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An Archeological Reconnaissance of the Proposed Pacolet River Reservoir: Spartanburg County South Carolina

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An Archeological Reconnaissance of the Proposed Pacolet River Reservoir: Spartanburg County South Carolina

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AN ARCHEOLOGICAL RECONNAISSANCE OF THE PROPOSED
PACOLET RIVER RESERVOIR: SPARTANBURG COUNTY
SOUTH CAROLINA

by

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Prepared by the
INSTITUTE OF ARCHEOLOGY AND ANTHROPOLOGY
UNIVERSITY OF SOUTH CAROLINA
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MANAGEMENT SUMMARY

In accordance with an agreement with Spartanburg Water Works, Spartanburg, South Carolina, the Institute of Archeology and Anthropology undertook a three week archeological reconnaissance of the area around the Pacolet River which is scheduled to be flooded by proposed dam construction. Application for a permit to build an earthen dam across the Pacolet River in Spartanburg County, South Carolina has been made to the United States Army Corps of Engineers by Spartanburg Water Works. The Corps of Engineers has determined that a cultural resource inventory of the project area is necessary for granting a permit. This archeological reconnaissance is a first step towards this cultural resource inventory.

The proposed dam site is located about one half mile upstream from the Clinchfield crossing of the Pacolet River. All of the property to be affected by construction and inundation has been purchased by the Spartanburg Water Works. The main purposes of the dam and reservoir will be to provide a future water supply for the greater Spartanburg area and "to provide a regulating structure for downstream flow during periods of high rainfall" (Gary Beaufait, personnel communication).

During the week of April 17, 1977, Rachel Most and an assistant, Eric Neil, of the Institute of Archeology and Anthropology conducted a five day field reconnaissance of the archeological resources in the impact area. All of the area to be affected is in Spartanburg County, South Carolina, within the Piedmont region of the state. This research was funded by Spartanburg Water Works in compliance with the National Environmental Policy Act of 1969 and Executive Order 11593.

The impact zone includes a 17 kilometer stretch along the Pacolet River including a small portion of the North Pacolet River. Sections along Buck Creek, Little Buck Creek, Casey Creek and Thompson Creek, as well as other small, unnamed tributaries will also be impacted. The field methodology consisted of identifying areas on the project map where sites would most likely be found. The determination of these areas was made on the basis of earlier work conducted in the Piedmont region of the state (House and Ballenger 1976; Goodyear, Ackerly and House n.d.). Once these areas were selected, they were thoroughly searched for surface material indicative of prehistoric or early historic activity. All pertinent data were recorded (locational, environmental, etc.) and this information is now on file at the Institute of Archeology and Anthropology, University of South Carolina.

During the one week field reconnaissance, thirteen prehistoric sites were located. All of these sites are along the stretch of the river between Thompson and Casey Creeks. Preliminary analyses indicate that they are representative of the Middle and Late Archaic and Mississippian Periods. No Woodland or Historic Period material was observed but as the observation sample during this research phase was relatively small,

there is no reason to assume that sites of these time periods do not exist within the impact area.

None of the 13 sites appears to be eligible for nomination to the National Register of Historic Places at this time, but they do contain significant information necessary for an understanding of the prehistory of the Piedmont region. Most of the previous work done in the Piedmont of South Carolina has been restricted to the inter-riverine zone (House and Ballenger 1976; Goodyear, Ackerly and House n.d.) and since the Pacolet River project is situated in a riverine environment, these sites and others that may be located in the area have the potential to be quite significant in understanding the general prehistoric settlement systems of the region.

For this reason, it is recommended that an intensive survey be undertaken in this area. Determinations of potential eligibility for nominations to the National Register of Historic Places can be made at that time. Although we were able to investigate several of the prime areas for site location, many others exist within the impact area. Previous work in the Piedmont conducted by House and Ballenger (1976) and Goodyear, Ackerly and House (n.d.) indicate the excellent possibility for larger, habitation sites in the riverine zone and Brockington (n.d.) has suggested the possibility of buried sites in the floodplain. This should be a major concern in the intensive survey phase of this project. A proposed budget may be found at the end of this report. It should be emphasized that since work on the dam is proceeding rather rapidly, this second phase of research should be considered as soon as possible.

