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## **An Archeological Survey of the Proposed East Cooper and Berkeley Railroad, Berkeley County, South Carolina**

Randolph J. Widmer

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## **An Archeological Survey of the Proposed East Cooper and Berkeley Railroad, Berkeley County, South Carolina**

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Excavations, Indians of North America, Seaboard Coast Line Railroad, Amoco Chemicals Company, Cooper River, Francis Marion National Forest, Berkeley County, South Carolina, Archeology

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AN ARCHEOLOGICAL SURVEY OF THE PROPOSED  
EAST COOPER AND BERKELEY RAILROAD, BERKELEY  
COUNTY, SOUTH CAROLINA

*by*

*Randolph J. Widmer*  
*Research Manuscript Series, No. 100*

Prepared by the  
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# TABLE OF CONTENTS

	Page
INTRODUCTION. . . . .	1
ARCHEOLOGICAL RESEARCH GOALS AND THEORETICAL ORIENTATION. . . . .	2
ARCHEOLOGICAL BACKGROUND. . . . .	3
SURVEY METHODOLOGY. . . . .	5
THE SETTING . . . . .	7
SURVEY RESULTS. . . . .	13
<i>The Huger Site, 38BK211.</i> . . . .	13
<i>Site Significance.</i> . . . .	18
IMPACT UPON CULTURAL RESOURCES. . . . .	19
CONCLUSIONS AND RECOMMENDATIONS . . . . .	20
<i>The Huger Site</i> . . . . .	20
<i>Possible Sites along the Right-of-Way.</i> . . . .	21
REFERENCES . . . . .	22

## *INTRODUCTION*

An archeological survey of the proposed right-of-way of the East Cooper and Berkeley Railroad, in Berkeley County, South Carolina was conducted in the summer of 1976 by the Institute of Archeology and Anthropology, University of South Carolina. This survey was a part of the environmental assessment of impact of the Amoco Chemicals Company's proposed plant and related construction along the Cooper River in this area. It was done under contract between the Institute and Dames and Moore, consultants to Amoco Chemicals Company and was one of several such archeological assessment studies contracted by Dames and Moore on this Amoco Project.

The proposed East Cooper and Berkeley Railroad is a 16 mile spur scheduled for construction by the South Carolina Public Railways Commission to connect the proposed Amoco Chemicals Plant with the Seaboard Coast Line Railroad near Cordesville, South Carolina. The proposed Amoco Chemicals Plant site is located adjacent to the east side of the Cooper River between Grove and Flagg Creek approximately 12 airline miles north of Charleston. The railroad right-of-way extends from the Plant site north, parallel to U.S. Highway 41, to just above the community of Huger where it bears westerly, crossing Huger and Gould Creeks, and connects with the Seaboard Coast Line Railroad near Cordesville. The southern two-thirds of the right-of-way is adjacent to the Francis Marion National Forest. The northern third passes through the former Cypress Barony, a region containing a number of Colonial plantations (Herold and Scruggs 1976: 2-3).

The purpose of this survey was to locate the prehistoric cultural resources within the right-of-way and to evaluate their significance in relation to anticipated impact of the railroad construction. A survey and evaluation of the historic cultural resources within the right-of-way had previously been made by Dr. Elaine Herold of the Charleston Museum (Herold and Scruggs 1976).

The field investigations were conducted during the period of June 21-25, 1976 by Randolph J. Widmer and David Ballenger of the Institute staff. The laboratory analyses were accomplished during July and August. Only one prehistoric archeological site was located during the field investigations. The significance of this site, The Huger Site (38BK11), has been evaluated and recommendations have been made for mitigation of the adverse effect to this site that the proposed railroad construction would have.

## *ARCHEOLOGICAL RESEARCH GOALS AND THEORETICAL ORIENTATION*

The initial research goal of the survey was to locate the total range of prehistoric cultural activities recognizable in an archeological context within the project boundaries. The evidence for this is, in most cases, observable in archeological localities that the archeologist calls "sites." The data that these sites contain are then evaluated in terms of their ability to contribute to the investigation of various archeological problems and research topics. Sites are parts of past functioning cultural systems and can, therefore, be evaluated and studied in terms of a total system. Each site will contribute important data within the system regardless of the size of the site. However, the types and amounts of information that each site will contribute to the understanding of the past cultural processes that occurred within the prehistoric cultural system will vary from site to site.

Evidence of prehistoric cultural activity obtained from each site within the cultural system will be analyzed within a culture-ecological theoretical framework. That is, prehistoric behavioral subsystems such as settlement patterns, subsistence patterns, and socio-political organizational patterns will be treated as interrelated parts of a larger adaptive cultural system or systems utilized by man. These cultural systems at one time articulated with the environment, in patterned relationships which are useful in understanding the prehistoric cultural processes (Struever 1968; Goodyear 1975). To obtain the data necessary for this type of study it is most desirable to conduct research on a regional basis (Struever 1968; Goodyear 1975).

It is doubtful if an archeological survey, particularly one which is small, with arbitrary boundaries and, as in this case, a linear transect will contain the entire range of different cultural systems that have utilized an area, nor will it necessarily include the total range of activities that were produced by a single cultural system. Despite these limitations, the fragmentary information which is generated from these surveys can be incorporated into the archeological research interests of the general region. Additionally, the information from these surveys will generate new topics of archeological consideration as well as contributing to previous research topics and problems.

To determine whether the different activities observable in the archeological record are a result of variability within a single cultural system or are instead the products of two or more cultural systems of separate time periods (Binford 1973; Bordes and Sonnevile 1970), it is necessary to establish a culture-historical sequence for each region that is detailed enough to control the temporal dimension of the archeological resources found within it. This sequence or chronology is not considered as an end in itself but a necessary procedure for the proper investigation of other archeological problems.

It is within the framework of these considerations that the archeological survey within the East Cooper River project area was performed. All archeological surveys regardless of their size and the number or types of sites which they locate will contribute substantive information to archeological research.

