bonneau, Jamestown, Cedar Creek, Cordesville, Bethera, Shulerville, Honey Hill, Santee, Minim Island, Kitteridge, Huger, Ocean Bay, Awendaw, McClellanville, Cape Romain, Cainhoy, Sewee Bay and Bull Island.

a little at present they both profit by it a great deal in the end.
Figure 1: The Francis Marion National Forest, Berkeley-Charleston Counties, South Carolina.
ENVIRONMENTAL SETTING

INTRODUCTION

The Francis Marion National Forest is located in the lower coastal plain of South Carolina, in Charleston and Berkeley Counties. The Forest contains 249,641 acres extending 25 miles inland from the coast, and is bounded by a series of natural and man-made terrain features (Figure 2). Along the coast, the Forest extends from the town of Cainhoy to the mouth of the South Santee River. The Wando River and the Intracoastal Waterway demarcate a major portion of the Forest's coastal boundary, which fronts on the estuary from the vicinity of Sewee Camp to the Santee. The Santee River comprises the Forest's eastern boundary, while the Cooper River and Lake Moultrie delimit the western margin. The Forest's northern boundary is in the vicinity of the town of St. Stephen, and the entire Forest tract resembles a large triangle with its base on the coast and narrowing in the interior.

The Forest is characterized by a variety of landforms and biotic communities, encompassing much of the environmental variability of the lower coastal plain. The purpose of this chapter is to provide a brief introduction to this environmental variability, and to provide both a perspective and references to guide future cultural resource investigations. Knowledge about present and past environments is important in cultural resource management, it should be emphasized, since the human occupation and use of an area is directly linked to environmental conditions. Modern use of the Forest, for example, focuses on timber, watershed, wildlife, and recreation management. Much of this activity occurs on the higher, better drained area. In the 18th century, in contrast, rice cultivation was a major industry, with most of the rice fields located in low lying, swampy areas. Many of the cleared and cultivated rice fields of the 18th century, in fact, are today densely overgrown swamps, reflecting the decline of the industry in the 19th century.

Patterns of land use, therefore, change over time, and documenting these changes is an important part of cultural resource management. Such documentation can help land managers predict where remains from earlier periods of settlement might occur.

Environmental conditions have changed considerably during the period of human occupation. Modern biotic communities, for example, reflect over two centuries of clearing, farming, and timber management. These conditions differ markedly from those recorded by early explorers. Equally dramatic changes in landforms, drainage conditions, and vegetational communities occurred during the thousands of years of aboriginal occupation prior to European contact. All of these changes influenced human settlement and use of the Forest area. Cultural-ecological research, that is, research documenting the relationship between present and past environments, and patterns of human land use and settlement, is only beginning in the Forest area. While most cultural resource reports contain descriptions of present-day environmental conditions, comparatively few studies focus on past conditions, during the periods of actual occupation. The goal of environmental research and description in cultural resource investigations is to help us understand why certain sites or areas were occupied, and what the occupants were doing there.

A number of recent archeological studies from the southeastern Atlantic coastal plain have explored the role of environmental conditions in human settlement, and changes in environment over time, and complement and augment the information provided here (e.g., Larson 1970; Widmer 1976a, 1976b; Brooks and Scurry 1978; Anderson, Lee, and Parler 1979; Brockington 1980; Brooks 1980; Trinkley 1980a).

Physiographic Setting

The Forest is located in southeastern South Carolina in the lower reaches of the Atlantic coastal plain physiographic province (Fenneman 1938). The Atlantic coastal plain is a broad, gently sloping belt of Cretaceous and Tertiary sediments that runs from Long Island south to the Florida peninsular. In the vicinity of South Carolina the coastal plain is relatively flat and extends inland 120 to 150 miles, attaining a maximum elevation of about 500 feet at the fall line, the boundary between the coastal plain and piedmont physiographic provinces. The sediments of the coastal plain slope to the southeast and become progressively thicker toward the ocean, attaining a depth of several thousand feet in the vicinity of the Forest (Cooke 1936) (Figure 3).

The distinctive physiography of the coastal plain is due to sea level fluctuations of Tertiary and Quaternary age (Colquhoun and Johnson 1968). The unconsolidated and semi-consolidated sands, clays, and marls that make up the coastal plain geological formations were laid down as the shoreline shifted back and forth, and a series of marine terraces, reflecting earlier shorelines, have been identified in the region. The terraces in the inner coastal plain are of Miocene or earlier age, while those in the lower coastal plain, in the vicinity of the Forest, are comparatively recent in origin.

Elevations in the Forest range from sea level to almost 80 feet in the northern portion of the area. Four terrace formations are present in the Francis Marion: the Wicomico (from roughly 70 to 100 feet above sea level), the Penholoway (from roughly 42 to 70 feet), the Talbot (from about 25 to 42 feet above sea level), and the Pamlico (from sea level to 25 feet above sea level). These terraces were formed during the Pleistocene, the last two
Figure 2: Major rivers, creeks, and swamps in the vicinity of the Francis Marion National Forest.
Figure 3: Principal geological formations in the vicinity of the Francis Marion National Forest.
margins of these terraces are characterized by eroded scarps, long, low ridgelines that run parallel to the modern coast, and separated by lower, comparatively undifferentiated terrain.

Major drainages in the coastal plain follow the slope of the terrain, from the northwest to the southeast. The three major drainages in the vicinity of the Forest are the Santee, Cooper, and Wando Rivers (Figure 2). The Santee is one of the largest rivers on the eastern seaboard, draining an area of about 16,000 square miles (U.S.D.A. 1973), including one third of the state of South Carolina. The Santee originates in the Blue Ridge Mountains and is an extensive river system, while the Cooper and Wando originate and flow entirely within the lower coastal plain. The upper reaches of the Cooper River were dammed in the early 1940's, creating Lake Moultrie, which is part of the western margin of the Forest.

In spite of its extent, only a small portion of the Forest is drained by the Santee, by small laterals, of which Echew, Wedboo, and Wambaw Creeks are the largest. The Santee which forms much of the eastern and northern margins of the Forest, however, has an extremely broad floodplain, up to several miles wide. The river swamp is one of the most extensive in the southeast, and is frequently subdivided by smaller streams, channels, and islands.

Much of the western and central part of the Forest is drained by the Cooper River and its tributaries, while the area near the coast is drained by the Wando and smaller streams including Awendaw and Jeremy Creeks. Away from major streams the terrain is relatively flat and featureless. Large areas in the central portion of the Forest are poorly drained, and are characterized by swampy depressions or bays. Some of these swamps extend over considerable areas, with small patches of higher ground, or islands, within them. The principal swamps within the Forest include Hell Hole Bay, Walleye Bay, and Wambaw Swamp.

Immediately along the coast, from Charleston Harbor to the north of the Santee, the shoreline is highly irregular, characterized by numerous islands, bays, and marshes. This area, referred to locally as the "sea islands," is characterized by extensive tidal marshlands, with beaches infrequent and typical only on the outer faces of the larger islands. Drainage along the coast is strongly influenced by tidal effects, and many of the streams are brackish. Much of the tidal marshland itself lies just outside of the forest, whose coastal boundaries generally correspond to the higher, better drained terrain at the edge of the marsh. The area within the sea islands adjacent to the Forest comprises the Cape Romain National Wildlife Refuge, under the management of the Department of the Interior. Small portions of the marsh, and the courses of a number of tidal creeks, however, are within the Forest.

**Geology and Soils**

The surface deposits in the vicinity of the Francis Marion are Pleistocene age marine sediments. Four major Tertiary geological formations underlie these deposits in the vicinity of the Forest (Figure 3), and are sometimes exposed along drainage channels and by deep construction activity. The southeastern portion of the Forest, immediately along the coast, is characterized by geologically recent deposits.

The surface deposits and underlying geologic formations are the primary source, or parent material, for most of the soils in the Forest area. The geologic formations had additional, economic importance for both prehistoric and historic populations in the area. Orthoquartzites suitable for aboriginal stone tool manufacture occur in the Black Mingo formation, and outcrop at several areas along the Santee (Anderson, Cantley and Novick 1980). Other lithic raw materials of use to prehistoric populations that occur in the general area include sandstone and (poor quality) chert, from the Black Mingo, Santee Limestone, and Cooper Marl formations. The local cherts it should be emphasized, are of extremely poor quality, and were not extensively exploited.

During the late 19th century extensive land mining of phosphate occurred in Pleistocene deposits above the Cooper Marl formation. Dredging of phosphate rock occurred along the lower Ashley and Wando Rivers (Albert Sanders, Charleston Museum, personal communication). This industry collapsed in the early 20th century, when competition from other areas made mining the South Carolina deposits economicaally uncompetitive (Wallace 1951:588,623). The industry was an important source of revenue for the state following the Civil War. Extensive fossil remains were encountered during the mining operations, and a large number of specimens were donated to the Charleston Museum (Albert Sanders, Charleston Museum, personal communication).

Major soil associations in the Forest area are illustrated in Figure 4. These associations correspond roughly to the primary physiographic subdivisions in the Forest. Features like Walleye Bay, Wambaw Swamp, and most of the major stream floodplains are clearly demarcated. Detailed soil maps are available for both Berkeley and Charleston Counties (Miller 1971; Long 1980), employing 1:2000 aerials. These maps provide fine grain coverage of the Forest area, and should be consulted for soils information on specific tracts of land.

Away from primary features like major stream channels, bays, and swamps, much of the Forest
Figure 4: Major soil associations in the vicinity of the Francis Marion National Forest. Archeological sites tend to occur on the higher, better drained soils in the forest.
The Forest includes swamps, floodplains, stream terraces, bays, upland flats, side slopes, and ridges. Soils vary from deep, well drained loamy sands on the upland flats and ridges to poorly drained plastic clays in the bottoms. The soils on the upland flats and ridges are well drained and have an adequate moisture content for plant growth. The swampy bottoms, in contrast, are characterized by wet soils with poor natural drainage and low fertility levels.

Except for some use of swamp area for rice cultivation in the 18th and 19th centuries, mostly along the Santee, historic settlement and agriculture in the Forest has focused on the higher, better drained soils. A similar preference occurred during the prehistoric era. Research by Brooks and others (Brooks and Scurry 1978; Brooks 1980; Herold and Knick 1979a, 1979b) indicates that aboriginal sites of all periods are more likely to occur on higher, better drained soils than in the low lying, poorly drained areas of the lower coastal plain. Because modern activity such as road and log deck construction often concentrates on the high ground which was used for early settlement, it is important that these high potential areas be recognized and managed wisely.

Climate

The climate in the vicinity of the Forest is subtropical, with warm summers and mild winters (Kronberg and Purvis 1959; Long 1980:46). Average annual rainfall varies from 49 inches along the coast to 47 inches in the interior, with the highest periods of rainfall occurring from April to September. The growing season, or period between spring and fall freezes, ranges from about 290 days on the coast to 260 days in the northern part of the Forest. Summers are hot and humid, with average daily temperatures ranging from 65 to 90 degrees F. Daily temperatures tend to be slightly cooler along the coast due to sea breezes. Showers and thunderstorms are common. Autumn is the driest season of the year, and is generally warm and pleasant. Tropical storms and hurricanes occur on occasion, during this season, but only rarely cause much damage away from the immediate coastal area. Winters are short and mild with average daily temperatures ranging from 35 to 60 degrees. Little significant snowfall occurs, and precipitation is typically in the form of rain. Spring is a highly variable period, characterized by increased rainfall and warming temperatures. Flooding can occur any month of the year, but is most common from the spring through early fall, particularly after storms.

Excavations at archeological sites in and near the Forest have shown that the prehistoric occupants of the area exploited a wide range of flora and fauna (e.g., Edwards 1965; Widmer 1976a; Anderson and Claggett 1979; Trinkley 1980a). Edwards' (1965:45-46) excavations at the Sewee Shell ring, which is managed by the Forest Service as an Archeological Area, recovered remains of oysters, periwinkles, clams, scallops, crab, rays, catfish (marine), drum, gar, turtle, alligator, birds, deer, raccoon, and opossum (Figure 5).

Major streams and swamps in the Forest area are characterized by bottomland hardwood communities, with tupelo (Nyssa aquatica) and cypress (Taxodium distichum) the dominant species. The interstream areas tend to be more diversified, with a mosaic pattern of hardwoods, conifers, mixed communities, and in some areas treeless savannahs and bogs. Longleaf pine (Pinus palustris) and loblolly pine (Pinus taeda) are the dominant species in the interstream area today, particularly on the flats and ridges. Much of this reflects historic timber management, particularly on Forest-owned land where large tracts are given over to pine plantations. The original, pre-European forests in the area appear to have

Biotic Resources

The modern flora and fauna of lower coastal
been more diversified, with an oak-hickory-pine mixture the climax community (e.g., Kuchler 1964; Braun 1950;297; Wells 1942). The lower coastal plain was heavily logged in the late 19th and early 20th centuries (Frothingham and Nelson 1944), and few if any virgin stands of timber exist within the Forest. Even the bottomlands were logged, and large expanses of swamp were cleared for rice cultivation as early as the mid-18th century. Following the decline of rice cultivation in the 19th century these fields reverted back to hardwood swamps (Doar 1936).

The lower coastal plain and sea islands are rich in wildlife. Many of the species in the area today have been present since the early Holocene. Prior to 10,000 years ago, during the initial human occupation of the region, a considerably different faunal assemblage was present, including mammoth, mastodon, tapir, horse, sloth, and a number of other now-extinct species (Michie 1977, Hay 1923).

Modern species of mammals commonly occurring in the vicinity of the Forest include white-tail deer (Odocoileus virginianus), raccoon (Procyon lotor), opossum (Didelphis marsupialis), cottontail (Sylvilagus floridanus), gray fox (Urocyon cinereoargenteus), gray squirrel (Sciurus carolinensis), fox squirrel (Sciurus niger), flying squirrel (Glaucomys volans), striped skunk (Mephitis mephitis), and bobcat (Lynx rufus). Less common mammals, whose range appears to have been greatly restricted since European colonization, include beaver (Castor canadensis), otter (Lutra canadensis), mink (Mustela frenata), black bear (Ursus americanus), and cougar (Felis concolor). Bison (Bison bison), and wolf (Canis lupus) were also observed during the early contact period (Penny 1950:81). Feral swine occur in the bottomland swamps, and were introduced by early European explorers. Aquatic mammals observed along the coast include seals, manatees (rare) and a number of species of whales (Larson 1980).

Modern species of reptiles and amphibians of probable importance prehistorically include alligator (Alligator mississippiensis), and a diversity of toads, frogs, newts, lizards, turtles, and snakes. Over 100 species of freshwater fish are reported from coastal rivers (Dahlberg and Scott 1971) and species of probable importance prehistorically include channel catfish (Ictaluris punctatus), gar (Lepisosteus osseus) and carp (Cyprinus carpio). Anadromous blueback herring (Alosa aestivalis) spawn in the spring in the South Carolina area although the extent to which they were exploited prehistorically is not known (Larson 1980:113).

Over 200 species of birds have been identified in the coastal plain (Norris 1963). Migratory waterfowl occur in large numbers in the winter, favoring swamps, ponds, and bays. The passenger pigeon, exploited prehistorically for both oil and meat, was common in the area (e.g., Lefler, ed. 1967).
The biotic communities of the coastal zone and near shore waters have been important to the economies of both the prehistoric and historic populations of the state (Figure 6). Extensive shell middens testify to aboriginal use of the estuary, with oyster (Crassostrea virginica), clam (Mercenaria mercenaria), tagelus (Tagelus pleheuis), Atlantic ribbed mussel (Geukensia demissa), and whelks (Busycon sp.) common remains. During the historic period some of these species continued to be exploited as a foodsource, and during the 18th century shellfish were extensively used in lime and tabby production (e.g., Gregorie 1925). The blue crab (Callinectes sapidus) was important prehistorically, and is avidly trapped by coastal residents today. A wide range of sharks, rays, and bony fishes occupy the near-shore waters, and remains from large numbers of species have been noted in coastal prehistoric sites (e.g., Larson 1980). Significant economic species (both for aboriginal and modern populations) include mullet (Mugil spp.), jacks (Carangidae), sea catfishes (family Ariidae), drum (Sciaenidae), and sheepshead (Archosargus probatocephalus). The Atlantic sturgeon (Acipenser oxyrhynchus), while currently rare in coastal waters, was in the past more common. Sturgeon and shad were probably commonly taken primarily during spring spawning runs.

Larson (1980:13), in a discussion of late prehistoric aboriginal use of the lower coastal plain, noted that the lagoon and marsh environment:

was probably the most intensively occupied area of the coastal sector...it had the greatest physiographic variation and contained the largest number of plant and animal species used by the aboriginal populations on the Coastal Plain.

Both the interior of the coastal plain and the sea islands were occupied during the prehistoric era. Large, impressive shell midden sites are common along the coast and until quite recently were the focus of much of the archeological research in the region.

The Forest Environment in Perspective

This chapter has attempted to briefly illustrate environmental conditions in the Forest area. The resources of the Forest are rich and diverse, and have seen extensive use by both prehistoric and historic populations. The local environment has not been static, though, and ecological communities in the Forest area have changed considerably over the period of human occupation. Cultural resource investigations should consider these environmental changes.

Figure 6: Ethnohistoric drawing of Indians preparing food. A variety of species were utilized.
The Forest can be generally viewed as quite conducive to human settlement and use. Studies of past adaptations, particularly for the colonial and prehistoric eras, have been initiated, but are still in their infancy. A major focus for future cultural resource investigations in the Forest, therefore, entails defining the nature of these adaptational systems.
CURRENT INFORMATION ON HUMAN OCCUPATION IN THE VICINITY OF THE FRANCIS MARION NATIONAL FOREST

The Prehistoric Era

Human occupation of lower coastal South Carolina dates back at least 15,000 years. Prehistoric populations are known to have arrived in the area during the last major ice age and over one hundred centuries of human occupation had already come to pass before the Spanish, French, and English "discoverers" arrived in the area some 400 years ago. No written records exist for the prehistoric era, and archeology is the only available method for documenting this period of occupation. The historic era itself does not begin until the early sixteenth century, when the European voyages of exploration began along the southeastern coast. Even within the historic period itself the first one and a half centuries of activity are relatively obscure.

The purpose of this review is to provide a general outline of the record of human occupation in the Forest area. While summaries of the prehistory of the region are available (e.g., Griffin 1967, Ford 1974), the specific archeological evidence used to justify claims of early human occupation in this part of the coastal plain remains obscure. The following sections review this evidence, focusing on the major periods, or stages of development, of the local Indian cultures. A brief summary of these stages is given in Figure 7.

Paleo Indian (c. 15,000-11,000 Before Present [BP])

The Paleo Indian period, as presently recognized, occurs at the end of the Wisconsin glaciation, and marks the earliest human occupation of the southeastern United States. The approximate date of entry into the New World, and into the Southeast, is unknown, although recent discoveries suggest a date of at least 15,000 years ago (Adavasio et al. 1976, MacNeish 1976). A number of archeological sites found in North America, dating to between 11,000 and 13,000 years before the present, are characterized by a distinctive, fluted projectile point form called Clovis, after a locality in New Mexico where they were found in the 1930's (Figure 8). The occurrence of this artifact has come to be regarded as a diagnostic marker of Paleo Indian activity.

Fluted projectile points have been found at a number of sites in South Carolina, indicating moderate Paleo Indian occupation of the area (Wauchope 1939; Waring 1961; Waddell 1965a). Michie (1977) investigated the occurrence of Paleo Indian projectile points from throughout the state, and summarized information on over 100 finds. His study indicates that Paleo Indian groups occupied the riverine environments of the lower piedmont, fall line, and coastal plain (Figure 9). Most of the fluted points were recovered along the terraces of the major river systems, particularly on high points of land situated at the intersections of creeks with the river floodplain. Less utilization appears to have occurred along minor drainages or in the inter-riverine area, where comparatively few fluted points have been found.

A number of fluted points have been recovered in the lower coastal plain of South Carolina, along both the Santee and Cooper River drainages (Waddell 1965a; Michie 1977). No sites dating to this period have been found within the boundaries of the Forest, although it is probable that they exist, particularly along the terraces of the Santee River. The lack of recorded Paleo Indian sites in the Forest is most likely due to the relatively few investigations conducted immediately along the Santee, and generally throughout the area.

Beyond a general knowledge of fluted point form and distribution, very little is actually known about the Paleo Indian occupation of the region. Groups are assumed to have been small and highly mobile, with an adaptation directed towards major river drainages and possibly quarry sites (e.g., Williams and Stoltman 1965, Gardner 1974, Goodyear 1979). The environment during the Paleo Indian period was considerably different than that at present, reflecting the worldwide glaciation. About 12,000 years ago sea level was approximately 250 feet lower than at present. Consequently, the coastal plain was much larger, with a somewhat colder climate. In addition to modern animals, a diverse megafaunal assemblage was present, including bison, tapir, mammoth, mastodon, giant sloths, and a number of other now-extinct species. The Paleo Indian inhabitants of the region may have exploited these extinct species, although little is actually known about their hunting, gathering, and settlement systems.

Early Archaic (c. 11,000-9,000 BP)

The Early Archaic period follows the close of the Pleistocene glaciation, and is viewed as a time of readaptation by local populations to the changing environmental conditions brought
<table>
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<th>KEY REPORTED SITES</th>
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<td>ceremonial centers)</td>
<td>Limerick*</td>
<td>Small triangular projectile pts.</td>
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<td>1000 AD</td>
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<td>Platform mounds.</td>
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<td>Santa Elena</td>
<td>Cord marked &amp; fabric impressed pottery.</td>
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<td>Finger pinched &amp; punctated pottery.</td>
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<td></td>
<td>Initial Human Occupation</td>
<td>Doerschuk</td>
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* *Within the National Forest Boundaries*

**Figure 7:** The cultural sequence in the vicinity of the Francis Marion National Forest.
Figure 8: Paleo-Indian, Early Archaic, and Middle Archaic bifaces from the vicinity of the Francis Marion National Forest. A - C Clovis; D - G Palmer; H - M Morrow Mountain; O - Q Guilford; N Swannanoa; R - S Unknown Stemmed.
about by climatic warming, a rising sea level, and the accompanying floral and faunal realignment (Fitting 1968; Ford 1974; Morse 1975). During this period, the large Pleistocene animals (such as mammoth, mastodon, sloth, etc.) were replaced by an essentially modern group of animals, forcing some redirection in hunting patterns. While archeological knowledge of settlement–subsistence patterning during this period is almost completely absent, there is moderate evidence of an increase in population, and an expansion in exploitation which included both major drainages and inter-fluvial areas of the coastal plain (Anderson, Lee and Parler 1979; James L. Michie: personal communication).

Early Archaic activity in the lower coastal plain is recognized by a number of diagnostic projectile point types that have been dated to this period at other localities in the Southeast (Figure 8). Dalton, Palmer, and Kirk projectile points (Coe 1964; Goodyear 1974) have been reported from the general area of the Forest, at sites both immediately adjacent to the estuary (Koob 1976:20; Trinkley 1980a) and in the interior (Wood 1977:49; Asreen 1974; Brooks and Scurry 1978:45).

Brooks and Scurry have offered this interpretation about the general Archaic adaptation in the area:

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

At the present, very little is known about Early Archaic site distribution, although there is some suggestion that sites tend to occur along river terraces, with a decrease in occurrence away from this zone.

The earliest Archaic assemblage recovered through excavation in the general South Carolina area is the Dalton complex, reported at the Taylor site near Columbia (Michie 1971) and at the Hardaway site in North Carolina (Coe 1964). The Dalton toolkit consists of large, thin side notched projectile points and a variety of tools, including end and side scrapers, burins, and other engraving tools, spokeshaves, flake knives, and pieces esquillees (bone splitting wedges) (Goodyear 1974). This complex may represent a transition from the Paleo Indian to the Archaic, reflecting "the onset of a new economic adjustment" (Williams and Stoltman 1965:678). An examination of faunal (animal) remains from Dalton sites in the Midwest and Southeast (McMillan 1971) indicates that these people were exploiting white-tailed deer, rabbit, squirrels, raccoon, turkey, mussels, fish, and...
waterfowl. Recent investigations in northeast Arkansas suggest that Dalton groups may have occupied central base camps and exploited territories oriented along river drainages (Morse 1977), a pattern that may have been common throughout the Southeast. One Dalton point has been found near Awendaw Creek in northern Charleston County (Koob 1976).

The post Dalton occupation of the coastal plain during the Early Archaic corresponds with Coe's (1964) Palmer and Kirk complexes. This period is characterized by the introduction of side and corner-notched projectile points. Subsistence continued to include a wide variety of animal and plant resources. The dominant game animal exploited was probably white-tailed deer, although numerous other animal resources as well as acorns, hickory nuts, and other plant foods were almost certainly utilized regularly. An increase in the population and settlement of the inter-riverine zone in South Carolina is apparent during the post Dalton period in the lower coastal plain (Anderson, Lee, and Parler 1979). In the area of the Forest both Palmer and Kirk points are relatively uncommon, although a few have been found along the Cooper River Rediversion Canal (Asreen 1974; Brockington 1980), from immediately along the coast (Koob 1976; Trinkley 1980a; Chevis D. Clark: personal communication), and at a few locations in the inter-riverine zone (Brooks and Scurry 1978;24; Kellar, Bernhardt and Garrow 1979:35).

Middle Archaic (c. 9,000-4,500 BP)

The Middle Archaic period in the Atlantic southeast reflects a continuation of the adaptation patterns developed earlier, at the end of the Pleistocene. An oak-hickory forest appears to have dominated much of the coastal plain during the Middle Archaic, with pines increasing after about 5,000 BP (Whitehead 1973). Three artifact/cultural complexes dating to this period have been recognized in the general region, based on Coe's (1964) work in North Carolina. These are, from earliest to latest, Stanly, Morrow Mountain, and Guilford. Stemmed projectile points replace the earlier notched forms, and ground stone tools begin to appear (Chapman 1975).

Middle Archaic sites appear to be common within the South Carolina coastal plain (Anderson, Lee, and Parler 1979), and are identified almost exclusively by the presence of Morrow Mountain and Guilford points (Figure 8). Stanly points are rare, and appear to be less common in coastal South Carolina than in North Carolina. Morrow Mountain Type I and II projectile points are the most common Middle Archaic bifaces recovered from the vicinity of the Francis Marion. These have been found at a number of sites, including along the Santee River (Brockington 1980), the Cooper River (Trinkley and Tippett 1980:97), and from the inter-riverine zone (Herold and Knick 1978:26; Kellar, Bernhardt, and Garrow 1979:35). The form has also been reported from along the coast. Koob (1976:20-22) reports the occurrence of Morrow Mountain points from a number of sites in Christ Church Parish, Charleston County in plowed fields immediately adjacent to the tidal marshland.

Guilford-like forms have been noted from some sites in the Forest area (e.g., Asleen 1974; Brockington 1980), although they appear to be less common than Morrow Mountain types. They are almost invariably made from local orthoquartzites. The age of these points remains somewhat uncertain, since lanceolate shaped points are occasionally seen in most other periods. The nature of Middle Archaic settlement in the lower coastal plain remains to be documented, although the apparent increase in the number of identifiable artifacts, compared with earlier periods, suggests an increase in population, use of the area, or both.

Late Archaic (c. 4,500 - 3,000 BP)

The Late Archaic period throughout the eastern United States is characterized by an increase in population, sedentism (remaining in one place), and level of social organization that stands in dramatic contrast to the lifeways that preceded it. Long distance trade networks were established, evidence for inter-group warfare increased, and social systems consisting of hundreds or even thousands of people appeared, compared to the small numbers of people comprising the earlier Archaic groups. Throughout North America the period is a time of dynamic social change that has come to be known as the "New World Formative," because it was during this time that the basis for the succeeding complex agricultural societies appeared (Ford 1969).

Late Archaic sites in coastal South Carolina are identified by the presence of punctated fiber, sand, and non tempered pottery, and the occurrence of large, square stemmed projectile points (Figures 10, 11). The ceramics, locally described as Stallings, Thom's Creek, and Awendaw wares, are among the earliest in North America, a finding that has prompted considerable interest and research. Late Archaic period sites are common in the vicinity of the Forest, both along the coast and in the interior. The coastal sites, located within and adjacent to estuaries, are characterized by shell midden deposits, reflecting extensive use of the marsh resources. Late Archaic sites in the interior, in contrast, only rarely exhibit shell remains, indicating a different pattern of adaptation (Anderson, Lee, and Parler 1979:93-94).

Large numbers of Late Archaic shell middens have been identified within and adjacent to the estuary in the vicinity of the Forest (Gregorie 1925; Waddell 1965b; Trinkley 1980a). The alkaline soil environment created by the shell remains favors the preservation of bone and other perishable materials. Excavations at
Figure 10: Late Archaic and Early Woodland ceramics from the Francis Marion National Forest. A Stallings Punctate; B, C, F, G, H, J Thom's Creek Punctate; D - E Awendaw Finger Pinched; I, K, L Thom's Creek Simple Stamped.
Figure 11: Late Archaic and Early Woodland points from the Mattassee Lake sites, Francis Marion National Forest. A, B, M - O Small Savannah River; P - Q Savannah River Stemmed; F, G, J Gypsy Stemmed; E Swannanoa; H, K Unknown Contracting Stemmed; C, D, I, L Unknown.
shell middens had been worked into tools, including needles, awls, points, and scraping implements. The middens typically produce large quantities of shellfish, animal bone, and charcoal from a range of plant species (Trinkley 1976a, 1980a). In addition to food remains, many of the bones found in the shell middens had been worked into tools, including needles, awls, points, and scraping implements (Waring 1968a; Michie 1979).

Most Late Archaic research in the vicinity of the Forest has focused on shell midden sites along the coast. These sites are characterized by sand and nontempered Thom's Creek and Awendaw ceramics (Waddell 1965a; Trinkley 1980b) (Figure 10). These ceramics have been dated to 1345 B.C. ± 110 (GX-2279) at the Sewee shell ring, which is on National Forest Land (Edwards 1965). Radiocarbon dates from early ceramic sites on the Georgia-South Carolina coast, compiled by Michael Trinkley (1980b), are given in Figure 12. Stallings fiber tempered ceramics are relatively rare along this portion of the coast, and appear to be concentrated south of Charleston in the Sea Island area (Anderson 1975:183; Trinkley 1980b). In the interior, however, both Stallings fiber tempered and Thom's Creek sand and nontempered ceramics have been reported from a number of sites (e.g., Wood 1977; Brockington 1980; Brooks and Scurry 1978; Herold and Knick 1979a, 1979b; Kellar, Bernhardt, and Garrow 1979:35). Awendaw ceramics, in contrast, which are common along the coast, are only rarely noted in the interior (Widmer 1976a). Diagnostic Late Archaic projectile points, Savannah River, Swannanoa, and Gypsy Stemmed types (Figure 11), have also been reported at a number of locations both along the coast and in the interior (e.g., Oliver: Personal Communication; Wood 1977; Brooks and Scurry 1978; Drucker and Anthony 1979; Brockington 1980). Ceramic artifacts dating to this period are much more common, however, and are the primary means by which sites of the Late Archaic and succeeding prehistoric periods are identified.

The nature of Late Archaic adaptation in the lower coastal plain, particularly the relationship of the coastal and interior sites, has been the subject of a moderate amount of research in recent years. Widmer (1976a) examined the occurrence of Awendaw and other Late Archaic artifacts in the Cooper River drainage and concluded that groups in the Sea Island area were largely sedentary, with only limited movement into and/or interaction with the interior. Separate Late Archaic groups, following a more mobile settlement pattern, may have occupied the interior. An alternate interpretation, proposed by Trinkley (1980a;290-291), is that the interior sites are temporally earlier, reflecting a relatively mobile adaptation that was abandoned as

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**Figure 12: Radiocarbon dates from the vicinity of the Francis Marion National Forest.**

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<td>Wilmington ceramics</td>
<td>South 1971</td>
<td></td>
</tr>
<tr>
<td>A.D. 605</td>
<td>1345 ± 100 B.P.</td>
<td>QC 786</td>
<td>Wilmington ceramics</td>
<td>South 1971</td>
<td></td>
</tr>
<tr>
<td>A.D. 415</td>
<td>1535 ± 95 B.P.</td>
<td>QC 788</td>
<td>Wilmington ceramics</td>
<td>South 1971</td>
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</tr>
<tr>
<td>A.D. 250</td>
<td>1700 ± 70 B.P.</td>
<td>UGa 3052</td>
<td>Hanover ceramics</td>
<td>Scurry and Brooks 1980</td>
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</tr>
<tr>
<td>105 B.C.</td>
<td>2055 ± 85 B.P.</td>
<td>Um 1916</td>
<td>Hanover ceramics</td>
<td>Scurry and Brooks 1980</td>
<td></td>
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<tr>
<td>125 B.C.</td>
<td>2075 ± 75 B.P.</td>
<td>Um 1917</td>
<td>Hanover ceramics</td>
<td>Dorian and Logan n.d.</td>
<td></td>
</tr>
<tr>
<td>150 B.C.</td>
<td>2100 ± 60 B.P.</td>
<td>MRR1 89</td>
<td>Hanover ceramics</td>
<td>Dorian and Logan n.d.</td>
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</tr>
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<td>180 B.C.</td>
<td>2130 ± 100 B.P.</td>
<td>MRR1 88</td>
<td>Hanover ceramics</td>
<td>South and Widmer 1976</td>
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</tr>
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<td>935 B.C.</td>
<td>2885 ± 175 B.P.</td>
<td>UGa 904</td>
<td>Thom's Creek ceramics</td>
<td>South and Widmer 1976</td>
<td></td>
</tr>
<tr>
<td>1230 B.C.</td>
<td>3180 ± 65 B.P.</td>
<td>UGa 903</td>
<td>Thom's Creek ceramics</td>
<td>Trinkley 1980a</td>
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<td>1240 B.C.</td>
<td>3190 ± 70 B.P.</td>
<td>UGa 901</td>
<td>Thom's Creek ceramics</td>
<td>Trinkley 1980a</td>
<td></td>
</tr>
<tr>
<td>1325 B.C.</td>
<td>3275 ± 65 B.P.</td>
<td>UGa 902</td>
<td>Thom's Creek ceramics</td>
<td>Trinkley 1980a</td>
<td></td>
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<tr>
<td>1345 B.C.</td>
<td>3295 ± 110 B.P.</td>
<td>GX 2279</td>
<td>Thom's Creek ceramics</td>
<td>Edwards 1965</td>
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<td>1395 B.C.</td>
<td>3345 ± 70 B.P.</td>
<td>UGa 905</td>
<td>Thom's Creek ceramics</td>
<td>Trinkley 1980a</td>
<td></td>
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</tbody>
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Figure 12: Radiocarbon dates from the vicinity of the Francis Marion National Forest.
exploitation of the coastal sector became increasingly efficient. The nature of Late Archaic settlement in the Forest area remains largely unknown, however, reflecting the need for additional work at both coastal and interior sites.

Woodland (c. 3,000 - 1,000 BP)

The Woodland period throughout the eastern United States is characterized by increasing population, sedentism, and reliance on horticulture and agriculture. Use of pottery is widespread, and the bow and arrow appear. The beginning of the Woodland Period in the South Carolina area occurs when punctuated Stallings and Thom's Creek wares are replaced by paddled stamped ceramics. The actual changes that occurred were far more complex, and appear to reflect a major adaptive shift. Exploitation of coastal shellfish appears to have been largely abandoned, at least during the early phases of the Woodland. Settlement appears to have shifted away from the coast and into the interior. Within the interior, use of the inter-riverine zone increased (e.g., Brooks and Scurry 1978:44), and only in the later Woodland is there evidence for renewed, intensive exploitation of coastal resources. The nature of Woodland settlement and adaptation, it must be stressed, is currently very poorly understood in the vicinity of the Francis Marion. A change from the Late Archaic pattern is evident, however, that may be related to rising sea levels drowning coastal shellfish beds and infiltrating low lying areas of the interior (e.g., DePratter 1977; Brooks 1980; Brooks et al. 1979, 1980), and/or to an increasing reliance on horticulture.

The Woodland era spans approximately 2,000 years in the vicinity of the Forest. A wide range of ceramic and lithic artifacts has been identified from this period, and temporal subdivisions have been recognized, each characterized by distinctive cultural materials. Three phases have been developed by local archeologists to subdivide the Woodland (e.g., South 1976; Trinkley 1980a). Each reflects a different time period and/or a different culture or lifeway. These are, from the earliest to the latest, the Refuge, Deptford, and Cape Fear/Wilmington phases.

The earliest Woodland occupation in the area of the Francis Marion is the Refuge Phase, dating from roughly 3000 B.P. to 2500 B.P. (Waring 1968b; DePratter 1976, 1979; Lepionka 1980). Sites of this period are relatively infrequent in the Forest area, and occur almost exclusively away from the coast, in the interior. Diagnostic artifacts include dentate stamped pottery and moderate sized square stemmed projectile points (Figures 11 and 13). These artifacts have been recovered from a number of sites in the vicinity of the Forest (e.g., Anderson, Claggett and Newkirk 1978; Herold and Knick 1978:25, 1979a:29, 1979b:26; Trinkley 1980a; Brockington 1980). An adaptation focusing on the resources of the interior is suggested, a marked change from the coastal, estuarine orientation characteristic of the preceding Late Archaic period. The association of Refuge phase materials with shellfish collection, noted near the mouth of the Savannah River (Waring 1968b; Lepionka 1980), appears to be the exception rather than the rule throughout the region (e.g., Peterson 1971; Anderson 1975; DePratter 1975; Trinkley 1980a).