INTRODUCTION

In accordance with an agreement between the Spartanburg Water Works of Spartanburg, South Carolina, and the Institute of Archeology and Anthropology, University of South Carolina, the Institute undertook a preliminary reconnaissance of the archeological resources within the area proposed for flooding by the Pacolet River Reservoir. This reconnaissance was funded by the Spartanburg Water Works in compliance with the National Environmental Policy Act of 1969 and Executive Order 11593. The field reconnaissance was done by Rachel Most and Eric Neil of the Institute of Archeology and Anthropology during the week of April 17, 1977. The project also included two weeks of laboratory analysis, which included an examination of artifactual material and writing of this report for Spartanburg Water Works. Both the analysis and report writing were done by Rachel Most.

The proposed Pacolet River dam is to be located on the Pacolet River north of Spartanburg, South Carolina, about 1.5 miles north of the Interstate 85 crossing of the river (Fig. 1). The general site area is heavily wooded with pines, hardwoods and dense undergrowth. The reservoir will inundate approximately 17 kilometers of river valley along the Pacolet River and parts of Buck Creek, Casey Creek, and Thompson Creek as well as other unnamed tributaries. The southern boundary of the impact zone is about one-half mile upstream from the Clinchfield Railroad crossing of the Pacolet River; the northern boundary is about one and a half miles upstream from where the South Pacolet Reservoir Number 1 and the North Pacolet River converge. All of the property to be flooded has been purchased by Spartanburg Water Works and the relocation of two county roads and two state roads is currently underway. The relocation of a third state road will soon be started. The purposes of this reservoir are to provide a greater water supply for the citizens of of Spartanburg and for flood control.

This initial reconnaissance stage was undertaken with three primary goals in mind: (1) to determine whether any prehistoric or historic archeological sites exist in the area to be impacted, (2) to determine the significance of the sites in the impact area and (3) to assess the worth of undertaking an intensive survey. This area is of particular interest to archeologists in that it lies in a riverine zone of the Piedmont. Extensive data have been accumulated on the inter-riverine zones (House and Ballenger 1976; Goodyear, Ackerly and House n.d.), but much of the Piedmont has been dammed up to the point that in many places riverine data no longer exist. Good riverine data are urgently needed in order to study habitation zones and sites in that environment.

Because of the short time allotted for field work, locating sites was accomplished by predicting ideal places for prehistoric and historic sites based on previous work conducted in the Piedmont of South Carolina by John House, Albert Goodyear and Paul Brockington of the Institute