## ARCHEOLOGICAL BACKGROUND

The East Cooper River area is poorly known from an archeological perspective. Until the last few years there have been no systematic archeological investigations conducted in the interior portion of the Lower Coastal Plain of South Carolina. Some archeologists have considered this area basically void of aboriginal occupation during various seasons of the year (Milanich 1972) or during the period before western colonization (Larson 1970). Recent surveys in the vicinity of the East Cooper River (Hartley and Stephenson 1975; Asreen 1974, 1975; House and Goodyear 1975) indicate that this may not be true. Until these recent surveys, most archeological investigations were focused on the large, conspicuous shell middens located in the estuary regions of the coast. Sites in the interior portion of the Lower Coastal Plain lack conspicuous shell deposits and have very low artifact densities, particularly lithics. These factors combined with the heavy vegetative growth and forest cover make locating sites in this region very difficult. This has resulted in a tendency to assume that there are few archeological resources in this area.

These unverified assumptions make this region extremely important from an archeological perspective. The lack of archeological research and investigation in this region makes any discussion of coastal archeology incomplete in terms of the discussion of archeological resources as systems of adaptation. Also, this region provides an ideal source of tests for archeological hypothesis developed from research in the estuary regions of the Coastal Plain. One such hypothesis maintains that only the immediate estuary zone of the south Atlantic Coastal Plain is capable of supporting year round aboriginal population. However, since some sites of this time period are located in river valleys in the inner regions of the Coastal Plain, it is suggested that these sites represent seasonal movements of people into the interior portions of the Coastal Plain. This basic transhumance pattern may represent a way of life which existed on the Southeastern Coastal Plain from 2500 B.C. to 700 A.D. This distinctive pattern is called the Coastal Tradition (Milanich 1972: 110-112, 1973: 51-53). The East Cooper River area provides an ideal test region for this hypothesis and forms one of the research topics within this region.

Before testing this hypothesis it is necessary to study the nature of the specific adaptive patterns which were utilized by prehistoric inhabitants within the interior region of the Lower Coastal Plain at various stages of cultural development. This requires the collection of archeological and environmental data relevant to subsistence, settlement, and socio-political patterns within the various temporally distinct cultural systems that utilized the region.

Well established chronological sequences, based on stratigraphy, have been established for the Savannah River Basin and the Georgia Coast (Williams 1968; Milanich 1976; Stoltman 1974; Caldwell 1971). However, there has been little stratigraphic data supporting a chronology for the coastal region of South Carolina. Because of this, the only chronological sequence established for the South Carolina Coastal Plain was developed primarily by cross-dating ceramics with the Georgia sequence (South 1973). The refinement and substantiation of this general chronology for the Coastal Plain by stratigraphic work is necessary in order to accurately interpret the observed variability in the

archeological record. The East Cooper River area can provide valuable data bearing on the problems and gaps present in the extant South Carolina coastal chronology. This area is especially significant in view of the research recently undertaken at the Palm Tree Site in the nearby Amoco Chemical Plant Site.



## *SURVEY METHODOLOGY*

A check of the site files of the Institute of Archeology and Anthropology revealed that there were no prehistoric archeological sites within the immediate impact area. A few prehistoric potsherds are in the collections obtained from the vicinity of the original Limerick Plantation home site and also in a road adjacent to the Kensington Plantation (Herold and Scruggs 1976). Both of these locations are outside the impact area, but they do indicate the likelihood of prehistoric occupation in the project area. The reconnaissance of the railroad right-of-way during the historic survey failed to yield evidence of prehistoric occupation on the ground surface (Herold and Scruggs 1976).

Ninety-one percent of the proposed right-of-way is located in wooded areas with dense vegetation or ground cover (Dames and Moore 1976, Table 1). This vegetation has resulted in an almost totally concealed ground surface. Only in clear-cut areas, old fields, along fire lanes, and logging roads was there exposed soil which would allow recognition of prehistoric cultural remains. There is considerable evidence to indicate that many archeological sites found in the coastal region of South Carolina are buried beneath a sterile layer of soil (South 1960; Hartley and Stephenson 1975; Widmer 1976; South and Widmer 1976). A subsurface sampling strategy was therefore employed to identify sites along the right-of-way.

The survey of the Amoco plant site on the Cooper River (Hartley and Stephenson 1975) served as a model for our expectations of site size, density, and artifact composition since it is the closest archeological site in this area and because this region lies within a similar physiographic and environmental setting. The results of that survey indicate that the expected artifact density for this area will be very low. There was an extremely low frequency of lithic material and a complete absence of shell associated with the sites located within the proposed Amoco plant site. Ceramic artifacts would therefore provide the primary archeological indicator for site recognition. The Palm Tree Site, 38BK147, located within the plant site, illustrates the problem which this situation presents in reference to the discovery of buried sites. At this site a five foot test square yielded a total absence of cultural material (Hartley and Stephenson 1975). However, subsequent large scale stripping of the site resulted in the uncovering of extensive undisturbed deposits of ceramic artifacts.

The survey of the right-of-way included the use of subsurface testing techniques which included post hole digger sampling and one foot and three foot square test excavations. The post hole digger was the main subsurface testing tool and a single sample was dug approximately every 200 feet along the entire right-of-way. This procedure allowed a close monitoring of the soil composition and drainage characteristics. These factors have been shown to be useful site indicators in certain areas of the Atlantic Coastal Plain (Widmer 1975). Areas with favorable drainage, high relief, or vegetational change were subjected to more extensive post hole sampling. Particularly intensive post hole sampling was focused at stream crossings; areas of known high site probability. If no cultural material was located after extensive post hole sampling but other indications of high site probability existed, a number of one foot test squares was excavated. All subsurface tests regardless

of type were excavated to a depth of two feet which in most instances was well into the culturally sterile mid-Pleistocene deposits. The three foot test square was employed at known sites to evaluate their stratigraphy and cultural context. Fill from the post hole samples and the one foot squares was trowelled to recover artifacts. The fill from the three foot test squares was sifted through 1/4 inch hardware cloth.

Many tracts along the right-of-way were inundated by surface water from recent rains at the time of the field investigation. This eliminated the possibility of post hole sampling over much of the area. The heavy rains were, however, an accurate indicator of the drainage characteristics of the area and served to identify areas with good drainage or slightly higher relief. Such areas would not be readily noticable during the drier portions of the year.

All areas of exposed soil were inspected for cultural material. All archeological sites discovered during the survey were located in reference to the railroad centerline stations.

## THE SETTING

The proposed East Cooper and Berkely Railroad right-of-way is situated entirely within the Talbot Pleistocene Marine Formation of the Lower Coastal Plain (Colquhoun 1969: 23-24). This formation was deposited as sea level rose, submerging the previous dry land surface. The advancing sea strand-line eroded the exposed land surface, redepositing the eroded materials seaward. The localized resultant topography is a level marine plain which contains a marsh plain environment (Colquhoun 1965: 28, Fig. 8, 1969: 30).