The Deptford phase, which dates from 2500 B.P. to 1500 B.P., is the next recognizable Woodland occupation in the vicinity of the Forest (Milanich 1971; South 1976). Sites of this period are quite common, and occur throughout the Forest area (e.g., Trinkley and Carter 1975; Herold and Knick 1978, 1979a, 1979b; Anderson, Claggett and Newkirk 1978, 1980; Brooks and Scurry 1978; Drucker and Anthony 1979, 1980; Green and Brooks n.d.). Diagnostic artifacts attributable to the Deptford phase include linear check stamped pottery and small stemmed Thelma-like (South 1959) and Deptford stemmed (c.f. Trinkley 1981) projectile points (Figures 13 and 14). Other artifacts that appear to be associated with this phase include sand tempered plain, simple stamped, cord marked and fabric impressed pottery. Unfortunately, these wares also occurred in succeeding periods, and are difficult to assign accurately to a particular phase when found out of stratigraphic context.

Few Deptford sites have been found associated with shellfish remains along the South Carolina coast, a pattern similar to that noted in the earlier Refuge phase (Anderson 1975). Sites of this period have been noted throughout the interior of the coastal plain, however, indicating extensive use of this area (Waring 1959, Anderson 1975, Brooks and Scurry 1978). Brooks and Scurry (1978:61) have noted that Deptford sites are common along both major drainages and in the inter-riverine zone in the lower coastal plain, which they attribute to a dispersed subsistence system directed towards maximizing food supplies.

The Cape Fear/Wilmington phase succeeds and is perhaps contemporaneous with all or part of the Deptford phase. This occupation is represented by collections and/or radiocarbon dates from a large number of sites, yet is perhaps the most confusing, and least understood period in the prehistoric era. The primary source of confusion lies in the nature of the artifacts that typify sites of this phase: cord marked and fabric impressed ceramics (Figure 15). These wares, locally called Cape Fear if sand tempered, and Hanover or Wilmington if sherded tempered, have a long temporal occurrence in the region. Cape Fear-like ceramics have been documented from Early Woodland through Mississippian assemblages in the South Carolina area (e.g., Caldwell 1958; Reid 1967; Anderson, Lee, and Parlier 1979) while an increasing series of radiocarbon dates for Hanover/
Figure 13: Woodland and Mississippian points from the Mattassee Lake sites, Francis Marion National Forest. A - C, E Carraway; D Yadkin; F - H, J, R Earred Yadkin; L, O Deptford; B, I, K, M, N, P, Q Unknown.
Figure 1A: Early and Middle Woodland ceramics from the vicinity of the Francis Marion National Forest. A – B Refuge Dentate Stamped; C Refuge/Deptford Plain; D – H Deptford Linear Check or Check Stamped; I – K Incised; L Deptford Simple Stamped.
Figure 15: Middle and Late Woodland and Mississippian ceramics from the vicinity of the Francis Marion National Forest. A - C Cordmarked; D - H, K Fabric Impressed; I - J Simple Stamped; L - Q Pee Dee Complicated Stamped.
Wilmington wares spans the period from 200 B.C. to 1100 A.D. (e.g., Caldwell 1971; South 1976; South and Widmer 1976; Scurry and Brooks 1980; Dorian and Logan n.d.). In spite of these ranges, cord and fabric marked ceramics tend to be interpreted by archeologists working in the region as reflecting later Woodland components. Some patterns are beginning to emerge in data collected from sites where these wares are present. Sites radiocarbon dated to between approximately A.D. 500 and A.D. 1000 on the South Carolina coast typically contain only cord marked and/or fabric impressed pottery, with sherds of plain or simple stamped wares occasionally noted (e.g., Scurry and Brooks 1980:27; South and Widmer 1976; Trinkley 1980a). The relatively limited stratigraphic/excavation data available from the coastal plain also suggests that post-Deptford, pre-Mississippian assemblages in the area tend to be characterized by cord marked, fabric impressed, plain, and simple stamped pottery (e.g., Widmer 1976a; Anderson, Lee, and Parler 1979; Trinkley 1980; Anderson, Cantley, and Novick 1980; Green and Brooks n.d.). Recent evidence from the Mattasssee Lake sites excavations, furthermore, suggests that simple stamped wares tend to dominate assemblages late in the Woodland, possibly replacing cord and fabric impressed wares (Anderson, Cantley and Novick n.d.). Use of cord marked, fabric impressed, or simple stamped finishes to date sites to the later Woodland, therefore, appears somewhat justified if a reasonable sample of artifacts can be collected from a site, and if few wares from earlier or later periods are found in association.

Late Woodland sites are common throughout the vicinity of the Forest, both in the interior and along the coast. Marked differences in the occurrence of the various diagnostic artifacts, however, strongly point to the presence of at least two, and possibly more discrete adaptations dating to this general period. Brooks and Scurry (1978:61) note that Cape Fear ceramics are common in both the interior riverine and inter-riverine zone of the interior, a pattern identical to that noted for the Deptford phase. Few Hanover/Wilmington sites were observed in the interior, however, although the wares have been noted (Brooks and Scurry 1978:61; Herold and Knick 1978:27). Both Cape Fear and Hanover/Wilmington wares are common along the coast, however, typically associated with shellfish remains (e.g., Caldwell 1952; Anderson 1975; Trinkley 1980a). These shell midden sites tend to be fairly extensive (e.g., Trinkley and Carter 1975, Trinkley 1980a), and appear to reflect the first substantial use of estuarine resources since the Late Archaic.

The later Woodland Cape Fear/Wilmington phase in the vicinity of the Forest will probably resolve into two or more subphases. The period appears characterized by an adaptation focusing on shellfish and other coastal resources, and a separate adaptation focusing on the interior, perhaps in conjunction with some use of the coastal area. These two adaptations, furthermore, appear to be associated with Wilmington and Cape Fear ceramics, respectively, at least in the area of the Forest. The overlapping distribution of these wares remains to be explained, however, and the later Woodland period will doubtless be a source of confusion for some time to come.

Mississippian (c. 1,000-500 BP)

The Mississippian period in the southeast represents the most complex level of culture attained by the native populations prior to European contact. The basic definition for the Mississippian refers to it as, "...the wide variety of adaptations made by societies which developed a dependence upon agriculture for their basic, storable food supply (Griffin 1967:189)."

Throughout the general region the period is characterized by sedentary, predominantly agricultural societies, with political control passed down through family line in the most complex and populous groups. Major political centers were characterized by earthen mounds, where high status individuals lived or were buried. Most sites dating to this period do not have associated mounds, but instead appear to be villages, hamlets, or special activity areas that may or may not have been related to a mound center.

Several large ceremonial and/or mound centers are known in the South Carolina coastal plain, together with numerous smaller sites of unknown function. Ferguson (1971, 1975a) has summarized much of the available data on the Mississippian occupation of the region, including information on site location and distribution. His research indicates that Mississippian ceremonial centers are regularly distributed along the major drainages of the region, and that their locations are closely correlated with specific soil and forest types. This distribution has been tentatively interpreted as reflecting intentional selection of environments suitable for both agriculture and for hunting and gathering, with both strategies playing a major role in local subsistence.

Diagnostic Mississippian artifacts in the lower South Carolina coastal plain include complicated stamped ceramics and small, stemmed and triangular projectile points (Figures 14 and 15). Sites of this period are known from the vicinity of the Forest (e.g., Gregorie 1925; Trinkley and Carter 1975; Anderson, Gigget and Newkirk 1978; Trinkley 1980a; Brockington 1980). A distribution along the coast and inland along the two major drainages in the area, the Santee and the Cooper, is indicated. Virtually no Mississippian sites are known from the inter-riverine zone in the interior of the Forest, a pattern that appears to hold throughout the coastal plain (Anderson
No Mississippian mound sites are currently known from the Forest area, although probable village sites are known from along the Santee and in the coastal zone. Mounds may exist but may be presently unrecognized in the area, however, or may have been destroyed in the past by farming, flooding, or other causes. One of the largest known Mississippian sites on the Forest is at Walnut Grove Plantation.
ETHNOHISTORY OF THE FRANCIS MARION NATIONAL FOREST

Introduction

At the time of Columbus' arrival in the New World the Indians of the southeastern United States were, for the most part, settled agriculturalists living in hamlets, villages, and towns scattered across the region. This way of life, described previously as the Mississippian era, was profoundly affected by European contact. Within 300 years of the initial Spanish voyages along the southeastern coast, virtually all traces of the native populations and cultures had disappeared from the Carolinas, and indeed from much of the region. The earliest explorers were in contact with Mississippian cultural systems at their height and their descriptions provide first-hand accounts of an essentially prehistoric way of life.

Spanish exploration along the southeastern Atlantic coast was underway by the first decades of the sixteenth century. From colonies in the West Indies, explorers and mariners went out to the south, west, and north to explore what was, in effect, a whole new world. By 1520 ships were regularly skirting the coasts of the southeast, and about this time initial European contact with the native peoples of the Carolinas occurred (Figure 16). The Spanish attempted a settlement near the vicinity of what is now the Francis Marion National Forest in 1526 in the Winyah Bay area, the "land called Chicora." Quattlebaum (1956:40-41) reports that the Spanish scouted the area of present-day McClellanville for potential settlement locations (Williams and Garrow 1980:65).

Many of the early Spanish accounts of these voyages remain untranslated. Our knowledge of this period of South Carolina history will undoubtedly increase as translations become available. Through careful study of the records of these early expeditions it is possible to learn a great deal about native life. Much of this information would otherwise have been lost, or could only be, at best, partially reconstructed through the work of archeology and related disciplines.

Within a few decades of initial European contact the native cultures of the southeast were in rapid decline. The historic records from this period provide graphic accounts of the destruction and/or disintegration of the native cultures, a disappearance that was largely complete in the vicinity of South Carolina even before the American Revolution. As early as 1770 the Lt. Governor of the Royal Colony of South Carolina commented on this loss, as part of an extended description of the province:

I cannot quit the Indians without mentioning an observation that has often raised my
wonder. That in this Province, settled in 1670...then swarming with tribes of Indians, there remain now, except the few Catawbas, nothing of them but their names, nor any accounting for their extinction by war or pestilence equal to the effect. William Bull II, to the Earl of Hillsboro, Nov. 30, 1770. Records in the British Public Records Office Relating to South Carolina, xxxii, 403.

The rapid destruction of native populations of the state has greatly influenced modern scholars. Two major sources on the early historic Indians of South Carolina - Red Carolinians by Chapman J. Milling (1940) and Indians of the South Carolina Lowcountry by Eugene Waddell (1980) are both prefaced by Governor Bull's quotation cited above.

The Record of Exploration and Contact

The earliest well-documented contact between European explorers and the native groups of the South Carolina area occurred in the 1520's (Figure 17). In 1520 and 1521 Francisco Gordillo, under orders from Lucas Vazquez de Ayllon, a member of the Royal Council of Santa Domingo, explored and mapped the southeastern Atlantic coastline for several hundred miles, including the area of modern South Carolina. Disobeying orders in June of 1520, Gordillo and a second Spanish captain mounted a slaving expedition, capturing a large number of natives from what is believed to be the mouth of the Santee or Pee Dee Rivers. The Indians were carried to Santa Domingo, where after considerable legal dispute they were freed. Few made it back to their homeland, however, and sanctioned and unsanctioned slave raiding continued over the next century, providing labor for the plantations, mines, and mills of the Spanish colonies in the Indies.

Gordillo's expedition is important to anthropologists and archeologists because it provides the earliest extensive descriptions of Indian groups in the southeast (Swanton 1946:830). One of the Carolina natives taken prisoner, Francisco of Chicora, quickly became fluent in Spanish. Attached to Ayllon as a servant, Francisco came in contact with both Peter Martyr and Oviedo, two of the most prominent early Spanish chroniclers in the New
Figure 18: European explorers viewing the Southeastern Indian black drink ceremony.

World. Francisco described the Indian groups of his homeland, and Martyr included a record of these tales, some highly fanciful, in his history.

Some of the earliest Spanish exploration in the New World and some of the earliest accounts of its natives, therefore, occurred along the South Carolina coast. These accounts, furthermore, describe groups living very close (if not within) the boundaries of the Forest, near the Santee and Pee Dee Rivers. Among the native groups described by Francisco, for example, are the Xoxi (Shoshi), whom Swanton (1946:182) considers possibly to be the ancestors of the Sewee Indians of the English colonial period. The Sewee occupied the lower coast between the Santee and the Cooper Rivers during the late 17th and early 18th century and, with the Santee, make up the two principal historic Indian groups known to have been living in the area of the Forest.

Spanish exploration of the Carolinas continued throughout the 16th century, and a number of valuable descriptions of the local Indian groups date to this period. After the middle of the sixteenth century French and later English explorers were also operating in the region, providing additional records written from different national perspectives. The early record of Spanish, French, and English exploration and attempted settlement has been described at length in Paul Quattlebaum's (1956) popular book The Land Called Chicora: The Carolinas Under Spanish Rule with French Intrusions 1520-1670. While a detailed account of this record is unnecessary, several events occurred that are of particular importance to the study of the early historic Indian groups of the region.

In 1526 an attempt by Ayllon to found a colony on the South Carolina coast ended in dismal failure after a few months. This settlement is believed by Quattlebaum (1956) and others to have occurred near Winyah Bay, and the colonists probably interacted in some fashion with Indians living in or near the Forest on the lower Santee River and along the coast. There is disagreement about the location of this settlement, however, with others suggesting that the site was located near the mouth of the Savannah River (Stephenson: personal communication).

From 1539 to 1542 the DeSoto expedition cut a path through the Indian groups of the southeast, passing through the general South Carolina area in the late spring of 1540. This expedition, initially consisting of about 600 men and an extensive baggage train, wandered, fought, and plundered its way across the entire southeast, from Florida north through South Carolina to North Carolina then west through Tennessee, Alabama, Mississippi, Arkansas, Louisiana and even into Texas. Finally the greatly reduced and demoralized survivors retreated to the Gulf Coast and from there followed the coast to Mexico.

The DeSoto expedition has been the focus of considerable scholarly attention, since it marked the first major European penetration of the southeast (Swanton ed, 1939). The accounts of the expedition provide the first, and in many respects the last, records of southeastern native Mississippian cultures at their height. Within a few generations most of the complex societies DeSoto encountered had collapsed through disease (especially European introduced smallpox), warfare, and famines triggered in part by European contact. During DeSoto's expedition into the South Carolina area his
forces encountered a highly complex native society, called Cofitachequi on the Fall Line in the area of the upper Savannah or Wateree Rivers. This province was already severely depopulated by (probable) European introduced diseases, although only some 20 years had passed since the Spanish encountered the coastal groups. While encamped in the principal village of the province DeSoto was shown Spanish artifacts that were believed to have come from Ayllon's failed colony, indicating native contact with that settlement well into the interior. The chronicles of the expedition provide extensive descriptions of the towns and temples of Cofitachequi, which was one of the most complex societies encountered during the expedition.

Recent historical research (e.g., Baker 1974; DePratter, Hudson, and Smith 1980) strongly suggests that the primary towns of Cofitachequi were located on the upper Wateree River, in central South Carolina. The records of the DeSoto expedition are of particular importance to local archeologists, since they describe conditions at villages that can be tentatively associated with major archeological sites (mound groups) in the area. Furthermore, as the dominant group in the general region, it is probable that the rulers at Cofitachequi, at least during the late prehistoric and very early contact era, politically controlled most contemporary groups in the lower coastal plain. Archeological sites of this period from the vicinity of the Forest, therefore, should not be regarded as isolated settlements, but as part of a widespread social system.

Following DeSoto the next major European activity in the South Carolina area came in the 1560's. Two French attempts at settlement, by Ribault and Laudonniere, in 1562 and 1564 respectively, quickly failed. In 1566 the Spanish established a fortified settlement at Santa Elena, on Parris Island near the modern city of Beaufort, South Carolina. This colony, occupied almost continuously for the next 21 years, was for a time the capitol of Spanish Florida, and a focus for contact with the native populations. Under the leadership of Captain Juan Pardo an expeditionary force from Santa Elena went well into the interior in late 1566, encountering many of the same groups met by DeSoto some 25 years before. Pardo's accounts are an invaluable record of the location and condition of local Indian groups, and have been used to pinpoint closely DeSoto's original route (Swanton 1939, 1946:64-70; DePratter, Hudson, and Smith 1980). The forts and town at Santa Elena have recently been the subject of extensive historical and archeological research, which should ultimately shed great light on the nature of Spanish interaction with native populations (South 1979, 1980).

Following the abandonment of Santa Elena in 1587 the South Carolina coast remained unsettled (by Europeans) until the English colony was established at Charles Towne. Spanish mariners continued to explore the coasts, and the accounts of the voyages of Iberra in 1604 and Eciia in 1605 and 1609 provide a valuable insight concerning coastal South Carolina natives. The colonial record is sparse between this period and the 1660's when English exploration occurred along the South Atlantic coast. In 1663 Hilton, and three years later Sandford, sailed up and down the coast. Their accounts include descriptions of a number of local groups, including the Sewee, who were occupying areas within the Francis Marion.

The British first landed at Bulls Bay in 1670 (Cheves 1897) but did not remain there long, moving to Albemarle Point on the west side of the Ashley River to establish the first permanent settlement in South Carolina (South 1971). Charles Towne was later moved to the peninsular area bounded by the Ashley and Cooper Rivers.

During the early years of colonization, the economy of South Carolina was based on trade with the coastal Indians. Although the colonists at first were fearful of the native Americans, they soon came to depend on the
Indians for survival during the early years. Close notes that: "By 1670 South Carolina Indians had already undergone major changes as a result of casual contacts with the Spaniards and other Europeans for a century and a half. White man's diseases and artifacts had irreversibly changed their existence" (1971:36). Waddell (1980:14) estimates that by 1682, the population of the coastal tribes had been reduced to about 1000 from approximately 1750. At the time of contact, the coastal area of South Carolina contained nearly two times the Indian population density of the rest of the continent north of Mexico.

The establishment and rapid expansion of the English at Charles Towne resulted in the decline and eventual displacement of all the coastal groups. The early English records contain extensive descriptions of local groups and their interaction with the colony: this history has been elegantly summarized by Chapman J. Milling in his book Red Carolinians (1940). Unfortunately, English interaction with the natives followed a pattern that at best can be described as one of neglect, and that was more typically characterized by deliberate economic exploitation, with enslavement, removal, and even extermination employed as necessary to advance the goals of the colony.

The Native Populations on the Lower Coast During the Historic Era

Comprehensive descriptive syntheses of the historic accounts of the southeastern Indians have appeared in this century, the most notable being John R. Swanton's monumental The Indians of the Southeastern United States (1946) and Charles Hudson's The Southeastern Indians (1976). These provide broad overviews of Indian life throughout the southeastern United States from the period of initial European contact in the 1500's through the mid nineteenth century, by which time most of the local cultures had disappeared. In the South Carolina area Milling (1940) has recounted the decline and disappearance of the local native groups during the period of English colonization. Milling's work is more a record of the interaction between the natives and colonists, however, than a study of the natives themselves.

A few investigators in the South Carolina area have made use of historic accounts to better understand the native people and their lifeway, notably Gregorie (1925), Baker (1974, 1975), and South (1971, 1972, 1976). Prehistoric archeological site reports, including most modern cultural resource assessments, also at least mention relevant historic documents. The most comprehensive overview of Indian life in the lower coastal plain of South Carolina is by Eugene Waddell (1980). His Indians of the South Carolina Lowcountry 1562-1751 provides an extensive overview, with documentation, of the Indians of the lower coast between the Santee

Figure 20: Construction of dugout canoe.
and Savannah Rivers. As such it forms a primary reference for any research on the native historic populations in the vicinity of the Forest.

Waddell's manuscript focuses on the Indians of the lowcountry rather than the history of their interaction with the Europeans. As he states:

I have not discussed subjects such as the Indian trade and colonial attitudes towards Indians because my goal has been to reconstruct a way of life rather than trace its destruction (Waddell 1980: xiv).

Beyond providing an overview of (to take from his table of contents) local tribes and their locations, population, intertribal relations, language, resource utilization, and social organization, Waddell's manuscript also documents extant historic references to Indian tribes and placenames found in the lower coastal plain. Researchers working in the area of the Francis Marion who would like to document the history of Forest place names will find Waddell's manuscript invaluable.

Waddell observed that an autonomous political system existed with 19 tribes who did not band together for any purpose: "If the tribes had been at all organized then, they could have driven the English Colony out, as they had the Spanish in 1576." These tribes at best formed only temporary military alliances with one another. He concludes that the reason for this was because:

Within the Lower Coastal, resources were so evenly distributed that one section offered little advantage over another. No tribe seems to have had particular advantages to arouse the jealousies of the others or to enable it to outstrip them in any way and to become relatively so much larger as to reduce the others to servitude. Overall, the fairly equal size and resources of nearly all tribes seems to have been the basis for a small-scale balance of power (Waddell 1980:19).

These observations apply to the post 1562 period, when the power of the earlier Mississippian societies, notably Cofitachequi, may have been considerably greater and spatially much more extensive. It is instructive to note that apparently 19 discrete tribes occupied the lowcountry between the Savannah and the Santee during the historic era. This diversity would be difficult if not impossible to document archeologically. Such cultural variability may have also occurred during the prehistoric era; a number of groups may have been present that can now be described only in terms of broad phases, or lifeways.

Waddell noted that there were four Indian tribes known to have been living in the area of the Francis Marion during the early historic era: the Sewee, the Santee, the Wando and the Sampa (Figure 21). The Sewee lived primarily along the coast while the Santee occupied the central Santee River drainage, adjoining and beyond the southeastern part of the forest. The Wando tribe lived south of the Wando River opposite Cainhoy. Prior to colonization they lived at or near the mouth of the river. The Sampa Indians lived north of the Wando River, moving there from the Ashley River. They later moved north of the Santee River. A number of other Indian groups were located just outside the Forest area, including the Winyah, Cape Fear, Pee Dee, and Waccamaw to the north, and the Wando, Sampa, and Kiawah to the south. In addition, as the native groups disintegrated, surviving members moved about periodically, and some, such as the Kiawah, were at least temporarily encamped on land in and near the Forest, before disappearing from the area completely.

The Sewee, the only major group occupying the lower coast in the vicinity of the Francis Marion, probably numbered between 200 and 300 (Waddell 1980:9). It is improbable that at any time during the prehistoric and early historic era more than a few hundred Indians were living within the Forest boundaries, and for much of prehistory, especially prior to the introduction of agriculture, the figure was probably much lower. In 1970, in contrast, the number of people living in the Forest was estimated at about 20,000.

Indian languages spoken in the lower South Carolina coastal plain during the historic period appear to fall into two major categories, corresponding to broad families of related languages. These have been equated by Swanton, Waddell, and others with Siouan, Muskogean, and possibly a third, unidentified language family, although specific assignment of the various coastal South Carolina tribal languages is still unresolved (Waddell 1980). Two of the groups occupying the area of the Francis Marion, the Sewee and the Santee, spoke different languages, suggesting that even within the relatively circumscribed area of the Forest distinctive cultural systems may have been present. The significance of this linguistic difference has been discussed in the future research section, since it appears that the Forest was on or near a boundary of sorts between two major aboriginal culture systems, or lifeways. Linguistic differences reflect one aspect of this boundary, and both archeological and historic data indicate that there were major differences in the lifeways of the native groups (generally) to the north and south of the Forest area.

At the time of European contact the Indians in the lower coastal plain of South Carolina were semi-sedentary agriculturalists. Corn, beans, squash, peas, and other crops were raised in and around villages that were built near the coast and occupied primarily during the summer. The groups would disperse in the fall, living
Figure 21: Indian place names in the vicinity of the Francis Marion National Forest.
of both the stored harvest and the wild plant and animal resources of the region, until the following year (Waddell 1980). In spite of the fact that all of the contact period groups practiced agriculture, evidence from both the historic literature and archeological research indicates that hunting and gathering of wild resources played an equal, if not more important role in subsistence (Waddell 1980; Ferguson 1971). Even for the historic period, Indian sites in the vicinity of the Francis Marion would include summer villages and smaller (family?) camps occupied during the remainder of the year.

The Jesuit Juan Rogel described the settlement pattern of the Edisto in 1570, and a similar pattern probably applied to the Sewee in the vicinity of the Francis Marion.

"At this season [summer] they were congregated together, but when the acorns ripened, they left me quite alone [in the village of Orista], all going to the forests, each one to his own quarter, and only met together for certain festivals, which occurred every two months, and this not always in the same spot, but now in one place, now in another...

...the inhabitants of these twenty houses scattered themselves in twelve or thirteen different villages, some twenty leagues [eighty miles], some ten [forty], some six [twenty-four], and some four [sixteen]. Only two families remained.

...for nine out of the twelve months they wander about without any fixed abode. Even then, if they only went together, there would be some hope [for conversion]...but each one takes his own road.

...they have been accustomed to this kind of life for thousands of years, and it would almost kill them to tear them rudely from it..." (cited in Waddell 1980:46-47).

Waddell discusses this settlement system in detail, including supporting observations by other early documents.

The Sewee and Santee

References to the two primary Indian groups living in the vicinity of the Forest, the Sewee and the Santee, have been compiled by Gregorie (1925), Swanton (1946, 1952), and Waddell (1980). The most extensive description of both groups is by the explorer John Lawson, who in 1700/1701 passed through the territories of both groups. In addition to camping in the houses of isolated individuals or families, Lawson visited principal villages of both groups. One deserted village, at Awendaugh-bough (of Awendaw), was in all probability along Awendaw Creek, near the National Forest's Walnut Grove Plantation.

Lawson's descriptions of individual Indian hamlets or houses in the interior (along the Santee) are particularly valuable, since they provide information both about the structures themselves, and about native subsistence. Two such huts, both apparently within the area of the Francis Marion, were encountered by Lawson in his journey between the Sewee along the coast and the Santee, who were at that time in the central coastal plain:

"We met in our Way with an Indian Hut, where we were entertain'd with a fat, boil'd Goose, Venison, Racoon, and ground Nuts" (cited in Lefler, ed. 1967:23).

"This Night we got to one Scipio's Hutt, a famous Hunter: There was no Body at Home; but we having (in our Company) one that had us'd to trade amongst them, we made our selves welcome to what his Cabin afforded, (which is a Thing common) the Indians allowing it practicable to the English Traders, to take out of their Houses what they need in their Absence, in Lieu whereof they most commonly leave some small Gratuity of Tobacco, Paint, Beads, &c. We found great Store of Indian Peas, (a very good Pulse) Beans, Oyl, Thikapin Nuts, Corn, barbacu'd Peaches, and Peach-Bread; which Peaches being made into a Quiddony, and so made up into Loves like Barley-Cakes, these cut into thin Slices, and dissolv'd in Water, makes a very grateful Acid, and extraordinary beneficial in Fevers, as hath often been try'd, and approv'd on by our English Practitioners. The Wind being at N.W. with cold Weather, made us make a large Fire in the Indian's Cabin; being very intent upon our Cookery, we set the Dwelling on Fire, and with much ado, put it out, tho' with the Loss of Part of the Roof" (cited in Lefler, ed. 1967:24).

These huts may represent camps used from fall through the spring, such as those that Rogel indicated that the Indians dispersed to after harvest time, although much work on local aboriginal settlement/subsistence systems would be needed to confirm this. Lawson's description of the Santee as they were in 1701 gives us one of the few surviving records of an agricultural group in the interior of the coastal plain. While the village and mound complex Lawson visited was probably ten to twenty miles north of the Forest, it is probable that the Santee had settlements in, or at least made intermittent use of, the Forest area. Of particular interest is Lawson's description of the Santee king's absolute authority, which may be a survival from the earlier, more complex Mississippian societies of the interior encountered by DeSoto (Baker 1974, 1974, 1975). Lawson's account provides considerable detail, suggesting the kinds of information to be found in the early documents:
The next Day we travell'd on our Way, and about Noon came up with a Settlement of Santee Indians, there being Plantation lying scattering here and there, for a great many Miles. They came out to meet us, being acquainted with one of our Company, and made us very welcome with fat barbacu'd Venison, which the Woman of the Cabin took and tore in Pieces with her Teeth, so put it into a Mortar, beating it to Rags, afterwards stews it with Water, and other Ingredients, which makes a very savoury Dish.

At these Cabins came to visit us the King of the Santee Nation. He brought with him their chief Doctor or Physician, who was warmly and neatly clad with a Match-Coat, made of Turkies Feathers, which makes a pretty Shew, seeming as if it was a Garment of the deepest silk Shag...

The Santee King, who was in Company with this Nonos'd Doctor, is the most absolute Indian Ruler in these Parts, although he is Head but of a small People, in Respect to some other Nations of Indians, that I have seen: He can put any of his People to Death that hath committed any Fault which he judges worthy of so great a Punishment. This Authority is rarely found amongst these Savages, for they act not (commonly) by a determinative Voice in their Laws, towards any one that hath committed Murder, or such other great Crime, but take this Method; him to whom the Injury was done, or if dead, the nearest of his Kindred prosecutes by Way of an actual Revenge, being himself, if Opportunity serves his Intent, both Judge and Executioner, performing so much Mischief on the Offender, or his nearest Relation, until such Time that he is fully satisfy'd...

Near to these Cabins are several Tombs made after the manner of these Indians; the largest and the chiefest of them was the Sepulchre of the late Indian King of the Santees, a Man of great Power, not only amongst his own Subjects, but dreaded by the neighbouring Nations for his great Valour and Conduct, having a large a Prerogative in his Way of Ruling, as the present King I now spoke of.

The manner of their Interment, is thus: A Mole or Pyramid of Earth is rais'd, the Mould thereof being work'd very smooth and even, sometimes higher or lower, according to the Dignity of the Person whose Monument it is. On the Top thereof is an Umbrella, made Ridge-ways, like the Roof of an House; this is supported by nine Stakes, or small Posts, the Grave being about six or eight Foot in Length, and four Foot in Breadth; about it is hung Gourds Feathers, and other such like Trophies, plac'd there by the dead Man's Relations, in Respect to him in the Grave. The other Part of the
Funeral-Rites are thus. As soon as the Party is dead, they lay the Corps upon a Piece of Bark in the Sun, seasoning or embalming it with a small Root beaten to Powder, which looks as red as Vermilion; the same is mix'd with Bear's Oill, to beautify the Hair, and preserve their Heads from being lousy, it growing plentifully in these Parts of America. After the Caracass has laid a Day or two in the Sun, they remove and lay it upon Crotches cut on purpose for the Support thereof from the Earth; then they anoint it all over with the fore-mention'd Ingredients of the Powder of this Root, and Bear's Oill. When it is so done, they cover it very exactly over with Bark of the Pine of Cyprus Tree, to prevent any Rain to fall upon it, sweeping the Ground very clean all about it. Some of his nearest of Kin brings all the temporal Estate he was possess'd of at his Death, as Guns, Bows, and Arrows, Beads, Feathers, Match-coat, &c. This Relation is the chief Mourner, being clad in Moss, and a Stick in his Hand, keeping a mournful Ditty for three or four Days, his Face being black with the Smoak of Pitch, Pine, mingl'd with Bear's Oill. All the while he tells the dead Man's Relations, and the rest of the Spectators, who that dead Person was, and of the great Feats perform'd in his Life-time; all what he speaks, tending to the Praise of the Defunct. As soon as the Flesh grows mellow, and will cleave from the Bone, they get it off, and burn it, making all the Bones very clean, then anoint them with the Ingredients aforesaid, wrapping up the Skull (very carefully) in a Cloath artificially woven of Possoms Hair. (These Indians make Girdles, Sashes, Garters, &c. after the same Manner.) The Bones they carefully preserve in a wooden Box, every Year oiling and cleansing them: By these Means preserve them for many Ages, that you may see an Indian in Possession of the Bones of his Grand-father, or some of his Relations of a larger Antiquity. They have other Sorts of Tombs; as where an Indian is slain, in that very Place they make a Hep of Stones, (or Sticks, where Stones are not to be found,) to this Memorial, every Indian that passes by, adds a Stone, to augment the Hep, in Respect to the deceas'd Hero (Lawson, cited in Lefler, ed. 1967:24-29).

Lawson's observations should prove particularly useful to archeologists working on protohistoric (contact period) sites in the Francis Marion.

Conclusions

As has been noted, an extensive literature exists concerning the historic Indian occupation of the lower coastal plain in the general vicinity of the Francis Marion. Archeology of this period is in its infancy at present. Along the entire coast only one historic Indian site, at Charles Towne Landing (South 1971), has been examined in any detail. The ongoing work at Spanish Santa Elena (South 1980), however, is expected to provide a wealth of information on the Indians of the 16th century. Within the Forest testing programs have been conducted to locate early historic Indian sites, including Walnut Grove and McConnell's Landing, and more work along these lines, to document these and other sites, is planned.

Considerable study of the early historic Indian groups in the vicinity of the Francis Marion is likely to occur in future years. The "Archeological Preservation Plan for South Carolina" states that:

"...tribal groups along the South Carolina coast are frequently referred to in the contemporary literature of the sixteenth,
seventeenth, and eighteenth centuries and locations of their villages are noted on some of the contemporary maps. Archeological sites are known to be present in some of the places suggested by these maps and documents (Bull 1969). None of these sites has been specifically correlated with a named tribal group and excavated to learn the cultural composition of the group. It is planned that an intensive study of these documents and maps together with intensive surface investigation of the areas will be made in an effort to identify specific sites. Once identifications on the ground have been made, excavations will be undertaken for the purpose of understanding and explaining the interrelationships between the Native and the European cultures at a time when the former were giving way to the latter. Portions of the coastal areas of Charleston, Berkeley, and Georgetown counties provide the best documented base of data for this study.” (Stephenson 1975:94)

Ironically, the area that Stephenson cites as having the greatest potential for research - the coastal sector from roughly Charleston to Georgetown - is undergoing rapid development. The Francis Marion National Forest, located squarely in the center of this growth, may be one of the few areas where cultural resources from this period can be preserved and studied.
Indian Trade

Upon settlement, the British quickly established a profitable trade relation with the Carolina Indians focusing on the lowland tribes and later trading with the more distant tribes during the early eighteenth century. The first trade relations consisted of the English colonists giving the Indians trade goods in return for food and friendly relations. Eighteenth century European trade items included guns, pistols, hatchets, axes, hoes, knives, swords, cloth, clothing, anklets, bracelets, mirrors, ribbons, stockings, salt, gunpowder, and brass kettles (Smith 1956:102).

The Indians cultivated extensive fields of maize (corn), beans, pumpkins, squash, melons, native peas, peaches and figs (introduced by the Spanish) and native tobacco (Figure 24). Trade for these staples undoubtedly kept the early colonists from starving. The Indians educated the British on the availability of native foodstuffs and hunting and fishing techniques. The Europeans often settled in the "Indian Olde Fields" which had been cleared by the natives by burning to facilitate game hunting (Clowse 1971:39-40).

The colonists traded the Indians firearms to improve their ability to collect skins and to protect themselves against their French and Spanish enemies. This shift to modern weapons resulted in a loss of aboriginal stone tool technology. The Indians supplied more and more game in trade and the ecology of the area was altered as wildlife populations were depleted. Smith suggested that many of the post-contact migrations were caused by "exhaustion of game from an intensively hunted area" (1956:104). As the Indians secured and traded more skins, they received more European goods. This created geometric rates of change in the ecology of the Forest and in aboriginal material culture.

As the colonists took control of more and more Indian land, British agents negotiated treaties with the appropriate tribal chiefdoms. However, since the Indians had no knowledge of European concepts of land ownership, it is doubtful that they understood the implications of the treaties (Clowse 1971:41).

While the Indian culture was rapidly disintegrating, tribes of the South Carolina coast were decimated by smallpox and other European diseases as discussed in the previous chapter. By 1700, the Wando tribe was wiped out by smallpox.

The destruction of the aboriginal economy through the dependence on European trade items turned the Indians into "economic slaves." Corkran gives this account:

...The traders operated on Charleston
credit from which they outfitted Indian hunters on credit to be repaid in deerskins and slaves. The Indian appetite for goods and rum and the traders' greed plunged the Indians into debts beyond their capacity to pay. Pressed by their Charleston creditors, the traders in efforts to collect abused the Indians. They beat debtors and even seized them or members of their families to be sold. The Indians tolerated these excesses because they had nowhere else to turn for goods, implements, rum, and weapons (1970:9).

Indians were frequently bought and sold as slaves. Clowse (1971:66) suggests that the Indian slave trade "may have been the most important generator of profits during the first five years."

As a result of these abuses by the Carolina Indian traders, the Sewee tribe attempted to cut out the "middle man" and sail to England to trade deer skins directly. They set sail from a location near the Sewee shell ring, now located in the Forest. All of the able bodied men had set sail when a storm came up, drowning most of them. The rest were rescued by an English ship and sold for slaves (Waddell 1980). Lawson's description of the Sewee focuses on the reasons for their decline and includes a graphic account of the great Sewee expedition.