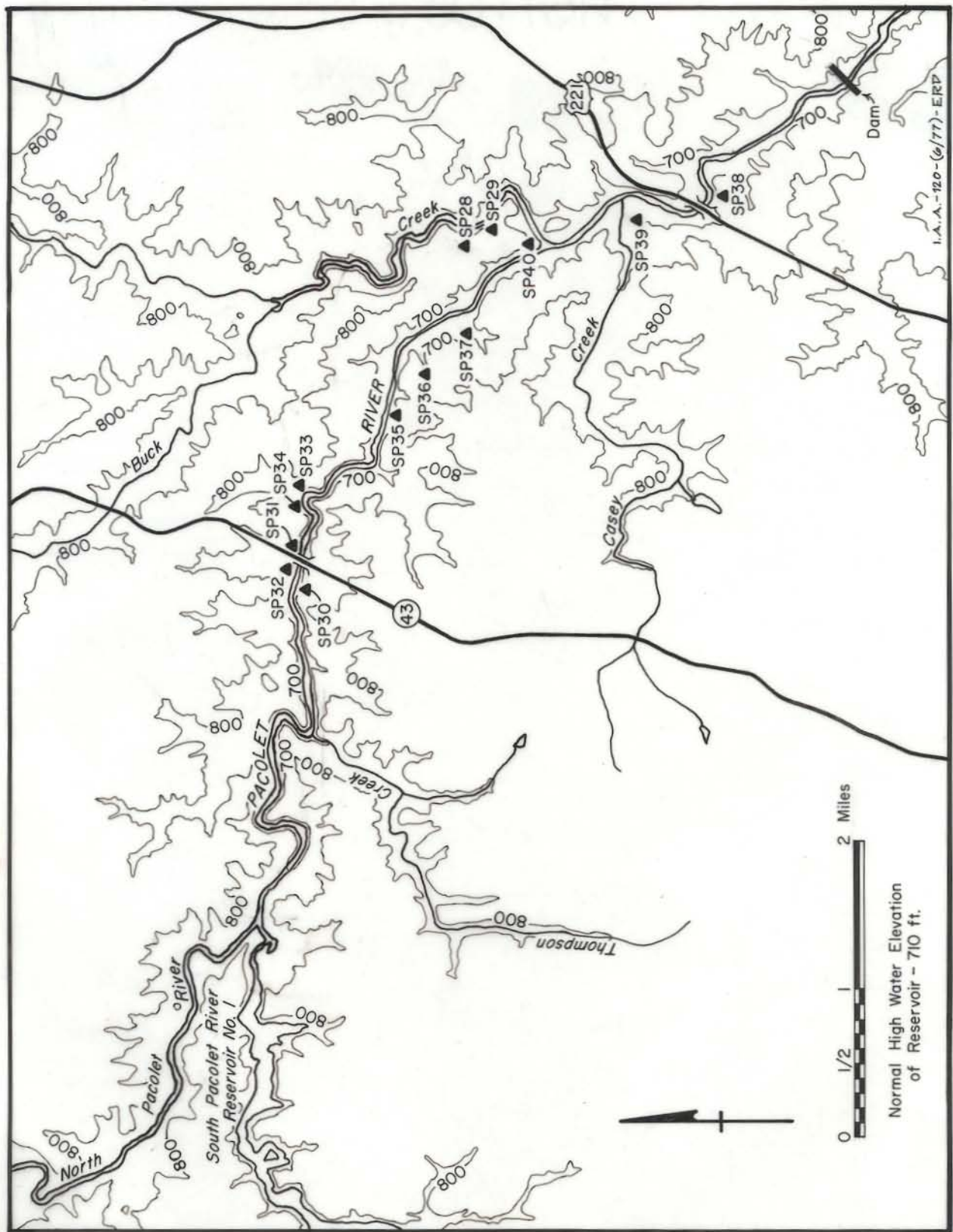


FIGURE 1. Area of the Pacolet Reservoir Survey.

of Archeology and Anthropology. Their work has indicated that sites tend to be on ridgetops sloping south to southeast and in relatively close proximity to a water source. Examination of the maps provided by Spartanburg Water Works showed that many such places exist in the impact zone, and it was therefore decided that these areas were to be carefully examined.

After predicting ideal locations, the chosen areas were walked over in order to locate and collect surface material indicative of either prehistoric or historic occupation. In cultivated or heavily eroded areas of the Piedmont, archeological sites are most often recognized by artifactual material present on the ground surface. In some cases, surface material is also indicative of buried sites which would further aid the archeologist in understanding the archeological record. This method of surface examination proved to be quite successful, as 13 prehistoric sites were located in the area sampled, generally between Thompson and Casey Creeks. The sites range in time from the Middle Archaic to the Mississippian Period, and although no artifacts were found which are indicative of either Woodland or Historic Period occupation, the possibility that they exist is still present.

The criteria by which the significance of archeological sites is determined are currently undergoing examination and revision (House and Schiffer 1975; Klinger and Raab 1976). These thirteen sites, however, do not appear to be eligible for nomination to the National Register of Historic Places. They do contain relevant information which is necessary for an understanding of the prehistory of the Piedmont and are therefore extremely important.

ENVIRONMENT

The proposed dam site lies in the northwest portion of the state within the Piedmont Physiographic Province (Fenneman 1938). This is a term applied to the area that runs generally northeast-southwest extending into Virginia, Georgia, and northern Alabama. At minimum, two separate environmental zones can be identified within the Piedmont: (1) a dissected inter-riverine zone with broad, flat ridgetops and (2) a riverine zone including bluffs, bluff slopes, terraces, and floodplains of major waterways (House and Ballenger 1976). The area in which this reconnaissance took place is the riverine zone of the Piedmont.

According to Braun (1950), the Piedmont of South Carolina lies within the Oak-Hickory forest. Prehistorically, this was an oak-hickory forest but due to continual clearing for timber and intensive agriculture over the past 200 years, this is no longer true (Trimble 1972). Currently, the Piedmont is covered with pine and pasture land and a small amount of oak. Very little of the original oak-hickory vegetation can be seen today. Fauna are varied and include such species as turkey, squirrel, white-tailed deer, bobcat, wolf, skunk, black bear, racoon, opossum and gray fox (Shelford 1963:57).