The low level relief of this marine terrace is also attributable in part to an underlying structural feature composed of Tertiary and Quaternary sediments known as the East Georgia Basin. This trough-like basin extends along the lower Atlantic Coastal Plain from Georgia north to Georgetown, South Carolina (Colquhoun and others 1969: 2-3, Fig. 2).

The project area is situated within the section of the marsh plain that was formed between the Bethera Scarp, along which the Seaboard Coast Line is located, and the Cainhoy Scarp. Both of these scarps represent barrier island remnants formed during the Talbot Age sea (Colquhoun 1969: 31). The geological profile for the East Cooper River Area consists of a coarse, well sorted, medium grained basal sand, overlain by a poorly sorted sandy clay horizon extending approximately 20 feet below the present land surface (Colquhoun 1965: 31-32, Fig. 10).

The resultant contemporary physiography and environment consists of a low, level, poorly drained forest. A knowledge of the original forest composition is necessary for an understanding of the food resources which would have been available to aboriginal populations within this region.

Four major forest types are found within the vicinity of the contemporary East Cooper River Area (USDA 1973, Fig. 3-3). These include a hardwood-pine forest adjacent to the east bank of the Cooper River extending north to French Quarter Creek; a loblolly-shortleaf pine forest with some swamp hardwoods interspersed, adjacent to the hardwood-pine forest, extends north to the Bethera Scarp; a longleaf pine forest extends east-west along the Bethera Scarp; and a swamp and bottomland hardwood forest association along the east branch of the Cooper River above its junction with French Quarter Creek and along the flood plains of French Quarter, Quinby, Huger, and Gould Creeks.

These forest cover types are corroborated by Chapman in his survey of the forest cover in the plantation region of the survey area (1905: 78). He further noted that the loblolly-shortleaf pine composition tended to be associated with flat, moist lands, swamp edges, and well drained bottomlands (Chapman 1905: 8-9, 33). These physiographic features are characteristic of most of the East Cooper River area (Dames and Moore 1975: Fig. 2.1-1). Conversely longleaf pine is more restricted in distribution than loblolly, preferring higher, lighter, better drained areas. There is little evidence to support the existence of a longleaf pine fire subclimax forest in the East Cooper River area south of the Bethera Scarp. The existence of scattered tracts in this area today can be attributed to modern forestry management practices. The occurrence of the longleaf pine tract along the Bethera Scarp can be attributed to the higher relief and improved drainage (Oosting 1956: 289).

The potential climax forest in the Southeastern Coastal Plain is a controversial, poorly understood association. This is in part attributable to an almost total absence of intact virgin forests in this area. Various climax forest associations have been hypothesized for this area. These include an oak-hickory climax (Wells 1928; Oosting 1956), oak-pine climax (Braun 1950), oak-hickory-pine climax (Küchler 1964), and a southern mixed hardwood climax forest (Quaterman and Keever 1962). The southern mixed hardwood forest climax reconstruction (Quaterman and Keever 1962) will be followed here since it is based on quantitative methods and allows for a wide variety of species in the association, a feature readily apparent in most remnant hardwood forests. This reconstruction is also followed by May (1969: 24-27). Fourteen hardwood species are of importance in the association. These species in descending order of frequency are: American beech (Fagus grandifolia), laurel oak (Quercus laurifolia), Southern magnolia (Magnifolia grandifolia), white oak (Quercus alba), sweet gum (Liquidambar styraciflua), mockernut hickory (Carya tomensoa), water oak (Quercus nigra), southern red oak (Quercus falcata), pignut hickory (Cayra glabra), black tupelo (Nyssa silvatica var. dilatata), and American holly (Ilex opaca). Understory associates include dogwood (Cornus florida) and sparkelberry (Vaccinium arboreum).

This would tend to indicate that the lowlying, poorly drained, sandy clay soils found in the vicinity of the East Cooper River between the Bethera and Cainho Scarp originally contained a southern mixed hardwood forest climax. The oak-pine forest tract currently bordering the Cooper River (USDA 1973, Fig. 3-3) and the numerous hardwood stands found throughout the East Cooper River Area (USDA Forest Service 1971; Dames and Moore 1975, 1976) would appear to represent this original climax forest. The original climax forest would be found throughout the East Cooper River area on tracts that are better drained than those containing hardwood swamp associations. The higher, better drained Bethera Scarp could maintain a fire subclimax Longleaf Pine forest. The general descriptions of the interior portions of the North and South Carolina Coastal Plain by seventeenth century explorers reinforce this reconstruction (Hilton 1959: 44, 47; Sandford 1959: 89, 101; Wilson 1959: 170).

The contemporary loblolly-shortleaf pine forest which now dominates most of the area within the East Cooper River Area can probably be attributed to the long history of logging and planned forest management. This activity began in the late seventeenth century (Hawley 1949) and continues to be a major economic activity of the area today (USDA 1973: 3-25-3-35). The use of fire by aboriginal inhabitants of the area for hunting and clearing fields for horticulture might also have contributed to the maintenance of pine tracts within the hardwood forests.

In January of 1701, John Lawson reported that the Sewee Indians set fire to cane swamps, driving out game (Lawson 1952: 5). Swanton (1946: 318-319) also discusses the occurrence of this practice in other parts of the Southeastern United States. If this practice was limited to areas containing cane undergrowth then the area would probably have been moist, bottomland, swamp, hardwood forest tracts where cane occurs.

One open pine savanna is located east of the railroad right-of-way (Fig. 1) and is known as the Big Savanna (Chapman 1905: 14). Similar savannas have been described by Wells (1942) and have even been considered a major biotic zone characteristic of the Atlantic Coastal Plain (Shelford 1963: 76). These savannas correspond to Kuchler's (1964) pocosin vegetation type 114 comprised primarily of pond pine (*Pinus serotina*) and gall berry (*Ilex glabra*). These pocosins are scattered throughout the lower Atlantic Coastal Plain from Virginia to South Carolina (Kuchler 1964). They could represent fire subclimaxes within the more poorly drained areas which will not permit the presence of longleaf pine. Although surface wildfires during the dormant season have little effect on the succession toward the hardwood climax, a crown fire which would totally destroy both the overstory and the understory would provide a favorable seed bed for pine with the composition of the resulting stand depending on the availability of pine seed (Wenger 1969: 94). These savannas could be the localized areas of aboriginal game drives scattered throughout the hydric gum-cypress swamp. Regardless of the nature of these savannas, they represent a distinctive biotic zone and will be considered as such.