While on one level it is colorful and amusing, it is also a rather sobering picture of the collapse of a way of life:

"These Sewees have been formerly a large Nation, though now very much decreas'd, since the English hath seated their Land, and all other Nations of Indians are observ'd to partake of the same Fate, where the Europeans come, the Indians being a people very apt to catch any Distemper they are afflicted withal; the Small-Pox has destroy'd many thousands of these Natives...

"Rum, a Liquor now so much in Use with them, that they will part with the dearest thing they have, to purchase it; and when they have got a little in their Heads, are the impatients Creatures living, 'till they have enough to make 'em quite drunk; and the most miserable Spectacles when they are so, some falling into the Fires, burn their Legs or Arms, contracting the Small Pox, and become cripples all their Life-time, others from Precipices break their Bones and Joints, with abundance of Instances, yet none are so great to deter them from that accurs'd Practice of Drunkenness, though sensible how many of them (are by it) hurry'd into the other World before their Time—as themselves often times will confess. The Indians, I was now speaking of, were not content with the common

Enemies that lessen and destroy their Countrymen, but invented an infallible Stratagem to purge their Tribe, and reduce their Multitude into far less Numbers. Their Contrivance was thus, as a Trader amongst them inform'd me.

"They seeing several Ships coming in, to bring the English Supplies from Old England, one chief Part of their Cargo being for a Trade with the Indians, some of the craftiest of them had observed, that the Ships came always in at one Place, which made them very confident that Way was the exact Road to England; and seeing so many Ships come thence, they believ'd it could not be far thither, esteeming the English that were among them, no better than Cheats, and thought, if they could carry the Skins and Furs they got, themselves to England, which were inhabited with a better Sort of People than those sent amongst them, that then they should purchase twenty times the Value for every Pelt they sold Abroad, in Consideration of what Rates they sold for a Home. The intended Barter was exceedingly well approv'd of, and after a general Consultation of the ablest Heads amongst them, it was, Nemine Contradicente, agreed

upon, immediately to make an addition of their Fleet, by building more Canoes, and those to be of the best Sort, and biggest Size, as fit for their intended Discovery. Some Indians were employ'd about making the Canoes, others to hunting, everyone to the Post he was most fit for, all Endeavors tending towards an able Fleet and Cargo for Europe. The Affair was carried on with a great deal of Secrecy and Expedition, so as in a small Time they had gotten a Navy, Loading Provisions and Hands ready to set Sail, leaving only the Old, Impotent and Minors at Home 'till their successful Return. The Wind presenting, they set up their Mat-Sails, and were scarce out of Sight when there rose a Tempest, which it's supposed carry'd one Part of these Indian Merchants, by Way of the other World, whilst the others were taken up at Sea by an English Ship, and sold for Slaves to the Islands. The Remainder are better satisfy'd with their Imbecillities in such an Undertaking, nothing affronting them more than to rehearse their

Voyage to England" (cited in Gregorie 1925:10-11).

By 1715 the Sewee were the only tribe known to exist between Charleston and the Santee River with a total of 57 men, women and children. The Indians would often accrue large debts while in a drunken state and found themselves with a debt too large to repay. The traders attempted to collect mercilessly: "...some even seizing a debtor or his wife and children to be sold into slavery" (Corkran 1970:21).

This lead to the Yemassee Indian War in 1715 when a group of Indians murdered some traders
Figure 25: Seventeenth century map of the area occupied by the Sewee Indians.
Figure 26: Fighting during the Yemassee Indian War.
to cancel their debt (Figure 26). The areas of Edisto and Beaufort were first affected, with fighting later shifting northward. Colonists gathered their essential household goods, and fled to the homes of local militia commanders, prominent landowners or minister's homes.

One of the more prominent of the private plantation forts in the area of the Forest was that of French Huguenot pastor Claude de Richebourg. This site is located on or near National Forest land on the Santee River. Militia and regular army units were garrisoned there until March 1716 (Ivers 1970:8, 72).

As a result of the Yemassee War, over 400 colonists were killed, buildings and livestock were destroyed, and the cultivation of crops in some areas was halted for years (Clowse 1971: 187). When the war ended in 1716 the remaining Sewee were captured numbering only 22 men and 40 women and children. They were most likely shipped out of the colony to be sold as slaves (Waddell 1980:297). The war ended the Indian trade in the area of the Francis Marion National Forest.

AGRICULTURAL DEVELOPMENT: Livestock, naval stores, rice, indigo, cotton

Most of the early colonists remained near Charles Town, but increasing numbers of hardy settlers moved away from town into the interior. Orvin (1973:17) notes that, "The Cooper River, being a navigable stream for more than thirty miles, attracted many and before 1700 small settlements, farms and plantations were on both sides of this river, and beyond as far as the Santee River." The settlers' desire to acquire land along the rivers and streams was a major factor in the development of the colonial settlement system. Not only were these lands the best for cultivation, but they provided the most efficient means of travel (Clowse 1971:29).

Even before the end of the coastal Indian trade in 1715, the colonist began to engage in the agricultural economic pursuits (Hawley 1946). Many of the colonists, however, were not experienced agriculturalists. As Thomas Newe noted in 1682, the first settlers "were most of them tradesmen, poor and wholly ignorant of husbandry..." (Orvin 1973:19).

In addition to the Indian trade, early settlers had become increasingly involved in the production of livestock. Lewis (1980) offers an excellent review of livestock raising in coastal South Carolina in Lees' (1980) report on the Limerick excavations. Three animals made up the large scale livestock industry: cattle, hogs and sheep. The swamplands and extensive forests were utilized for grazing hogs while cattle were grazed in the pine forests, cane swamps, savannahs and the dry marshes and estuaries of the coast. Hogs were raised primarily on the upper coastal plain. Livestock were grazed on open range and by 1707 the cattle range was encroaching on Indian groups. After the Revolution, cattle farming declined partly as a result of the expansion of agricultural farming.

Livestock raising continued at a lower level throughout the eighteenth and nineteenth centuries. Because livestock utilized a separate ecological niche they were quite compatible with rice agriculture.

Another early economic pursuit of the Colonial period was the naval stores industry that produced tar and pitch to caulk ships (Figure 27). These were obtained at tarpits where the abundant longleaf pine was burned with reduced oxygen that drove off the tar to be collected in a pit. Recent studies have focused on the role of the naval stores industry on the economic development of South Carolina (Garrow et al. n.d.; Hart n.d.).

Britain instituted a bounty on tar and pitch at the start of the eighteenth century to encourage production and thereby reduce dependence on naval stores from the Baltic countries. By 1719 the South Carolina colony had come to "surpass all America" in naval stores production. The supply soon outgrew the demand, however, and the bounty was reduced that same year. Bounties were reduced further in the following years resulting in a loss of 1/4 to 1/3 of the gross income of the province (Lees 1980). The renewal of the naval stores subsidy in 1729 came too late since the small farmers who had depended heavily on the industry had gone out of business when prices fell (Foley 1979:7). Carolina settlers continued to produce naval stores in reduced quantities through the nineteenth century.

The Forest Service excavated a tarpit site in 1980 (Hart n.d.) and Soil Systems, Inc., excavated a naval stores warehousing/processing plant during the Cooper River Rediversion project (Garrow et al. n.d.). A review of the history of the industry in South Carolina is provided in the excavation reports.

With the practical elimination of the Indian trade in coastal South Carolina and the reduction of naval stores production, South Carolina planters focused on the production of rice. By 1720, rice accounted for at least half of the colony's profits, even though more people were engaged in naval stores and livestock production (Drucker and Anthony 1979:22). The date of introduction of rice agriculture is not certain, however, it is known that Dr. Henry Woodward was planting rice in 1685. By 1695, colonists were paying their quit rents with rice. Five years later the province was producing "more rice than we have ships to transport" according to the Governor of the Council (Hawley 1966). As the production of rice increased the importation of slaves likewise increased. The colonists were faced with an inhospitable environment quite different from their homeland. The environment...
Figure 27: Colonial production of Naval Stores.

Figure 28: Diagram of rice trunk.
was considered too oppressive for European laborers who were susceptible to diseases such as malaria. As the planters imported more African slaves who had built up an immunity to tropical diseases, the plantation economy became dependent on slave labor. The upland swamps, located above the influence of tides, were utilized throughout the colonial period with slave labor used to construct canals and dams to impound fresh water for irrigating the fields (Figure 28).

The economic loss caused by the withdrawal of bounties in the naval stores industry was lessened by the introduction of another major crop in colonial South Carolina: indigo. The process for extracting a rich blue dye from the plant was developed by Eliza Lucas in 1743. Indigo was very compatible with the planters' other major crop, rice, since it grew best on high ground. Formerly unused land could now produce an economic crop [a review of the indigo process is given in Doar (1936)]. The British subsidized indigo production prior to the Revolution. The loss of the bounty coupled with the increased production of cheaper indigo in the East Indies, however, led to the demise of this industry in the Carolinas around 1790 (Doar 1936).

The French Huguenots

The most prominent colonial agriculturalists in the area of what is now the Francis Marion National Forest were the French Huguenots who settled along the Santee River. These colonists left France in large numbers to escape religious persecution after the revocation of the Edict of Nantes. By 1698 over 33,000 acres had been sold to French emigrants in South Carolina not including the free land grants. Three of the six Huguenot settlements in South Carolina were located in the vicinity of what is now the Francis Marion National Forest.

French Jamestown, the largest French settlement outside of Charles Town, was located on the Santee River (Figure 29). The French settlement was scattered along the "waterfronts of streams" between Mazyck's Ferry located two miles below Wambaw Creek and a few miles from Lenud's Ferry. In 1690, 80 French families were settled in this region (Hirsch 1928: 15-17).

One of the earliest Huguenot settlers was Daniel Huger. His plantation, named Wattahan, was visited by John Lawson in 1700-1701. This site, located on National Forest land has been proposed as a historic area.

Individual grants were given to a number of Huguenots and the village of Jamestown was established in 1706. The Huguenot Church at Jamestown served as the center of religious and political life. The structure was constructed of wood on a brick foundation, located at the north end of the central street, less than five yards from the Santee River (Hirsch 1928:17).

Figure 29: Eighteenth century settlement along the South Carolina Coast.
Figure 30: Low country pine hill villages or "summer settlements."
Settlement in the town was limited, although the plantations established by the French emigrants along French Santee did prosper through the production of rice, indigo and cotton (Hirsch 1928:1-9). The literature suggests a dispersed settlement pattern along the river. Known Huguenot sites located on National Forest land are discussed in later chapters.

The St. Stephen area was settled after Jamestown and many of the Jamestown residents moved to the new settlement. St. Stephen parish was established in 1754. The increase in production of indigo encouraged the settlement at St. Stephen which was considered "a place more congenial to the growth of indigo" (Hirsch 1928:27). The area soon became "the most thickly populated country area in the province" (Hirsch 1928:27). The reports from the Cooper River Rediversion Canal historic sites excavations will undoubtedly yield significant data on the early settlement of this area (Brockington 1980; Carrow 1980; and Wheaton 1980). The National Forest undoubtedly contains a number of sites related to this settlement.

The English settled along the lower Santee, outside what is now the National Forest boundary. For this reason, the present discussion has focused on the Huguenot settlement.

By the mid to late eighteenth century planters from the western Santee were leaving their plantations during the summer months to escape the "summer fevers." During the nineteenth century it was believed that malaria was caused by breathing "aerial poisons" resulting from the decomposition of vegetable matter. Pine hill communities sprang up away from the swamps in areas such as Cainhoy, Cordesville, Spring Hill, Honey Hill, Cravel Hill, McClellanville, Pineville, Pinopolis, and Summerville (Figure 30). Charleston was also a popular summer retreat for the planters (Friedlander: personal communication). These communities were located so that a number of families could spend the summers close to each other and yet were able to travel to their plantations within a few hours. Planters would move from their plantations in the spring and not return, except for short visits, until after the first frost. These summer settlements played a major role in the social lives of the planters (Drucker 1980).

The Revolutionary War

The area of the Francis Marion National Forest played a major part in the Revolutionary War, providing the setting for many skirmishes and battles between American and British forces. With the Continental Army defeated and driven out of South Carolina by the British early in the war, the only effective American fighting forces left in the state were the partisans. General Francis Marion (Figure 31), for whom the National Forest was named, was the leader of the low country partisans who were "distinguished by small leather caps and the wretchedness of their attire." They harassed the British so frequently that their supply lines from Charleston to North Carolina were almost useless. Marion, referred to as the "Swamp Fox" by the British, did much of his fighting in and around the National Forest and is known as the "father of modern guerrilla warfare" (Gardner 1972). He would attack the British and then disappear into the swamp like a fox.

The Revolutionary War had major effects on the economy of the new state of South Carolina due to the elimination of bounties on rice, naval stores and indigo. Orvin notes that: "There was scarcely a plantation or farm in Berkeley County which had not suffered at the hands of the enemy. From many places slaves and stock had been taken away, harvested crops seized or wantonly destroyed, and farm implements broken beyond repair" (1973:147).

Naval stores and indigo production was practically halted after the war. Rice agriculture was not very profitable without the British subsidy using the available technology at the time. On the bright side, however, South Carolina was now free to regulate its own commerce (Lees 1980).

It appears that a major shift in agricultural practices occurred in the area of the Forest, with rice production in the eastern portion of the forest greatly reduced in favor of cotton. Frequent flooding on the Santee had ruined crop
after crop of rice. These losses in conjunction with the loss of the British bounties made rice agriculture less than profitable along the upper Santee. After the war the planters of St. Stephen "found it hard to do more than make provisions for themselves and their slaves" (Orvin 1973: 148). The Santee planters began to experiment with cotton as a substitute for rice and the invention of the cotton gin in 1793 further expanded cotton production. The construction of the Santee Canal between 1792 and 1795 further assisted the planters in contracting for slave labor to construct the canal. In Historic Berkeley County, Orvin states that: "When an owner hired out a large number of his slaves this meant a neat sum of money in his pocket each quarter, and he was relieved of their care during the contract period... This enabled the St. Stephen planters to experiment with cotton without fear, and with the invention of the cotton gin, the planting of the fleecy staple became a profitable enterprise. More and more land was put to cotton." (1973:149).

The introduction of tidal rice agriculture developed by Gideon Dupont had major effects on the economy of the new state and the settlement pattern of the region (Figure 32). This new process restricted rice production to the freshwater marshes characterized by sufficient freshwater tidal range to allow the flooding of the fields (Lees 1980). The settlement pattern of rice plantation became concentrated "along major rivers within the 15 mile corridor in which tidal rice agriculture was possible" (Lees 1980). Upland plantations, unable to compete with the tidal rice plantations, were abandoned or adapted to cotton agriculture.

The process of establishing tidal rice fields was expensive and labor intensive; however, the associated benefits were considerable. Tidal rice agriculture was a more efficient production method by which the planter no longer had to deal with problems of water supply or weed control. Moreover, because of the replenishment of nutrients caused by the tidal actions, once a field was established it was never exhausted. Lees (1980) states: "With the increased profits available from tidal rice agriculture, antebellum rice planters were able to make a rapid recovery.

Figure 32: Formation of tidal rice fields.
from the depression caused by the Revolution and the loss of indigo."

The introduction of water powered rice milling equipment by Jonathan Lucas at the end of the eighteenth century further increased rice production and profit. After the turn of the nineteenth century, South Carolina was the number one in the production of rice in the United States.

The Civil War

The Civil War brought the end of the plantation system. Most of the fighting took place around Charleston, although the Federal troops made sporadic raids along the coast and up the rivers. The massive Confederate Battery, located on National Forest land on the Santee River was constructed in 1862 to control the Santee River by preventing Union boats from coming up the river. The Battery was occupied between January 1863 and November 1864 (Hart 1980). No engagements are known to have occurred at the site.

Although fighting was limited in the National Forest area, the overall effects of the war and its aftermath were not. Since the state's economy depended heavily on the export trade, the blockade of the coast had major adverse effects. Many plantations were destroyed by the force of invading Federals resulting in the devastation of the plantation system. The loss of slave labor dealt a severe blow to the state's economy. The lowcountry economy evolved into a share-crop system with many displaced freed men purchasing land from their former masters.

As cotton agriculture was not overly labor intensive, it was readily adapted to the tenant farming system. The growth in cotton agriculture is evidenced in this graph from the Georgetown District (Figure 33). Rice agriculture, however, was labor and land intensive, handicapping its ability to exist economically without the slave system.

The deforestation of the uplands and piedmont region of the state, a result of extensive logging activities during the latter nineteenth century, resulted in large quantities of runoff which had devastating effects on the rice industry. Lees (1980) notes that: "Frequent and severe flooding along rivers, especially along those originating in the piedmont, occurred as a result of this deforestation."

The U.S. Census report in 1900 stated that "No dikes can withstand their (the flood's) force, and thousands of acres of rice are often destroyed in a night and the land left a barren waste" (Heyward 1937:214; Carpenter 1973:42). The final downfall of the rice industry came with... "A series of six hurricanes between 1893 and 1911 (which) severely hindered rice agriculture in South Carolina since most rice fields were located on the tidal marshes and were extremely susceptible to damage" (Lees 1980).

As discussed in the environmental chapter, extensive phosphate mining occurred in the area after the Civil War providing needed support to the post-war economy. The industry continued until the early 20th century when phosphate mining of the Florida deposits became more profitable. Few traces of this once booming industry remain in South Carolina today (Albert Sanders, Charleston Museum, personal communication).

Timber Production

During the late 19th and early 20th centuries, large lumber companies acquired much of the land on the present Francis Marion National Forest. They established large sawmills and used railroads and overhead steam skidders to haul timber. They rapidly cut over their holdings. Fire frequently followed cutting, thereby destroying reproduction. An excellent review of lumbering in South Carolina is provided in Ames (1906). When the depression of the 1920's and 1930's brought financial difficulties to the timber companies, they petitioned the U.S. Government to buy their "mostly cut over" lands to establish a National Forest (Figure 34). The Francis Marion National Forest was established by proclamation of President Franklin D. Roosevelt in 1936. Since that time the forest has been managed to produce timber, wildlife, recreation, to protect watershed and most recently to protect and preserve cultural resources.
Figure 34: Cut over lands which became the Francis Marion National Forest.
A REVIEW OF ARCHEOLOGICAL INVESTIGATIONS CONDUCTED IN AND NEAR THE FRANCIS MARION NATIONAL FOREST

Introduction

Detailed histories of archeological research in the South Carolina area have appeared in recent years, summarizing work in both the Coastal Plain (Anderson 1977) and throughout the entire state (Stephenson 1975). These reviews are general in nature, however, and are not suited for the close examination of smaller areas. A more specific summary, focusing on the immediate area of the Francis Marion National Forest, is presented here. To determine the extent of past archeological investigations in the Forest, existing technical reports from the area were examined. The site files and collections at the Charleston Museum and the University of South Carolina (hereafter referred to as the Institute) were also inspected to determine the extent of unpublished data from the Forest area.

The purpose of this review of fieldwork in and near the Francis Marion National Forest is to summarize the evidence currently used to document the archeological resources in the area. This kind of information is essential if archeologists and land managers are successfully to predict the kinds of sites that might be encountered in the Forest and their probable locations. Knowledge of this sort is important in two respects: (1) it facilitates interpretation and land management by Forest Service personnel and (2) it provides both archeologists and land managers with a framework to help plan future cultural resource activity in the Forest.

This review represents the first comprehensive history of archeological investigation in the vicinity of the Francis Marion National Forest. Most of the reports referenced here contain summaries of past work in their immediate area, but it should be noted that these summaries tend to vary greatly in length, orientation, and inclusiveness. Relevant reports, beyond this overview, should be consulted in the event future cultural resources projects occur in given areas within the Forest.

Detailed cultural resource overviews similar to this one have recently been prepared for the Cape Romain (Wright 1978; Anderson and Claggett 1979) and Santee National Wildlife Refuges (Anderson, Newkirk, and Carter 1979), providing valuable, complementary syntheses from areas near the Forest. These records indicate that a moderate amount of archeological fieldwork has taken place in this part of the South Carolina coastal plain, and that the pace of activity has been rapidly increasing in recent years. The locations and references for past archeological projects in the area of the Forest are given in Figure 35.

Prehistoric Sites Investigations to 1938: Archeology at the Charleston Museum

No archeological investigations are known to have taken place in the vicinity of the Forest during the 19th century, although some fieldwork did occur in other parts of the South Carolina coastal plain, near Camden (Blanding 1848; Thomas 1894), along the southeast coast, and up the Savannah River (Moore 1898a, 1898b). During the first two-thirds of the 20th century almost all archeological research in South Carolina was directed by, or coordinated through, the Charleston Museum. The museum served as a repository for artifacts and other site information, and to this day maintains the finest collections of coastal South Carolina prehistoric artifacts.

During the 1920's through the mid-1930's the staff of the Charleston Museum maintained an active interest in local archeological research. Under the direction of Laura M. Bragg, the museum conducted an extensive archeological survey in northeastern Charleston County during the early 1920's, in the area between Charleston Harbor and the mouth of the Santee River. Two papers appeared describing this activity (Bragg 1925; Gregorie 1925), representing the first published account of archeological remains in the Forest area. Unfortunately many of the field notes from this early work have been lost. The collections remain at the museum, however, documenting the archeological richness of the coastal area north of Charleston (Figure 36).

In 1921 museum personnel under the direction of Laura Bragg visited Walnut Grove, a site now in the Francis Marion National Forest at the mouth of Awendaw Creek. A large number of artifacts was recovered (cat. #33.367), including chert projectile points and plain, cord marked, and fabric impressed sand tempered pottery, suggesting a Woodland period occupation. Other material from the site area, recovered in 1979 and 1980 by Patricia A. Logan and Jenalee Muse of the U.S. Forest Service, documents a Mississippian component in the area as well.

Other sites within the Forest boundaries visited during the 1921 Museum Expedition include Grove Plantation, Laurel Hill Plantation, Fairfield Plantation, Silk Hope Plantation, and several other localities of less secure provenience (Figure 37). The collections from the general area of the Francis Marion in the Charleston Museum are extensive, and in need of analysis. Some of the material, such as that from Walnut Grove, can probably be tied to specific sites in the Forest given a careful review of existing notes and accession records.

Throughout the 1920's and 1930's the Charleston Museum accumulated artifacts and site information from the Forest area, either from donations from local citizens, or by collecting
Figure 35: Archeological Investigations in the vicinity of the Francis Marion National Forest.
trips by museum personnel. The beginnings of the state archeological site files date to this period. Under the direction of Woldemar H. Ritter, a Boston architect and amateur archeologist who collected up and down the South Carolina coast during the 1930's, individual site numbers and files were established at the museum (Allen Liss, personal communication). The contents of these files in the mid-1960's became the basis for the county-by-county statewide site inventory maintained by the Institute and the South Carolina Department of Archives and History (Stephenson 1975).

In July of 1933 G. Robert Lunz, Jr., a museum biologist, and E. Burnham Chamberlain, the director of museum, visited and mapped the Andersonville shell midden (38CH9) located near Moore's Landing on Sewee Bay. This site, largely destroyed today, was formerly one of the largest shell middens on the south Atlantic coast. As described in Lunz's (1933) original report:

"The mound is quite evidently a refuse heap or midden...the ridge is about 557 feet long and 80 feet wide. The higher portion of the mound is 176 feet from the northeast end. It is 10 feet 5 inches high...The mound is entirely composed of shells, black earth, and refuse from Indian inhabitation... Potsherds are quite numerous and of several different patterns."

A map of the site, as drawn by Lunz in 1933, is shown in Figure 38. Lunz also collected materials from a number of other sites in northern Charleston County (Lunz 1933), and discussions of his early work, by Lunz, Ritter, and others, may be found in reports by Anderson and Claggett (1979) and Trinkley (1980a).

In 1938 Ritter revisited the Andersonville shell midden and conducted test excavations, further confirming the conclusions reached by Lunz about the aboriginal nature of the mound. At various times during the 1930's Ritter visited and conducted test excavations at sites in and near the Forest in northern Charleston County (Anderson and Claggett 1979). None of this work has been reported in detail, however, and the collections remain in the Charleston Museum.

Prehistoric Sites Investigations From 1940 to 1960: The Era of Private Collection

From the late 1930's through the early 1960's no archeological investigation on a professional level occurred in the area of the Forest. In the late 1930's and early 1940's lakes Marion and Moultrie were built. Unlike operations at virtually every other southern reservoir constructed at the time, JTO archeological salvage was undertaken in South Carolina. Part of the reason for this omission was simply that there were no professional archeologists working in the state. Thus, while WPA and reservoir salvage archeology helped generate basic archeological sequences throughout much of the south, South Carolina remained unknown and uninvestigated. Archeological remains in the lower coastal plain were acknowledged only in general or regional overviews, with few specific data reported (e.g., Caldwell 1952, 1958; Waring 1955).

Although no archeologists were working in the Forest from 1940 to 1967, a moderate amount of professional activity was occurring in nearby areas, providing a basis from which to interpret local remains. Griffin's (1943, 1945) analysis of ceramics from the Beaufort area, and from sites along the Fall Line, together with the work of Caldwell, Waring, and others at the mouth of the Savannah, in Georgia, provided a ceramic taxonomy and sequence that has rough utility in the Forest area (Caldwell and Waring 1939; Waring and Holder 1968; Waring 1955). The first descriptions of archeological remains from the coastal plain north of the Forest area were also prepared at this time, by Carl Miller (1950), in a brief description of ceramics from Horry County.
Figure 37: Coastal archaeological sites visited by the Charleston Museum staff during the 1920s.

Figure 38: The Awendaw or Andersonville Shell Mound mapped by the Charleston Museum staff in the 1930s.
During the period following the extensive museum-based activity in the 1920's and 1930's, until the rise of modern archeology in South Carolina in the mid-1960's, the only field data collection conducted in the Forest area was that done by amateurs. Most of this attention focused on Charleston County, with only moderate activity in Berkeley County. During the 1950's and early 1960's private citizens like Don and Stuart MacKintosh of McClellanville, and Bob LaFaye in the Moncks Corner area, developed large artifact collections from the lower and central coastal plain. The MacKintosh brothers collected materials from a large number of sites in the eastern part of the Forest, both along the coast and inland along the Santee, particularly near Honey Hill. Don MacKintosh donated his collections, together with site locational information, to the IAA in 1974. LaFaye's material, which is largely from the Lake Moultrie and Lake Marion area, outside of the Forest, is partially displayed at the Berkeley County Development Commission's offices in Moncks Corner.

Only a fraction of the prehistoric sites discovered by private collectors during the 1940's and 1950's have been visited by professional archeologists, although considerable effort has been expended to relocate some of them in recent years (e.g., Anderson, Newkirk and Carter 1978; Trinkley 1980a). An important and incompletely examined body of information about local cultural resources, therefore, exists in the notes and collections of private citizens living in the vicinity of the Forest. In 1964, for example, Robert L. Edwards conducted a test excavation at the Ardea site, a late prehistoric scatter located four miles northeast of McClellanville, South Carolina, on a low sand island in the salt marsh. The site, located on private property just outside the boundaries of the National Forest, had originally been discovered by Stewart MacKintosh. Edwards dug a stratigraphic trench across the scatter to a depth of 50 cm. and opened a shallow irregular block unit covering some 500 square feet. Edwards (1964) prepared a detailed, preliminary report on his testing, which included a site map, excavation unit profiles, and descriptions and illustrations of the artifacts that were recovered. The site was tentatively dated to the early Mississippian period, and was somewhat unusual for a marsh site in that no shell remains were noted or recovered. The report on these investigations has remained unknown and unreferenced, however, and was only recently rediscovered. As such, it serves as an excellent example of the kind of information on the cultural resources in the Forest area that remain to be identified.

The First Professional Reports on Prehistoric Remains in the Forest Area: The Work of Eugene Waddell

In the late 1950's and early 1960's Eugene Waddell, a student assistant at the Charleston Museum, organized the archeological site files and collections while attending the College of Charleston. Waddell visited a number of sites in the Berkeley and Charleston County area, and donated all of his materials to the Charleston Museum. Sites within the Forest visited by Waddell (in 1961) included 38BK39, 38BK40, and 38BK41 in the Honey Hill and Jamestown areas, and his collections from these sites are located at the Charleston Museum. Waddell also actively examined sites and collections from the Sea Island area within and to the south of the Forest, and visited the Sewee and Awendaw shell mounds in the late 1950's. The Sewee shell ring (38CH45) is a National Register site located in the Forest, and is currently an Archeological Management Area.

Waddell examined many of the artifacts in the site collections, and published three technical papers summarizing his research. These were distributional studies, describing and delimiting the occurrence of Late Archaic Thom's Creek and Awendaw ceramics, and Paleo Indian fluted projectile points in the South Carolina area (Waddell 1963, 1965a, 1965b). His papers document the presence of all of these artifact categories within the area of the Forest. Thom's Creek punctate pottery was reported from both Berkeley and Charleston Counties (Waddell 1963:8), while Awendaw pottery, characterized by a finger-pinched decoration, has a reported northern distributional limit at the Sewee shell ring (Waddell 1965a:83). One of Waddell's principal discoveries was that Awendaw ceramics were largely restricted to the coast between Charleston Harbor and Bull's Bay, with only a rare occurrence elsewhere (Figure 39). This distribution has recently been confirmed through an analysis of collections from throughout the coastal plain, and has been tentatively interpreted as reflecting the general boundaries of a localized, Late Archaic society (Anderson 1975; Trinkley 1980b; Widmer 1976a:43; Anderson, Lee, and Parler 1979:94-95).

Waddell (1965b:53) also reported the surface finds of two fluted points from the eastern shore of Lake Moultrie, formerly the upper Cooper River drainage, at Porcher Plantation and on Eady Island. Fluted points were also reported from a number of locations along the Santee drainage; although none were reported within the Forest. Michie's (1977) greatly expanded upon Waddell's work, and documented additional fluted points from the Santee and Cooper river drainages. Michie's analysis suggests that currently unrecognized Paleo Indian components are probably present along the river terraces in the Forest.

The Location of Prehistoric Sites in the Forest Area: The Record Prior to the 1960's

Archeological sites reported from the Forest, until the early 1970's, were almost always...
found along the terraces of major drainages, in and adjacent to the tidal estuary, or by the margins of Lake Moultrie. These locations reflected an obvious collector bias toward these areas, which was due to several factors. First, the terrace/swamp margin has long been recognized as a favorable location for prehistoric settlement. River terraces throughout the southeast are known to be rich in archeological remains, and formed a logical focus for most collectors. Second, erosional conditions along both lake and estuary margins are conducive to site discovery, and both archeologists and collectors have tended to concentrate on these areas. Wave action and seasonal or tidal fluctuation in water level combine to erode and expose the shoreline area. Prehistoric and historic artifacts are continually exposed as the shoreline erodes away. Artifacts are also usually present in the offshore bottoms, where they may be recovered by wading when visibility is good. Sites along the coast are also often characterized by the presence of light colored shell, causing them to stand out from the surrounding terrain, unless they are completely overgrown and uneroded. Only in recent years has survey emphasis turned away from shell middens or favored or exposed areas to an orientation encompassing all terrain features.

Prehistoric Sites Investigations From 1960 to 1967: The Beginnings of Professional Archeology in the Francis Marion National Forest Area

About 1960 professional archeological activity began to awaken in South Carolina. At this time Stanley South, working out of Brunswick Town Historic Site in North Carolina, conducted an extensive survey of the southeastern North Carolina Coast. His work carried him into Horry County, South Carolina, and the report on this project (South 1960, reprinted 1976) has helped to produce a viable ceramic taxonomy and cultural-historical framework for the north-central South Carolina coastal plain (Figure 40). In his 1960 survey report, South described the Cape Fear and Hanover pottery types, which are commonly found on prehistoric sites in the Forest area. South (1960:74-76) was also early to recognize that the North Carolina/South Carolina area was a zone of mixing between two somewhat distinctive Indian cultural traditions, a position that was demonstrated in the archeological record by the differing artifacts from the two areas.

Excavations at the Sewee Shell Ring: The 1965 Field Investigations

In the mid-1960's the first extensive, well-documented archeological excavations in the Forest were conducted at the Sewee shell ring (38CH45)(Figure 41). In 1962 the Sewee
**Figure 40:** Indian pottery taxonomy for the South Carolina coast.
Indian Shell Mound Archeological area was designated. The location, bordering the Intracoastal Waterway, was the first archeological area proposed in the Forest. The 1965 excavations were undertaken to document the nature of the archeological remains in the area and their significance, in part because the Forest Service was contemplating eventual interpretive development of the site.

From January through April of 1965 Dr. William E. Edwards, who at the time was the South Carolina State Archeologist, directed excavations at the site. Shortly after the close of fieldwork Edwards delivered a preliminary report on the excavations to the U.S. Forest Service (Edwards 1965). The excavations were accomplished over a period of eleven weekends, largely by volunteers, with the U.S. Forest Service providing partial funding and assistance for the project. A total of 1000 person-hours was spent in excavation at the site, with a comparable period spent in laboratory analysis and report preparation (Edwards 1965:2-3). The purpose of the excavation was to provide the Forest Service with information about:

"the dimensions, productivity, age, and importance of the Sewee Mound, as well as general information on Indian occupation of other sites in the immediate vicinity" (Edwards 1965:2).

During the excavation eight 5-foot squares in the immediate area of the ring were opened and water or dry screened through 1/4 or 1/8th inch mesh. The units were taken to depths of from 24 to 108 inches, employing 6-inch arbitrary levels. Two additional 5-foot units were opened at a small shell midden 1/4 mile to the north of the ring, to determine the nature of this second site. Excavation units were intuitively placed in various areas on and adjacent to the ring. A contour map of the site was prepared, and at least four test units were laid out along the ring wall, another within the center of the ring, and (apparently) three immediately outside of the ring to the north. Edwards' 1965 report, it should be noted, was a preliminary document and did not include summary data tables nor detailed unit proveniences. Since no final report was prepared, these omissions render interpretation of the analysis difficult.

Two pit-like features and a considerable quantity of charcoal, shell, bone, and ceramics were recovered from the site, as well as a few lithic artifacts. A charcoal sample from within the midden was later dated to 1345 B.C. (3295 ± 110; GX-2279). The artifact analysis was largely descriptive, and included an extensive discussion of Awendaw artifacts. Finger pinched (and other) ceramics, and associated bone, shell and stone tools were described in detail and floral and faunal

Figure 41: Excavations at the Sewee Shell Ring (38CH45) on the Francis Marion National Forest.
remains recovered from the midden were tentatively identified (Edwards 1965:18-26). Edwards (1965:16) also gave a brief discussion on the effects of differing screen size on the nature of subsistence information recovered, an observation considerably in advance of the period in which he wrote (c.f. Thomas 1969; Roth et al. 1977). The report provided some descriptive information on the Late Archaelic material culture of the site, and the assemblage has been used in comparative analyses with other shell midden remains recovered in the region (e.g., Michie 1979:92-96; Trinkley 1980b). The 1965 excavations remain to be documented fully, however, and reflect only a small portion of the actual site area, which should eventually receive further study.

The weakest aspect of Edwards' 1965 report lies in its somewhat informal and speculative nature. The analysis and interpretations are only infrequently documented in relation to the recovered assemblage. His reason for the construction of the midden is one of the most novel proposed for the coastal shell rings. His interpretation that the “Sewee Mound probably represents a huge fish-trap” (Edwards 1965:36), positioned on an assumed higher sea level at the time of construction, has been undermined by recent archeological and geological evidence favoring a lowered sea level during the period of ring usage (e.g., Michie 1973, 1979:17-18; DePratter 1977:11; Brooks et al. 1979:92, 1980; Brooks 1980; Trinkley 1980a:316).

The artifacts recovered from the 1965 Sewee shell ring excavations are stored at the Institute. The Sewee shell ring was placed on the National Register of Historic Places in 1971. It is clearly one of the most significant archaelogical properties within the Forest, deserving maximum protection and interpretive development.

Prehistoric Sites Investigations From 1967 to 1980: Recent Archeological Fieldwork in the Forest Area

In 1967 the Institute of Archeology and Anthropology (IAA) was established at the University of South Carolina, and in 1968 Dr. Robert L. Stephenson became Director and State Archeologist. This transition marked the beginning of the modern era of archeology in the state. Since the founding of the Institute, a tremendous amount of archeological investigation has taken place throughout the state (Stephenson 1975). This activity has taken two forms: (1) predominantly “academic” research either conducted voluntarily or financed by such agencies as the National Park Service or local universities, and (2) environmental impact related “contract” work. Academic-sponsored activity has tended to focus almost exclusively on Indian mounds in the interior and shell midden sites along the coast. The contract work, in contrast, has tended to occur throughout the region, both along the coast and in the interior. Academic work in the estuarine zone has been triggered, in part, by the early radiocarbon dates associated with Thom's Creek and Stalling's shell midden ceramic assemblages, together with the favorable preservation encountered on sites of this kind. The contract-related fieldwork, in contrast, has been conducted where project parameters dictate, with the funding a direct requirement of recent federal environmental legislation (e.g. the Historic Preservation Act of 1966, The National Environmental Policy Act of 1969, Executive Order 11593, PL. 91-190; The Archeological and Historic Conservation Act of 1974, PL. 93-291).