The area in which this reconnaissance took place currently exists as pasture land or pine plantation. It is heavily eroded (Fig. 2) as is most of the Piedmont, down to red clay subsoil as a result of the intensive agricultural practices operative during the 19th century. All artifactual material was recovered from areas that have been subjected to heavy erosion as visibility is usually better.

Numerous rock types are present in this portion of the Inner Piedmont Belt. The predominant types are mafic gneiss, felsic gneiss, and felsic schist (Law Engineering Testing Company 1976:3). These are interlain with quartzite and pegmatite. Due to severe soil erosion, most of the Piedmont is presently covered with a red clay. At the dam site "the more clayey soils are confined to an upper surface stratum of variable thickness where the soil weathering is more complete. With depth, the clay content decreases until the soils classify texturally as micaceous silty sands and silts with varying amounts of sand and gravel-sized pieces of weathered rock" (Law Engineering Testing Company 1976:3).

In the vicinity of the dam site, study of drainage patterns indicates linear stream segments in the Pacolet River and other streams (Law Engineering Testing Company 1976:3). The two predominant directions for the linear stream segments are northwest and northeast and several northerly trending linear segments are also visible (Law Engineering Testing Company 1976:3). The Pacolet River (Fig. 3) is a Rank 4 waterway (Weide and Weide 1973) in the area with which we are concerned. The Pacolet River's origins are in North Carolina and it eventually drains into the Broad River and is thus part of the Santee watershed. Buck Creek is a Rank 3 stream and Thompson and Casey Creeks, as well as several



FIGURE 2. Heavily Eroded Section of Road
Typical of Much of Survey Area.



FIGURE 3. The Pacolet River

other small, unnamed tributaries are all Rank 1 streams. Adjacent to streams and rivers, the residual soils are covered by alluvial material washed down from higher elevations upstream and adjacent slopes (Law Engineering Testing Company 1976:4). In areas of high stream gradients, the alluvium usually consists of rocks and boulders; however, in areas of lower stream gradients, such as in the area surveyed, the alluvium consists of finer grained sands, silts and clays (Law Engineering Testing Company 1976:4).

In summary, these stream valleys provide excellent areas in which prehistoric activity (habitation, trade, farming, wild plant and animal procurement) would have occurred. Soils in pre-European settlement times were most probably rich and well-drained and thus suitable for Late Woodland and Mississippian Period agriculture. Flora and fauna were also abundant and could provide important supplements to agriculture in these later prehistoric periods, as well as a stable base for the hunting and gathering groups of earlier cultural periods. Deer density was most likely high in this oak-hickory forest, and they were a major part of the subsistence base for early hunting groups (House and Ballenger 1976), as well as for later Woodland and Mississippian Period populations. There is an abundance of quartz for tool manufacturing as well as slate, and the occurrence of tools made from Coastal Plain chert is indicative of trade between the Piedmont and the Coastal Plain. An intensive survey phase of this project area will hopefully provide the data that are necessary in building a model for subsistence and settlement patterns and to aid in an understanding of how man adapted to this Piedmont environment in South Carolina.

PREHISTORY AND HISTORY

The culture history and prehistory of the Southeast is still poorly known. The events which took place in prehistory are just recently becoming more clearly defined as a result of recent work done. Much knowledge has been added to what is known about the Carolina Piedmont as a result of the archeological work done by the Institute of Archeology and Anthropology (House and Ballenger 1976; Goodyear, Ackerly and House n.d.) (Table 1). This report and future work in the area will add pertinent information in order that one may better understand the prehistory and history of the Piedmont.

Paleo-Indian Period

This period lasts from the earliest human occupation of the area until approximately 8500 B.C. and is characterized by fluted points, commonly known as Clovis, and an economy mainly oriented towards the hunting of large mammals, most of which are now extinct. Points from this period can be found all along the Atlantic Coastal area and most of the United States. Because of their wide range it has often been hypothesized that this fluted point was possibly an Old World invention, brought over when the migration into the New World occurred.