A cypress-gum swamp forest is currently found in all of the hydric regions of the East Cooper River area including the flood plains along creek bottoms and the poorly drained areas within the eastern portion of the survey area. This biotic community has not been modified by aboriginal or historic cultural activity. Past hydrological and climatic fluctuations might have altered its distribution from that of today. However, these fluctuations are poorly known and therefore the prehistoric distribution is considered identical to that of the present.

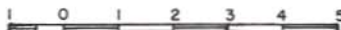
These four forested biotic zones; the longleaf pine forest, the southern mixed hardwood forest, the gum-cypress swamp forest, and the pine savanna, as mapped in Figure 1, probably represent the primeval forest cover before western colonial exploitation and expansion into this area. In addition to these wooded areas, two type of marsh are found within the project area. These include the tidal marsh and the freshwater marsh. The tidal marsh presently occurs from just below the fork of the eastern and western branches of the Cooper River, south to the Cooper River estuary and Charleston Harbor, while the freshwater marsh is found along the edges of the east bank of the Cooper River, Quinby Creek as far north as Huger, and the west branch of the Cooper River north to about Monck's Corner. The extent and distribution of these two biotic zones fluctuated through time. Two factors are largely responsible for this vacillation, sea level fluctuation and the variability of freshwater discharge. The latter variable has been radically modified since the Santee River diversion (Dames and Moore 1975: 77-78).

Surprisingly, the fluctuations in these two environments does not appear to have drastically affected the distribution of the resources which appear to have been important to man since most of these resources are tolerant of some saltwater and will thrive in freshwater.

In all, six biotic zones have been hypothetically reconstructed for the East Cooper River area before European contact (Fig. 1). The occurrence of contrasting biotic zones in relatively close proximity to each other relates directly to the richness and diversity of potential food resources available for exploitation by prehistoric populations. The interfaces between these

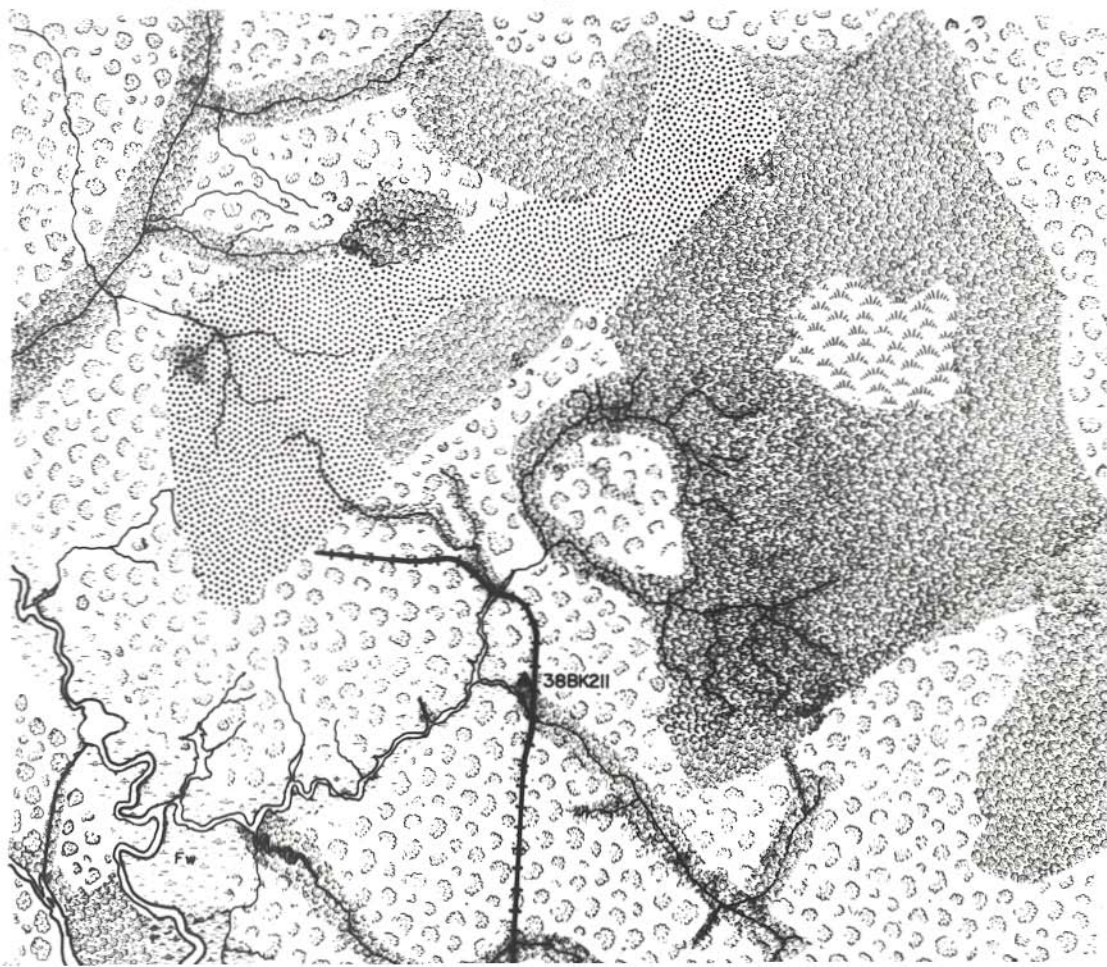
# HYPOTHETICAL RECONSTRUCTION OF THE PREHISTORIC BIOTIC ZONES WITHIN THE EAST COOPER RIVER AREA

SCALE IN MILES



## LEGEND

- |   |                      |   |                                |
|---|----------------------|---|--------------------------------|
|  | LONGLEAF PINE FOREST |  | SOUTHERN MIXED HARDWOOD FOREST |
|  | FRESHWATER MARSH     |  | SOUTHERN HARDWOOD SWAMP        |
|  | TIDAL MARSH          |  | PINE SAVANNA                   |





biotic zones are favorable habitats for certain species of upland game, particularly the white tailed deer.