With the founding of the Institute, Stephenson initiated the State-wide Archeological Site Inventory, incorporating the site file data from the Charleston Museum. Sites from the National Forest area that had been reported to the museum earlier in the century, most notably those by Waddell, Bragg, Gregorie, and Macintosh, were renumbered and entered into a permanent site inventory jointly maintained by the Institute and the South Carolina Department of Archives and History. In addition to curating site collections and records, the Institute quickly became the lead institution in the state for both academic and contract archeology, a position it dominated until the late 1970's, when other state and federal agencies, academic institutions and private corporations began to work in the state. The following sections of this chapter recount the archeological activity in and near the Forest since the late 1960's, using a topical or areal organizational theme.

Reconnaissance Surveys along the Coast: Hemmings and Waddell, Trinkley and Carter, and Others

Increasingly in recent years archeologists have conducted fieldwork in the Sea Island area bordering the Forest. In 1970 Eugene Waddell, then at the Florence Museum, and E. Thomas Hemmings of the Institute staff traveled the length of the Georgia-South Carolina coast, recording measurements at every known shell ring, and making a small artifact collection from each. The results of this project have been briefly summarized (Hemmings 1972; Trinkley 1976b), and the field notes and sketch maps (on file at the Institute) provide one of the best sources of information to date on coastal shell rings. Five of the rings visited by Hemmings and Waddell are located in northern Charleston County, in or immediately adjacent to the Forest. These sites include the Buzzards' Island, Sewee, Auld, Stratton Place, and Yough Hall rings, of which Sewee is actually in the Forest. Much remains to be learned about these coastal shell rings, which appear to have been built between 4000 and 3000 years ago. Their function has been the subject of recent study (Michie 1979; Trinkley 1980a), and will doubtless serve as a focus for research in the future.
During the summer of 1974 Michael Trinkley and Jack Carter, then undergraduate students at the University of South Carolina, conducted an extensive archeological reconnaissance in portions of Charleston County. The results of this work were reported in a paper presented at the First Annual Conference on South Carolina Archeology in 1975. Survey activity was undertaken in over 61 separate square-mile sample blocks, with the county stratified into three environmental zones: the beach, tidelands, and interior. A 0.31 percent sample of the area between the Santee and South Edisto Rivers, up to six miles inland, was examined. During the survey 38 new sites were discovered, and 12 previously recorded sites were relocated. Several sites were recorded from the Forest, in the vicinity of Awendaw Creek in northern Charleston County. The exact areas surveyed by Trinkley and Carter (1975) were not reported, nor was the amount of time spent in surveying the 61 square mile sample. This makes it difficult to determine which areas of the Forest were examined, and how comprehensive the coverage was. Attention appears to have focused on the area inland from Bull's Bay, where several new sites were located.

The site forms and collections from Trinkley and Carter's (1975) reconnaissance have been curated at the Institute, and provide a useful record on sites in the lower, coastal portions of the Forest area. The Trinkley/Carter survey was also important in that it represented one of the first attempts to examine the overall environmental variability of the coastal sector. Previous investigation, as noted, tended to focus on specific site types (i.e., mounds or shell middens) or microenvironments (i.e., estuary margins). The data recovery strategy used during the survey entailed collecting all visible artifacts. This provided for a more representative sample of site remains than previous collection procedures, which focused on large, unusual, or decorated artifacts. The collections from the Trinkley/Carter survey provide particularly valuable data on the occurrence and proportional incidence of ceramic types along the coast (Trinkley 1976b, 1980a), and highlight biases in earlier collection procedures.

Some recent survey activity along the coast north of Charleston Harbor remains unreported, documented only in the files and collections of local institutions. Under the direction of Dr. Reinhold Engelmayer (1976, 1978), for example, a series of both survey and excavation projects have been conducted in Georgetown and Horry Counties, just to the north of the Forest. All of the artifacts and site records from this work are stored at the University of South Carolina's Conway campus. Early in 1974, in another project, staff members from the Institute recovered a human burial and a number of artifacts from an early Woodland shell midden (38GE46) on Minim Island, at the mouth of the Santee River.

Research by private citizens is also continuing. Under the direction of the Charleston Museum staff, Mr. Chevis D. Clark, Jr. of Mt. Pleasant has gathered an extensive sample of artifacts and other data from sites in northern Charleston County. Mr. William Koob, also of Mt. Pleasant, recently reanalyzed some of the Anne King Gregorie collection, and maintains his own collection of artifacts from the coastal region (Koob 1976). Archeologists and interested private citizens are continuing to record new sites along the coast in the vicinity of the Forest, amassing data useful to eventual analysis and synthesis. Any program of archeological research conducted in the Forest area therefore, should be aware that an extensive unpublished data base exists which should be consulted.

While the archeological record along the coast in and near the Forest is currently poorly understood, this situation is rapidly changing. Within the Cape Romain National Wildlife Refuge, immediately to the south and east of the Forest, two archeological projects were undertaken in 1977 and 1978. The first was a reconnaissance level overview of the entire Refuge (Wright 1978), and the second was an intensive survey and testing project in two areas of proposed construction, at Moore's Landing and on Bull's Island (Anderson and Claggett 1979). Both reports contain useful summaries of the archeological resources in the Refuge area. The latter study, by Anderson and Claggett (1979), includes an extended report of test excavations at a small Mississippian shell midden (38CH184), together with a discussion of current ideas on late prehistoric settlement along the coast of South Carolina. A third report from the coastal area, by Ishmael Williams and Patrick H. Garrow (1980) describes a reconnaissance level survey conducted along the Atlantic Intracoastal Waterway in South Carolina. This survey, extending along the entire coastline, represents one of the first attempts to synthesize coastal archeological remains. Another recent survey report, by Lesley Drucker and Ronald Anthony (1980), describes archeological remains to the northeast of the Forest, on the Myrtle Beach Air Force Base in Horry County. Perhaps the most comprehensive examination of coastal archeology in recent years is Michael B. Trinkley's (1980a) recent PhD dissertation summarizing several years of research in the area.

Recent Attempts to Synthesize Coastal Prehistory: Investigations by Trinkley, Michie, and Williams and Garrow.

In recent years several archeologists working in the coastal area of South Carolina have initiated or released syntheses of local prehistory that serve as valuable guides for future research. In 1979 James L. Michie released a report on excavations at the Bass Pond Dam site on Kiawah Island, a Late Archaic period shell midden characterized by Awendaw.
series ceramics. Michie's (1979) report contained detailed descriptions of the artifact assemblage recovered, together with a perceptive and informative examination of their use prehistorically. The paper provides one of the most comprehensive discussions of a coastal South Carolina Late Archaic shell midden artifact assemblage, from a functional perspective, released to date (Figure 42). As such it complements earlier work by Waring (1968a) at the Bilbo site in Georgia and recent work at other coastal sites in the region by Milanich (1971), Trinkley (1975, 1980a), Marrinan (1975), and South and Widmer (1976).

Michie's (1979) Bass Pond report is particularly useful to those interested in coastal archaeology because it contains one of the first detailed models of Late Archaic settlement proposed for the region. Michie (1979:27) notes that coastal shell middens occur in three basic forms: shell rings, large amorphous shell middens, and small, artifactually dense and diverse middens with only moderate quantities of shell. The first two site types are considered to be (briefly used) special activity areas, while the third site type is interpreted as a more permanently occupied "base camp". Michie's interpretations have generated considerable argument (e.g., Trinkley 1980a:308-312) and counter-explanation, but nonetheless stand as the first major attempt to explain the often bewildering variability in the size, shape, and content of coastal shell midden sites.

A second overview of prehistoric coastal assemblages, by Williams and Garrow (1980), summarizes the results of an archeological reconnaissance along the Atlantic Intracoastal Waterway in South Carolina. The field survey was conducted during September and October of 1978, along an approximately 20 percent sample of the 210 mile waterway. Investigations were limited to a corridor 50 feet wide on each side of the waterway, together with several proposed disposal areas. A large number of archeological sites in and near the survey corridor were discovered or revisited, and the report includes detailed information on their location and all encountered artifacts. The purpose of the study was to provide the contracting agency, the U.S. Army Corps of Engineers, with a plan for the protection, investigation, and management of the cultural resources along the waterway. The sections of the report dealing with effects of boat traffic, wave action, and erosion are particularly relevant to land managers in the Forest, since the Sewee shell midden and other important coastal archeological sites on the National Forest are subject to the same kinds of damage. The Forest boundary is adjacent to that of the Atlantic Intracoastal Waterway in portions of northern Charleston County, and the report describes several sites on the edge of the Forest that may extend into it. The report also includes detailed descriptions of the coastal environment, and a review of the prehistoric and historic occupation of the lower coastal plain. With the descriptions of sites along the waterway, and the environmental and archeological overview, the report stands as one of the few efforts to examine the archeological remains along a transect spanning the entire South Carolina coastline. As such it helps provide a larger, more regional perspective for archeological researchers focusing on the relatively circumscribed area of the Francis Marion National Forest.

The most extensive examination of coastal South Carolina archeology in recent years is reflected in a series of papers by Michael B. Trinkley (e.g., 1974, 1975, 1976a,b,c, 1979), culminating in a doctoral dissertation Investigation of the Woodland Period Along the South Carolina Coast, completed in 1980 under the direction of Dr. Joffre L. Coe at the University of North Carolina (Trinkley 1980a). Trinkley's research has taken two forms: extensive excavations at a series of single sites, such as the Marett Mound (38CH110), Lighthouse Point (38CH13), and Stratton Place (38CH24) shell middens; and the comparative analysis of artifacts from groups of coastal sites. The comparative analyses include the development of a typology for coastal Thom's Creek pottery (Trinkley 1976b, 1980b) and a discussion of the kinds of carbonized plant remains found to date in coastal shell middens (Trinkley 1976a).

Figure 42: Resharpening sequence for Late Archaic hafted bifaces.
Trinkley's (1980a) dissertation incorporates the results of several of his earlier papers, together with a substantial body of new data and analysis, into a single volume. The report contains a period by period review of the ceramic prehistoric era along coastal South Carolina, from 2,500 B.C. to A.D. 1700. This era, which Trinkley calls the "Woodland," is subdivided into a series of phases, which from earliest to latest include Thorn's Creek, Refuge, Wilmington, Cape Fear, Jeremy, and Pee Dee. Each phase is named after the principal pottery type in use at the time, and refers to a relatively distinct culture or lifeway. The body of the report focuses on excavations at four sites containing artifacts from these phases: the Lighthouse Point and Stratton Place shell rings, a shell midden (SOCV425 in the North Carolina filing system) in Charleston County, and the Pinckney Island shell midden (38BU67) in Beaufort County. Several of the sites and areas Trinkley reported on from northern Charleston County are within or near the boundaries of the Francis Marion National Forest. Excavations were conducted at Stratton Place, just outside the Forest, and at 38CH454 (SOCV425), at the edge of the Forest. Although none of the sites were on National Forest land, some of the other reported sites (notably the Sewee shell ring) are within the Forest boundaries. Trinkley's analysis and discussion of local artifact assemblages, therefore, forms an essential reference for archeologists working in the Forest area.

Of particular importance to cultural resource investigations in the Francis Marion are Trinkley's (1980a) detailed accounts of both his and previous excavations at coastal shell rings. Trinkley's review of past work on Georgia-South Carolina shell ring sites, coupled with extensive descriptions of his recent work at Lighthouse Point and Stratton Place, provide an unparalleled record on the origin, function, and associated artifactual remains of these site types (Figure 43). Many of Trinkley's observations, based on the extensive excavation of over 3550 square feet within the Stratton Place and Lighthouse Point rings, are directly amenable to testing should further field work be undertaken at the Forest Service's Sewee shell ring. Trinkley's detailed discussion of field procedures, coupled with the analytical approaches developed by himself, Michie (1979), and others (e.g., South and Widmer 1976; Marrinan 1975), would also prove especially useful in the planning stage of future shell ring or midden excavations along the coast.

Trinkley's (1980a) dissertation, beyond a comprehensive discussion of shell ring and midden sites on the South Carolina coast, also includes a detailed overview of the coastal environment. The report additionally describes methods for the collections, analysis, and interpretation of subsistence remains such as shell, bone, and charcoal from coastal sites. While the bulk of the analysis and reporting effort focuses on the Late Archaic/Early Woodland Thom's Creek phase, the dissertation also provides effective general summaries of

Figure 43: Excavation units at the Stratton Place Shell Ring, Charleston County, South Carolina.
the later ceramic periods. While the author explicitly states that "this paper is not intended to be a coastal South Carolina cultural synthesis" (Trinkley 1980a:1), at the present time it stands as the only such document available.

Archeological Reconnaissance in the Interior of the Forest: Recent Power Development Surveys

The rapid industrial development of the Charleston area in recent years has produced a markedly increased demand for electric power, well beyond the capacity of existing generating facilities. To meet the growing energy requirements of the region, a series of new generating stations have been or are being built around Charleston since the mid 1970's, together with a range of support facilities such as access roads, railroads, and transmission lines, to maintain the plants and to distribute the new load. An increasing amount of archeological survey and assessment has been initiated in the area of the Forest as a direct result of this development, including surveys of generating plant sites (Herold and Knick 1978), transmission line corridors (Wood 1977; Anderson, Claggett, and Newkirk 1978, 1980; Herold and Knick 1979b), and access or support facilities (Herold and Knick 1979a).

The Williams to Mount Pleasant Powerline: Survey on The Western Margin of the Forest

The first extensive powerline corridor archeological survey in the area of the Francis Marion National Forest was conducted in November 1977, over the route of a proposed 230 kV line between the town of Mount Pleasant and the Williams generating plant on the Cooper River in Berkeley County (Wood 1977). The Williams to Mount Pleasant survey was directed by Karen Wood of the Laboratory of Archaeology at the University of Georgia, where the project notes and artifacts were curated. The survey was undertaken for the South Carolina Electric and Gas Company and covered a corridor 75 feet wide and 17 miles long. The corridor briefly entered the Forest area upon crossing the Wando near Cainhoy, but did not pass over government-owned land.

Fieldwork during the Williams to Mount Pleasant survey took place from November 2 to 7, 1977. For the first two miles of the 17 mile corridor, 0.5 meter test units were opened to 25 cm every 150 meters; over the remainder of the route only the surface was examined. When sites were encountered general surface collections were made, and five sites were additionally tested using one or more 0.5 meter test units, with all fill screened through 1/4 inch mesh. Twenty two prehistoric and historic archeological sites were located along the corridor, including two previously recorded by Hartley and Stephenson (1975). Four sites (38BK254-38BK267) were within the proclamation boundary of the Francis Marion National Forest, near Cainhoy, but were not on National Forest land. To date no further work has been done along this corridor, although the recovered artifact assemblages help to document the nature of existing archeological remains in this portion of the Forest.

The Winyah to Jeffries and Winyah to Charity Corridors: Survey in the Central Portion of the Forest

During March and April of 1978, archeologists from Commonwealth Associates Inc. conducted archeological surveys along two proposed powerline corridors in Berkeley and Georgetown Counties, in areas cutting across the central and northern portions of the Francis Marion National Forest (Anderson, Claggett, and Newkirk 1978, 1980). The work was undertaken for the South Carolina Public Service Authority (Santee-Cooper) in support of an application for a Special Use Permit to build the lines across National Forest property.

The first corridor, the Jeffries Rebuild, ran for 41.2 miles from the Winyah generating station in Georgetown County to the Jeffries substation in Berkeley County (Anderson, Claggett, and Newkirk 1978). The right-of-way, which was 100 feet wide, was characterized by an existing 115 kV line, which was to be dismantled and replaced with a 230 kV facility. Of the total 41.2 mile corridor, 18.7 miles were within the boundaries of the Francis Marion National Forest, all in Berkeley County. The corridor route paralleled U.S. 17-A across the northern part of the county, from the Jeffries Substation on Lake Moultrie to Jamestown on the Santee River.

The entire length of the corridor was surveyed on foot. Field procedures included the examination of all exposed surfaces and limited subsurface testing in overgrown areas where the presence of archeological sites was suspected. When archeological sites or other cultural resources were encountered they were photographed and a general surface collection of all visible artifacts was made. A small test unit, 0.5 meters on a side, was opened at each site, or exposed and eroding soil profiles were cleaned, to obtain some indication of deposit depth and contents.

Thirty-one archeological sites were located along the right-of-way for the Jeffries Rebuild, all of which were characterized by prehistoric aboriginal remains, with seven also containing evidence for historic period use. Eleven of the sites located were within the boundaries of the Forest, and had been moderately to heavily damaged by the original corridor construction, obviating the need for further, mitigative effort. The artifacts and site records from the project were curated at the Institute.
The second powerline corridor examined by Commonwealth Associates for the South Carolina Public Service Authority cut across the south central portion of the Forest, parallel to and approximately ten miles inland from the coast (Anderson, Claggett, and Newkirk 1980). The proposed 230 kV transmission line corridor, occupying a 70 foot right-of-way, ran in nearly a straight line from the Winyah Generating Station in Georgetown County to the Charity substation in Berkeley County. The corridor was 38.7 miles long, of which 27 miles were within the boundaries of the Forest and 19.7 miles were on National Forest land. The corridor crossed the Santee River near Pleasant Hill Landing passing over or through Honey Hill, the Wambaw Swamp, Quinby Creek, and French Quarter Creek before arriving at Charity, a small community just east of the Cooper River.

The Winyah to Charity corridor paralleled an existing South Carolina Electric and Gas Company gas pipeline along most of its length. At the time of the 1978 archeological survey, the right-of-way for the gas line had been recently cleared, with all fresh underbrush cut down as part of normal corridor maintenance. This greatly facilitated access to the powerline corridor, which ran immediately adjacent to the pipeline, and provided an extensive area of exposed ground immediately outside the survey zone.

An on-the-ground survey was conducted over the entire corridor employing the same procedures used during the Winyah to Jeffries survey described previously. Eighteen archeological sites were located along the right-of-way, including 15 in Berkeley County within the Forest boundaries. All but one of the sites were characterized by prehistoric remains, with both historic and prehistoric artifacts found at four sites. The single pure historic site was an early 20th century farm outbuilding found on private land near Honey Hill, that had been recently leveled by a logging company operating in the area. The remaining archeological sites were characterized by the presence of surface and subsurface artifacts, and several were found to be in a relatively undisturbed condition.

The recommended mitigation for four sites potentially eligible for nomination to the National Register was total avoidance during construction, a procedure advanced by the Forest Archeologist, and accepted by the South Carolina Public Service Authority. All artifacts and records collected during the Winyah to Charity survey were curated at the Institute. The two Commonwealth surveys, along the Winyah-Jeffries and Winyah-Charity routes, provided information on almost 50 archeological sites in the interior of the forest, and represent one of the few data sets collected from the inter-riverine area, on lands well away from major drainages.

Archeological Survey at the Northern Margin of the Forest: The Cross Generating Plant Project, St. Johns Parish, Berkeley County

A series of archeological investigations have been conducted near the northern margin of the National Forest in recent years, in conjunction with the construction of the South Carolina Public Service Authority's Cross Generating Plant. The project area is located approximately 10 miles west of the Francis Marion National Forest, on the northwest side of Lake Moultrie. Archeological surveys have been conducted over the proposed plant site (Herold and Knick 1978a; Kellar, Bernhardt, and Garrow 1979), along a railroad line leading to the plant (Herold and Knick 1979b; Kellar, Bernhardt, and Garrow 1979), and over a series of powerline corridors leading to and from the plant (Herold and Knick 1979b). Taken together, these reports provide a good body of information on the prehistoric and historic human occupation of the upper Cooper River drainage.

The site of the proposed Cross Generating Plant was a 2600 acre tract near Lake Moultrie is characterized by low-lying pine forest and swamps. An archeological survey of the tract was undertaken in September and October of 1978, by staff from the Charleston Museum, to determine if cultural resources were present in the areas of proposed construction (Herold and...
The investigation included a program of archival research, to document historic settlement in the area, together with an on-the-ground survey of the tract.

The field survey included the intensive, systematic coverage of seven sample blocks totalling 279 acres. The blocks were chosen to both cover areas of planned construction and to permit the close examination of all apparent micro-environmental zones in the project area. Upon completion of the intensive survey, the remaining areas in the project tract were traversed, with all exposed soil areas examined. During both the intensive and the subsequent reconnaissance surveys, shovel testing was employed; during the intensive survey, however, shovel tests were systematically dispersed while in the later phase they were placed primarily in high probability zones and within known sites.

During the survey of the Cross Generating Plant four archeological sites (38BK346 - 38BK349) were located, all outside areas of planned construction. The sites included an extensive prehistoric artifact scatter (the 1000 Birds site), a historic tar kiln and pitch pit, a historic cemetery, and a historic artifact scatter tentatively associated with the early nineteenth century Couturier plantation complex. Of importance to understanding where archeological resources are likely to occur in the region, Herold and Knick (1978:28) noted that both historic and prehistoric sites in the low country tend to occur on slightly elevated, well drained soil areas. This observation, reflecting a pattern of site occurrence familiar to most researchers in the area, was independently proposed, and extensively documented, by Brooks and Scurry (1978) about the same time using data gathered to the south and east of the forest, along the Cooper River.

The Charleston Museum survey of the Cross Generating Plant area, beyond suggesting patterns for the occurrence of cultural resources in the region, also noted that paleontological remains were common, not to be dismissed if encountered. Citing discoveries made during the construction of the Santee Canal, Herold and Knick (1978:28-29) noted that late Pleistocene fossil remains could occur close to the surface in this area. Since geological formations of a similar age occur within the boundaries of the Forest, it is probable that important fossil bearing strata worthy of protection are present in the National Forest. Paleontological sites on government property warrant the same protection afforded archeological remains under the 1906 Antiquities Act. All artifacts and records from the Cross Generating Plant site survey have been curated at the Charleston Museum.

A second archeological survey conducted by Herold and Knick (1979a) focused on the corridor for a proposed railroad spur designed to service the Cross Generating Plant site. The corridor, which was 10.5 miles long and 100 feet wide, traversed the northern perimeter of Lake Moultrie, connecting the plant site with the Atlantic Coast Line railroad. The survey corridor extended away from the upper Cooper drainage toward the Santee, across a region characterized by low lying pine forests and swamps. The end of the survey corridor was just outside the boundary of the Forest, near Russellville.

The investigations included archival research to determine historic settlement in the area. The report included a series of illustrations superimposing the project corridor over early historic maps, providing a graphic example of the contribution these documents can make in cultural resources surveys (Herold and Knick 1979a:10-20). Fieldwork included walking the entire corridor, with shovel tests dispersed along the centerline at intervals of from 100 to 200 feet. All exposed surface areas were examined, and suspected high probability areas received proportionally greater attention.

Seven sites were found in the project area, four of which had been previously recorded during work associated with the Cooper River Rediversion Canal Project (Asreen 1974). The sites were distributed in a fashion similar to that noted during the Cross Generating Plant survey, that is, in "those areas with well-drained, sandy soils, often with large deciduous trees present, and with convenient access to a water supply" (Herold and Knick 1979a:3). Four of the sites located during the railroad corridor survey were small, disturbed scatters, and were considered to be of no great importance. The fifth site, a portion of the historic Santee Canal, would only be minimally affected by the project, and so again, no further work was recommended. Extensive prehistoric and historic artifact scatters were observed at two sites, named Low Ridge and Deer Field, which were considered potentially eligible for inclusion on the National Register of Historic Places. Accordingly, additional, testing and possible mitigation stage excavations were recommended at both sites prior to initiating construction along the railroad corridor.

Intensive archeological testing operations were conducted at the Low Ridge (38BK372) and Deer Field (38BK373) sites during July and August 1979, by archeologists from Soil Systems, Inc., under the direction of Patrick H. Garrow, the project principal investigator (Kellar, Bernhardt, and Garrow 1979). Field activity at the Low Ridge site took place from July 23 to August 3, 1979, and included controlled surface collections within and away from the proposed railroad corridor, together with a metal detector survey and test excavations within the corridor (Figure 45). To facilitate the surface collection procedure, the corridor area was plowed. Eleven 5- x 10-foot surface collection units were intuitively dispersed and collected within the corridor area, and four
Figure 45: Surface collection and excavation units at the Low Ridge Site, Berkeley County, South Carolina.
were excavated. A large soybean field running for 1500 feet northeast of the corridor was also examined, and was found to contain numerous historic artifacts. Because of the richness of these remains, they were assumed to contain information important if not essential to interpreting the historic components found within the railroad corridor. Accordingly, the entire field was collected using 50-foot long crop row segments, employing transects placed every ten rows, or roughly 30 feet. The surface and subsurface testing operations demonstrated that no undisturbed cultural remains were present in the corridor area. Outside of the corridor, however, the surface collections documented the presence of a probable plantation complex, including a main house and outbuilding, and two slave quarter areas. These occupations were tentatively identified with Murrell's Plantation, an 18th century settlement in the immediate area. For the part of the site within the proposed railroad corridor (found to be highly disturbed), no further work was recommended. The portion of the site outside of the corridor, however, encompassing the main plantation house and slave complex was considered eligible for inclusion on the National Register of Historic Places.

The second site, Deer Field, was also examined by Soil Systems, Inc. between July 23 and August 1, 1979 (Kellar, Bernhardt, and Garrow 1979:27-37). Field operations included systematic shovel testing, plowing with general and controlled surface collection, and the excavation of five 1 x 3-meter test pits. The testing indicated that the main portion of the scatter was well outside of the railroad construction corridor, and that the portions of the site within the corridor were entirely in the plowzone, and hence disturbed.

The artifacts recovered at Deer Field spanned most of the prehistoric era, with diagnostics from the Early Archaic through the later Woodland recovered, together with a few historic artifacts dating to the 18th and early 19th century. No evidence for historic structures was detected, although the 19th century Daniel Eady plantation is believed to have been in the general area, possibly containing relatively undisturbed archeological deposits (e.g., Herold and Knick 1979a:29). The historic artifacts found at the Deer Field site may represent artifact spillover from this (currently unlocated) complex, or may derive from a building associated with it. Because the archeological remains at Deer Field were found to be entirely in the plowzone, with the main scatter outside of the corridor, no further investigations were recommended. Low Ridge and Deer Field are important in that they represent two of only a very few sites that have been intensively examined in this part of the lower coastal plain. The artifactual and site data are useful for comparative, inter site analysis, and the effectiveness of the various field procedures employed during the testing should serve to guide subsequent field programs in the area. All of the artifacts and records from the Low Ridge and Deer Field sites investigations were curated at the Charleston Museum, Charleston, South Carolina.

A fourth cultural resources investigation associated with the construction of the Cross Generating Plant involved the archeological and historical reconnaissance of 160 miles of proposed transmission lines. The reconnaissance, conducted by members of the Charleston Museum staff (Herold and Knick 1979b), was designed to identify the general nature of cultural resources in the project area, to facilitate both route selection and subsequent, more intensive cultural resource surveys. The proposed corridors all lie outside of the boundaries of the Forest, extending across substantial portions of Dorchester, Berkeley, Orangeburg, and Williamsburg Counties. Given the extent of the corridors, and their general nature - linear transects cutting across a series of environmental zones - project data (once corridor routes have been selected and intensively surveyed) should be extremely useful for developing predictive models of site occurrence in the lower coastal plain.

The reconnaissance level survey by Herold and Knick (1979b) included both archival and field investigations. Archival research included work with early maps and land plats to pinpoint areas of historic settlement. Field investigation focused on those sections of the proposed lines that followed existing power transmission line corridors, approximately 40 of the total 160 miles. A pedestrian survey procedure was employed, with all exposed surface areas examined. Shovel testing was conducted in all suspected high probability areas.

A total of 33 previously unrecorded archeological sites were discovered and described, an important addition to current knowledge about human occupation in the inner coastal plain. Seven of the 33 sites had only prehistoric components, nine only historic, while 17 exhibited both. The high co-occurrence of historic and prehistoric components indicated that similar landforms were selected for settlement; again, these were noted to be areas "topographically above the swampy areas and which were relatively well drained" (Herold and Knick 1979b:3). Project components were also examined in relation to existing models of prehistoric artifact distribution in the coastal plain (e.g., Anderson 1975), with findings indicating congruence in some areas and disagreement in others. What this survey and others like it demonstrate is that traditional models of prehistoric and historic settlement in the region are being refined or even replaced as more and more information is gathered.
Intensive Survey and Mitigation Activity within the Francis Marion: The Cooper River Rediversion Canal Project

The Cooper River Rediversion Canal project, currently underway in northern part of the Francis Marion, has permitted an unprecedented amount of analysis and synthesis. This project, by the Charleston District of the U.S. Army Corps of Engineers, has resulted in the most extensive series of archeological investigations ever undertaken in the coastal plain of South Carolina. Since the mid 1970's one preliminary archeological reconnaissance, one intensive survey, and mitigation stage excavations at 13 sites have been conducted along the canal route (Figure 46). The resulting body of information, currently undergoing analysis, includes a series of technical reports (scheduled for release by 1982) which will greatly increase our understanding of local prehistoric and historic cultural resources.

Archeological investigations associated with the Rediversion Canal project began in 1974, with a reconnaissance level survey along the right-of-way (Asreen 1974). The reconnaissance was conducted by archeologists from the Institute. Dr. Leland G. Ferguson served as the project director and principal investigator, and was assisted by Robert Asreen and David G. Anderson, then Research Assistants on the Institute staff. The proposed canal route ran from near Russellville on Lake Moultrie, across Berkeley County north of the town of St. Stephen, to the Santee River. In the vicinity of the river, the canal swung south and ran parallel to the main channel for several miles along the terrace margin, before emptying into Lake Mattassee, a tributary of the Santee. The area examined was approximately nine miles long and 500 feet wide.

Forty-four archeological sites were discovered, and two were tested, with the results used to provide recommendations for subsequent investigations. The survey was accomplished by a two person team, on foot, over a period of three weeks. General surface collections were made, with no shovel testing conducted. After the completion of the survey two sites (38BK76, 38BK83) were tested. Four 3-foot test units were opened at 39BK76, and two 5-foot units at 38BK83. Well preserved, relatively undisturbed deposits were found at both sites. A range of prehistoric components (including a small Mississippian period shell midden) were documented at 38BK83, and both historic and prehistoric components were found at 38BK76.

The Rediversion Canal survey demonstrated that both prehistoric and early historic occupation in the project area was most intensive along the Santee River terrace, with markedly less use of the pine barrens, or flatwoods away from the river (Asreen 1974:11-12). Complete excavation of three endangered sites (38BK76, 38BK83, and 38BK84) was recommended, together
with additional testing at nine other sites. A recommendation was made to conduct an extensive archaeological survey of the lower Santee basin, since completion of the project would result in dramatic daily fluctuations of the water level below the canal mouth, resulting in the rapid erosion of shoreline sites. This secondary effect could have a major impact on cultural resources on National Forest lands along the Santee. A number of known sites considered eligible for nomination to the National Register may be adversely affected. In addition a high density of previously unrecorded sites are expected to occur along the Santee bluffs.

All of the records and artifacts from the 1974 survey were curated at the Institute, where they have been repeatedly examined in the course of subsequent investigations.

After the original cultural resources reconnaissance was completed in 1974, the proposed route of the Rediversion Canal was altered slightly, necessitating additional cultural resources investigations. An intensive archeological survey over the entire revised right-of-way was conducted during 1977 and 1978, by archeologists from the Institute (Brockington 1980). Dr. Paul Brockington served as principal investigator, and directed field operations. The purpose of the survey was to locate, evaluate, and prepare mitigation recommendations for all sites affected by the project. Site evaluation was to be conducted in terms of National Register criteria, with mitigation recommendations advanced for all sites found eligible for inclusion on the National Register of Historic Places.

Fieldwork occurred from June through early September 1977. The entire project impact zone was surveyed on foot, including areas covered during the 1974 reconnaissance. Shovel tests were employed throughout the project area, along standardized transect intervals whenever ground visibility was poor. When sites were discovered a general surface collection was made, with periodic shovel tests placed in areas of poor visibility. In addition to the 44 sites previously located during the reconnaissance, another 23 sites were located during the 1977 survey. In all, 66 sites were found within the project direct impact zone (Figure 46). Additional testing was recommended at 14 sites with large scale excavation recommended at eight. An additional recommendation noted that a slight modification of project activity would preserve one additional site. All sites for which large scale excavation was recommended were considered eligible for inclusion on the National Register. Two of these were located on National Forest Service land, sites 38BK225 and 38BK229, and one of them, 38BK229, was the subject of extensive excavation in 1979.

Site 38BK225 is situated on land managed by the Corps of Engineers and the U.S. Forest Service. Salvage excavation were performed on the portion of the site owned by the Corps of Engineers in 1978. Paul Brockington acted as principal investigator. The site contains Archaic, Woodland and Mississippian materials in addition to an eighteenth century French Huguenot component. The site appears to be well preserved and Brockington noted:

"Such a stratified site is rare for the coastal plain of the Southeast and the information that may be recovered is significant in terms of understanding culture history, as well as behavioral differences among groups living successively at the same location" (1980:63).

The site extends over 100 meters across Forest Service property.

Excavation designed to recover and record details of the eighteenth century structure concentrated on the western portion of the site (Figure 47). Remains of a structure were encountered, and the associated cultural materials suggest high status occupation. The structure was interpreted as a kitchen serving an unattached main plantation house nearly. If Brockington's inference that the doorway was situated on the eastern side is correct it is possible that most of the site is still present on the Forest Service tract.

Brockington suggests that the structure may have been owned by Margaret Walker, "a somewhat colorful resident of the area in the late eighteenth and early nineteenth centuries" (1980:65). Because of its potential for understanding eighteenth century inland plantation complexes site was determined eligible for nomination to the National Register. Brockington recommended that the Corps take action to avoid secondary impacts, since the site is visible from a canal access road. Unfortunately, some pothunting has occurred at 38BK225 since the construction of the access road. The site thus highlights the speed with which archeological remains can be destroyed given ready access and lack of sufficient protection.

The report on the 1977-1978 intensive archeological survey along the Rediversion Canal route (Brockington 1980) produced a considerable amount of information on the prehistoric and historic human occupation of the middle Santee drainage. Among other things, it provided additional confirmation of the intensive use of the terrace area throughout all periods. Until the reports on the final mitigation excavations appear the intensive survey report stands as the only synthetic document on the site data gathered from across the project area. The primary use of the 1977-1978 intensive survey information was in planning additional testing and mitigation stage activity. Under the overall direction of Interagency Archeological Services — Atlanta, extensive field operations were
initiated at thirteen sites in the direct impact zone in early 1979. All of these sites had been documented by the earlier surveys (e.g., Brockington 1980, Asreen 1974) as potentially eligible for inclusion on the National Register of Historic Places. The artifacts and records from the intensive archeological survey have been curated at the Institute, where many of them are undergoing analysis in conjunction with the final mitigation effort.

Three separate teams of archeologists were involved in the final mitigation stage excavations along the Rediversion Canal. These teams included Soil Systems Inc., Commonwealth Associates Inc., and the Institute. The excavations were conducted from March through October, 1979, with analyses planned through 1981. Although the final reports by these groups are still in preparation, it is possible to recount some of the findings each team made during the excavations.

Six historic sites were examined by archeologists from Soil Systems Inc. during the Rediversion Canal project in 1979. Patrick H. Garrow served as the project principal investigator and Thomas R. Wheaton directed the fieldwork. Three sites were tested and three were extensively excavated during the 1979 field season. Large scale excavations were conducted at 38BK75 and 38BK76, identified as Yaughan Plantation, and at 38BK245, Curriboo Plantation. Both plantations were occupied by French Huguenot families during the 18th and early 19th centuries. The excavations, focusing on areas within the project direct impact zone, located a number of slave quarters and outbuildings associated with the two plantations (Figure 48). Through hand excavation eight structures were found and examined, and through use of heavy machinery all or portions of an additional 25 buildings were detected (Wheaton 1980). Project research, currently underway, is focusing on the nature of French Huguenot, British colonial, and African slave culture (Garrow 1980). A specific area of interest entails documenting changes in the forms and use of Colono-ware over time, since the project recovered extensive quantities of this kind of pottery, believed to be manufactured and used primarily by slaves (Ferguson 1978).

From March through August 1978, archeologists from Commonwealth Associates Inc. conducted extensive excavations at three prehistoric sites (38BK226, 38BK229, and 38BK246) along the Rediversion Canal route. The primary project team consisted of David G. Anderson (field director and principal investigator), Charles E. Cantley, and A. Lee Novick, who are coordinating the final analysis and report, with additional input provided by a range of specialists. One of the three sites, 38BK229, was on National Forest land, and the Commonwealth team was assisted by U.S. Forest
Service Swamp Fox Youth Conservation Corps crews for part of the project (Figure 49). The sites extended for a kilometer along a low terrace overlooking the Santee River floodplain. Fieldwork included opening a series of test pits systematically dispersed across the terrace, together with the intensive excavation of three large block units. The block units produced stratified deposits spanning much of the known period of human occupation in the region, from the Early Archaic through the Mississippian (Figure 50). Project research is focusing on documenting the nature of prehistoric use of the terrace environment over time. Additional goals include developing a local material culture sequence, and investigating lithic raw material procurement, use, and discard (Anderson, Cantley, and Novick 1980).

A third major program of excavations associated with the Cooper River Rediversion Canal project during 1979 was conducted by archeologists from the Institute (Brooks and Canouts 1980). Intensive testing and mitigation stage excavations were conducted at four sites along and away from the Santee River characterized by Woodland and Mississippian components. Dr. Paul E. Brockington, Jr. was the project principal investigator, with Mark J. Brooks the field director. Two sites contained evidence for structures and other features together with preserved animal and human bone. Project research, which is being directed by Mark J. Brooks and Veletta K. Canouts, is focusing on the intrasite analysis of activity areas, and on site, intersite, and regional subsistence and settlement patterning.