No evidence of Paleo-Indian occupation was found during this reconnaissance, and work assembled by Michie (n.d.) has suggested that although fluted points do occur in the Piedmont, they occur less abundantly than in the Coastal Plain. One fluted point is reported to have been found by Kelly (1972:36-37, Fig. 7) at site 38CS26 in southern Chester County.

Early Archaic Period

The Early Archaic encompasses the time between 8000 and 5500 B.C.. It is characterized by three different point types: Dalton-Hardaway, Palmer-Big Sandy and Kirk. These point types also represent three different phases within the Early Archaic Period. The earliest complex, Dalton-Hardaway, consists of large, thin projectile points, hammerstones, endscrapers and various associated chippage. It occurs in the Appalachian Mountains, throughout the Piedmont, down the Tennessee and Ohio Rivers and into Missouri. The next phase, Palmer-Big Sandy, with its diagnostic trait being the Palmer point, is found throughout the East and along the Atlantic Coast into New England. The Palmer point is characteristically a small, corner notched point with extensive grinding along the base. Other artifacts in the tool kit consist of endscrapers, grinding tools and the chippage associated with the manufacturing of these tools. The last phase in the Early Archaic is the Kirk Phase, with the Kirk point

TABLE 1: CHRONOLOGICAL SEQUENCE FOR GEORGIA AND CAROLINA PIEDMONT*

<u>DATE</u>	<u>PHASE</u>	<u>PERIOD</u>	<u>DIAGNOSTIC ARTIFACTUAL TRAITS</u>
1600 +		Historic	Colono-Indian and Ocmulgee pottery
1000 - 1600	Savannah I Savannah II	Mississippian	Lamar, Chicora, Etowah and Savannah Stamped Pottery
0 - 1000	Woodland	Woodland	Swift Creek, Napier, and Conestee pottery; Yadkin, Badin and Uwharrie points
A.D. B.C.			
1000 - 0	Deptford	Woodland	Deptford pottery and Savannah River points
1500 - 1000	Thom's Creek (Coastal Plain)	Late Archaic	Thom's Creek pottery
2500 - 1500	Stalling's Island	Late Archaic	Stalling's Island ceramics, fiber-tempered pottery, steatite artifacts
3000 - 2500	Savannah River	Late Archaic	Savannah River and Gary points, steatite
3500 - 3000	Guilford	Middle Archaic	Guilford points
4500 - 3500	Morrow Mountain	Middle Archaic	Morrow Mountain points
5500 - 4500	Stanly	Middle Archaic	Stanly points
7000 - 5500	Kirk	Early Archaic	Kirk points
8500 - 7000	Palmer - Big Sandy Dalton - Hardaway	Early Archaic Early Archaic	Palmer points Dalton points
12,000 - 8500		Paleo-Indian	Fluted points

*(Based on House and Ballenger 1976; Coe 1964; Wauchope 1966; Keel 1972; Sears 1964; Phelps 1964; Bullen and Green 1970; South 1973.)

being the diagnostic artifact for this period. It is a larger point than the Palmer point with a broader stem and is also corner-notched. The tools in this phase are similar to the ones in the two above mentioned phases including hammerstones, scrapers, bifaces and chippage resulting from the manufacturing of these tools. Kirk Phase artifacts extend over a great part of the Southeast; they are known best in the Carolina Piedmont from work done by Coe (1964:122).

Middle Archaic

Beginning at 5500 B.C. and lasting until approximately 3000 B.C., the Middle Archaic encompasses four phases: Stanly, Morrow Mountain, Guilford and Halifax. The Stanley point represents a continued change in point form. Also present in Stanley phase sites are what may be the first polished or ground stones as well as axes and atlatl weights. The Morrow Mountain phase began around 4500 B.C. and is characterized by Morrow Mountain I and Morrow Mountain II projectile point styles. These were small points with short tapering stems and were made primarily from quartz. They are found in the Southeast Appalachians, the Georgia and Carolina Piedmont and north to New England. Caldwell's "Old Quartz Industry" also includes the Morrow Mountain types (Wauchope 1966:6). The next phase, Guilford, is recognized by long thick lanceolate points, scrapers, grinding implements, axes and the remains of fire hearths. Guilford is best known from the Gaston site on the Roanoke River and the Doerschuk Site on the Yadkin River; both sites are in North Carolina (Coe 1964:123). Preliminary analysis of the artifactual material recovered during this reconnaissance indicates that three of the sites are representative of the Guilford phase (38SP35, 38SP36 and 39SP40). The collections from two of these sites (38SP36 and 38SP40) are currently maintained by the Institute of Archeology and Anthropology and the third collection (38SP35) belongs to Mr. August Cook of Spartanburg County, South Carolina. The Halifax Phase is best represented at the Gaston Site on the Roanoke River in North Carolina and has been dated to 3484 B.C. (Coe 1964:123). This phase is characterized by a small elliptical side-notched point and has not been thought to extend any further south in the Piedmont than the Roanoke Basin (Coe 1964:123).