The highest deer population density occurs where many small areas of varying vegetation are located. This situation produces maximum edge areas between varying biotic zones, a condition extremely favorable for deer (Smith 1975: 19). The bottomland hardwood associations provide the best deer habitat in the Southeastern United States (Stransky, cited in Smith 1975: 41). Moore (cited in Smith 1975: 39) estimates the deer population density in the bottomland area of the Savannah River in South Carolina to be approximately 50 per square mile. A wildlife habitat study of the Francis Marion National Forest indicates diversified habitat conducive to deer maintenance (USDA Forest Service 1971). Plentiful browse is found in this area including tit, bay, blueberry, black gum, cane, greenbrier, gall berry, sweet pepper, blackberry, wild grape, yellow jasmine, red maple, honeysuckle, dogwood, and smilax. Mast for deer is provided by hickory, oak, beech, and dogwoods. Deer habitat would probably have been richer during the prehistoric period with the availability of much more mast since the pine tracts would be replaced by hardwood forest cover. There would still be numerous edge areas and transition zones providing ample browse to complement the seasonally varied deer diet. This setting also favors turkey, woodcock, wood duck, dove, squirrel, bobcat, raccoon, opossum, and bear. The swamp regions would additionally provide habitats for wading birds (Dames and Moore 1975: 23-24). All of these animals would be potentially available to prehistoric inhabitants of the area.

The freshwater marshes and certain regions of the tidal marsh provide particularly attractive seasonal habitats for migratory birds including various species of ducks, geese, and teal. These birds were important subsistence items of the Sewee Indians in the region of the Santee River Delta during the early European contact period (Lawson 1952: 4) and were undoubtedly important subsistence items throughout the prehistory of the area. The migratory waterfowl would be attracted to the open marsh area primarily by the plentiful wild rice. Turtles, alligators, and wading birds inhabit this zone and would have been available for exploitation by prehistoric populations.

The east branch of the Cooper River and Quinby Creek are foraging grounds for anadromous fish such as shad, rock, and herring (Dames and Moore 1975: 20) and possibly sturgeon which are reported as having been commonly taken from North Carolina, Virginia, and Georgia rivers during the sixteenth through eighteenth century (Swanton 1946: 336-338; Larson 1970: 177-178). However, the stream flow in these drainages is insufficient for spawning of anadromous fish (Dames and Moore 1975: 20). Spawning could however, occur in the main channel of the Cooper River west of the project area (Dames and Moore 1975: 21). The occurrence of these species in the deeper channels adjacent to the survey area would not be adversely affected by fluctuation in salinity and should therefore have remained available to prehistoric inhabitants for exploitation throughout time. Freshwater species of the sunfish family, the coastal shiner, mullet, and flounder have been identified as presently occurring in the east branch of the Cooper River (Dames and Moore 1975: 20-21).

Plant resources exploited by prehistoric human populations are equally abundant in the East Cooper River Area. The hardwood forest tracts would provide abundant acorns and hickory nuts during the fall. These items were extremely important in prehistoric economies in the Southeastern United States (Caldwell 1958; Larson 1970). Numerous sixteenth through eighteenth century accounts testify to the importance of these subsistence items in the aboriginal economy (Harriot in Swanton 1946; Hilton 1959: 47; Ashe 1959: 142-143; Lawson 1952: 12,24). Other potentially exploited species include saw palmetto berries, flesh of the sabal palm, and other edible berries. All of these species are known to have been exploited by Southeastern aboriginal populations (Larson 1970).

The hypothetical reconstruction of the prehistoric environment which has been outlined has been treated as basically unchanged from the close of the Pleistocene some 12,000 years ago, until European contact. This prehistoric environment as conceived above differs considerably from the previous generalizations of the prehistoric environment of the Southeastern Coastal Plain. Larson (1970) includes the East Cooper River Region in the Delta section of this Coastal sector. He concludes that the Delta section offers few resources that would attract a large or stable aboriginal population, and considers only anadromous fish to have been potentially attractive to aboriginal inhabitants (Larson 1970: 34-35). Milanich (1972: 110-111) would divide the survey area into a Pine Barren Biotpe, and a Pine Barrens River Valley Biotpe characterized by deciduous bottomland hardwoods which would favor seasonal exploitation of their nuts and associated fauna. He would not, however, consider that this region has a subsistence base capable of supporting year round habitation.

While both of these hypothetical reconstructions and evaluations are valid as general characterizations for the Southeastern Coastal Plain, they clearly demonstrate their inadequacy for interpreting and analyzing the culture-ecological adaptation to the specific environment found in a particular region. Furthermore, they indicate the need for specific detailed environmental reconstructions based on the full range of environmental research available for the area.



## *SURVEY RESULTS*

One prehistoric site was located during the survey. No additional historic archeological resources, other than those reported during the historic survey, were found. A single chert thinning flake was recovered from the surface of a filled logging road which transected a recently clear-cut field in the vicinity of the right-of-way centerline station 492. Search of the immediate vicinity yielded no additional cultural material. This artifact was apparently brought in with the fill used for the construction of the road.

### *The Huger Site, 38BK211*

The Huger site is located in the immediate vicinity of right-of-way centerline station 278+39 on the north bank of Quinby Creek directly west of the community of Huger (Figs. 2 and 3). The site is situated on a prominent, heavily wooded ridge which extends in a westerly direction on U.S. Highway 41 towards Quinby Creek (Fig. 3). Two lowlying swampy areas flank the northern and southern edges of the ridge, merging at the western end of the ridge to form a lowlying swamp forest bordering the Quinby Creek marsh plain.

Site vegetation included a number of hardwood species which comprise a tall closed canopy community. Species noted in this area include numerous oak species, maple, ash, magnolia, yellow poplar, red bud, holly, hickory, and an occasional pine. Understory is sparse and consists mainly of seedlings of the above, ferns, poison ivy, and various fungi. Soil at the site is the type Norfolk fine loamy sand and is extremely well drained.