Excavations at Walnut Grove near Awendaw

Dr. Michael Trinkley directed excavations at the Walnut Grove shell mound (38CH260) in February, 1981 (Figure 51). Five days were spent excavating six 5'x5' test units. This excavation obtained samples of cultural material useful in determining the site's cultural phases, stratigraphy and the potential for answering research questions outlined in the Francis Marion National Forest Cultural Resource Overview. Investigations were oriented toward collecting data for subsistence reconstructions, determining the site's usefulness for creating or refining Middle Woodland typologies and obtaining northern shell midden data to be used in comparison with southern shell midden data.

A report is expected in 1981 and will be on file at the U.S. Forest Service in Columbia. Artifacts and field notes will be turned over
to the U.S. Forest Service and will be curated at the Charleston Museum.

The Highway 52 Widening Project: Moncks Corner to Kingstree

In September of 1974 archeologists from the Institute conducted a reconnaissance level survey of proposed widening areas along U.S. Highway 52 between Moncks Corner and Kingstree (Asreen 1975). The survey route, which crossed approximately two miles of National Forest land, affected an area 200 feet on one or both sides of U.S. 52, over a 35 miles stretch of the roadway. The survey was contracted by the South Carolina Department of Highways and Public Transportation to assess the impact of the project construction on local cultural resources. The fieldwork was directed by Dr. Albert C. Goodyear, then Institute highway archeologist, assisted by Robert Asreen, a research assistant on the Institute staff.

A pedestrian survey was made over the entire direct impact zone, and a total of 10 archeological sites were located, including five in Berkeley County within the National Forest boundaries. General surface collections were made from each site, but no subsurface testing was undertaken. Five sites, all in Williamsburg County, were recommended for either avoidance or excavation. None of the sites in Berkeley County, were considered important enough to warrant further work including one site on National Forest land (38BK140). All of the artifacts and records from the U.S. 52 widening survey were curated at the Institute. An intensive survey of National Forest land including subsurface examination prior to the issuance of a Forest Service easement has been recommended by the Forest Archeologist.

Investigations Along the Cooper River: The Amoco Chemical Plant Projects

The rapid industrialization of the region around Charleston has prompted a large number of cultural resources investigations in recent years. One of the largest construction projects, the Amoco Chemical Plant complex, located immediately outside the National Forest, on the east side of the Cooper River, has generated a series of cultural resource investigations and reports. Activity associated with, the Amoco project has focused on both the areas history and historical archeological resources (e.g., Herold and Scruggs 1975a; Herold, Knick, and Liss 1978), as well as prehistoric remains (e.g., Hartley and Stephenson 1975; Brooks and Scurry 1978). One mitigation stage excavation has also been conducted, at the Palm Tree site (Widmer 1976a), a prehistoric Indian occupation dating to the Late Archaic and Woodland periods. In addition, a railroad built to accommodate the Amoco plant generated an extensive series of cultural resources investigations (e.g., Herold and Scruggs 1975b; Widmer 1976b; Lees 1979, 1980; Green and Brooks n.d.).
Figure 50: Map of artifacts and features in the main excavation block at 38BK226, Mattassee Lake.
Cultural resources investigations associated with the construction of the Amoco Chemical Plant have been underway since the mid 1970's. An initial archeological reconnaissance of the plant site, which is located between Flagg and Grove Creeks some 12 miles north of Charleston, was conducted in March of 1975 by archeologists from the Institute (Hartley and Stephenson 1975). Dr. Robert L. Stephenson served as principal investigator and Michael Hartley directed the fieldwork. Five prehistoric sites were located during this initial survey, and additional work was recommended at one, the Palm Tree site (38BK147), which was tested the following year (Widmer 1976a). The Institute survey focused primarily on prehistoric cultural resources. A second reconnaissance, focusing on the area's history and historic resources, was conducted concurrently by staff from the Charleston Museum (Herold and Scruggs 1975a), and is discussed in the section detailing historic sites investigation in the Forest area.

Excavations at the Palm Tree site were conducted during March and April of 1976. Dr. Robert L. Stephenson was the project principal investigator, and Randolph Widmer directed the fieldwork and subsequent analysis. The site had been defined on the basis of a scatter of Woodland artifacts during the 1975 reconnaissance, and upon excavation was found to contain a series of Late Archaic and Woodland components. The 1976 excavation strategy at Palm Tree entailed machine stripping the modern plowzone/humus zone, coupled with the mapping and collection of all encountered artifacts and features. Overburden from approximately one acre was removed, encompassing the extent of surface artifact scatter. Within this block Late Archaic and Woodland artifacts and features were found in relatively discrete clusters (Figure 52). In an effort to locate additional cultural remains, an exploratory cut roughly 800 feet long was opened, again with heavy equipment, along the ridge defining the Palm Tree scatter. No other artifact concentrations were detected, however, a finding that serves to point out the somewhat unusual nature of the site itself.

The analysis of the Palm Tree assemblage focused on artifact description and on documenting changes in site use over time. Widmer (1976a:39) noted that an apparent decrease occurred in the intensity of site use between the Late Archaic and the Woodland periods, which he attributed to some kind of settlement or adaptive shift. Widmer (1976a:41-48) then proceeded to examine Late Archaic site distribution in the Cooper River drainage, and from this base offered a model for Late Archaic settlement in the general area. This model proposed two discrete adaptive systems during the Late Archaic period, one followed by groups along the coast, and one practiced by populations occupying the interior. The coastal adaptation, it was argued, was sedentary, with year round settlement of this region. In the interior, in
contrast, a semi-nomadic pattern was followed, with groups moving up and down the river valleys. The report is valuable as a source of ideas on local prehistoric settlement and subsistence, as well as for the data presented on the aboriginal use of the Palm Tree site.

A second intensive archeological survey was conducted within the Amoco Chemical Plant site in 1978, under the direction of Mark J. Brooks and James D. Scurry (1978). The report on this survey is one of the most significant statements to date from the lower coastal plain documenting both patterns of aboriginal settlement over time and environmental variables associated with the location of prehistoric sites. The survey encompassed 1949 acres along Grove Creek, an area known locally as the Boswell tract. The purpose of the cultural resources investigations was to locate and evaluate archeological resources within the tract that might be endangered by eventual industrial development. An additional, overriding objective was the augmentation of local archeological knowledge, by testing "specific subsistence-settlement hypotheses which had been developed for the lower coastal plain of South Carolina" (Brooks and Scurry 1978:vi). The intensive survey by Brooks and Scurry (1978) focused primarily on prehistoric archeological remains, while a second project, by staff members of the Charleston Museum, investigated the area's history and historic archeological remains (Herold, Knick, and Liss 1978).

The intensive survey of the Boswell tract was accomplished from May 22 through June 9, 1978. An 11.57 percent stratified random sample of the tract was intensively examined, employing 200 meter blocks as the basic sampling units. The sample was further stratified according to soil drainage conditions, with seven soil categories employed ranging from poorly drained to well drained. A pedestrian survey of all exposed soil areas was conducted within each sampling unit. In addition, 25 systematically dispersed half meter squares were excavated within each 200 meter sample block, to control for poor ground surface visibility. A total of 49 archeological sites were located in the Project area, including 29 that had been recorded in previous surveys. The distribution of these sites with respect to the sampling strata clearly "indicated that sites of all periods were much more likely to be found in the relatively restricted areas of well drained soils" (Brooks and Scurry 1978:x). All observations, although occasionally noted by other researchers, had not been rigorously tested prior to the Amoco Plant survey. By employing statistical sampling procedures and a range of field techniques appropriate for locating even overgrown or buried sites. Brooks and Scurry conclusively documented an association of archeological sites with well drained soils in the lower coastal plain (Figure 53). Equally important, their findings support the converse of this pattern, namely that archeological sites are unlikely to occur in areas of poorly drained soils. The report, therefore, serves as an important guide for the development of predictive models of site location in the vicinity of the Francis Marion National Forest.

The intensive archeological survey of the Amoco Plant tract provided information of relevance to local land managers by locating and evaluating both archeological sites and high probability areas for sites within the property. It also included extensive review of the evidence for prehistoric settlement in the area, information that is of considerable value to other archeologists working in the region. In particular, Brooks and Scurry (1978:47-63) extensively examined two hypotheses about prehistoric occupation in the lower coastal plain. The first states that:

"The prehistoric utilization of the inter-riverine zone of the interior Lower Coastal Plain was primarily for the exploitation of acorns, hickory nuts, and deer during the fall and early winter when the nuts ripen and the deer aggregate to feed on them" (Brooks and Scurry 1978:47).
The second research hypothesis examined with the Amoco Plant site (and other) data was that

"The Woodland Period, especially the Middle-Late Woodland, represents the most intensive utilization of the inter-riverine zone of the interior Lower Coastal Plain during prehistory. In part, this is due to a higher, through possibly fluctuating, sea level than during earlier prehistoric times" (Brooks and Scurry 1978:49).

The examination of these two hypotheses was conducted using both the sites encountered during the Amoco Plant survey, and with a larger sample of 100 sites from throughout Berkeley County. The evidence, although not conclusive, tended to support both assertions strongly. Beyond providing a valuable overview of prehistoric settlement in the interior of the lower coastal plain, the project has also helped to foster, in part, a major program of interdisciplinary research. This effort, directed by Mark J. Brooks, has focused on archeological and geological evidence for fluctuations in sea level in the general region, a subject of considerable importance to the eventual understanding of known adaptation both along the coast and in the interior (e.g., Brooks et al. 1979, 1980; Brooks 1980).

![Figure 53: The relationships of archeological sites and soil types in the Amoco Realty Survey Tract.](image-url)

The East Cooper and Berkeley Railroad Project: Survey and Excavation at the Huger Site

A second major program of cultural resource investigations in the Cooper river drainage began in 1976, when archeologists from the Institute conducted a survey along the proposed right-of-way for a railroad connector into the Amoco plant area from an existing line near Cordesville (Widmer 1976b). Prior to the Institute's survey, staff members from the Charleston Museum had conducted a historical overview of the project area. This work (Herold and Scruggs 1975a) is summarized in a succeeding section. One prehistoric property, the Huger site (38BK211), was located during the Institute survey. This site was the focus for extensive mitigation-stage fieldwork and analysis during 1977 and 1978 (Green and Brooks n.d.). A second site, Limerick Plantation, also visited during the Institute survey, was extensively excavated by William B. Lees (1980). The excavations at Limerick plantation are summarized in a subsequent section focusing on historical archeological research in the forest area.

The survey of the proposed right-of-way for the East Cooper and Berkeley Railroad, a 16 mile spur from the Seaboard Coast Line, was conducted from June 21 to 25, 1976, by Randolph Widmer and David Ballenger of the Institute staff. Dr. Robert L. Stephenson, the director of the Institute, served as the project principal investigator. Almost the entire length of the proposed connector was within the boundaries of the Francis Marion National Forest, although very little Forest Service land was actually crossed. Virtually the entire corridor was in dense vegetation, and a subsurface testing program was adopted in an effort to locate archeological remains. Using a posthole digger, a two-foot deep test hole was opened every 200 feet along the entire right-of-way, except in flooded areas. Additional shovel tests were opened in seemingly favorable site areas. One prehistoric site was located, 38BK211, on the north bank of Quinby Creek immediately west of the town of Huger. Several posthole tests, and one three-foot square were opened and screened on the site, in an effort to better determine its nature.

The Huger site, as it was called, was characterized by a scatter of Late Archaic through Mississippian period artifacts over an area of several acres. In 1977 an extensive subsurface testing operation was conducted over the site, under the direction of Dr. Stanton Green of the University of South Carolina's Department of Anthropology, and Mark J. Brooks of the Institute staff (Green and Brooks n.d.). The data gathered during this testing were used to guide an extensive block unit excavation on the site in 1978, again under the direction of
Green and Brooks. The report on this project (Green and Brooks n.d.) is undergoing final revision, and is expected to be released in the near future.

The Wando River Terminal Survey: Archeological Investigations on the Southern Margin of the Forest

In 1979 an intensive archeological survey was conducted near the mouth of the Wando River, at Bellevue Plantation a 561 acre tract of land on the south bank of the river (Scurry and Brooks 1980). The project area, located between Hobcaw Creek and the Wando River in northeastern Charleston County, is just a few miles southwest of the Forest boundary, across the Wando from the town of Cainhoy. The South Carolina State Ports Authority is planning a terminal and docking facility in the area, and the purpose of the archeological survey was to locate and evaluate cultural resources, and to make recommendations for their preservation and/or mitigation. The survey was conducted by Mark J. Brooks and James D. Scurry, archeologists with the Institute.

Concurrent with the survey of the land tract, a detailed investigation of the Wando River channel below the project area was also conducted, to determine if significant underwater cultural resources would be impacted by the proposed port construction. The underwater survey was directed by Alan Albright (1980), the Institute's underwater archeologist. The underwater survey was undertaken in July 1979, and included an extensive program of archival research, an electronic survey of the project area employing both a side-scanning sonar and a proton magnetometer, and a visual (diver) survey over the entire area and on specific targets identified during the earlier phases. The report on the investigations (Albright 1980) carefully describes the survey methodology and to other archeologists working in the region. In particular, Brooks and Scurry (1978:47-63) extensively examined two hypotheses about prehistoric occupation in the lower coastal plain. The first states that:

"The prehistoric utilization of the inter-riverine zone of the interior Lower Coastal Plain was primarily for the exploitation of acorns, hickory nuts, and deer during the fall and early winter when the nuts ripen and the deer aggregate to feed on them" (Brooks and Scurry 1978:47).

The second research hypothesis examined with the Amoco Plant site (and other) data was that

"The Woodland Period, especially the Middle -Late Woodland, represents the most intensive utilization of the inter-riverine zone of the interior Lower Coastal Plain during prehistory. In part, this is due to a higher, through possibly fluctuating, sea level than during earlier prehistoric times" (Brooks and Scurry 1978:49).

The examination of these two hypotheses was conducted using both the sites encountered during the Amoco Plant survey, and with a larger sample of 100 sites from throughout Berkeley County. The evidence, although not conclusive, tended to support both assertions strongly. Beyond providing a valuable overview of prehistoric settlement in the interior of the lower coastal plain, the project has also helped to foster, in part, a major program of interdisciplinary research. This effort, directed by Mark J. Brooks, has focused on archeological and geological evidence for fluctuations in sea level in the general region, a subject of considerable importance to the eventual understanding of known adaptation both along the coast and in the interior (e.g., Brooks et al. 1979, 1980; Brooks 1980).

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The survey of the Bellevue tract was conducted from February 13 to March 10, 1979. Following a detailed site file and historic records check, a four phase field program was conducted. The first phase consisted of the intensive examination of a recently timbered and cleared tract containing the badly damaged remains of Bellevue Plantation (38CH434), an 18th-19th century settlement. The second phase of the survey consisted of the excavation of 50 cm test pits at 100 meter intervals along a series of 15 north-south transects, spaced 20 meters apart, over the project area (Figure 54). This testing determined that most of the
sites in the project area appeared to be adjacent to marshlands and tidal inlets. The entire marsh face in the project area was then tested, during the third phase of the survey, with 50 cm test pits placed every 100 meters along the edge of the estuary. The fourth and final phase of the fieldwork consisted of a reexamination of the Bellevue Plantation tract, focusing this time on possible areas of prehistoric components (phase I had as a primary purpose the documentation of the historic remains).

Forty-one sites were located during the Bellevue tract survey, including five prehistoric shell middens, 33 prehistoric sherd and/or lithic scatters, and three historic sites. The prehistoric sites range in time from the Late Archaic through the Mississippian, with most of the identified components apparently dating to the later Woodland. All five of the shell middens were characterized by Wilmington wares, suggesting a late Woodland period age. The three historic sites include one recent structure, one colonial shipbuilding area, and one predominantly 19th century plantation area. Of particular importance to the prehistory of the area, three radiocarbon dates were obtained from 38CH367, a small shell midden with plain and fabric impressed sherd tempered (Wilmington ware-group) pottery present: 1345±100BP (QC 786), 1250±90BP (QC 787), and 1535±95BP (QC788) (Scurry and Brooks 1980:27). These dates help to delimit further the temporal range of Wilmington pottery on the South Carolina coast; coupled with South’s dates from Charles Towne Landing and Fort Johnson (South 1976:29, South and Widmer 1976) and Logan’s (n.d.) recent dates from Honey Hill, they suggest a long period of occurrence for Wilmington ware on the South Carolina coast, possibly over 1000 years.

The project report (Scurry and Brooks 1980) provides detailed descriptions of the sites, and their location and contents. All of the artifacts, site forms, field notes and photographs, furthermore, were curated at the Institute at the University of South Carolina. The report is of value in several respects. First, it provides a detailed summary of European settlement along the Wando River, with a particular emphasis on the history of the local shipbuilding industry. Second, the historic and prehistoric sites and encountered artifacts are well documented, and provide a good sample of the kinds of cultural resources that are to be found in and near the marsh. Third, the authors examine and synthesize data from this survey, and from two other surveys in the general area (Brooks and Scurry 1978; Trinkley and Tippett 1980), to further develop models of prehistoric and historic settlement in the lower coastal plain. All of these points are of importance to archeologists working within the Francis Marion, since the coastal portions along the southern boundary of the forest are similar in many respects to the
Bellevue tract, and probably contain similar cultural resources.

Survey and Testing South and West of the Forest: Projects in the North Charleston, East Cooper, and Lower Wando River Areas

A major construction project underway in the vicinity of the Forest that will generate a considerable amount of information about the historic and prehistoric settlement of the region is the South Carolina Department of Highways and Public Transportation's Mark Clark Expressway. The proposed corridor runs around Charleston to the north, and is designed to relieve traffic pressures caused by the rapid growth of the region. The corridor begins in Mount Pleasant, and proceeds to the north and west, crossing first the Wando and then the Cooper River in North Charleston. It then proceeds west and south, crossing the Ashley and along the Cooper and Wando Rivers is proceeding rapidly. This, together with the planned highway corridor, will lead to greater development of the western part of the Forest. Archeological surveys were recently conducted along the eastern side of the Cooper, at the proposed Alumax plant site on Mt. Holly plantation (Poplin et al. 1978), at a proposed county wastewater treatment plant between the Back and Cooper Rivers (Lees and Michie 1978), and along a proposed highway between Ladson and Goose Creek (Trinkley and Tippett 1979). Both prehistoric and historic sites were located during each survey; these, and future development-related projects will inevitably lead to a rapid increase in knowledge about the area's cultural resources.

Historic Sites Investigations in the Vicinity of the Francis Marion

Introduction

Historic sites investigations, like those focusing on prehistoric remains, have only recently been initiated in the general area of the Forest. Gregorie (1925:16) mentioned the existence of colonial lime-kiln sites along the tidelands to the northeast of Charleston, an industry that remains to this date poorly documented. This is one of only a very few early references to historic archeological remains in the area. Most historic sites research conducted within or near the Forest has occurred within the last ten years, and has been concerned almost exclusively with prominent military fortifications, plantation complexes or elaborate town houses. A range of miscellaneous historic remains have also been exposed by construction activities within the city of Charleston. These have been briefly examined by Charleston Museum staff members.

Building A Research Foundation

Under the direction of Stanley South of the Institute staff, several seasons of survey and excavation have been conducted at (predominantly) Colonial and Revolutionary War period fortifications in the vicinity of Charleston Harbor. These excavations have included work at Charles Towne Landing, Fort Moultrie, and Fort Johnson (South 1971, 1974; South and Widmer 1976). South's investigations have been extensively reported and have come to form the contemporary theoretical and methodological basis for historic sites archeology in the area. While work in the Charleston area focused primarily on military establishments, South (1977a, 1977b) has also drawn heavily on the data from historic sites investigations throughout the region to develop methods for examining and interpreting a wide range of historic sites, both military and domestic. It should also be noted that while many of the historic sites examined were regarded in a period-specific perspective by planning and funding agencies, South thoroughly investigated all periods of site occupation encountered. Thus, at Charles Towne Landing, where South (1971) documented the period of initial English settlement, a palisaded aboriginal village was also examined, the only such site currently known from the Carolina coast.

Historic Sites Work by the Charleston Museum

The Charleston Museum maintains an active program of historic sites research in the lower coastal plain. During the past several years the museum has been conducting historical overviews, surveys, and excavations in the Charleston and Berkeley County area under the direction of Donald and Elaine Herold (Herold and Knick 1978, 1979a,b; Herold, Knick, and Liss 1978). This activity includes extended excavations at specific sites, such as the early colonial Heyward-Washington house in central Charleston, as well as brief salvage operations, which appear necessary almost every time construction projects disturb the ground in the downtown area. Members of the Museum staff have conducted environmental impact-related historic site surveys in the Forest area, including work on the Amoco plant site, and along the East Cooper and Berkeley railroad connector route (Herold and Scruggs 1975a, 1975b). These surveys, while complement Institute projects focused on the prehistoric resources in the same areas (e.g., Hartley and Stephenson 1975; Widmer 1976b), are resulting in mitigation stage historic sites research. The extensive program of research at Limerick Plantation (38BK223) in Berkeley County, underway since 1977 (Lees 1979, 1980), for
example, resulted in part from recommendations made during a cultural resources survey by staff members of the Charleston Museum (Herold and Scruggs 1975b).

Two reports released through the Charleston Museum in 1975 provided reconnaissance-level surveys of historic properties on the Amoco plantation site, between Grove and Flagg Creeks, and along the East Cooper and Berkeley Railroad route (Herold and Scruggs 1975a, 1975b). Each report summarized the results of title and land plat searches and included a general historic overview of each area. The Grove and Flagg plantation overview focused on the Amoco plant site, while the East Cooper and Berkeley railroad survey examined the historic resources along four alternate corridors, all crossing Forest Service land, to aid in the selection of a route that would cause the least damage to cultural resources. Field reconnaissance was conducted during each project, to locate structures or sites referenced in the archival data. The railroad corridor survey (Herold and Scruggs 1975b), besides identifying a number of sites, provided a valuable review of the early historic occupation of Forest Service property in the western part of the Forest, between Cainhoy and Witherbee.

Excavations at Limerick Plantation

The route finally selected for the East Cooper and Berkeley Railroad was found to intersect the site of Limerick Plantation, a major low country rice plantation occupied from the early 18th century until after the Civil War, when its fortunes declined markedly (Lees 1980). The property was unoccupied during the latter part of the 20th century, and many of the buildings burned or deteriorated during this period. The program of fieldwork adopted at Limerick employed a series of differing but complementary excavation procedures to sample the portion of the plantation within the direct impact zone (Lees 1980).

In February of 1977 a reconnaissance of the final right-of-way for the railroad was conducted by Dr. Paul E. Brockington, Jr., of the Institute staff. The line was walked, with shovel cuts placed every one hundred feet. A number of historic artifacts were recovered from the area of the plantation, and a program of intensive survey was recommended. In June and July, 1977, the site area was intensively tested, with results such that a major program of excavations was undertaken from August through November of that year. The work on the plantation site was funded by the South Carolina Public Railroad Commission, and undertaken by archeologists from the Institute, was Kenneth Lewis principal investigator. William B. Lees served as the field director and was responsible for all phases of analysis and report preparation.

The initial testing at Limerick, in July 1977, consisted of a systematically dispersed sample of 94 8-inch diameter tests placed with a power posthole auger (Lees 1980), coupled with the excavation of six 5-foot squares. The extensive, mitigation stage excavations conducted from August through November included a stratified random sample of 61 5-foot test units together with 27 nonrandomly placed five-foot squares excavated in block units in selected site areas. In addition to the excavation of the 88 5-foot squares, a power auger was used to open 409 8-inch diameter tests, systematically dispersed in a 10-foot grid. The final week of the excavation a backhoe was used to open a series of transects in the right-of-way, and to facilitate the excavation of the cellar at the main house.

The cultural resources mitigation program at Limerick has been extensively described by William R. Lees (1980). The final report provides a wealth of information and pictures about the history of the plantation, and touches on a wide range of subjects. Beyond the specifics of the history, architecture, and archeology of the plantation itself, the report also investigates such diverse subjects as livestock raising in the lowcountry (Lewis 1980), kinds of pottery made and used by local slaves, and the operation of successful rice plantation agriculture in the 18th century.

The Spier's Landing Site

A second major historic site investigation from the general vicinity of the Forest, at Spier's Landing, summarized excavation at a slave cabin site located on Lake Marion in Berkeley County (Drucker and Anthony 1979; Anthony 1980). Archeological investigations were initiated because the site was in the area of a proposed county recreational facility that would be partially federally funded. The fieldwork at Spier's Landing was undertaken in November 1977, and from January through April 1978. Lesley M. Drucker served as principal investigator, and co-directed the fieldwork with Ronald Anthony.

Project research focused on documenting the recovered material culture assemblage, in order to define the socioeconomic status of the site occupants (Figure 55). The report included an extensive review of local history, focusing in particular on the kinds of archeological remains that would be expected in slave as opposed to tenant or plantation quarters. Site features and artifacts were thoroughly described and illustrated, and the analysis included the identification of both faunal and paleobotanical remains. The report is of value for its extended discussion on the kinds of evidence needed to document socioeconomic status archeologically, in the absence of written records, and provides a guide for the examination of similar kinds of sites in the general region.
The Seventeenth Century Lowcountry Settlement Survey

Stanley South and Michael Hartley of the Institute staff conducted a survey of seventeenth century sites in selected areas of Charleston County between April and September 1980 (Figure 56). The survey focused on an area south of Charleston, from the Ashley to the Edisto Rivers, along a 28 mile section of the coast and up to 16 miles inland. The survey correlated site locations on the Thornton-Morden Map of 1695 and the Maurice Matthews Map of 1685 with modern topographic maps and field reconnaissance data, to test the hypothesis that 17th century sites tend to be located on high ground adjacent to deep water channels. During their survey South and Hartley used the presence of ceramics to document the location of 20 17th century sites. They found that the:

"critical variables in site location during the first years of colonization reflect[ed] the need for transportation, access to goods, shipping of products, and access to land suitable for crop production, as well as being defensible against potential enemies by land and sea" (South and Hartley 1980:2).

The project represents an important step in developing a predictive settlement model for historic sites in the Charleston area. A similar deep water/high ground settlement pattern would be expected for 17th century sites in the Francis Marion, especially along the major watercourses of Guerin Creek, Awendaw Creek, Wambaw Creek and the Santee River.

Excavations at Hampton Plantation

During the spring and fall of 1979 extensive testing operations were conducted at Hampton Plantation, an 18th and 19th century rice plantation on the lower Santee River in Charleston County. The plantation is being developed as a state park by the South Carolina Department of Parks, Recreation, and Tourism. The archaeological investigations were directed by Kenneth E. Lewis of the Institute staff, and were sponsored by the South Carolina Coastal Council. Two field seasons of excavation at the site have been conducted and extensively reported, the first during the spring of 1979 (Lewis 1979) and the second in November and December of 1979 (Lewis and Haskell 1980). The fieldwork has included the excavation of a one percent sample of several acres of the central plantation complex, employing five foot squares selected using a statistical sampling procedure. During the second season an unusual pit/feature was encountered, and a larger block unit, encompassing approximately 188 square feet, was opened to examine it in detail (Figure 57). The reports on the field work provide extensive summaries of the archeology and history of Hampton plantation, and provide significant comparative data for similar sites that occur on the Forest, such as the Wattahan and Point plantations.

Ongoing Historic Sites Research in the Forest Area

Historic sites research, like prehistoric sites investigation, is occurring at an increasing pace in and around the Forest. The Cooper River Rediversion Canal project, discussed previously, included excavations at six historic sites. This work is expected to contribute a great deal of knowledge about early French settlement along the Santee, and about plantation life, including slave conditions, in the low country. Around Charleston, work on the Mark Clark expressway has resulted in one major historic site report (Carrillo 1980), summarizing mitigation stage excavation at Green Grove Plantation (38CH109), and additional investigations are probable before the project is completed.
Figure 56: Location of seventeenth century settlements along the coast between the Ashley and Edisto Rivers.

Figure 57: Excavations at Hampton Plantation.
The growth of the Charleston area will increasingly necessitate mitigation or salvage of historic sites, as construction encroaches on the remains of early settlements. Given the strong interest in local history, excavations at protected sites are also likely to accelerate. Extensive excavations have already been conducted at a number of historic sites around Charleston, such as at Fort Moultrie, Fort Johnson, and at Charles Towne Landing, as well as at several locations within the city itself. The historic sites research in the lower coastal area has been funded by private groups and by local, state, and federal governments. The National Trust for Historic Preservation has sponsored an ongoing series of excavations at Drayton Hall since 1975 (L. Lewis 1978), reflecting in part the intense interest in the history of the general region, and the awareness of the contributions that archeology can make to bring that history to life.

The direction of historic (and prehistoric) research has not been restricted to dry land. Under the direction of Alan Albright, the Institute's underwater archeologist, an extensive program of underwater research has been conducted in the lower coastal plain, with shipwrecks, ferry crossings, fossil deposits, and many other locales the subject of investigation. A number of underwater archeological sites have been reported from the vicinity of the Forest, particularly along the Cooper and Wando Rivers. Most of these sites reflect ferry crossings or shipwrecks, although some fossil localities and Indian sites have also been discovered.

The accelerating development of the region around Charleston and, to a lesser extent, Georgetown, is resulting in the continual exposure and destruction of archeological remains. Legal mechanisms now exist whereby some of this damage can be rectified, through archeological mitigation or salvage projects. Unfortunately some forms of destruction cannot be so readily controlled or remedied, particularly those caused by relic hunters. With increasing populations, the activities of historic and prehistoric artifact collectors have been on the increase, resulting in the depletion of local cultural resources. Responsible private divers and amateur or avocational archeologists have a long tradition of locating and reporting important finds in the area. Unfortunately these citizens form a small minority when compared to the increasing number of casual or even intentionally destructive relic collectors operating in the area. Civil War period sites and historic privies have received the brunt of this vandalism by bottle collectors and military ordnance enthusiasts, but some prehistoric sites have also been severely damaged by similar actions.

Discussion of problems caused by collectors is often considered unpleasant, since many people (including archeologists) enjoy or sympathize with the activity. Unfortunately, unless done in a reasonably controlled fashion, the practice can be very destructive. One uninformed person with a metal detector can, in an afternoon of digging, destroy the information content of a historic site that had lain undisturbed for a century or more. The few bullets or belt buckles recovered are small return compared to what might have been learned had the site been preserved and responsibly examined. In the Forest, where Civil War period fortification, colonial plantation sites, or old ferry crossings pose increasingly tempting targets for collectors, the problem is one of no small importance.

The 1979 Historic and Archeological Preservation Act will discourage such activity. The Act provides stiff criminal and civil penalties for damaging archeological resources on National Forest land.
The US Forest Service has conducted archeological surveys in the Francis Marion National Forest since 1977 (Figure 58). At that time Paul Rubenstein conducted surveys of approximately 300 acres of lands proposed for exchange with non-Federal individuals or companies. Wayne Prokopetz assumed the position of Zone Archeologist in 1977, responsible for cultural resources on the Forests in Florida, South Carolina, Alabama and Puerto Rico. Prokopetz conducted surveys of proposed Forest System Roads on the Francis Marion. Trisha Logan became Forest Archeologist in 1978, conducting surveys of proposed roads, impact areas and land exchanges.

For several years the Francis Marion National Forest has been involved in an active program of cultural resources management. Several sites have been tested or excavated since the inception of the Francis Marion National Forest cultural resource program. The Youth Conservation Corps and the Young Adult Conservation Corps have been involved in the Cultural Resources Program since 1979.

Forest Service archeologists have recorded 144 sites since 1978 bringing the total number of recorded archeological sites on the Francis Marion National Forest to 202. Archeological inventory efforts will continue on the Francis Marion with priorities for survey placed on proposed impact areas.

A review of previous investigations conducted by Forest Service archeologists since 1977 is presented here. These surveys were conducted in compliance with the National Historic Preservation Act of 1966, Executive Order 11593 and the Archeological and Historic Preservation Act of 1974. Reports on these surveys are on file at the US Forest Service Supervisor's Office, the SC Department of Archives and History and the SC Institute of Archeology and Anthropology.

In July 1977, Paul Rubenstein, Forest Service Archeologist conducted surveys of several proposed land exchange tracts. The following tracts were examined:

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>TRACT</th>
<th>ACRES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wambaw</td>
<td>535</td>
<td>254.4</td>
</tr>
<tr>
<td>Witherbee</td>
<td>843</td>
<td></td>
</tr>
<tr>
<td></td>
<td>158-A</td>
<td>49.2</td>
</tr>
<tr>
<td></td>
<td>158-B</td>
<td></td>
</tr>
</tbody>
</table>

The survey of tract 535 consisted of a perimeter walkover (utilizing drainage and fire lines) followed by an intensive examination of several high priority areas. These areas were identified by soil type, elevation and proximity to key resources and subsurface testing was undertaken.

The survey of tracts 843, 158-A and 158-B consisted of a combination of surface and subsurface testing. One low density historic scatter was located in tract 535. No significant sites eligible for nomination to the National Register of Historic Places were located during these surveys (Rubenstein 1977).

Wayne Prokopetz, Forest Service Zone Archeologist, conducted a survey of the following proposed roads and borrow pits on the Francis Marion in November 1977:

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Road</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>215</td>
<td>2.5 miles</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>141</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>128</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>8.45 miles</td>
</tr>
</tbody>
</table>

The survey technique consisted of walking the centerline of the road and placing shovel tests at random intervals. Much of the area traversed by these proposed roads contained low lying, poorly drained terrain not suited for human habitation. No cultural resources were located during the survey (Prokopetz 1978a).

A second road survey was conducted by Wayne Prokopetz in October 1978 involving the following projects:

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Road</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>83</td>
<td>1.4 miles</td>
</tr>
<tr>
<td></td>
<td>83</td>
<td>0.86</td>
</tr>
<tr>
<td></td>
<td>170</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>3.16 miles</td>
</tr>
</tbody>
</table>

Examination of aerial photographs and topographic maps prior to ground reconnaissance indicated that the planned roads were situated in swamp locations and did not cross elevated ground suitable for habitation. The field survey consisted of walking the centerline, placing shovel tests at 100' intervals. No cultural resources were located during the survey as reported in Forest Service Report #79-1 (Prokopetz 1978b).

During Fiscal Year 1979, Trisha Logan, Forest Archeologist, conducted surveys of approximately ten miles of proposed road construction on the Witherbee and Wambaw Districts of the Francis Marion. The following projects were surveyed:

<table>
<thead>
<tr>
<th>District</th>
<th>Compartment</th>
<th>Road #</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wambaw</td>
<td>201</td>
<td>260A</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>160</td>
<td>219A</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>132</td>
<td>5011</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>177</td>
<td>212G</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>251-A</td>
<td>5169</td>
<td>1.1</td>
</tr>
<tr>
<td>Witherbee</td>
<td>86</td>
<td>6344</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>251-A</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>98</td>
<td>6325</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6272</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Figure 58: Archeological investigations conducted by the U.S. Forest Service.
The survey consisted of walking the centerline of the proposed roads using subsurface inspection (shovel testing) in areas of suspected site locations. Six archeological sites were located during the road surveys.

The Honey Hill site (38BK134) was located on F.S. Road 219-A (Logan 1979a). Test excavations were conducted by Logan in July of 1979. The Swamp Fox Youth Conservation Corps assisted in the one week project. A controlled surface collection was conducted using a 50' grid prior to the excavation of two test units. This site was determined eligible for nomination to the National Register of Historic Places and was mitigated prior to road construction (Dorian and Logan n.d.). The site contained both prehistoric and historic components. The major prehistoric occupation represented the Woodland Period.

Mitigation of the Honey Hill site was carried out in September, 1979 under the direction of Trisha Logan with Alan Dorian serving as field director. Two weeks were spent in the field during the mitigation phase. An intact hearth found during the excavations, contained Hanover Fabric Impressed ceramics from which three carbon-14 dates were obtained. Two dates cluster around 145 B.C. while the third dates to 250 A.D. (Figure 59). The historic occupation was represented by late 18th/early 19th century cultural materials. The foundations to a "summer settlement" house were located which date to that period. The road construction project was re-designed to leave the historic component of the site intact (Dorian and Logan n.d.).

The historic period scatters (38BK390 and 38BK391) found along F.S. Roads 6344 and 5169 were not considered significant (Logan 1979a).

Three archeological sites related to Limerick Plantation were located during the survey of F.S. Road 251-A. Two eighteenth/nineteenth century slave settlements (38BK261 and 38BK376) and a rice trunk and flood gate (38BK389) were found in the vicinity of the road. The slave settlements are outside the road right-of-way and will not be affected. The rice trunk which was used to control water levels in rice fields was excavated by Trisha Logan. The flood gate remains were protected during the construction of the bridge across Gough Creek.

The slave settlements are considered to be eligible for nomination to the National Register of Historic Places and should be included in the thematic nomination of Limerick Plantation. Modifications were made in the road plans to protect this site.