Late Archaic

Phases represented in the Late Archaic Period include Savannah River, Stalling's Island and Thom's Creek-Awendaw. At approximately 3000 B.C. the Savannah River phase began. Fiber tempered pottery from this time period is known to be the earliest pottery in the Southeast, occurring initially around 2800 B.C. The Savannah River phase is characterized by the Savannah River point, a broad bladed, broad stemmed knife or spear point that is slightly larger than its predecessors. Also found

in this complex are polished stones, atlatl weights, full grooved axes, and steatite vessels (Coe 1964:123). The Savannah River phase is represented in the Carolina Piedmont and is known from such sites as Bilbo, Irene, and Stalling's Island in Georgia. During this reconnaissance, two sites were found that contained artifactual material indicative of a Savannah River phase occupation. The first, 38SP35, yielded one quartz Savannah River point, as well as several Guilford points. The second sites, 38SP37, was represented by one slate Savannah River point (Fig. 4e); although no other artifactual material was recovered at 38SP37, the possibility that other artifacts exist has not been eliminated due to the restricted surface area which could be investigated at this site and the lack of subsurface testing.

Cultural remains from about 2500 B.C. until 1000 B.C. have been defined as the Thom's Creek-Awendaw phase. The major diagnostic attribute of this phase is Thom's Creek ware, and it is known from Stalling's Island, Georgia, and Marksville, Alabama with numerous sites scattered throughout the Piedmont and Coastal Plain of South Carolina. This phase (and ware group) is named after the Thom's Creek site in the Congaree River Valley south of Columbia, South Carolina, where it was first discovered.

Large worked masses and bowl fragments of steatite generally indicate quarry sites of the Archaic Period. Evidence for this is seen in the abundance of steatite (or soapstone) found by Coe (1964) at the Gaston site in North Carolina known to predate 2000 B.C. The possibility of natural outcrops of steatite and aboriginal steatite quarries exists for the impact area in that eight steatite masses have been found in an ENE-WSW line extending for 3 3/4 miles across the borders of Spartanburg and Cherokee Counties, South Carolina (Lowman and Wheatly 1970). This line is southeast of the impact area and runs perpendicular to and across the lower Pacolet River.

Woodland

The Woodland Period is defined as beginning about 1000 B.C. and lasting until approximately A.D. 700 and is characterized by the first widespread manufacture of ceramics, by burial mound construction, and by evidence of horticulture (Stoltman 1974). Coe (1964:306-308) divides the Woodland Period in the North Carolina Piedmont into three phases: Badin, Yadkin, and Uwharrie. Numerous types of grit and sand tempered pottery, decorated by cord, fabric, or net impressions, or by check stamping, appear to be valid indicators of Woodland occupation in the Carolina Piedmont (House and Ballenger 1976:24). Other artifacts in the Woodland assemblage include celts, stone pipes, the bow and arrow, and the atlatl. Small triangular points, described as Badin and Yadkin by Coe (1964:45-49), appear to be representative of the earlier part of the Woodland Period, while small, narrow triangular points seem to predominate in the latter Uwharrie phase (Coe 1952:308).