Since no cultural material was visible on the site surface due to its undisturbed context and heavy leaf mold, the exact size of the site is not certain. Based on comparison with the Palm Tree Site, which has similar density, the site probably has an area which coincides with the ridge top, about 200 by 500 feet in extent (Fig. 3). A series of post hole tests revealed the presence of cultural material in three samples within the right-of-way area. The approximate locations of these tests and the cultural material obtained from each test have been listed below:

#### Post Hole Sample, 25 feet east of R/W survey station 278+39

##### Potsherds

Residual Grit Tempered	1
------------------------	---

#### Post Hole Sample, 50 feet east of R/W survey station 278+39

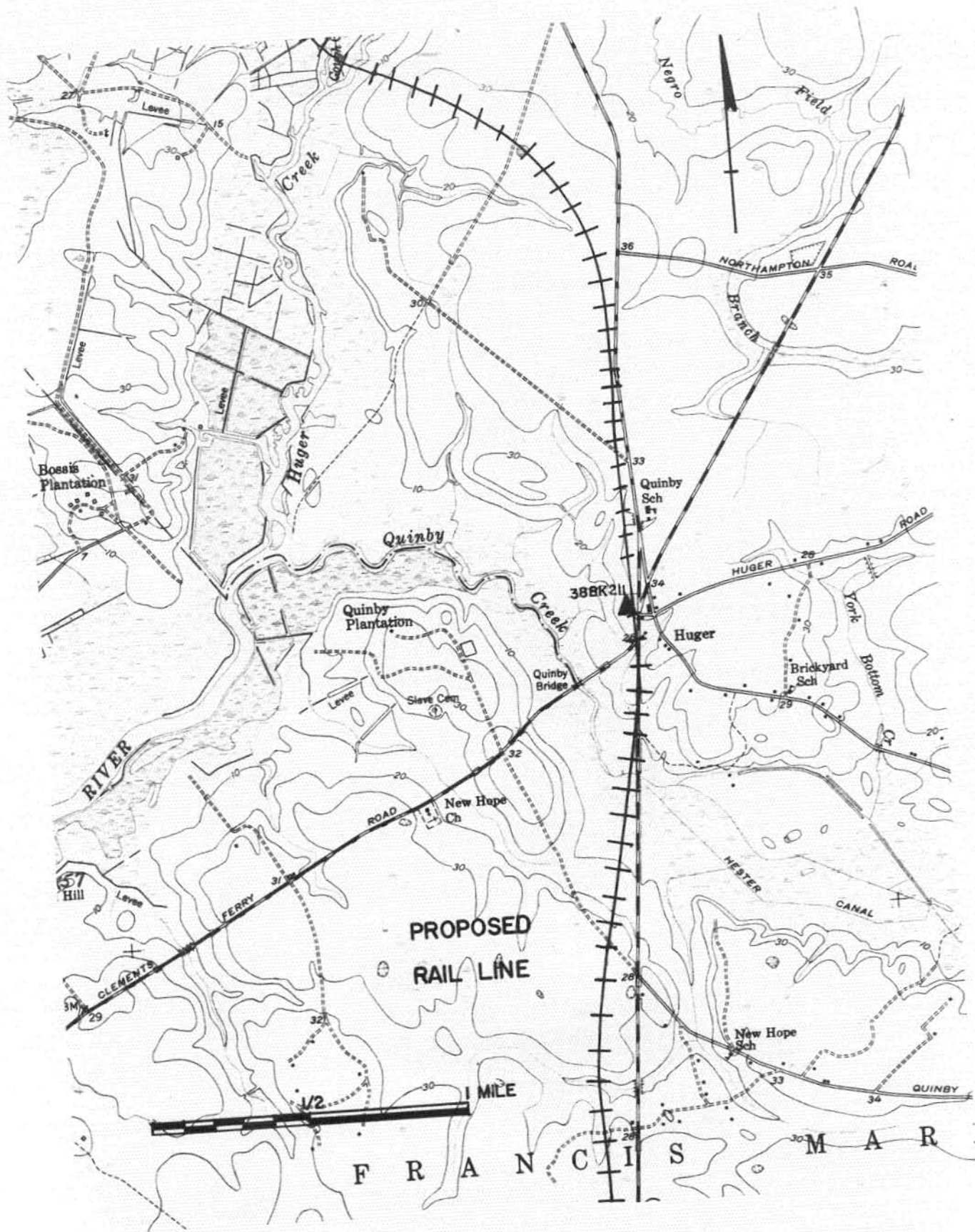
##### Potsherds

Grit Tempered Simple Stamped	1
Wood Charcoal	

#### Post Hole Sample, 15 feet northwest of R/W survey station 278+39

##### Potsherds

Residual Grit Tempered	1
Grit Tempered Simple Stamped	1



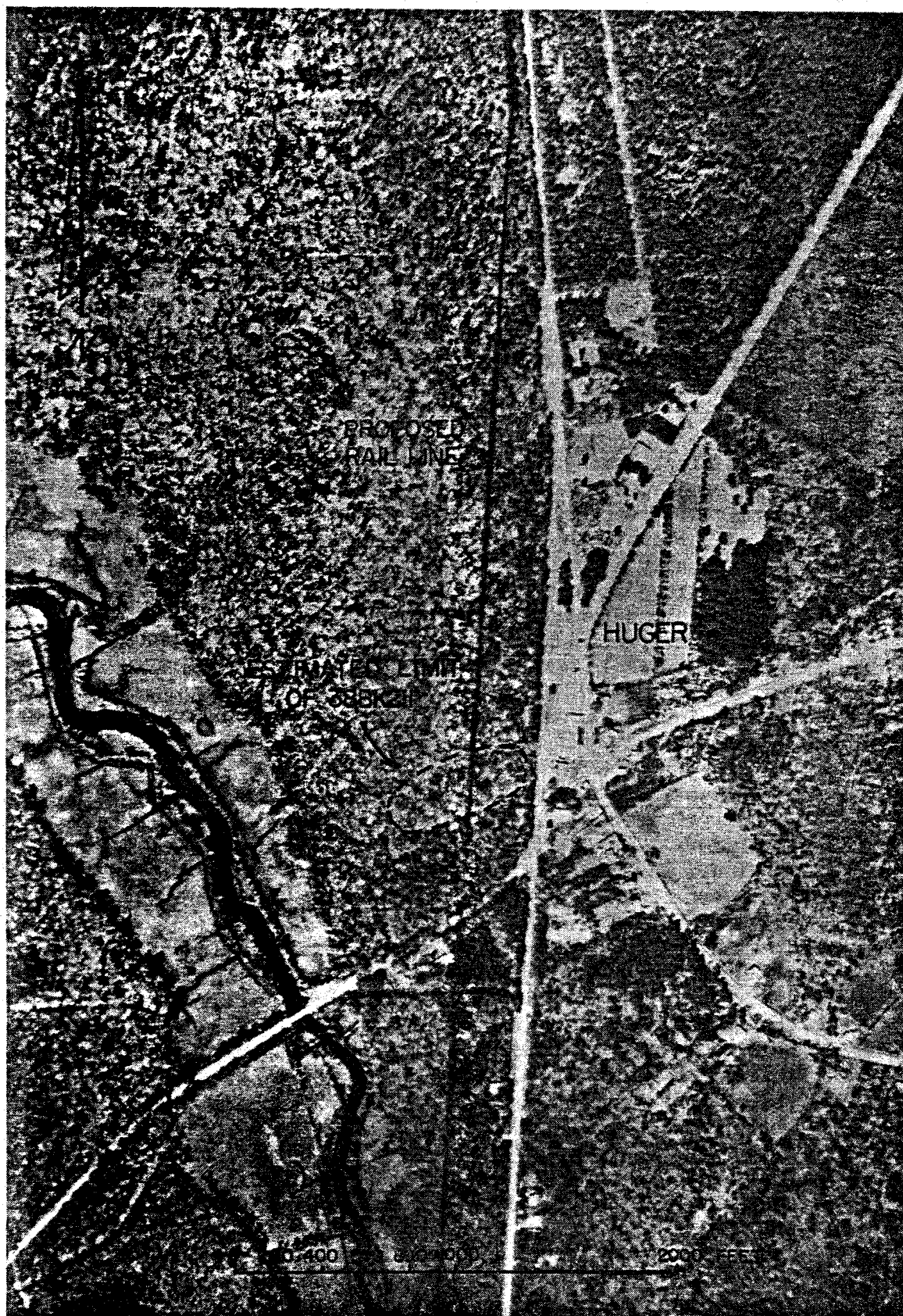


FIGURE 3. Aerial Photo of the Huger Site, 38BK211

A three foot square was excavated over the post hole which contained extensive wood charcoal in the anticipation that this might represent a fire hearth or other cultural feature. Additionally, this test would provide data for the evaluation of the stratigraphic condition of the site. The fill from this test was not sifted. This square was excavated primarily to reveal the feature, if present, and to obtain general stratigraphic data. The feature when exposed consisted of a charred log approximately 1.5 feet in length and 0.4 feet in diameter resting partially within the yellow sand strata. No cultural material was observed associated with this feature. This charred log appears to represent a fire hearth. An adjacent three foot test square was excavated in vertical levels following the natural stratigraphic zones. The fill from this test was sifted through 1/4 inch hardware cloth and cultural material was separated by level in an attempt to establish the stratigraphic sequence of occupation for this site. The following soil stratification was revealed through the test excavations.

A thick black humus zone composed of a matrix of roots and organic material intermixed with some sand was present from the site surface to approximately 0.4 feet below the site surface. Beneath this zone was a brownish-grey, organic, mottled, sand layer approximately 0.4 feet thick. This zone gradually lightened in color and was replaced by a clean yellow sand which occurred at a depth of about 0.8 feet below the ground surface. The test was excavated to a depth of about 1.5 feet. The cultural material appears to be restricted to the upper two strata and the top of the yellow sand strata.

Listed below is the cultural material recovered from each of these strata.

Humus layer 0-0.4 feet

Potsherds

Chicora ware complicated stamped	1
Grit tempered plain	1
Fire Cracked rock	1

Grey-brown sand layer 0.4-0.8 feet

Potsherds

Grit tempered plain	1
Grit tempered simple stamped	1
Utilized flake	1

Top of yellow sand layer below 0.8 feet