In conjunction with the road survey, two proposed clearcut areas were surveyed in Compartment 86 totalling 62 acres. The area had been part of the Limerick rice fields and cultural resources were not located during this survey.
Archeological surveys were conducted by Trisha Logan for proposed recreational development areas on the Wambaw District. Three proposed parking lots were examined:

<table>
<thead>
<tr>
<th>Parking Lots</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swampfox Trailhead</td>
<td>5175</td>
</tr>
<tr>
<td>Swampfox Trail at</td>
<td>5107</td>
</tr>
<tr>
<td>Halfway Creek Camp</td>
<td></td>
</tr>
<tr>
<td>Swampfox Trail at</td>
<td></td>
</tr>
<tr>
<td>Halfway Creek Road</td>
<td></td>
</tr>
<tr>
<td>Crossing</td>
<td></td>
</tr>
</tbody>
</table>

One archeological site (38CH427), a historic period house site, was located outside the project impact zone during this survey as reported in Forest Service Report #79-14 (Logan 1979c).

A survey of a 2.3 acre land exchange at Cape Romain lookout failed to produce archeological sites (Logan 1979d). Previous disturbance in this tract probably resulted in the obliteration of any cultural resources as reported in Forest Service Report #79-17.

Cultural Resource inventories conducted on the Francis Marion National Forest in Fiscal Year 1980 included surveys of road construction projects, land exchanges, mechanical site preparation projects and timber sales.

Trisha Logan, Forest Archeologist, conducted surveys of the following road construction projects:

<table>
<thead>
<tr>
<th>District</th>
<th>Compartments</th>
<th>Road</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wambaw</td>
<td>161/25/126</td>
<td>204-D</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>6347</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6347a</td>
<td>0.5</td>
</tr>
</tbody>
</table>

In addition to the .7 miles of road construction in Compartment 161, 13 log decks and a borrow pit were examined (Forest Service Report #80-2). A Late Archaic site (38BK429) was located adjacent to the borrow pit. Protective measures were taken so that this site would not be affected (Logan 1980a).

Four archeological sites were located during the survey of F.S. Road 204-D in Compartments 125/126. Three historic period scatters were not considered to be significant (38BK420, 38BK421 and 38BK422). The fourth archeological site containing early historic cultural materials and prehistoric material was located on the bluff above the Santee River near the road terminus. Prehistoric occupation is represented by a high density of Late Archaic, Woodland and Mississippian cultural material. A 17th, 18th century component was also located at the site.

Barricades were installed by the Wambaw District Youth Conservation Corps to protect the site (Figure 60) from traffic and construction activity as reported in Forest Service Reports #80-13 and #81-3 (Logan 1980f and Muse 1981a).

Forest Service Report #80-6 reports that a historic/prehistoric site was located in Compartment 48 during the survey of F.S. Road 6347 (Logan 1980c). The Big Ocean Bay site (38BK425) was subsequently tested (Logan 1980c). Three 3'x3' test units yielded cultural material including Early Woodland and Mississippian artifacts and a low density scatter of historic ceramics.

Test excavations revealed that the area of the proposed right-of-way had been previously disturbed (Logan 1980d). Construction activity was restricted to this previously disturbed area (Forest Service Report #80-9).

A survey of Tract 106, a proposed land exchange, was conducted by Alan Dorian, a seasonal Forest Service Archeologist (Dorian 1979). The survey consisted of subsurface testing of high probability areas. Approximately 50% of the tract was unsuitable for human habitation (swampy areas). The remaining high ground had been previously disturbed by timber harvesting.

A low density prehistoric site was recorded (38BK424). No sites eligible for nomination to the National Register were located (Forest Service Report #80-3).

Trisha Logan, Forest Archeologist, conducted surveys of land exchange tracts at Honey Hill (Logan 1980b) and near Beaufordtown (Logan 1980e).

The five acre tract at Honey Hill (Tract 110) contained a 20th century historic scatter. Subsurface testing failed to identify significant cultural resources. This survey was reported in Forest Service Report #80-4 (Logan 1980b).

The subsurface survey of the 18 acre McNair exchange tract also failed to locate significant sites. A historic period scatter was recorded (Forest Service Report #80-12, Logan 1980e).

Under the field supervision of Martha Zierden, the Swamp Fox Youth Conservation Corps enrollees of the Withbee District conducted an Historic Site survey of portions of the Francis Marion National Forest. This program was conducted under the direction of Camp Director Oliver Buckles and Forest Archeologist Trisha Logan. The Youth Conservation Corps offers a combination of environmental education and work experience for high school age youth. The YCC cultural resource program provides the youth with an understanding and appreciation of the Nation's cultural heritage (Figure 61).

This eight-week survey, during the summer of 1980 examined a total of 1416 acres for cultural resources. Two types of surveys were conducted: proposed impact surveys and historic sites surveys.
Figure 60: Installation of barricades at 38BK406 to protect the site.

Figure 61: Youth Conservation Corps crew excavating a site in the Francis Marion National Forest.
Of primary importance were areas which are scheduled for ground-disturbing activities. These consisted of the following timber stands in Compartments 64, 65, 70, and 94:

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Stand</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>64</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>65</td>
<td>1</td>
<td>96</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>98</td>
</tr>
<tr>
<td>70</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>23</td>
</tr>
</tbody>
</table>

Survey of these areas consisted of walking a series of transects, placing shovel tests at various intervals, and screening materials through 1/2" mesh. Two roads, one in Compartment 64 and one in Compartment 70, were also surveyed. No significant sites eligible for nomination to the National Register of Historic Places were located during these surveys. Four tar kilns were located in Compartment 94. Two tar kilns were found in Compartment 70. One appears to be in good condition and will be avoided during harvesting activity. A light scatter of brick and iron artifacts was located in Compartment 65. These sites were recorded in the South Carolina Archeological Site files. Reports are on file at the USFS Supervisor's Office in Columbia.

The following is a list of sites located.

**HISTORIC SITES SURVEY**

**Sites located:**

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK469</td>
<td>Fishbrook Plantation - 18-19 cent.</td>
</tr>
<tr>
<td>BK468</td>
<td>Eccles Church - Prehistoric (Private)</td>
</tr>
<tr>
<td>BK466</td>
<td>18th century structure</td>
</tr>
<tr>
<td>BK467</td>
<td>Peter Murphy Place - 20th cent homestead</td>
</tr>
<tr>
<td>BK465</td>
<td>19th century domestic</td>
</tr>
<tr>
<td>BK463</td>
<td>Prehistoric/Civil War</td>
</tr>
<tr>
<td>BK456</td>
<td>French Huguenot Site</td>
</tr>
<tr>
<td>BK460</td>
<td>19th cent. domestic? (18th?)</td>
</tr>
<tr>
<td>BK459</td>
<td>19th cent. domestic</td>
</tr>
<tr>
<td>BK471</td>
<td>Tombstone</td>
</tr>
<tr>
<td>BK457</td>
<td>19th cent. domestic</td>
</tr>
<tr>
<td>BK455</td>
<td>House site</td>
</tr>
<tr>
<td>BK454</td>
<td>Tar Kiln</td>
</tr>
<tr>
<td>BK453</td>
<td>Tar Kiln</td>
</tr>
<tr>
<td>BK461</td>
<td>Tar Kiln</td>
</tr>
<tr>
<td>BK462</td>
<td>Tar Kiln</td>
</tr>
<tr>
<td>BK458</td>
<td>Tar Kiln</td>
</tr>
<tr>
<td>BK464</td>
<td>Wadboo House (Private)</td>
</tr>
<tr>
<td>56-2</td>
<td>Sawmill</td>
</tr>
<tr>
<td>BK470</td>
<td>18-20th Century (Private)</td>
</tr>
</tbody>
</table>

Future Youth Conservation Corps projects will focus on the evaluation and nomination of Forest Service sites to the National Register of Historic Places.

During June, July and August 1980, Linda P. Hart, Forest Service Archeologist, directed excavations by Youth Conservation Corps enrollees at a tar kiln site in the Witherbee District of the Francis Marion National Forest (Figure 63). The site is located in Compartment 87, on Threemile Head Road approximately one-half mile from its intersection with Strawberry Road (Hart n.d.).

The site consists of three tar kilns used in the production of naval stores (see section on History of Francis Marion National Forest) and associated features in an area of about five acres. Tar kiln A was most extensively excavated. A trench, 65 feet long by 5 feet wide, bisected the kiln on a N-S axis to obtain...
Figure 62: Swamp Fox Youth Conservation Corps historic site survey.

Figure 63: Youth Conservation Corps excavation of a tar kiln site on Limerick Plantation.
It is estimated that the tar kilns were built sometime after the 1709 sale of Limerick to Daniel Huger, since the previous owners did not live on the land. Presently more precise estimates cannot be made as to the date (dates) of the three tar kilns. The two square nails found in kiln A provide no datable evidence. It is suggested that further testing might locate a "tar burner's" shack and/or a refuse pile. Tar kilns were attended throughout the burning process, which could be as lengthy as of two weeks for kilns the size of A and B. It is assumed that at some time during that burning the tar burner must have dropped or deposited at least a small amount of cultural/datable material.

Materials recovered at the site (soil samples as well as artifacts and pieces of the wooden trough) are stored at the Charleston Museum, along with photographs and fieldnotes. The excavation report is on file at the USFS Supervisor's Office in Columbia.

Jenalee Muse conducted surveys of proposed impact areas on the Wambaw District during the summer of 1980. These included proposed timber sales, mechanical site preparation areas and road construction projects. The Wambaw District Youth Conservation Corps assisted in conducting these surveys.

Excavation revealed that the six were constructed in the same manner - making a 5-7 foot hole, about 18 inches deep, lined with a heavy layer of clay. These acted as pools in which the tar was burned to render it into pitch. These two sets of three depressions corresponded to the two burnings of kiln B. At kiln C evidence suggested a single use. However, it remains different from kiln A in that the charcoal, tar, and clay layers were thicker in kiln C. It was also higher in elevation (a more distinct mound) and smaller in diameter than the other two kilns.
The following areas were surveyed:

<table>
<thead>
<tr>
<th>Compartment</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>132</td>
<td>70</td>
</tr>
<tr>
<td>135</td>
<td>168</td>
</tr>
<tr>
<td>191</td>
<td>503</td>
</tr>
<tr>
<td>196</td>
<td>115</td>
</tr>
<tr>
<td>200</td>
<td>95</td>
</tr>
<tr>
<td>203</td>
<td>75</td>
</tr>
<tr>
<td>215</td>
<td>30</td>
</tr>
</tbody>
</table>

Areas scheduled for mechanical site preparation in Compartments 196, 132, 203 and 215 were surveyed. Nine low density prehistoric (Woodland/Mississippian) sites and two historic sites were recorded in Compartment 196. Compartment 132 contained two low density prehistoric sites and one historic site. No sites were located in Compartment 203. Two historic sites were located in Compartment 215. None of these sites were considered eligible for nomination to the National Register (Muse 1981c).

Surveys were conducted prior to timber sales in Compartments 135, 191 and 200. Three prehistoric sites were located in Compartment 200. One of these sites may be eligible for nomination to the National Register. Four archeological sites were recorded in Compartment 135, two ceramic prehistoric, one prehistoric/historic and one historic site. These sites had been previously impacted and were not considered eligible for nomination to the National Register (Muse 1981b).

The survey of 503 acres in Compartment 191, the Walnut Grove Tract, yielded 14 previously unrecorded sites, 10 of which may be eligible for nomination to the National Register (Forest Service Report #81-2, Muse 1980b). These sites included both historic and prehistoric occupation. The major area of concentration was along the bluff above Awendaw Creek. Recommendations were made to avoid or minimize disturbance to these sites during harvesting operations.

Three sites (38CH491, 38CH493, and 38CH496) will be avoided during harvesting and a 300' buffer will be maintained along Awendaw Creek to protect the sites along the bluff (38CH492, 38CH498, 38CH499, 38CH500, 38CH501, 38CH502 and 38CH506). Timber harvesting will be allowed in this area only during dry weather with an archeologist present to monitor logging activity.

During 1981 Martha Zierden will spend six months conducting cultural resource surveys of proposed impact areas on the Francis Marion. These surveys will concentrate on road construction, mechanical site preparation and timber sale projects. Soils data, topographic information and expected impact have been considered in designing the Data Recovery and Analysis Plan. Whenever possible the survey will be correlated with the prescribed burning plan to allow for greater ground visibility and facilitate site discovery.
DIRECTIONS FOR FUTURE CULTURAL RESOURCE INVESTIGATIONS

Introduction

The Francis Marion National Forest is located in an area rich in both historic and prehistoric cultural phenomena. Previous chapters have documented the extent of these resources, and their exploration to date. A considerable amount of cultural resource investigation has occurred in and near the Forest, mostly within the past ten years. Given the rapid industrialization of the Charleston area, an increasing amount of archaeological work will undoubtedly take place in the coming years. Some of the major problem domains facing archeologists in the area are presented in this section in an effort to help guide future investigations.

Such a review serves a variety of purposes. First, since most cultural resource work in the Forest area has only recently occurred, little in the way of synthesis has appeared. Individual reports have focused on a number of research topics and problem domains, but even the most comprehensive efforts have been bounded by fairly restricted geographic areas, time periods, or research orientations. Efforts to explore, or document the range of problem domains facing archeologists working in the area are needed. This chapter represents an initial attempt at such a synthesis. In the discussions that follow, the record of past investigation in the Forest area is extensively referenced. Future cultural resource projects should consult primary sources whenever possible, for additional information, interpretation, and alternative perspectives.

A second reason for detailing major problem domains is that it enables land managers to better understand why the cultural resources they are responsible for may be important. Under existing federal regulations, cultural resources are considered significant, or eligible for nomination to the National Register of Historic Places, if they

- are associated with events that have made a significant contribution to the broad patterns of our history; or
- are associated with the lives of persons significant in our past; or
- embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possesses high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- have yielded, or may be likely to yield, information important in prehistory or history.

Archeological sites, using these criteria, may be considered important if they can provide information that can contribute to a better understanding of local history and prehistory.

Sites which can help answer major questions about the past occupation of an area are considered significant sites. The Forest Service is required to locate, evaluate and nominate all sites on National Forest land which meet National Register criteria (Executive Order 11933, FSM 2363.21).

By reviewing topics of concern to professional archeologists, land managers can develop a better appreciation for the kinds of cultural resources in the Forest area that are important, and why they are important.

It must be emphasized that this overview is designed to both guide future investigations and to offer a perspective for evaluating the importance of cultural resources in the Francis Marion National Forest. It must be viewed as an initial effort, and not as a final, definitive statement. It is not possible to provide a comprehensive checklist of all relevant cultural resource problem domains, since these topics change as old problems are solved and new ones are identified. Nor is it possible, for the same reason, to provide a set of criteria that can be used to evaluate all known cultural resources in the Forest area. What is attempted is to provide some understanding of the importance of the cultural resources in the Francis Marion, and the kinds of questions they can help us answer about the past. The overview will be revised to reflect advances in knowledge as they occur.

Inventory and Evaluation of Cultural Resources

The primary goal of the cultural resource program of the Francis Marion National Forest will be in inventory and the evaluation of cultural resources on National Forest Lands in order to comply with existing legislation (Figure 65). Chief Max Peterson has recognized the need for inventory of cultural resources:

A comprehensive inventory is basic to the cultural resource management program on the National Forests as well as other lands. An inventory is an efficient and effective mechanism to recognize important cultural resources in advance of other planned or ongoing activities, thus allowing for protection and public enjoyment of the resource at the same time that other resource objectives are met. A complete inventory makes it possible to coordinate with other programs in advance of impact, thereby achieving the desired management goals. An adequate data base is essential for sound and orderly land management planning, for meeting our responsibilities under the National Environmental Policy Act, and for other aspects of multiple resource management. Inventory is a major tool for the avoidance of resource conflicts (1980:3-4).

To improve the cultural resource decision making framework, it is important to both
managers and archeologists to determine where cultural resources occur in the Forest.

Predicting Site Occurrence in the Francis Marion National Forest

Knowledge of where sites are (and are not) located can greatly facilitate both land management and knowledge of the past. Only a small fraction of the Forest has been surveyed for historic and prehistoric remains, and virtually nothing is known about what lies in the unsurveyed areas. Currently, archeological surveys are needed prior to ground disturbing projects which may affect cultural resources. Chief of the Forest Service Max Peterson has stated that:

It is Forest Service policy that potentially ground disturbing activities may take place only after insuring that cultural resource values are identified and addressed, and the adverse impacts are mitigated and minimized. Generally, this means avoidance -- redesigning a timber sale or re-routing a road -- so that the area of concern may be left undisturbed (March 17, 1980).

By conducting controlled survey and testing programs across the Forest it should be possible to develop predictive models identifying where sites are likely to occur. The development of such knowledge, effectively an inventory of the kinds and locations of cultural resources in the area of the Forest, is required under Executive Order 11593. This kind of information can be gathered fairly easily given long range planning.

A number of recent cultural resource surveys conducted in the vicinity of the Forest have addressed the question of predicting site location (e.g., Asreen 1974; Trinkley and Carter 1975; Brooks and Scurry 1978; Herold and Knick 1978). From this work it is possible to offer a series of generalizations as to where sites are likely to be found in the Forest, i.e., along major stream terraces, on elevated or well-drained soils, adjacent the the estuary, and so on. Each of these generalizations is based on work from a relatively small area, or from one or a few environmental zones. Until surveys can be conducted that encompass the total range of environmental variability within the Forest, our knowledge of site occurrence in the area will remain incomplete. The kinds of data that must be collected to develop predictive models have been discussed at length in a number of publications (e.g., Mueller, ed. 1975; Schiffer and Gummerman, ed. 1977), and excellent local applications exist (e.g., Brooks and Scurry 1978; Scurry and Brooks 1980).

Technological Improvements

In order to achieve quality management of cultural resources, current methods of site detection must be refined: "We need to develop cultural resource inventory strategies which are workable in forested areas" (Cutler 1980:6). Sampling techniques and collection methods should be improved to increase accuracy and reduce time and costs involved.

Dating techniques need to be refined: "to establish the importance and value of archeological sites" (Cutler 1980:6). The Thermoluminescence Laboratory at Washington University, St. Louis is developing a method of dating ancient heated rocks from archeological sites. The Forest Service should cooperate in this project, coordinating through the State Archeologist.

Remote sensing has been proposed as a non-destructive method of cultural resource inventory (Cutler 1980:6). Lyons and Scoville describe remote sensing as "a sophisticated set of tools which can be efficient and cost-effective when applied to inventorying, evaluating, planning, managing, and conserving cultural resources" (1978:10). They go on to discuss the benefits of using remote sensing in cultural resource management: "A most practical application of the concepts of remote sensing in non-destructive archeology is in the administration and management of our cultural resources. The data and information derived from the techniques described provide managers with substantial input to their working base for use in planning, developing and administrating cultural resources, particularly for those agencies...in control of large landholdings" (1978:8-9).

The non-destructive approach to the discovery and investigation of cultural resources employs remote sensing techniques as its primary tools, with traditional field work (survey, collecting, excavation) utilized as a method of validating and testing this pre-fieldwork research. Remote sensing uses an approach which includes geology, geomorphology, biology, hydrology, climatology and anthropology.
Techniques include aerial imagery, photogrammetry and subsurface probes.

An exciting new technique for obtaining subsurface data involves the use of Subsurface Interface Radar (SIR). SIR is a sophisticated electronic system used to detect buried cultural features. This system has been used successfully at the Trudeau Site in the Lower Mississippi Survey (Brain 1980:23-32). The SIR system has adapted the principles of radar detection to subsurface applications. Brain gives this description of the process:

The SIR system performs an advanced impulse radar procedure which gives an electronic subsurface profile. In operation, the transducer is moved along a predetermined line (in this report referred to as a "transect") on the surface of the site while propagating an electromagnetic impulse into the ground. When the impulse strikes an interface between two materials of differing electrical properties—whether natural soils, cultural features, or even artifacts—some of the impulse energy is reflected and the rest continues on through the ground to other interfaces. The reflected signals are received by the transducer which transmits the information back to the control unit where it is monitored on an oscilloscope and then recorded on magnetic tape and printed out on the graphic recorder (1980:23-24).

Once the electronic results are plotted, test excavation is necessary to correlate cultural features with the SIR results.

This system has yielded impressive results at the Trudeau Site (Figure 66) (Brain 1980) and offers promise for use at other sites. The SIR system requires minimal field time and produces data which allows the archeologist to focus on the most productive areas of the site. The Trudeau Site field survey was completed in three days using a crew of three resulting in considerable savings as opposed to traditional test excavation based on a systematic sampling plan.

The Forest Service should incorporate the use of such technological advances into the cultural resource management program.
The evaluation of methods used to discover, record, and analyze cultural resources is an important problem area. Through careful evaluation, the strengths and weaknesses of specific techniques may be disconcerted, with conclusions useful to future investigations along the same or related lines. Through examination of specific field or laboratory procedures, or analytical constructs (such as ceramic or projectile point typologies), for example, archeologists should be able to increase project efficiency. Proper concern for evaluation prevents the repetition of mistakes and ensures a maximum return for available time and resources. This concern with research cost effectiveness is increasingly important in light of the massive upsurge in public funding (and scrutiny of that funding) for archeological research.

A good example of what is meant by procedural evaluation concerns the effectiveness of shovel testing operations (Figure 67). In recent years shovel testing, or similar methods of subsurface testing, have been increasingly advocated as a site discovery procedure (Lovis 1976; Percy 1976). While highly touted and widely adopted there have been few published evaluative statements, and the actual usefulness of the procedure remains undocumented. Where the procedure has been used in the coastal plain of South Carolina its value as method for site discovery has been questioned (Smith 1977:11-12; Wood 1977:12-13; Brooks and Scurry 1978:21; Trinkley and Tippett 1980:25; Scurry and Brooks 1980:23). Differences in artifact recovery are apparent when shovel test fill is screened rather than troweled, yet this remains to be thoroughly documented. What is indicated is that shovel testing tends to be labor intensive, with an undocumented return on the investment. Effective subsurface testing procedures must be developed since a number of recorded sites could have only been found by some sort of excavation strategy. Until alternative methods have proven to be successful, shovel testing will continue to be used on the Forest.

The use of fireplows has been considered as an alternative to shovel testing. Fireplows (Figure 68) have been used effectively by the Forest Service in locating and determining the extent of archeological sites (Logan FS #80-11). A fireplow is pulled behind a small dozer, making a cut approximately three feet in width and about one foot in depth. This method is especially useful in areas of low ground visibility. Fireplows cause minimal damage to cultural resources and the efficiency of this method far exceeds that of shovel testing.

As discussed above, technological advances such as the SIR system (Brain 1980) should be considered for cost effectiveness in testing archeological sites.

Figure 67: Shovel testing is a method commonly used to locate archeological sites.
Forest Management Impact Studies

There is a need to evaluate the various forest management practices for the potential of site disturbance caused by each activity. As Assistant Secretary of Agriculture Rupert Cutler (1980:6) stated: "We need improved methods for assessing and predicting potential impacts upon cultural resources..." Recent work in the United States Forest Service Northwest Region has focused on quantifying the extent and duration of adverse effects created by various forest management practices (Wildersen 1978). Studies which quantify resource damage created by Forest management activity need to be conducted in the Southeastern Forests.

The effects of forest management activities on cultural resources have not been well documented. The amount of disturbance expected can vary with the landform, the moisture content, and the physical properties of the soil. Studies are needed which correlate these variables with activities such as timber harvesting and site preparation.

The Regional Office is preparing a research design to study the net effects of Forest management activities on cultural resources. This study should provide the quantitative data on resource damage needed to direct Forest Service archeological survey efforts. Archeological sites on the Francis Marion tend to be quite shallow, normally occurring within the top foot of soil. Because of the non-renewable nature of cultural resources it is important that sites are located prior to activities which may affect archeological sites.

Archeological Site Management

Once archeological sites have been located they should be thoroughly documented. Cultural resource reports for projects conducted within the Forest document field and laboratory procedures, and results, together with encountered sites, their location, content, and general environmental associations. There are a number of reasons for such a policy. First, the careful and complete documentation of field and laboratory activity is the responsibility of every professional archeologist. This provides the cultural resource manager with the information necessary to evaluate or expand upon previous work.

There are two additional reasons why effective documentation is important in the vicinity of the Forest. First, as indicated in the review of past investigations, very little is known about the archeological resources in this part of the coastal plain. Descriptive summaries of anything more than the most general nature are lacking, and any detailed report on the archeological resources that occur in the area is of value. Second, of the more than 600 archeological sites recorded in the Institute and Charleston Museum files for Berkeley and Charleston Counties, the general area of the Forest, more than half are poorly documented, possessing minimal information about location, condition, or content. A large number of these sites are the products of informant interviews, and have never been visited, collected, or described by a professional archeologist. Since site information is the basis upon which all subsequent archeological research is built, it is important that these data be professionally documented. Accurate site records are essential to the development of a larger, areal perspective. All archeological sites which are located on National Forest lands, whether they meet the criteria necessary for nomination to the National Register or not, will be placed on the South Carolina State-wide Inventory maintained at the Institute.

There are also Forest Service Regulations (FSM 2361.5) requiring specific reporting standards. These requirements, apply to all cultural resource surveys conducted on the Francis Marion National Forest.

Once cultural resources are located they will be evaluated for eligibility for nomination to the National Register of Historic Places in compliance with Executive Order 11593 and the Forest Service Manual (2361.1). Eligible properties will be nominated to the Register (FSM 2363.21). Sites which appear to be of major national significance will be considered for nomination as National Historic Landmarks (FSM 2361.14).

Archeological Site Preservation

As stated in the Forest Service Manual, emphasis will be placed on the in-site preservation of cultural properties whenever possible (FSM 2361.21).
As a result of its long term commitment to land management, the Forest Service offers the opportunity to manage cultural resources as opposed to the mere salvage of archeological data. The Forest Service often has the alternative of site avoidance, thereby allowing us to "bank" archeological resources (Peterson 1980:5). Forest Service cultural resource specialists, as a result of close cooperation with the other functional units within the agency (engineering, timber, etc.), can often recommend the use of less destructive methods and/or equipment. In resolving resource conflicts involving incompatible uses of lands which contain cultural resources the concept of archeological values should be utilized. Wildersen (1978) has pointed out the advantages of using a site conservation framework as opposed to the traditional salvage archeology framework in assessing cultural resources. In other words, the option of preserving and managing the site instead of salvaging it should be given priority. The traditional salvage archeology framework is "based on a limited view of archeological values" which results in site exploitation (Wildersen 1978). The site conservation framework is based on the broader concept of archeological values, including aesthetic, recreational, interpretive and scientific values. The utilization of this framework insures that all potential values will be considered in the resolution of land-use conflict situations, assuring us that the future supply of interpretive sites will not be sacrificed for current limited research goals (Wilderson 1978).

Because of the non-renewable nature of cultural resources every reasonable attempt will be made by the Forest Service to preserve them in place. When cultural resources are threatened by other resource activities, the Forest Service Manual states that a reasonable effort should be made to redesign the activity to avoid adverse effects to the resource. When avoidance is not possible, the cultural resource values should be conserved through scientific removal, analysis and reporting (FSM 2361.21).

In determining the effects of an undertaking on cultural resources both direct and indirect impacts should be considered. Direct impacts include the effects an action has on resources as a direct and immediate result of construction and development. Destruction of archeological sites and their environment by earth moving, plowing, flooding and building construction are direct impacts (Figure 69). Indirect impacts include those which are not an immediate or direct result of an action, but which would not occur without it. These include actions which expose resources within and adjacent to the development to adverse effects such as accelerated erosion, and road building which creates better accessibility and leads to increased vandalism.

Figure 69: Direct impacts to archeological sites may occur from earth moving, plowing, flooding and building construction.
Use of Computers for the Storage and Manipulation of Data

The computer has become an important tool for the storage and analysis of data gathered by the archeologist. The accelerated use of computer technology in dealing with archeological data is a goal of the Archeological Preservation Plan for South Carolina (Stephenson 1975:88). The former Assistant Secretary of Agriculture Rupert Cutler (1980:6) also recognized the need for improved data management: "We need better data base systems, more complete cultural resource inventories, and better means of managing and exchanging data and other information."

The Southeastern Region of the United States Forest Service is presently developing a regional Cultural Resource Management data base system using System 2000. This system will allow manipulation of large amounts of data which can be utilized in forming predictive site location models. It should be recognized that the Forest Service is entering the initial phase of computer programming – the storage of large amounts of raw data. Before site prediction models can be formulated, large area surveys representative of the various ecological zones of the Francis Marion National Forest must be completed with data entered into System 2000. Once formulated, site prediction models must be field tested for feasibility.

Computer storage provides a readily accessible data assemblage which can be used to predict the probability of site density in specified areas. Current methods of assessing the archeological significance of an area utilize subjective, non-quantified information which cannot be verified. The development of an accurate land use system for cultural resources will require the collection of large amounts of additional raw data and the formulation, testing, and modification of settlement models.

Another major use of computer technology, linear programming, is being utilized by the Forest Service in developing Land Management Plans. Linear programming is a method used to allocate limited resources among competing activities in an optimal manner. Presently, the linear program in use in Land Management Planning, Forplan, does not contain cultural resource data in developing constraints. The model does not, therefore, consider the cost of cultural resources management in economic analyses of project feasibility. The optimal management solutions are reached without cultural resource input. Inclusion of cultural resource data during planning stages will insure the early consideration of cultural resource costs and benefits in making management decisions. The value of cultural resources is not easily quantified, however, it is possible to enter other subjective variables into the program (e.g. landscape architecture). The incorporation of cultural resource variables into Forplan and other linear programming models to consider cultural resources in developing the original optimal management solution, rather than considering these resources after this solution has been identified, is a major task.

Interdisciplinary Approaches to Archeological Research

Watson et al. (1971:153) have identified long term interdisciplinary studies of regions as the "single most obvious trend in contemporary archeology..." Interdisciplinary efforts involving an areal as opposed to a site specific orientation have become more common since pioneered by Braidwood (Braidwood and Howe 1960). Interdisciplinary archeological projects:

...should be conceived and handled as a completely cooperative affair among the full-time collaborators (archeologists working with botanists, ethnologists, zoologists, geologists, physical anthropologists, and so on). The ideal archeological project of the future should also have ready access to the services of a variety of technicians who might be consulted about plant and animal remains, the identification of raw materials used to manufacture artifacts, details of the history or ethnohistory of the region, the source areas of imported items, the nature of the prehistoric climate and land forms, or certain aspects of the social and political organization of contemporary local communities.

There should also be excavation technicians who might be called in to exercise their special skills as bulldozer operators, flotation experts, burial experts, and so on (Watson et al. 1971).

The Forest Service Cultural Resource Specialist has a number of specialists available for consultation. These include soil scientists, geologists, hydrologists, wildlife biologists, timber specialists, aerial photograph interpreters and illustrators. Close cooperation between these specialists will be mutually beneficial in carrying out the goals of the Forest Service.

Awareness and Understanding of Cultural Resources

The Forest Service encourages the use of cultural resource values for public education and interpretation: "The Forest Service also is developing a program of enhancement, development, and interpretation -- using the resource for the education, interest and enlightenment of the public" (Peterson 1980:5). Chief Max Peterson has stated that: "Forest Service use of the cultural resource includes research studies designed to inform and educate the interested public. Resource overviews, archeological assessments, and research reports
are produced and made available for public use and benefit" (1980:6). The education of the public concerning cultural resource values is also consistent with the goals outlined in the Archeological Preservation Plan for South Carolina (Stephenson 1975:89).

Assistant Secretary of Agriculture Cutler has recognized the need for Forest Service cultural resource training: "If the Department of Agriculture is to carry out its cultural resource responsibilities, we must first open the eyes of our own people" (1980:7). To accomplish this, awareness and understanding training sessions on cultural resources have been presented on both districts of the Francis Marion National Forest. Every Forest Service employee has been exposed to the Cultural Resource Program. Forest managers and supervisors have attended an advanced session on the management of cultural resources in the National Forests. A three day training session has been conducted for district technicians involved in cultural resource protection. There has been evidence of positive feedback from district personnel as a direct result of this training. When district personnel are aware of the presence and importance of cultural resources, they can often assist the archeologist in managing cultural properties. Often, district personnel can notify the Cultural Resource Specialist of the existence of archeological sites early in the planning process. Such an early warning system will facilitate project completion, allowing alterations in project design to be made, when necessary, with minimal effect on the overall project.

The Forest Service plans to continue to provide cultural resource training for Forest Service employees. For example, this overview of cultural resources on the Francis Marion National Forest should be required reading for professionals on the districts. Technicians involved in cultural resource management should also become familiar with this document.

A program of education and awareness of cultural values and federal cultural resource legislation aimed at the public would help in reducing vandalism. Information located at the Ranger Stations, trailheads, and recreation areas can be used to educate the public thereby lessening vandalism of cultural resources.

Interpretation of Cultural Resources

Man has lived on what is now the Francis Marion National Forest for thousands of years. The history is written in the ground and in the artifacts he left behind. This panorama of man's occupation should be incorporated into interpretive and recreation site designs to complement both the cultural and recreational values (Lalande et al. 1977:63).

A number of historic and archeological sites are located on the Francis Marion which offer unusual recreational potential for public use. Close cooperation between the managers of cultural resources and recreation in developing the interpretive aspects of the forest will result in offering the forest visitor a broader appreciation of his or her national heritage.

Utilization of these areas meets the objectives defined in the Francis Marion National Forest Environmental Impact Statement (1977:92): "To use interpretation and information as a means of developing a better understanding and appreciation of the management activities on the National Forest."

Known archeological sites with potential interpretive value located in the Forest include: The Sewee Shell Ring, Walnut Grove, the Battery, McConnell's Landing, Wattahan Plantation, Jerico Plantation and portions of Limerick Plantation.

Since the inauguration of the Multiple Use - Sustained Yield Act of 1960, the Forest Service has increasingly involved itself with the management and construction of recreation facilities. Included in recreation management is the interpretation of both natural and cultural aspects of the forest community. Recreational values can sometimes be enhanced through the interpretation and restoration of archeological and historical resources. Interpretive displays telling about past occupation and utilization of the forest should be incorporated into existing and new recreational developments. These exhibits should be placed at trail heads, boat landings, parking lots and camping areas. The displays should also educate the public on the value and the need to protect cultural resources.

Cultural Resource Protection

A study on cultural resource vandalism reported that there are two major groups responsible for destruction of archeological sites (Williams 1978:130). The first consists of people living in the vicinity who know the land and its resources. These are generally adults who travel in off-road vehicles. A large percentage of the vandalism that occurs on National Forests, however, is done by people who have no intention of being destructive. Because of their ignorance, curiosity and carelessness they destroy sites without being aware of the impact. The incidence of vandalism is positively correlated with the level of visitation. Improved access to what were once isolated areas has increased this problem.

In order to reduce the impact of cultural resource vandalism, personnel at both the field level and the administrative level must coordinate their efforts using a twofold approach. For those persons who inadvertently destroy cultural resources, an educational approach is most useful. Strong on-site interpretive programs will help to reduce
vandalism caused by ignorance and carelessness. Maintaining or creating difficult access to unprotected resources by closing roads and erecting barriers will cut down on site destruction. The public should be made aware that legislation exists to protect cultural resources through pamphlets similar to the Forest Service "Protecting Your Heritage" publication. Personal contact with the public should be stressed instead of using a hard-line authoritative approach.

Dealing with the persons who knowingly destroy archeological sites, motivated by the personal desire to collect or monetary gain, is more difficult. A more authoritative approach is needed in these cases. These people must be made aware of the possible consequences of their actions. The Archeological Resources Protection Act of 1979 should be publicized. This act provides strong protection for archeological sites located on federal lands. It contains substantial civil and criminal penalties designed to halt the destruction of archeological resources. Criminal penalties for persons convicted of knowingly violating this law can go as high as $20,000 and/or two years imprisonment for a first conviction. In case of a second conviction or subsequent violation, penalties can reach $100,000 and/or five years imprisonment.

The Forest Service should meet with local law enforcement personnel and judicial officials to explain the agency's stand on cultural resource vandalism. We need to encourage cooperation and a consistent approach to apprehending and prosecuting vandals. The Washington Office has proposed a Cultural Resource Law Enforcement Notebook and Training Session for Forest Service Law Enforcement Officers.

Training for Forest Service employees should be continued. Federal employees who are collectors themselves not only destroy sites but fail to provide a positive example to the public they serve. The Washington Office is expanding the USDA Employees Responsibilities and Conduct Handbook to include cultural site vandalism among the prohibited behavior defined for employees.

IDENTIFICATION OF AREAS REQUIRING MORE INTENSIVE INVENTORY

Areas requiring more intensive cultural resource inventory have been spatially identified as required in the National Forest Management Act (Figure 70). These are areas of known occupation where a high site density has been recorded. Priorities should be placed on surveys within these areas.

The identification of areas requiring additional survey does not imply that cultural resource inventories are not required for ground disturbing projects located outside these identified areas. Compliance with Federal Cultural Resource regulations is still required when a project may affect cultural values outside these study areas. The identification of areas requiring additional inventory will allow the forest manager to set priorities for complying with objectives outlined in the Forest Service Manual (2361.02). These objectives include the inventory of cultural resources on National Forest Service land by 1985 sufficient to provide a data base for land management planning and the complete inventory of all National Forest Service lands by 1990.

Sewee/Awendaw Study Area

The Sewee/Awendaw Study Area includes Compartments 191, 199, 200 and 201 on the Wambaw District. This is the center of the lands occupied by the Sewee Indians. Archeological survey of portions of Compartment 191 has yielded a high density of well preserved historic and prehistoric sites. The geometric growth rate in development along the South Carolina coast is rapidly depleting the number of these sites, thereby increasing the significance of the remaining well preserved and protected sites on Forest System lands.

The bluffs along Awendaw Creek should be intensively surveyed. Because of the recreation potential of this area, every effort should be made to preserve cultural values for interpretive purposes. Recreational development should be closely coordinated with the cultural design through the use of archeological and historical data.

Known sites in this area should be evaluated for National Register eligibility. A thematic nomination should be considered along Awendaw Creek with sites added as they are located and evaluated.

Wambaw Creek Study Area

The area adjacent to Wambaw Creek including Compartments 128, 131, 132, 149, 150, 158, 159, 160 and 165 needs additional inventories. This area has a high probability for historic period settlement. This environment is also rich in natural resources known to be exploited by prehistoric peoples. A high density of prehistoric sites is expected in the Wambaw Creek area.

A study of historic settlement will provide information on historic settlement patterns and the evolution of the European and American use of the Francis Marion National Forest. Because of the high probability for the location of plantation sites, it is expected that the area will provide important information on the plantation economy and the socio-economic patterns associated with Black-Americans.

The prehistoric settlement along Wambaw Creek will also provide ecological data on the aboriginal use of the forest. It is expected to yield information on coastal transhumance.
Figure 70: Archeological Study Areas on the Francis Marion National Forest.
Sites in the area should be evaluated for eligibility to the National Register.

The area between Wambaw Creek and Hampton Plantation has been designated as a high priority acquisition tract. This area contains at least one known historic site: Wambaw Plantation. If this tract is acquired it will be included in the Wambaw Creek Study Area with a high priority for archeological survey.

French Santee Study Area

The area between Lenud's Ferry and Wambaw Creek was known as French Santee or Jamestown. Compartments 119, 120, 121, 125, 126, 127 and 128 are included in this study area. This area was densely occupied by the Huguenot refugees in the seventeenth and eighteenth centuries. By 1699 approximately 111 French protestants were living on the Santee River. Approximately 3/4 of the French Santee area is located within the National Forest.

Inventory is needed to locate and protect these significant historic sites. In addition to actual field survey, archival research is needed to piece together the story of the early settlement of French Santee.

South and Hartley's (1980) deep water channel/high ground site predictive model should be tested in this study area. A relatively high density of seventeenth century sites is expected to occur.

A high co-occurrence between prehistoric and historic site locations is also expected along the Santee River.

The effects of the Cooper River Rediversion Project on sites potentially eligible for nomination to the National Register are not known. The water level of the Santee River will be raised from its existing level. The probability of adverse impact is compounded by the fact that daily fluctuations in water level will occur. This may have the effect of scouring and eroding the existing banks.

A survey of sites along the Santee River was recommended in the original survey of the Cooper River Rediversion Project (Asreen 1974) but has not been conducted to date. However, a number of potentially significant sites have been located on National Forest land which may be adversely affected by the proposed Rediversion Project. Because of the high density of sites in this area, it is expected that a large number of unrecorded sites may be impacted by the daily changes in water level.

A survey of the Santee River should be conducted to identify significant National Forest archeological sites. The condition of these sites should be documented and monitored to determine the effect of the Rediversion Project on cultural resources below the tailrace canal.

St. Stephen/Santee River Study Area

The St. Stephen area includes Compartments 002, 003, 008, 009 and 010 on the Witherbee District. The settlement at St. Stephen was created by emigration from French Santee. It was established as a parish in 1754, however, French families are known to have resided there earlier. Hirsch notes that: "Twenty years prior to the emigration from St. James Santee, St. Stephen was a garden spot of South Carolina" (1928:26). The French abandoned their homes in French Jamestown "to seek a place more congenial to the growth of indigo, then the chief source of their increasing wealth" (1928:27). St. Stephen soon became the most densely populated country area in the province.

The high correlation between historic and prehistoric sites is expected to hold for the St. Stephen area. The excavation of sites along the proposed Cooper River Rediversion Canal demonstrates the existence of significant archeological sites in the area.

The effects of the Cooper River Rediversion Canal on sites in this Study Area are unknown. The potential for adverse effects to cultural resources has been discussed above. A survey of the Santee River below the tailrace canal has been recommended (Asreen 1974).

Honey Hill Study Area

The Honey Hill area, containing Compartments 135, 136, and 146, appears to have an unusually high density for both prehistoric and historic sites. One National Forest site in this area, BK134, was determined eligible for nomination to the National Register of Historic Places. This site was excavated prior to being impacted by road construction. Modifications were made to avoid the historic portion of the site.

Honey Hill served as a pine hill community for planters on the west bank of the Santee River during the nineteenth century. To avoid the summer fevers, plantation owners sought refuge away from the swamps during the "sickly season."

A high co-occurrence between prehistoric and historic occupation appears to exist on the Forest and is expected in the Honey Hill area. Prehistoric populations undoubtedly used positively correlated variables for site selection. Areas of high ground relatively close to a potable water supply are high probability zones for both prehistoric and historic settlement.

The Honey Hill area offers an opportunity to test this correlation. The area contains clear water springs which need to be inventoried for cultural resources. The summer settlement of Honey Hill offers an opportunity to study the plantation social and economic system.
Significant sites in the Honey Hill Study area should be nominated to the National Register.

Cainhoy Study Area

The Cainhoy Study Area includes Compartments 117 and 118. This is the area which was occupied by the Wando Indians. A high density of prehistoric sites is expected in the Cainhoy Study Area. Likewise the area was intensively settled by Europeans during the eighteenth century. Plantation sites are expected along the Wando River and Guerin Creek. South and Hartley's (1980) settlement pattern for seventeenth century sites should also be tested in this area.

Significant sites in the Cainhoy area should be nominated to the National Register.

The Huger Study Area

This area which includes Compartments 81, 85, 86, 91, 93 and 94 is known to contain a high density of eighteenth and nineteenth century plantation sites. Recorded plantation sites in this area include Limerick, Windsor, Fishbrook and Silk Hope. Settlements associated with the French Huguenot "Orange Quarter" might also be expected in this area.

An intensive inventory of the area should locate historic sites on National Forest land. These sites should be evaluated for National Register eligibility.

Cultural Ecological Questions

Cultural ecology is the study of how human populations live within and make use of their surrounding environment (Flannery 1967, 1968; Vayda, ed. 1969). A primary emphasis on such an approach involves the determination of how natural environmental conditions shape and constrain human behavior. The occurrence and distribution of archeological sites is an important factor. Site locations and contents may be examined, for example, for clues about settlement patterning and the selection and procurement of food and other resources. Through careful examination, recognizable adaptational patterns may be noted, and through further examination, explanations for these patterns may be proposed. In the vicinity of the Forest work along these lines is beginning to emerge as the basic culture-history of the area becomes better understood. Much of this activity has been inductively oriented, however, consisting of the inspection of data sets to see if environmental associations are present. Currently four major problem areas are under investigation in the lower coastal plain that might be considered cultural-ecological in orientation:

1. The nature of prehistoric sites in the riverine and interriverine areas of the lower coastal plain;

2. The nature of prehistoric sites along the coast and in the interior areas of the lower coastal plain;

3. The nature of prehistoric lithic raw material procurement and use in the lower coastal plain; and,

4. The evidence for and against a prehistoric transhumant settlement pattern, between the coast and the interior, in the lower coastal plain.

Each of these problem domains is discussed in detail in the sections that follow. Although questions (2) and (4) are related, they are treated separately. The former (2) focuses on similarities and differences in adaptation in the two areas, while the latter question (4) is concerned with whether these adaptations are discrete, or part of a larger system involving movement between the two areas.

Cultural Ecological Domain 1: The nature of prehistoric sites in the riverine and interriverine areas of the lower coastal plain.

The lower coastal plain away from the sea island area is characterized by a wide range of vegetational communities. Major drainages are bordered by bottomland hardwood communities, while the interriverine areas are more diversified, with stands of hardwoods, conifers, mixed hardwoods and conifers, and treeless savannahs and bogs. The distribution of prehistoric archeological sites over these microecological zones has been a focus of study in recent years, in efforts to develop an understanding of patterns of environmental exploitation by past human populations.

In the immediate area of the Forest, the ecological associations of archeological sites have been investigated in conjunction with survey and excavation activity along the proposed Cooper River Rediversion Canal (Asreen 1974; Brockington 1980; Brooks and Canouts 1980; Anderson, Cantley and Novick 1980) during survey activity associated with the Amoco Chemical Plant project (Brooks and Scurry 1978); and over the entire Berkeley county area. This was part of an effort to correlate discoveries made during the Huger site excavations with surrounding archeological resources (Brooks 1980; Green and Brooks n.d.). Elsewhere in the South Carolina coastal plain similar studies have been conducted, along the Savannah (Hanson, Most, and Anderson 1978), the Edisto (Anderson, Lee, and Parler 1979), the Congaree (Anderson 1979a), and the Lynches River (Cable and Cantley n.d.).

One pattern noted in all of these studies was that large, multicomponent prehistoric sites tended to occur in the terrace area between the riverine swamps and the more varied interriverine zone. Archeological sites are known from both the riverine swamp and the interriverine areas, but the larger sites were
consistently reported from the terrace (riverine) microenvironment. Sites in other areas, in contrast, tended to be smaller, with fewer components. Period-specific distributional patterns were also suggested. Asreen (1974:11-12), for example, noted that Woodland sites tended to occur across all environmental zones, while Archaic sites were located almost exclusively along the ecotone. An apparent pattern of increased exploitation of the interior, interriverine areas during the Woodland, and particularly during the later Woodland, has also been noted by Brooks and Scurry (1978:44).

A major research topic for investigators working in the vicinity of the Francis Marion is the period by period study of the prehistoric use of the riverine (terrace) and interriverine areas. Details on the nature of these adaptations must, however, await the careful investigation of individual site assemblages from both environmental zones. Brooks and Scurry (1978) have examined existing site records from the general Forest area, and have proposed a series of distributional patterns, specific hypotheses, and test implications relevant to such a study, and their work serves as a primary reference for future investigation of this topic (see also Brooks 1980, Brooks and Canouts 1980).

Cultural Ecological Domain 2: The nature of prehistoric sites along the coast and in the interior areas of the lower coastal plain.

At the present little is known about what the occurrence of specific archeological materials in the lower coastal plain actually means in terms of human adaptation. Although different life ways are clearly indicated by the coastal shell midden and interior (non-shell) sites, these adaptations are still at best only partially understood. A major focus for archeological research in the Forest area, therefore, entails documenting local subsistence/adaptational strategies. Trinkley (1980a) has provided an important review of Woodland period adaptation along the coast although most of his research was directed toward shell midden sites. Virtually nothing is known about coastal non-shell midden sites, or the occupation of the interior. Recent excavations at Huger (Green and Brooks n.d.) and at sites along the Cooper River Rediversion Canal are helping to change this picture.

Adaptation to the coast, the interior, or both areas is variously indicated over time in the vicinity of the Forest, as outlined in the summary of human occupation. Few Paleo Indian or Archaic period sites are reported from along the coast, with most occupation during these times (apparently) restricted to the interior. Late Archaic sites occur both in the interior and along the coast, but during the immediately succeeding early Woodland period an interior adaptation is indicated. Later Woodland and Mississippian sites reverse this pattern, occurring both along the coast and in the interior.

Waddell (1965b) noted that Late Archaic Awendaw finger-pinched ceramics occurred almost exclusively along the coast, in the region between Charleston Harbor and Awendaw Creek. An adaptation towards tideland resources was indicated, with little evidence for the ware on non-shell midden sites. An examination of Late Archaic assemblages in the Ashley/Cooper rivers area by Widmer (1976a:25), however, has indicated some occurrence of finger-pinched ceramics on non-shell midden sites, but considerable additional research is needed to resolve this distribution and its significance.

A similar pattern of estuarine adaptation may be indicated by the distribution of Wilmington ware-group ceramics. Few artifacts of this category have been noted inland in the coastal plain southwest of the Santee (Anderson 1975; Scurry and Brooks 1980), and the ware may be associated with groups living in the sea island area.

Finally, South Appalachian Mississippian period artifacts have been reported from the coastal (sea island) area and inland along major drainage systems (Ferguson 1971, 1975a), but whether sites of this period occur in the interriverine areas of the lower coastal plain remains to be demonstrated. Current research suggests that Mississippian period sites are rare in the interriverine zone (Anderson 1975;
Brooks and Scurry 1978), with sites occurring primarily along the Santee and the coast in the Forest area. The nature of the coastal Mississippian adaptation is also poorly understood (Anderson and Claggett 1979), and its relationship to Mississippian systems in the interior is unknown.

Cultural Ecological Domain 3: The nature of prehistoric lithic raw material procurement and use in the lower coastal plain.

Lithic raw material sources used by prehistoric populations are relatively uncommon in the vicinity of the Francis Marion. A range of raw materials has been observed on archeological sites in the area, including chert, rhyolite, quartz, quartzite, steatite, ferruginous sandstone, and other materials, but little is known about selection practices or procurement systems. Is local raw material selection dictated by the proximity of the source or by other factors, such as the intended function of the manufactured tools? Also, are fine quality materials from distant sources used in a different manner than poorer quality, but more readily available local materials?

Documenting local and extralocal lithic source areas is currently a focus for considerable research in the southeast Atlantic region (e.g., Novick 1978; Anderson, Lee, and Parler 1979; Anderson 1979a; Goad 1980). In the Forest vicinity both chert and quartzite outcrops have been reported along the Cooper River Rediversion Canal (Asreen 1974; Anderson, Cantley and Novick 1980). These outcrops occur in the northern part of the Forest, and the materials from them appear to have seen little use beyond this area.

Given restricted sources, some patterning might be expected in the occurrence of raw materials. With increasing distance from the source, for example, fewer items of a particular raw material might be expected (Mathis 1977). A number of intervening variables would have to be taken into account, although the general pattern is unquestionably viable. Raw material distribution studies would have to include considerations such as ease of procurement and current levels of socio-political complexity. Raw materials may be more common on sites along trade routes, for example, or within rather than between major drainages. Populations that were highly mobile, or that had surplus labor might have been more likely to possess extra-local raw materials than sedentary groups, or groups with relatively restricted travel patterns or constrained labor forces.

Given the relative scarcity of lithic raw materials, evidence for careful conservation might also be expected on site assemblages within the lower coastal plain. Few large, usable but unused chunks of material might be expected, and reduction technologies might incorporate bipolar flaking (Goodyear 1974, Figure 72: Depiction of Southeastern palisaded Indian village.)
personal communication) or intentional thermal alteration (Anderson 1979b) to facilitate conservation and efficient raw material use.

Cultural Ecological Domain 4: The evidence for and against a transhumant settlement pattern, between the coast and the interior, in the lower coastal plain.

Prehistoric archeological sites have been reported throughout the South Carolina coastal plain, from the sea island area to the fall line, along the major river margins, and in the interriversine zone. One explanation proposed to account for some of the distributional variability, particularly among sites of the same period, is that the remains reflect transhumance. Transhumance is a pattern of scheduled, seasonal population movement between environmental zones to exploit the resources of each. The principal exponent of this theme in the southeast in recent years has been Milanich (1971, 1972), who proposed it in conjunction with his analysis of Deptford (early Woodland) culture in the region.

According to Milanich, prehistoric site distribution in the southeastern Atlantic coastal plain during much of the last 4000 years can be explained in terms of seasonal population movements between the sea island area and the interior. This pattern of regular settlement movement and subsistence orientation forms the basis for the "Coastal Tradition", a transhumance-based adaptation that Milanich feels continued largely unchanged from the Late Archaic until the adoption of intensive agriculture during the Mississippian.

Under this view, prehistoric populations spent much of the year living in the sea island area, exploiting the variable resources of the ocean and marshlands, and nearby upland communities. Movement into the interior river valleys occurred periodically, possibly during the fall when oak/hickory mast was abundant, or during periods of resource shortage along the coast. Scheduling patterns, and area-specific resource exploitation models are currently poorly understood. The model remains hypothetical, although Milanich and others (Marrinan 1975; Trinkley 1980a) have attempted to test it through seasonality studies with ethnobotanical and zooarcheological remains.

Waddell (1980:46-48) has documented the transhumant settlement system of the sixteenth century Edisto Indians. The Edisto's scheduled seasonal movement seems to have applied for other Coastal Tribes. In 1562, Landonniere mentions the Edisto moving inland during the winter to live on nuts and roots (in Waddell 1980:47). As discussed in the ethnohistory section, Jesuit Juan Rogel recorded the following passages in 1570:

At this season [summer] they were congregated together, but when the acorns ripened, they left me quite alone [in the village of Orista], all going to the forests, each one to his own quarter, and only met together for certain festivals, which occurred every two months, and this not always in the same spot, but now in one place, now in another...

Nevertheless I persevered, thinking to persuade them in the spring, at the time of planting maize, to put in sufficient to last them so that the subject of one cacique could remain in the same place for the whole year... I...proposed that they should sow it at the place where we were...there were twenty houses already built there...after having promised me many times to come and plant, the inhabitants of these twenty houses scattered themselves in twelve or thirteen different villages, some twenty leagues [eighty miles], some ten [forty], some six [twenty-four], and some four [sixteen]. Only two families remained.

...for nine out of the twelve months they wander about without any fixed abode. Even then, if they only went together, there would be some hope [for conversation]...But each one takes his own road.

...they have been accustomed to this kind of life for thousands of years, and it would almost kill them to tear them rudely from it...if they were willing the nature of the soil would not permit it, as it is poor and barren and easily wears out; and they themselves say that it is for this reason that they live so scattered and wander so much (in Waddell 1980:46-48).

According to Waddell (1980:47) these groups, representing extended families, separated during the winter months and moved inland from sixteen to eighty miles. These small, scattered inland settlements are thought to have normally consisted of a single extended family.

A transhumant settlement pattern would be represented archeologically by sites showing signs of temporary or semi-permanent, but not sedentary occupation and use. For the lower coastal plain during the Woodland and Mississippian periods, year-round settlement in one location, such as in the sea island area or along one of the major drainages, would not be expected.

Trinkley (1975:11), Widmer (1976a:46) Milanich et al. (1976), and others (Fish 1976; Brooks and Scurry 1978, Anderson, Lee, and Parler 1979:22-24; Brockington 1980; Brooks and Canouts 1980) have recently argued that a model of transhumance may be inappropriate in the lower coastal plain. Instead, the possibility of year-round occupation in the sea island area and along the interior river valleys is suggested, as the ecological richness of both areas becomes better understood. One
alternative to Milanich’s model, by Widmer (1976a:46-47), hypothesizes a bipartite pattern of exploitation, with sedentary groups occupying the sea island area and semi-nomadic groups in the interior:

It is hypothesized here that this (estuarine) ecological zone allows the development of an adaptive system which favored sedentary life. This sedentary existence is evidenced by the large shell sites in the estuary sector... Because non-estuary resources such as deer, hickory nuts, acorns, and migratory waterfowl were also located in this sector there was no need to exploit the interior...

A separate adaptive system was developed to exploit the relatively rich, but only temporarily available, resources in the non-estuary interior regions of the lower coastal plain. Therefore, a seminomadic adaptive strategy, possibly based on a seasonal scheduling pattern, but certainly of limited length of habitation at any one site, was developed. The resultant settlement pattern is one of small sites with individual activity areas representative of short-term utilization (Widmer 1976a:46-47).

Resolving archaeological correlates for sedentary as opposed to mobile populations, or for long-term as opposed to short-term site use, has been variously approached in the southeast (Morse 1975, 1977; Bowen 1977; House and Ballenger 1976). In the Atlantic coastal plain subsistence remains have been examined for evidence of seasonality at a number of sites. Most of these have been shell middens, where the depositional environment favors preservation, but recently promising efforts along these lines have occurred at non-shell midden sites, from the interior of the coastal plain (Widmer 1976a:36-37; Trinkley 1979; Anderson 1979a).

Comparison of prehistoric artifact assemblages from the interior with remains from the sea island zone may help us understand population movement occurred between the two areas. The presence of similar remains, such as identical ceramic styles, in the two areas would support population movement, although it would not conclusively prove it. The occurrence of completely different assemblages in the two areas, particularly if environmentally imposed functional diversity could be controlled would, in contrast, argue against a model of transhumance.

Cultural-Historical Questions

The reconstruction of local culture-history is another major archeological orientation applicable to cultural resource work in the Forest. For the prehistoric era this approach refers, generally, to the development of descriptive syntheses, or archeologically derived “histories”, of the human occupation of the area. At present little is known about even the occurrence of specific archeological materials in the lower coastal plain. Although inductive attempts at pattern recognition have appeared using large numbers of sites (e.g., Waddell 1965a; Anderson 1975; Brooks and Scurry 1978; Brooks 1980), little is known about individual site size, content, or function.

From a cultural historical perspective, resolving the distributions of specific artifact categories should help indicate the geographical extent of prehistoric populations, or minimally of shared technologies or styles. A period by period examination of these distributions, furthermore, might indicate changes related to increased or decreased group size or interaction, as well as data about group adaptation, and adaptational shifts. Comparison of sea island and interior assemblages would also be important, particularly since little is known about the occupation of each area, or the possible history of interaction between these areas.

Four specific problem areas are currently under investigation in the vicinity of the Francis Marion that might be considered cultural-historical in orientation:

1. The effectiveness of existing taxonomic frameworks;

2. The Santee River “cultural boundary” question;
3. The nature of Paleo Indian and Archaic site occurrence in the lower coastal plain; and

4. The relationship of Wilmington and Cape Fear ceramics.

Each of these questions is discussed at length in the following sections.

Cultural Historical Problem Domain 1: The effectiveness of existing taxonomic frameworks.

In the vicinity of the Francis Marion National Forest ceramic and projectile point taxonomies provide the basic means for identifying and dating prehistoric sites. The primary taxonomic framework for the area's ceramic assemblages is that developed by South (1973, revised 1976). This taxonomy (Figure 40) employs existing type descriptions from the region as its basic unit. These types are then arranged into a hierarchical framework characterized by broad temporal dimensions, with major subdivisions (ware-groups) corresponding to specific periods and readily distinguishable technological attributes within the ceramics themselves.

The South taxonomy encompasses most prehistoric ceramics found within the coastal plain, providing a basis for cultural-historical assignment for ceramic producing sites. While the South taxonomy has been found useful for most periods, some confusion is still evident among the later prehistoric ceramic assemblages. For example, the relationship of Cape Fear and Wilmington ceramics (and sites) is still unresolved. Mississippian period ceramics, as identified by South, are virtually unreported from along the smaller streams of the coastal plain (Anderson 1975:189), and which wares, if any, were used as substitutes remains unresolved.

Recently, archeologists working in the South Carolina coastal plain have recognized the need for refinement of South's original taxonomy. Further refinement should allow more accurate temporal classification (Trinkley n.d.). This is a task which should be undertaken by the professional community working in the lower coastal plain. The Forest Service should participate in the development of such a refined ceramic taxonomy.

For sites without ceramics, projectile points represent an alternative method of cultural historical placement. In the coastal plain only a few excavations document local biface variability over time (Michie 1969; Stoltman 1974; Anderson, Lee, and Parler 1979). The primary reference for projectile points is the regional sequence developed by Coe (1964), DeJarnette et al. (1962), and others. In the South Carolina area temporal affiliations for projectile point styles, particularly Woodland forms, are poorly documented, although this is changing due to the increase in excavation activity in recent years. A major archeological concern in the Forest area, therefore, is the development of valid taxonomic devices - temporally sensitive artifact typologies - to facilitate the accurate dating of local archeological sites.

Cultural Historical Problem Domain 2: The Santee River "cultural boundary" problem.

The Santee River and river swamp may have been an imposing geographical boundary to prehistoric occupants of the lower coastal plain. In the vicinity of the National Forest the Santee swamp is several miles wide. Travel across the swamp would, in all probability, have been more difficult, even given dugout canoes, than up and down one side or the other. Group territories and travel patterns may, therefore, have tended to focus between or along drainages rather than across them (e.g., Morse 1975, 1977). The occurrence of distinctive ceramic or stone tool forms, or other differences in assemblage composition on each side of the drainage might suggest such an orientation.

In the vicinity of the Forest this "boundary" question has considerable importance. Swanton (1946) placed the contact period boundary between speakers of the Muskogean and Siouan language families, the two primary linguistic groups in the southeast, along and just to the south of the Santee River (Figure 74). At the time of European contact, speakers of these two stocks exhibited differences in socio-political complexity, material culture, and subsistence orientation (Swanton 1946:10; Speck 1935, 1938), with the northern Siouan groups generally less complex than the Muskogean groups to the southwest.

It is suggested that evidence for the existence of a major cultural boundary may be present in the archeological record, both for the contact era and further into the past. The existence of a boundary during the later prehistoric era is suggested by several lines of evidence. The distribution of late prehistoric South Appalachian Mississippian mound and ceramic sites, for example, effectively ceases north of the Pee Dee drainage (Ferguson 1971, 1975a). Differences in the prehistoric archeological assemblages to northeast and southwest of the general Santee-Pee Dee region have been noted; emphasis has focused on the occurrence of a cord and fabric marked ceramic tradition in the northeast and a carved stamped ceramic tradition to the southwest (Holmes 1903; Coe 1952:307-309; Evans 1955:142; Sears 1956:76; Caldwell 1958:32, 51; South 1960:72-73, 1972; Ferguson 1971, 1975a; Anderson 1975:187-189; Drucker and Anthony 1980).

The Forest area encompasses the southeast side of the lower Santee drainage, and extends away from the river for a considerable distance to the south and west. Comparison of artifact assemblages from one side of the river with
Figure 74: The Siouan/Muskogean linguistic boundary.

those from the other, or from the east and west sides of the forest, might indicate the presence or absence of prehistoric "boundary effects." Examination of particular categories of artifacts for an increase or decrease in occurrence from one end of the area to the other might additionally indicate the direction and degree of attenuation, if any.

Cultural Historical Problem Domain 3: The nature of PaleoIndian and Archaic site occurrence in the lower coastal plain.

A major cultural historical research domain in future prehistoric sites investigation in the Forest will be documenting the nature of all occupations, regardless of period. Most archeological research in the Forest to date, however, including excavation activity, has focused on ceramic period (Late Archaic through Mississippian) sites. No sites of the earlier, preceramic periods have been examined in detail; however, and little is known about the lifeways of lower coastal Archaic and Paleo Indian groups. Thus, documenting sites of these periods is of particular importance.

Aside from the occasional documentation of surface projectile point finds, little is known about preceramic Paleo Indian and Archaic sites in the coastal plain. South and Widmer (1976:11) have suggested that few Archaic period sites and artifacts occur immediately along the coast:

The stone projectile points, fire-cracked rocks, lithic debitage and other cultural materials characteristic of the Archaic Period in the Piedmont area of South Carolina are not so often found in the
coastal zone (South 1960). More
characteristic of the coastal area is the
concentration of shell midden containing
oysters, clams, conchs and mussels on the
high ground adjacent to the sounds and
marshes (South and Widmer 1976:11).

Brooks and Scurry (1978:44), working with
materials from the interior of the lower
coastal plain, also report low Archaic period
site density.

The apparent scarcity of Paleo Indian and
Archaic period sites in the vicinity of the
Forest may reflect survey and interpretive
biases. Most surveys conducted along the
coast, until recently, appear to have been
strongly biased toward areas where shell
middens were found, at the expense of other
locations. Recent surveys along the coast
directed toward a greater range of
microenvironments have, in contrast,
occasionally produced preceramic Archaic
projectile points (e.g., Koob 1976; Trinkley
and Tippett 1980). The low visibility of
preceramic sites in the lower coastal plain may
also be more related to lithic raw material
scarcity than an actual pattern of avoidance or
minimal use of the area. Conclusions that
portions of the lower coastal plain were more
intensively utilized during the Woodland than
during earlier periods (e.g., Brooks and Scurry
1978:44) appear to be based primarily on the
far greater frequency of ceramic producing
(e.g. Woodland) sites in the area. If counts
of diagnostic projectile points alone are
examined, however, there are few differences
between the earlier and later periods, both in
artifact frequency and site distribution (e.g.,
Anderson, Claggett, and Newkirk 1978; Brooks
and Scurry 1978:24). Until the effect of
perishable container technologies (e.g. Archaic
basketry) as opposed to imperishable container
technologies (e.g. Woodland pottery) can be
controlled, direct comparison of ceramic and
preceramic settlement/subsistence systems in
the lower coastal plain will remain unclear.
Any site with well documented Paleo Indian or
Archaic components in the Forest area,
therefore, is likely to be of considerable
importance.

Cultural Historical Problem Domain 4: The
relationship of Wilmington and Cape Fear
earmicos.

The majority of the cord marked and fabric
impressed pottery found within the coastal
plain of South Carolina may be typologically
subsumed under South's (1976) Cape Fear and
Wilmington ware-groups. While taxonomic
alternatives exist within this classification
system (e.g., Deptford cord marked, Savannah
cord marked), inspection of local reports
suggests that most sherds possessing these
finishes are conventionally placed into the
Cape Fear ware-group if sand or nontempered,
and into the Wilmington ware-group if clay or
grog tempered (e.g., South and Widmer 1976;

The temporal positioning and behavioral
significance of the Wilmington and Cape Fear
ware-groups are only partially understood at
the present. The literature itself is somewhat
confused, with most current activity focused on
the temporal relationships of the two wares:

In 1960 South had placed the Hanover
series pottery at a Deptford time frame
(South 1960) on the basis of the few
clues available to that time. Later,
South (1973) published a taxonomic
sequence which reversed the position of
Cape Fear and Hanover ceramics based
primarily on available radiocarbon dates
which suggested a date as late as 1105+
90 A.D. for sherid tempered ceramics
(South 1971). The data from the present
study reveal that the early position of
sherid tempered ceramics, prior to sand
tempered Cape Fear ceramics, as
interpreted by South in 1960 is the
correct relationship. A time range of
c. 200 B.C. to ca. 1000 A.D. for the
Hanover Series (Wilmington Ware-Group:
South 1973), however, is the range now
indicated by the data for Wilmington
ware-group pottery (South and Widmer

South subsequently clarified his position
somewhat, in a revision of his earlier
taxonomy:

Hanover series pottery in the Cape Fear
area south to Charleston was a phenomenon
contemporary with the Deptford Series
followed by the sand tempered Cape Fear
series...The Hanover Series represents
the earlier, with the Wilmington Series
the later component of this ware-group
(South 1976:1).

As noted in the review of human occupation,
while this statement effectively account for
the observed temporal distribution of the
Wilmington ware-group ceramics, the temporal
position of the Cape Fear ware-group is still
uncertain.

To date, there have been no excavations
conducted on sites with both ware-groups
present that have yielded clear information on
this matter of temporal relationship.
Excavations documenting the stratigraphic
positioning of the two wares in relation to
each other have not been reported. The
temporal occurrence of Cape Fear ceramics is
still unknown, although available evidence
(Milanich 1971:165; Anderson, Lee and Parler
1979) suggests an early appearance in the
Atlantic coastal plain, comparable to the range
suggested for Wilmington.

Two alternative viewpoints exist about the
relationship of these wares. Widmer
(1975a:29), based on the close physical
proximity of features at the Palm Tree site
with these wares, has suggested that the two
ware-groups may be culturally
indistinguishable, that is, equivalent temporally and behaviorally. Anderson, in contrast, suggests that the two ware-groups may be temporally or behaviorally discrete, basing his inference on their apparent geographical distributions:

Cape Fear ceramics are found throughout the Coastal Plain...[while] of particular interest is the almost complete lack of sherd-tempered material inland in the coastal plain south of the Santee River. This lack of sherd-tempered cord fabric ware compared with the presence of Cape Fear sand-tempered cord and fabric ware for the same area strongly suggests a temporal or cultural basis for the observed dichotomy (1975:186,189).

Such a position would also appear to be supported by South and Widmer (1976:59) where a temporal ordering of these two wares was suggested.

The chronological placement and distributional associations of these two ware groups, it should be apparent from this review, remain to be determined. Their distribution and occurrence on sites in the area of the Francis Marion National Forest can, however, be used to test the opposing viewpoints about their relationship. If the two ware-groups are consistently found together, for example, this would support cultural identity. Separate, or independent distributions, in contrast, would tend to suggest discrete (differing) cultural systems. Since these ware-groups appear to be the most prevalent ceramics in northern coastal South Carolina (South 1960; Anderson 1975; Drucker and Anthony 1980), the need for understanding their relationship is important if accurate interpretations of the area's prehistory are to develop.

Historic Sites Research

The Francis Marion National Forest is rich in historic sites dating from the seventeenth century to the present day. A variety of archeological research questions can be answered through the study of these resources.

A study of the evolution of the socio-economic development of the low country is an important research goal. A wealth of information is available in historic sources, however, archeological research is needed to complement these written sources. A clearer picture often emerges when history and archeology are used together (Figure 75).

The first settlement at Charles Towne led to the intensive and rapid acculturation of aboriginal Carolinians. In less than half a century the coastal Indians were reduced to an insignificant number through European introduced disease and exploitation. Smith (1956) has studied the effect of European settlement on aboriginal population in Florida. He compares the effect of Spanish settlement on the aboriginal population in Florida to British colonization in Georgia and the Carolinas. British influence on the aboriginal population was more widely dispersed and of a shorter time frame than that in Spanish Florida. The impact on the native population, however, was more intensive with the Indians, who were influenced by the British, becoming acculturated faster as a result of their acceptance and utilization of European trade goods (Smith 1956:115).

Archival and archeological research should be used together to study the effects of acculturation caused by the settlement of the South Carolina coastal plain.

Stephenson (1975:54), in his Archeological Preservation Plan for South Carolina, has indicated that at least a three year program of research should be expended in study of contact period coastal tribes. Such a project would make use of both archeological and historical research; extensive documentary evidence exists and could be readily exploited (Milling 1940; Swanton 1946; Waddell 1980).

Acculturation studies on the Francis Marion National Forest should consider both the impact of the European on the Indian as well as the effect that the aboriginal population had upon European settlement. Acculturation studies should also tie in with ecological studies. For example, the European trade system furnished more complex hunting tools which resulted in an ecological change. The depletion of game, through the trade in skins in turn resulted in a shift in subsistence and settlement patterns.

The Francis Marion National Forest abounds in historic sites which can be used in conducting agricultural studies. Evidence of early naval stores industry sites is present throughout the forest. Study of these sites will yield cultural information on this early use of the forest while providing significant silvicultural information on native vegetation types.

The forest contains a number of historic plantation sites. These sites might be expected to yield information on the evolution of rice and indigo agriculture in coastal South Carolina. They also offer opportunities for studying historic ceramics. The large number of Black-American sites offers an opportunity for studying colono-ware.

Evidence from subsistence farming and cotton agriculture should also yield information on the agricultural history of the area.

A number of anthropological and archeological research questions can be answered through the study of the plantation system. The plantation system functioned as a self-sufficient entity creating the economic base of the early colony. Social status studies have been conducted in the coastal area in recent years. Status differences between plantation owners, managers and overseers, and slaves can be studied through archeological excavation.
Figure 75: A clearer picture often emerges when history and archeology are used together.
The study of French Huguenot settlement along the Santee River and the French Quarter Creek area will provide new insights into the cross-cultural interaction that existed between the French, English and Indian cultures.

South and Hartley (1980) have presented a model for seventeenth century occupation in the area. This model should be tested and refined through site survey and excavation. These authors have also stressed the need for sociological or anthropological study to complement archeological research:

...we recommend that future research projects be multidisciplinary in nature, focusing on the specific sites as seen in the synchronic 1685/1695 map, but with the diachronic goal of studying not only the continuation of occupation found on many of these sites through time, but the interlocking fabric of family and community relationships characterizing the area (South and Hartley 1980:32).

An important consideration in seventeenth century sites research is that these sites tend to yield minimal surface indications when compared to eighteenth century sites. Subsurface remains can be present at sites with low density surface collection. This is due to the "relative scarcity of ceramics in use in the seventeenth century" (South and Hartley 1980:33).

**Revolutionary and Civil War Studies**

Because of the short duration of occupation of Revolutionary War camps and battle sites, archeological excavation of these sites is not expected to yield adequate information to access their significance. Historical research is needed to more fully understand the role that the area of the Forest played in the Revolutionary and Civil Wars.

**Historic Ceramic Analysis**

Historic ceramic studies are expected to increase in the Francis Marion. The Forest contains a number of Black-American sites which have the potential for yielding important information on the slave system through the study of colono-ware. Architectural, ethnobotanical and zoological information from these sites is also important.

The Forest contains archeological sites representing a wide range of ethnic and socio-economic levels. As a result of its close proximity to the early settlement at Charles Towne the forest contains some of the earliest European settlements in the Southeast. A study of ceramic cultural materials from these sites should yield insights into the lifeways of these Forest occupants. Because development within the area has been limited, the preservation of historic resources is better than that normally found on historic sites.

**The 20th Century**

The era of large scale timber cutting of the late 19th and early 20th centuries is evidenced on the Francis Marion by railroad trams throughout the forest. This phase in the evolution of the forest is an important chapter of the Forest Service's history. Historical sources such as Ames' (1906) thesis on the lumber operations of the E.P. Burton Lumber Company contain a wealth of information on these early lumbering practices. One goal of the cultural resource program is the ongoing study of the history of forest management in the area of the Francis Marion (Figure 76).