Potsherds

Stalling's Plain	1
Grit tempered plain	1

The stratigraphic tests excavated at the Huger site clearly reveal an intact stratified deposition of cultural material. A well developed natural soil profile was present and there was no indication of modern cultural disturbance or the presence of old plow scars. The archeological sample, although small, maintains a stratigraphic sequence of deposition which roughly follows the general cultural sequence for the South Carolina Coast (South 1973: 54-55). The Stalling's plain sherd was recovered from the lowest stratigraphic level, the simple stamped sherd from the grey brown level, and the complicated stamped sherd from the humus level.

Three ceramic ware groups (South 1973) were represented in the samples recovered from the combined subsurface tests. The frequency and chronology of this ceramic assemblage has been presented below.

<u>Count</u>	<u>% of Sample</u>	<u>Ware Group</u>	<u>Type</u>	<u>Chronology</u>
1	10	Chicora	untyped complicated stpd.	1200-1650 A.D.
3	30	Deptford or Thom's Creek	untyped simple stpd.	1500 B.C.-500A.D.
5	50	Thom's Creek	untyped grit tempered plain	1500-1000 B.C.
1	10	Stalling's	Stalling's Plain	2500-1500 B.C.

The above table provides a rough estimate of the cultural context of the site. It also indicates that the site was primarily occupied during the Early Woodland period (1000-0 B.C.). Eighty percent of the ceramic assemblage, if the plain sherds are classified into the Thom's Creek Ware Group, is from this period. An accurate evaluation of the frequency of occupation at this site can only be determined by subsequent investigation but for present purposes this site is interpreted as being occupied primarily during this period.

The exact cultural and chronological context of simple stamped ceramics in this area is unknown. In the Savannah River region and along the Georgia Coast it clearly occupies a temporal range from 1000 to 600 B.C. (Milanich 1976; Peterson 1971; Stoltman 1974; Caldwell 1971; Williams 1968). However, in the Cooper River drainage area this sequence may not be the same. At the Charles Towne Landing site on the Ashley River, simple stamped ceramics did not occur associated with Deptford, Thom's Creek, or Stalling's ware groups, but instead were located in a shell midden context exclusive of other material (South, personal communication). At the Palm Tree Site, 11 simple stamped sherds, were recovered from the surface (Widmer n.d.). However, not a single simple stamped sherd was found in the excavated collections from that site which consisted primarily of Stalling's, Thom's Creek, and Deptford ware groups, the supposed context of this simple stamped type. It is therefore possible that this ceramic type belongs in a later temporal context. This material might possibly be similar to the Ashley Simple Stamped type of the York ware group, a late prehistoric or protohistoric ceramic assemblage dating from the sixteenth through the eighteenth centuries (South 1973: 54-55). The delineation of the context of these ceramics should be a research goal of subsequent work at this site.