The Forest area played a significant role in the early Civilian Conservation Corps (CCC) in South Carolina. Documentation on this use of the Forest should be collected and studied.

**Archival Map Collection**

The direct historical approach, using historic maps has proven to be effective in historic sites survey (South and Hartley 1980). The systematic compilation of archival maps and land records of National Forest lands is an ongoing project of the Cultural Resource Program. Many plats are available for low country plantations which give the locations of structures and related cultural features. These can be used to locate historic sites on the ground using topographic references.

The Swamp Fox Youth Conservation Corps Cultural Resource Program has utilized this method of locating historic sites. The McCrady Plat collection is an invaluable resource for the location and documentation of historic sites. A system should be developed to collect and index historic maps of the Forest area.

**Conclusions**

The Forest Service, the Institute and the Charleston Museum, as well as a number of individual researchers, are likely to continue to pursue a range of cultural resources explorations along the coast and inland near the Forest. The pace of future research furthermore, is likely to accelerate, since the number of professional archeologists in the state is growing rapidly. The recent establishment of a graduate program in archeology at the University of South Carolina has produced an influx of students, many of whom will make contributions to coastal archeology. The Forest Service cultural resource program has the potential of offering excellent training opportunities in cooperation with this program.

Given the probable growth of local archeological research over the next few years, it is virtually certain that most of the problem domains posed here will be refined or replaced before the end of the century.
Figure 76: Early timber operations on the National Forest.
IDENTIFICATION OF SITES WITH NATIONAL REGISTER POTENTIAL

Introduction

The National Register of Historic Places is the official list of the Nation's cultural resources which are worthy of preservation. National Register status provides protection to significant sites through the Advisory Council on Historic Preservation. Nomination to the National Register is a process which requires extensive research into the background, significance, and description of the resource. The National Forest Management Act requires each forest to provide for the identification and evaluation of sites eligible for nomination to the National Register. Sites which may be eligible for nomination are identified in this section along with sites having interpretive potential.

Sewee Shell Ring

The Sewee Shell Ring is currently the only site on the Francis Marion National Forest listed on the National Register of Historic Places (Figure 77). This prehistoric shell midden dates to the second millenium B.C. and contains some of the earliest pottery known in North America.

The site was tested in 1965 by Dr. William E. Edwards who was the State Archeologist at the US Forest Service Supervisor's Office and the Institute of Archeology and Anthropology in Columbia.

Vandalism at the site has been limited. The fence at the north end of the site has undoubtedly helped to limit destructive activity while providing access to the interested public. The closure of the road leading to the site has contributed to its preservation. Because of the obvious nature of the site, cultural resource protection signs have been posted.

This site offers excellent opportunities for interpretation and public education. The prehistoric utilization of forest resources should be used as the interpretive theme. A trail could be constructed from the existing road terminus following the woods road to the shell ring, circling back along the intercoastal waterway.

Several shell middens along the waterway might be incorporated into the interpretive trail to provide the visitor with a better understanding of the variations in prehistoric environmental adaptation.

Development of an interpretive trail in this area would complement the proposed development of the Walnut Grove Recreation Area. A small parking area should be provided so that
visitors from Walnut Grove could park in the area. Such a development would also enhance recreation opportunities for recreational visitors at private campgrounds along the coast in adjacent areas.

Walnut Grove

Walnut Grove contains a number of sites which should be considered for nomination to the National Register. The Walnut Grove mound (CH 260) was visited by Laura Bragg during the 1921 Charleston Museum Expedition. This site is relatively well preserved with limited damage by pothunters. Based solely on surface collections, the primary occupation appears to be Woodland.

Test excavations were conducted at the site in February, 1981 by Dr. Michael Trinkley. His report should provide sufficient data to complete a National Register nomination for the site.

The Walnut Grove Plantation Site (CH259) was occupied from the late eighteenth century through modern times. The original structure has been destroyed and replaced by an early twentieth century structure. Additional archival information, inventory and testing are necessary to evaluate the site adequately.

Evaluations need to be made for other sites located during the partial survey of the Walnut Grove tract. These sites include CH491, CH492, CH493, CH496, CH498, CH499, CH500, CH501 and CH502.

The Forest Service acquired the Walnut Grove area for its recreation potential. Recreation development should be closely coordinated with the cultural resource management of the area. This offers an excellent opportunity for cultural resource interpretation and public education.

Cultural values should be considered in planning trail construction. Prehistoric utilization of the forest should be an important part of educating the public about the forest environment. Interpretive displays could combine natural and cultural values.

Wambaw Creek

Eighteen archeological sites were recorded during the survey of proposed impact areas within the Wambaw Creek Study Area (Zierden 1981). Prehistoric as well as historic sites (possibly French Huguenot) were recorded. The following sites should be evaluated for nomination to the National Register:

<table>
<thead>
<tr>
<th>Site</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BK485</td>
<td>French Huguenot</td>
</tr>
<tr>
<td>BK487</td>
<td>18th/19th Century</td>
</tr>
<tr>
<td>BK488</td>
<td>19th Century American</td>
</tr>
<tr>
<td>BK490</td>
<td>18th Century</td>
</tr>
<tr>
<td>BK491</td>
<td>Unknown Historic</td>
</tr>
<tr>
<td>BK492</td>
<td>Prehistoric</td>
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<tr>
<td>BK493</td>
<td>Prehistoric</td>
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<tr>
<td>BK494</td>
<td>Unknown Historic</td>
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<tr>
<td>BK495</td>
<td>Prehistoric</td>
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<tr>
<td>BK496</td>
<td>Historic/Prehistoric</td>
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<td>BK497</td>
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<td>BK500</td>
<td>Prehistoric</td>
</tr>
<tr>
<td>BK501</td>
<td>Historic/Prehistoric</td>
</tr>
</tbody>
</table>

The designation of the nearby Wambaw Creek Wilderness might affect the future recreational use of this area. Cultural values should be incorporated into the recreation design through the use of interpretive data.

The Battery

The Battery is a Civil War Period earthen fort located in a 60 acre proposed historic area on the Santee River (Figure 78). The fort was constructed on the recommendation of General P.G.T. Beauregard to control the Santee River and to prevent raiding by Union forces in the interior of the state. Occupation of the Battery most likely occurred between January 1863 and November 1864 (Hart 1980). No engagements are known to have occurred at the Battery.

Other earthen forts of this period are known to exist along the Carolina coast; however, they are increasingly threatened by coastal development. Sites which are not located on Federal lands are not assured of protection. Because of the excellent state of preservation and the cultural and interpretive values of this site, it should be placed on the National Register.

This site has been subject to some vandalism in the past; however, its isolation has limited destructive activity at the site. Because of its obvious nature, cultural resource signs should be posted which inform the public about legislation protecting cultural resources.

The isolation factor, which has been largely responsible for the preservation of the site, has also prevented the interpretive utilization of the site. The effects of the Cooper River Rediversion project on the recreational use of the river are not known at present. Until its effects are known, plans for recreational development at the site should be delayed. It is imperative, however, that the impacts of the change in the water level caused by the Rediversion project are closely monitored. These changes could result in erosion and scouring which would adversely affect this site.

Wattahan Plantation

Wattahan Plantation (later changed to "Waterhorn") was established by Daniel Huger, one of the earliest French Huguenots to settle in the French Jamestown area (Figure 79). Wattahan is encompassed by three grants to Huger in 1696, 1704 and 1705. Huger may have settled at Wattahan at an earlier date;
Figure 78: The "Battery," a Civil War Period earthen fort on the Santee River.
however, since records show that a son was born to Huger in 1688 "in Craven County, in St. James, Santee River" (Huger 1897:11). Without doubt, Wattahan was present in 1700-1701 when John Lawson, Deputy Surveyor General for the British Government, visited the Santee Settlement, spending an evening at "Mons. Eugie's house" (Lawson 1700-1701).

The plantation passed out of Huger ownership in 1716 to John Mayrant. It was purchased by Elias Horry in 1765. In 1769, the adjacent tract known as Point Plantation was granted to Thomas Horry who later acquired the Wattahan tracts.

Wattahan Plantation is significant for its historic associations with the French Huguenot settlement of Jamestown on the Santee River. Huger was one of the earliest Huguenot immigrants to have left his native France to escape religious persecution. Wattahan represents the desires of the American people for religious freedom.

Wattahan Plantation offers potential interpretive and recreational values with an interpretive theme of "The Pursuit of Religious Freedom." As the scene of the second engagement of the Battle of Wambaw Creek, Wattahan offers interpretive values related to the Revolutionary War and General Francis Marion. The site should first be evaluated for nomination to the National Register of Historic Places. This will require an inventory to locate remains of structural features, test excavation to determine integrity, and extensive historical research.

Interpretive development of this site in the past has been prevented by the isolation of the area. Interest in the interpretive utilization of the site is expected to increase as the Hampton State Park development matures.

Interpretive development of Wattahan should be closely coordinated with that of Hampton State Park, located one mile south of the site (Figure 80). The initial stages of development of Hampton will be aimed at providing information regarding other sites in the neighborhood whose relationship to Hampton and the history of the area is significant. Hampton's interpretive approach will introduce visitors to what the planter's life was like in the Santee region from initial settlement to the Civil War (Foley 1979).

Educational displays at Hampton will provide a historical synthesis of the French Huguenot settlement, including information on rice and cotton agriculture, colonial architecture, and the low country plantation economy. Future development of Wattahan should supplement and enhance the interpretive efforts at Hampton without duplicating these efforts.

Because of the low acreage associated with the State Park, cooperative efforts should emphasize the outdoor recreation opportunities of the National Forest. An interpretive trail emphasizing natural as well as historical values might be constructed from Hampton State Park to Wattahan and Point Plantations.

The tract between Wattahan and Hampton contains the remains of Wambaw Plantation. This tract is listed as a high priority acquisition tract. Acquisition of the Wambaw tract is consistent with the Francis Marion National Forest Environmental Impact Statement (USDA 1977) because of its outstanding recreational value.

An auto tour beginning at Hampton might include Wattahan and Point Plantations as stopover points with interpretive exhibits showing the locations of the main house and related structures (Figure 81).

Effects of the Rediversion Project on Wattahan are unknown at present. Close monitoring of the site is recommended.

Point Plantation

Point Plantation was granted to Thomas Horry in 1769, remaining in the Horry family until 1838. The Horries, like the Hugers, emigrated to Carolina from France in search of religious freedom and economic advancement. The two families were united when Daniel Huger's daughter, Margaret, married Elias Horry, a fellow Huguenot immigrant in 1704. Elias and Margaret acquired the rice plantation, Wambaw, on the South side of Wambaw Creek.

Point Plantation presently contains the ruins of a number of structures. An archeological survey should be coordinated with archival research to locate and evaluate archeological sites related to Point Plantation. A
Figure 80: Proposed development plan for Hampton Plantation State Park.
determination of eligibility for nomination to the National Register should be made. Interpretive development should be incorporated with the development of Wattahan and Hampton Plantation. The effects of the Rediversion Project on the site are unknown at this time and should be monitored.

McConnell's Landing

The archeological site at McConnell's Landing contains Late Archaic, Woodland, Mississippian and Colonial components. This is the reported location of Claude de Richebourg's home, which was fortified during the Yemassee Indian War. The long span of occupation at the site offers potential for interpretation to educate the public about the utilization of the forest over a period of more than three thousand years. Interpretation could stress the adaptations of human populations to their environment. In addition, the development of the Huguenot historical component of the site should be correlated with the development of Wattahan. Barriers have been placed at the site to provide protection from vehicular traffic. The site should be evaluated for nomination to the National Register of Historic Places as recommended by the State Historic Preservation Officer. Test excavation and additional historical research will be needed to determine eligibility.

Recreational development of McConnell's Landing must be closely coordinated with the cultural resources program. The site may be eligible for nomination to the National Register and must be treated as an eligible property until this determination is made.

Hampton State Park plans to provide water recreation opportunities. McConnell's Landing could serve as a "put in" location for canoes with Hampton serving as the terminus. Interpretive displays at McConnell's should be coordinated with those of the State Park.

The effects of the Rediversion Project on this site are unknown and should be closely monitored. Variations in water level could cause scouring and erosion which could adversely affect the site.

Limerick Plantation

Limerick Plantation was part of the 12,000 acre Cypress Barony which was granted to Thomas Colleton in 1681. His son, Peter Colleton, sold Cypress Barony to John Gough, Dominick Arthur and Michael Mahon in 1707 with Mahon receiving his share consisting of 3,500 acres, known as Limerick Plantation, in 1709.

Cypress Barony included 800 cattle at the time of its sale, indicating that cattle raising was a significant activity on the barony prior to 1707. When Mahon sold Limerick to Daniel Huger II, both Mahon and Huger were referred to as planters, indicating that agriculture had assumed an important role in the plantation economy (Lees 1980).
Lees (1980) indicates that naval stores played an important role in the economy of Limerick prior to the withdrawal of the bounty of naval stores in 1729. When the bounty was lost, it is thought that the plantation produced rice as its viable economic staple. We have evidence of barrel making, brick manufacture, carpentry, hide processing, livestock raising, lumbering, production of naval stores, peas, corn and rice agriculture, and shoe manufacture on Limerick by the mid eighteenth century.

Daniel Huger II ranked among the richest planters in the province. His sons became political and military leaders of the state. Daniel Huger III served as delegate to the Continental Congress 1786-88 and was a representative at the Federal Congress between 1789 and 1793. Isaac Huger served as a lieutenant in the Cherokee War, as a lieutenant colonel in 1776, and was made a brigadier general in 1779. Prior to the Declaration of Independence, John Huger served as a member of the Assembly, later serving as Secretary of State in South Carolina. Benjamin Huger served as major of the First Regiment of Riflemen and a member of the Provincial Congress. Francis Huger served as a captain in Moultrie's regiment, later serving as a quartermaster general in the Continental Army (Hirsch 1928).

Limerick Plantation was sold to Elias Ball of Kensington Plantation in 1764 remaining in the Ball family until 1895 (Figure 82). During the Ball ownership plats of Limerick Plantation were made in 1786 and 1797. These plats show the location of several cultural features which are now located on National Forest land.

To date, three major archeological sites related to Limerick have been recorded on the Santee Experimental Forest. These included two slave settlements and a mill complex. These sites should be evaluated for nomination to the National Register of Historic Places. A thematic nomination of Limerick would allow sites related to the plantation to be added to the existing nomination as they are evaluated. This is an archeologically sensitive area and extreme caution should be taken in conducting forest management in the vicinity.

**Jericco Plantation**

Jericco Plantation (38BK477 and 38BK478) appears to contain an 18th/19th century occupation. Intensive shovel testing conducted by Logan (1980; FS #80-34) located several high density artifact clusters. A portion of the site might have been disturbed by the previous construction of a wildlife opening. A major portion of the site appears to be well preserved including the associated slave settlement. Monitoring is planned to minimize impact to the site during the upcoming pine harvesting. Removal of the pine will promote growth of the large live oaks associated with the plantation and might add to the interpretive value of the site. The site's interpretive potential is magnified by the location of Jerico horse trail which runs through the site.

Archival documentation is badly needed at this site. In addition, test excavations are needed to determine the integrity of the site in order to evaluate its eligibility for nomination to the National Register. A high density of colono-ware was recovered from this site. Future research questions on the function and socio-economic relationships associated with this ceramic type might be answered through excavation of the site.

**38BK225**

Brockington located and test excavated 38BK225, "a large, multicomponent ecotone zone site," during the Cooper River Rediversion Canal Archeological Project (Brockington 1980). This site has been determined eligible for nomination to the National Register. The excavated portion of the site was situated on land owned by the Corps of Engineers. The portion of the site on National Forest land appears to be well preserved. The Archaic, Woodland and Mississippian periods, as well as the late eighteenth/early nineteenth centuries, are represented at the site. Brockington (1980:63) noted that: "Such a stratified site is rare for the Coastal Plain of the Southeast and the information that may be recovered is significant in terms of understanding culture history, as well as behavioral difference among groups living successively at the same location."

Emergency excavations focused on the historic component. A French Huguenot foundation, thought to be a kitchen structure was found. Brockington (1980:64, 65) expressed concern over the secondary impacts caused by the construction of the access road on Corps of Engineers' property. The historic component was considered significant because of its potential contribution to understanding the lifeways and building activity of an inland Huguenot Plantation. Brockington recommended two weeks excavation of the prehistoric component and four to six weeks excavation of the historic structure, followed by laboratory analysis.

**Historic Sites Inventory**

A number of seventeenth through nineteenth century historic sites, some containing prehistoric components, have been recorded on the Francis Marion National Forest. These sites will require additional testing and archival research to determine eligibility for nomination to the National Register. Until determinations are made these sites will be protected as required in the Forest Service Manual (2360). The following historic sites may be eligible for nomination to the National Register:

- BK379 Brick Kiln
- BK402 Brick House
Figure 82: Plat of Limerick Plantation.
APPENDIX I

GLOSSARY

The following glossary is provided primarily for the non-archeologist. A number of archeological and cultural resource management terms are included which are commonly used in this overview as well as in other archeological literature. The cultural resource management definitions are taken from the Forest Service Manual (2360).

ABORIGINAL
A native of an area before the coming of European or other settlers, e.g., the American Indians were the aboriginal inhabitants of North America. The term is also rendered "aborigine," although this usage has some connotations of dislike (Winick 1970:2).

ACCULTURATION
Occurs when people from different cultures come into contact resulting in changes in the cultural patterns of one or both groups.

ADVERSE
Generally, adverse effects occur under conditions which include but are not limited to: (a) destruction or alteration of all or part of a property (b) isolation from, or alteration of, its surrounding environment (c) introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting (d) transfer or sale of a Federal-owned property (e) neglect of a property resulting in its deterioration or destruction (36 C.F.R. 800.9) (FSM 2361.05).

ADVISORY COUNCIL ON HISTORIC PRESERVATION
Created by the National Historic Preservation Act (1966) to advise agencies of proper procedures to protect, preserve, and enhance historic and prehistoric cultural resources (Wildersen 1977).

ARCHAIC PERIOD
Archaic peoples were semi-nomadic with a hunting and gathering subsistence base (11,000-3000 BP).

ARCHEOLOGY
The study of the past (both historic and prehistoric) ways of life and patterns of human behavior, or past cultures and people.

ARTIFACT
An object of any type made by human hands. Tools, weapons, pottery, and sculptured and engraved objects are representative artifacts (Winick 1970:44).

ATLATL
A short board or stick, 20 to 24 inches long, fitted with a handle on one end and a groove or peg at the other, used in throwing a dart or lance. Widely used in the New World (Jennings 1974:373).

BENEFICIAL
Any introduced change which will enhance those qualities or characteristics that qualify as eligible for inclusion in the National Register of Historic Places (FSM 2361.05).

B.P.
Before present or years ago. Can be converted to a B.C. date by subtracting the current year.

BURIN
A flake or blade stone tool with a small, angled chisel edge or a sharp, beaked point used for sculpturing and engraving purposes (Jennings 1974:374).

CHECK-STAMPED
A design of small, impressed squares used in decorating pottery vessels and produced by a paddling or stamping technique (Jennings 1974:375).

CHERT
An impure flint used for chipped stone implements (Jennings 1974:375).

CHIPPED STONE
Stone artifacts manufactured by percussion and/or pressure flaking techniques. Chipped stone implements are predominantly used as projectiles and as cutting or skinning tools (Jennings 1974:375).

CHRONOLOGY
The establishment of relative and absolute time sequences.

COILING
Both a pottery and a basketry manufacturing technique. In pottery: Long, finger-sized rolls of clay are added one on top of another in a circular fashion starting at the bottom of the pot and continuing up to the desired height. The inner and outer surfaces are then smoothed. In basketry: A spirally coiled foundation of warp strands is sewn together in horizontal rows, the weft strands looping over the warp strands in an overcast stitch (Jennings 1974:375).

CONSERVATION
The wise use of cultural resources through time, including protection, preservation, recovery, enhancement, and other management techniques.

CULTURAL ECOLOGY
The study of the relationship between humans and their environment or between organism and habitat.

CULTURAL RESOURCES
Evidence of human behavior. They may be divided into four, often overlapping, data areas which can be represented by the following disciplines: (a) Archeology. That branch of anthropology which studies the physical remains (artifacts) and other products and byproducts
of human behavior. (b) Architecture. The art or science of building, including plan, design, construction, and decorative treatment. (c) Ethnology. That branch of anthropology which studies the behavior of living people. (d) History. That discipline which studies the human past through the analysis of written documents (FSM 2361.05).

CULTURE
Learned and shared patterns of human activity which are evident in behavior and the results of behavior (FSM 2361.05).

CULTURE HISTORY
Sequence of cultural periods.

DIAGNOSTIC ARTIFACT
An artifact which is representative of particular cultural period.

DIRECT IMPACT
The effects an action will have on environmental resources as a direct and immediate result of an action. This includes such effects as destruction of archeological sites and their environment by earth-moving, plowing, flooding, or building construction.

EFFECT
Refers to any conditions of a project or undertaking which may cause any change, beneficial or adverse, in the quality of the historical, architectural, archeological, or cultural character that qualifies a property as eligible for inclusion in, or which is included in the National Register of Historic Places (36 C.F.R. 800.8) (FSM 2361.05).

ELIGIBLE
Cultural properties that meet the criteria for nomination to the National Register of Historic Places (FSM 2361.05).

ENHANCEMENT
Management of cultural resources so as to realize their recreation and educational values to the public.

ETHNOGRAPHY
The study of individual cultures. For example, the study of an American Indian group (Winick 1970:193).

EVALUATION
The process of determining the scientific, social, and historical significance of a cultural resource property by qualified cultural resource professionals. Evaluations also considered the effects proposed actions or undertakings will have on the scientific, social, and historical significance of cultural resources (FSM 2361.05).

FLAKE
The thin, flattened piece removed from a stone by pressure- or precussion-flaking techniques. Flake tools are usually retouched (Jennings 1974:375).

FLINT
A variety of quartz, gray to brown or black, used for chipped stone implements. Although harder than steel, it is easy to work, making it a valuable raw material for stone tools (Jennings 1974:375).

GORGET
A bone, shell, or stone artifact which is perforated so that it can be suspended (Jennings 1974:376).

GRAVER
A flint tool used for shaving or cutting, probably the first type of chisel (Jennings 1974:376).

GROUND STONE
Stone artifacts manufactured by pecking and abrading techniques. Usually included in this category are grinding and pounding implements such as the mano, metate, mortar, and pestle as well as pipes and statuary pieces.

HISTORIC ARCHEOLOGY
Archeology dealing with historic sites (i.e. those of post-European contact). These might include Spanish, British, early American and Civil War Period sites.

HOPEWELL TRADITION
Woodland culture developed in Ohio and Illinois characterized by large burial mounds with log-lined tombs; an elaborate burial-oriented culture which spread throughout the Southeast.

INCISING
A method of decorating pottery vessels by cutting the design in the wet clay surface with a sharp implement (Jennings 1974:376).

INDIRECT IMPACT
Effects on the environment which are not an immediate or direct result of an action, but which are less likely to occur without it. Indirect effect is the extent to which a project or action exposes resources, either within or adjacent to the development to such adverse effect as accelerated erosion, construction of private homes or commercial buildings, road building, increased vandalism, or other disturbance attendant on the action. An indirect impact could be beneficial such as a development which helps protect a site from vandalism.

IN SITU
A Latin phrase meaning "in place." Archeologically, it refers to an artifact or object being found in its original, undisturbed position. Items found in situ provide an opportunity for establishing firm stratigraphic or other associations for dating purposes (Jennings 1974:376).

INTER-RIVERINE
Upland areas between the major river courses, which are dissected by permanent and intermittent streams.

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INVENTORY
Strategies designed to collect existing information and locate cultural resources. Inventories are divided into the two general categories of overview and survey (FSM 2361.05).

LANCEOLATE
Shaped like a lance, being tapered at one or both ends. In archeological usage the term usually refers to long slender chipped stone points or knives pointed at one or both ends (Jennings 1974:376).

LAND DISTURBING ACTIVITIES
Actions undertaken by man which may cause the alteration or destruction of cultural resource sites.

LITHIC SCATTER
An archeological site consisting of lithic (stone) material, often containing cast-off flakes from the manufacture of stone tools. Usually considered to represent a prehistoric hunt camp.

MIDDEN
A refuse heap marking a former habitation area. Midden debris usually contains decayed organic material, bone-scrap, artifacts (broken and whole) and other material.

MISSISSIPPIAN PERIOD
Tradition based on intensive farming, the development of large permanent villages and towns and the construction of platform (truncated) mounds (1000 - 1700 AD).

MITIGATION
To lessen in force or intensity or to moderate the severity of an adverse effect on cultural resources (FSM 2361.05).

MULTI-COMPONENT
Evidence of more than one occupation at a single site.

NATIONAL REGISTER OF HISTORIC PLACES
A list of cultural resources of National, State, or Local significance maintained by the Department of the Interior (Wildersen 1977).

OVERVIEW
Refers to the systematic collection and organization of existing information relevant to the cultural resources of an area. Overviews provide sufficient information to construct (1) designs for future cultural resource research, and (2) plans which consider the potential for locating cultural resources in an area. Cultural resource overviews are updated as new information is acquired (FSM 2361.05).

PALEOBOTANY
The study of prehistoric flora.

PALEOINDIAN
Earliest inhabitants of North America. Traditionally assumed to be nomadic, big-game hunters (prior to 11,000 BP).

PERCUSSION FLAKING
The technique of shaping a stone, a heavy bone, or a piece of wood. If a finer finished tool was desired, the surface and edges were further worked by pressure flaking (Jennings 1974:378).

PREHISTORIC ARCHEOLOGY
The study of archeological sites prior to the coming of recorded history.

PREHISTORIC SITE
An archeological site limited to prehistoric times.

PRESSURE FLAKING
The technique of removing flakes from a stone by pressing a blunt, pointed implement of antler or bone against the edge being worked. This method permits greater control over the size and direction of the flakes removed than does percussion flaking (Jennings 1974:378).

PRIMARY FOREST EFFICIENCY
Theory formulated by Joseph R. Caldwell. States that there was a trend toward greater efficiency in resource utilization during the Archaic Period.

PROCESSUAL ARCHEOLOGY
Attempts to explore the causes and manifestations of culture change.

PROFESSIONAL CULTURAL RESOURCE SPECIALIST
A person who has demonstrated proficiency through education, field experience, research, and publications in the field of archeology, history, architecture, and ethnology.

PROJECTILE POINT
"Arrowhead." Chipped stone tool used as a projectile or as a cutting tool.

PROPERTY
Can refer to a district, site, building, structure or object (36 C.F.R. 800).

PROTECTION
The prevention of direct or indirect impacts on a cultural resource; the protection of the resource for future study.

PROVENIENCE
The location of an artifact or object described in terms of map grids, stratified levels, and/or depth from ground surface. It provides for a scientific control of artifacts and associations once the items have been removed from the context of the site (Jennings 1974:378).

REMOTE SENSING
Method of detecting sites prior to on-the-ground survey. Includes aerial imagery, photogrammetry and sonar. Electrical resistivity and magnetometry can map major underground features without excavation under proper soil conditions.
RESEARCH DESIGN
A written plan of study which professionally justifies the wise use of cultural resources.

RETOUCH
Secondary flaking of a stone implement to remove surface irregularities and to refine or modify the cutting edge. Always done by pressure flaking (Jennings 1974:378).

RIVERINE ZONE
Contains the land immediately surrounding the major drainages.

SALVAGE ARCHEOLOGY
The attempt to recover as much information as possible from sites facing destruction.

SCRAPER
An implement of flint used to scrape leather and remove fat from the underside of a skin and to smooth wood (Jennings 1974:378).

SETTLEMENT PATTERN
The pattern showing relationships of structures and other features within an archeological site and the pattern formed by settlement of an area; i.e. relationship of sites to other sites.

SHERD
A broken piece of a pottery vessel (Jennings 1974:379).

SHORT TERM EXTRACTION SITE
Site which was utilized for a short period of time for the collection of resources such as game, plants or lithic raw materials.

SIGNIFICANT
Those qualities or characters that qualify a property as eligible for inclusion in the National Register of Historic Places (FSM 2361.05).

SITE
Distinguishable location of human activity, either prehistoric or historic.

SPOKESHAVE
A scraper with a rounded notch in the edge used for such chores as scraping arrow shafts (Jennings 1974:379).

STATE HISTORIC PRESERVATION OFFICER (SHPO)
An official appointed by the Governor of each state. He is responsible, on the state level, for ensuring compliance with Section 106 of the National Historic Preservation Act (Wildersen 1977).

STRATIGRAPHY
The arrangement of archeological deposits in superimposed layers of strata. Based on the law of superposition that the accumulation of deposits is progressive. Usually lower levels accumulated earlier and are older than the layers above them. Careful stratigraphic observation permits the reconstruction of sequences of events at archeological sites (Hunter and Whitten 1976:372).

STREAM RANK
Ordering system to differentiate sizes of drainages (Strahler's method of Stream Order).

SUB-SURFACE PROBE
Refers to the use of a "resistivity survey". A method of determining the extent of human habitation of different parts of an archeological site by sending an alternating electric current through the ground.

SURVEY
That type of field investigation designed to locate, within certain limits, all cultural resources in a specified area. Limitations are related to vegetation and topographic factors that make some portions of an area unsurveyable with currently accepted techniques. (a) Sample. That level of a survey designed to provide predictive information. It may involve statistically sound designs. (b) Complete. That level of field survey designed to investigate the entire project area such that, to the extent practical, the discovery of all locatable cultural resources will occur (FSM 2361.05).

SYSTEMATIC SAMPLE SURVEY
That level of a partial field survey designed to provide predictive information. It involves statistically sound sampling designs and inventories.

TEST PIT
A small excavation unit at an archeological site used to reveal information about buried artifacts and stratigraphy. They are used to plan further excavation or to provide samples in a broad survey.

TRANSHUMANCE
A kind of nomadism in which groups migrate annually on a seasonal basis.

UNDERTAKING
A Forest Service action, activity, or program, or the specific legislated administratively directed responsibility or authority for approval, action, assistance, or support (FSM 2361.05).

WATTLE-AND-DAUB
A construction technique in which a frame of poles and interwoven twigs is plastered with mud or a similar substance (Jennings 1974:380).

WOODLAND PERIOD
Characterized by paddlestamped, cordmarked or fabric marked ceramics, earthen mounds and a mixed hunting and economy (3000 - 1000 BP).
Federal cultural resource legislation has been enacted in an attempt to preserve our American heritage. The management of cultural resource properties located in National Forest lands is governed by a number of Federal laws and orders described below (FSM 2361.01).

Federal agency compliance with cultural resource legislation is procedural in nature, requiring the Forest Service to consider the effects of an undertaking on cultural resources. Compliance with archeological provisions can involve an inventory of the known resource base or comprehensive mitigative action, depending on the planning state of the project where archeological involvement is considered. The Airlie House Report on "The Management of Archeological Resources" provides an excellent review of the compliance process (McGimsey and Davis 1977). The procedures required for compliance are spelled out in 36 CFR 800 (Forest Service counterpart regulations have been proposed).

1906 Antiquities Act (34 Stat. 225) - The earliest legislation to address the protection of cultural resources is the 1906 Antiquities Act. This Act provides for the protection of prehistoric or historic remains, "or any object of antiquity", on Federal lands. It establishes criminal sanctions for unauthorized destruction or appropriation of antiquities and authorizes scientific investigation of antiquities on Federal lands, subject to permit and regulations (FSM 2361.01).

The Historic Sites Act of 1935 (49 Stat. 666) - authorizes a comprehensive program for identifying, preserving and enhancing nationally important historic sites. The Act further authorizes the designation of National historic sites. The Act authorizes the designation of National historic landmarks and establishes criminal penalties for violations of regulations pursuant to the Act. Interagency, intergovernmental and interdisciplinary efforts are authorized for the preservation of cultural resources (FSM 2361.01).

The Reservoir Salvage Act of 1960 (74 Stat. 220) - is an extension of the Historic Sites Act, stating that an attempt will be made to recover archeological or historical data affected by the construction of a dam reservoir or attendant facility by any Federal or federally licensed agency. The Archeological and Historic Preservation Act of 1974 amended the Reservoir Salvage Act.

The National Historic Preservation Act of 1966 (80 Stat. 915) - declares a national policy of historic preservation and encourages participation on the state and private levels. It includes the consideration of cultural resources of state and local significance as well as those of national significance. The National Historical Preservation Act establishes an Advisory Council on Historic Preservation and provides for procedures, in Section 106, for federal agencies to follow in the event an undertaking may affect a National Register property.

The act requires the federal agency to consult the National Register and the State Historic Preservation Officer (SHPO) when Federal activity may affect a potential National Register site. Field surveys to locate sites eligible for nomination to the National Register within the impact area may be required. Cultural resources located in compliance with Executive Order 11593 and NEPA must be evaluated for National Register eligibility as mandated in the National Historic Preservation Act. Section 106 of the act requires the federal agency to consult the SHPO if potential National Register sites are located in the project area to determine the effects of the project on these sites. Where an impact to a site eligible for nomination to the National Register occurs, the Advisory Council on Historic Preservation must be contacted.

If the federal agency and/or the SHPO considers the impact to cultural resources to be adverse, they work with the Advisory Council to formulate a plan to mitigate the adverse impact. If an agreement is reached, the Advisory Council draws up a Memorandum of Agreement with the agency and the SHPO. When agreement is not possible, implementation of the project must await full council comment. Once these procedures (found in 36 CFR 800) are completed, the federal official makes the final decision regarding project implementation.

The Act also authorizes the Secretary of the Interior to withhold from disclosure to the public locational information on National Register listings "whenever he determines that the disclosure of specific information would create a risk of destruction or harm to such sites or objects."

The National Environmental Policy Act of 1969 (NEPA) (83 Stat. 852) - was the first Federal Act which recognized the need to protect both environmental and cultural resources. NEPA requires that any federal undertaking having a significant effect on the environment to be covered by an environmental impact statement which considers cultural as well as natural resources. The Act broadens the range of cultural resources considered by federal agencies to include those of state or local recognition in addition to those cultural resources listed in the National Register of Historic Places.

Archeological involvement should occur in the NEPA process during the early stages of project development when the decision is made whether...
the project constitutes a major federal action. Archeological investigations for an environmental impact statement may include assessments, reconnaissance and/or intensive surveys is required for the level of environmental impact statement being prepared.

Executive Order 11593, Protection and Enhancement of the Cultural Environment, May 13, 1971 (36 FR 8921) - extends the purpose and policies of the National Environmental Policy Act, the National Historic Preservation Act, the Historic Sites Act, and the Antiquities Act of 1906. The Order asserts that the "federal government shall provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the nation." The Order declares it national policy that federal agencies are responsible for protecting cultural properties under their jurisdiction. It further requires these agencies to make professional quality surveys of the area under their control and nominate those properties considered eligible to the National Register. Executive Order 11593 directs Federal agencies to assure protection of those properties until their eligibility is determined. The Order states that Federal agencies should exercise caution until the required inventories and evaluations are completed "to insure that any Federally owned property that might qualify for nomination is not inadvertently transferred, sold, demolished or substantially altered" (EO 11593, Sect 2b.). Obligations pursuant to the National Historic Preservation Act and Executive Order 11593 are independent from NEPA and must be complied with even when an environmental statement is not required (FSM 2361.3.31).

The Archeological and Historical Preservation Act of 1974 (88 Stat. 174) - amends the Reservoir Salvage Act of 1960, giving the Secretary of Interior the responsibility of administering a national program for the recovery, protection and preservation of scientific, prehistoric and historic data which otherwise would be damaged or destroyed as a result of federal or federally related land modification activities (National Park Service: 1974,4).

The Archeological Resources Protection Act of 1979 (PL 96-95) - recognizes that previous legislation did not adequately protect archeological sites from uncontrolled excavation. The purpose of the Act is to protect archeological sites on public lands, to foster cooperation between governmental authorities, the professional archeological community and private individuals having collections of archeological resources and data which were obtained before the date of the enactment of the Act.

It provides a permit system for the excavation of archeological sites on Federal lands by qualified professionals, replacing the Antiquities Act permit system.

It establishes criminal penalties up to $100,000 and/or five years imprisonment for the unauthorized excavation, removal or damage to archeological resources. The sale, purchase, or exchange of archeological resources removed from public lands is also prohibited. In addition, the Act allows for civil penalties to be imposed by the Federal land manager.

Other Acts such as the Multiple Use - Sustained Yield Act of 1960 (74 Stat. 215), the Forest and Rangeland Renewable Resources Planning Act of 1974 (88 Stat. 476), and National Forest Management Act of 1976 (90 Stat. 2949) - established National Forest management direction and thereby may affect cultural resource management activities.


The American Indian Religious Freedom Act of 1978 (92 Stat. 469) - establishes the policy of protection and preservation for American Indians' inherent rights to religious freedom. The Act directs Agencies to consult with native traditional leaders in order to determine the potential effect of Federal agency activities upon Native American religious and cultural rights and practices.

The Public Buildings Cooperative Use Act of 1976 (90 Stat. 2505) and Executive Order 12072 "Federal Space Management" - encourages adaptive use of historic buildings as administrative facilities for Federal Agencies and activities.
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