### Site Significance

The Huger Site, 38BK211, represents an important archeological site. Situated as it is in the interior portion of the Lower Coastal Plain, not directly associated with a major watercourse, it is an environmental ecotone in which marsh, swamp, and hardwood forest interface each other, a specific environmental niche that is poorly known. It should be possible to recover data from this site that were not available at the nearby Palm Tree Site. The Huger site should provide important and necessary comparative data for the reconstruction of the systems of cultural adaptation present in the East Cooper River area. This site represents a type of site which is a distinctive part of the larger adaptive system.

To date, there is little archeological knowledge of the chronological position and cultural context of simple stamped ceramics in the northern region of the South Carolina Coastal Plain. Sites containing this material are few (Anderson 1975) and usually in mixed stratigraphic context, thereby limiting investigation of this problem. The Huger site allows for exploration of this phenomenon within a stratigraphically controlled context. The site will also provide valuable data relating to the differences or changes in settlement and subsistence activities within temporally distinct cultural systems of the same region. The Huger site meets the criteria of eligibility for the National Register of Historic Places.



## *IMPACT UPON CULTURAL RESOURCES*

The Huger Site (38BK211) is situated directly within the proposed railroad right-of-way between center line survey stations 277 and 279. An estimated one fifth of the site will be totally destroyed by the proposed railroad construction. Project design plans indicate that approximately 10 feet of fill will be removed from the site surface to reach the desired grade (Office of the Director of Engineering n.d.). This will result in total destruction of archeological deposits in this portion of the Huger Site. Potentially, additional portions of the site could also be endangered as a result of the use of the construction equipment in the immediate area. Any equipment coming into or leaving the area or parked in the area might conceivably use this section of high ground. Such use would adversely affect the site.

In addition to the direct impact on an estimated one fifth of the site, the remainder of the site would be indirectly affected. An archeological site is a unit and its entirety must be studied as a unit, just as a house and yard form a cultural unit and cannot be understood by a study of one room. The cultural materials that exist within the spatial boundaries of a site are related in a systemic pattern. It is that total systematic pattern that the archeologist must study and try to interpret. If only a portion of that pattern is studied or if a portion is destroyed, the ability to understand the whole pattern is lost. For this reason the entire site would be impacted by construction of the railroad here, even though only a portion of it is actually destroyed.

In addition to the one site that was discovered there is the possibility that other sites exist within the railroad right-of-way. The survey was conducted with the best methods and techniques available for discovering sites but this does not assure that nothing was missed. The extremely dense forest cover and poor ground visibility in much of the area required subsurface testing in selected sectors. These tests could not be complete or total and therefore some archeological sites could have been missed in the survey. This is essentially true of any archeological survey of an area such as this and it is a risk that the archeologist has to accept. He does the best sampling that he can within the time frame of the project in order to reduce to a minimum, the probability of having missed some sites. This was done along the right-of-way of the East Cooper and Berkeley Railroad. The probability of additional sites remaining undiscovered has been reduced to a minimum but that possibility still exists.

## CONCLUSIONS AND RECOMMENDATIONS

An archeological survey and subsurface testing operation was carried out along the 16 miles of right-of-way for the proposed East Cooper and Berkely Railroad in June of 1976. One prehistoric archeological site of major significance, and eligible for inclusion on the National Register of Historic Places, was discovered. The possibility of additional, undiscovered sites existing in the impact area has been reduced to a minimum by this survey and testing operation but that possibility still exists.

Guidelines for use with the National Register of Historic Places (36 C.F.R. part 60.6) states that a property may qualify for the Register if it "has yielded, or may be likely to yield, information important in prehistory or history." While disturbance of archeological properties should be avoided, under certain circumstances properties primarily significant for the data they contain can be said to realize their significance where the data are retrieved in an appropriate manner. The Huger Site (38BK211) is a site of this kind and can indeed realize its significance by excavation rather than preservation as an undisturbed site.

### The Huger Site (38BK211)

This site is recommended for additional research and excavation. The exact spacial extent of the site is not certainly known but it appears to occupy all or nearly all of the small ridge top, approximately 200 feet by 500 feet in extent. It is recommended that a series of 25 squares, each two meters on a side, be randomly selected for excavation to give adequate coverage and even dispersion over the preserved area of the site. This should delineate the boundaries of the site and provide comparative data for intra-site artifact distribution. All test squares would be plotted by transit and stadia and located on a general topographic map of the site. This would require a field archeologist and four assistants for three weeks of field investigation.

At the completion of this phase of the research, additional areas in which features, post holes, or activity areas have been located should be more intensively investigated. Additional squares or trenches would be excavated. Features, pits, fire hearths, post holes, and other similar archeological data should be plotted and recorded and subsistence items and artifacts should be recovered and recorded according to provenience. Soil samples should be taken for possible pollen studies and also for flotation to obtain carbonized plant remains. This phase of investigation is anticipated to require up to four additional weeks of field work utilizing one field archeologist and four field assistants. Because of the dense forest cover and the nearness of the archeological deposits to the site surface, the use of heavy machinery as an archeological tool is not advised. Furthermore, all archeological field investigation at this site should be completed before any clearing or construction activity is initiated in this area.



Laboratory processing and analyses will require up to 21 weeks of time using the services of one archeologist and two assistants. Additional specialized processing and analysis of such items as pollen samples, soil samples, floral and faunal samples, and radiocarbon samples might be required. A portion of the proposed budget should provide for these services should they be required. Report preparation would require an additional two weeks involving clerical, photographic, drafting, and editing services. An estimated budget for mitigation of the Huger site should not exceed \$30,000.00.

Possible Sites along the Right-of-Way

It is also recommended that, after the initial clearing of the proposed right-of-way, a team of two field investigators should perform an archeological reconnaissance to locate any of the sites not previously discovered. Since these sites will be expected to be very small, the surface collections and site descriptions, will be sufficient for archeological purposes. No formal excavation will be required and the field investigation should take approximately one week to perform. Estimated budget for this survey would be approximately \$5,000.00.

The above recommendations should adequately mitigate the adverse impact to prehistoric cultural resources which will result from the construction of the proposed right-of-way. The work outlined here will be performed within a theoretical framework consistent with ongoing archeological research in the South Carolina Lower Coastal Plain.

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