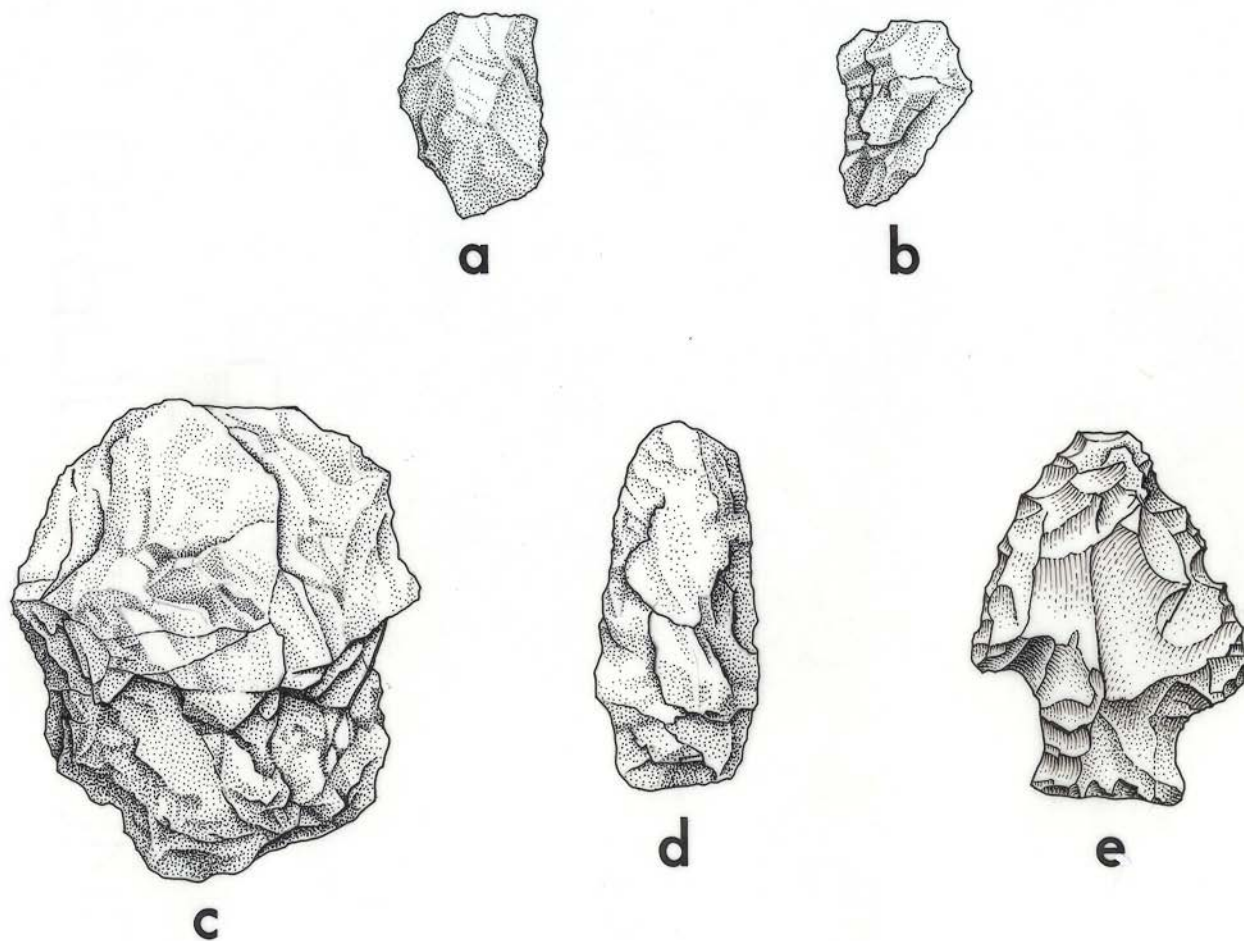


FIGURE 4. a and b - quartz flakes of bifacial retouch
c - quartz biface
d - quartz Guilford point
e - slate Savannah River point

Neither Woodland ceramics nor Woodland points were recovered in the reconnaissance. There is a strong possibility that Woodland sites do exist in this region but the limited nature of the field work did not allow for an examination of the total area to be impacted. Woodland components are numerous on the Congaree floodplain at the Fall Line (Anderson, Michie, and Trinkley 1974; Goodyear 1975), and Kelly (1972: 65-71) located a small number of triangular points during his Piedmont survey in Chester and Fairfield counties.

Mississippian

The Mississippian Period lasted from about A.D. 700 until A.D. 1600. The term Mississippian refers to those communities in the eastern half of the United States during the late prehistoric and early historic times that had a primary dependence on agriculture for their basic storable food supply (Griffin 1967). These societies are thought to have had a more complex life style, a higher population density, and larger, more permanent settlements than earlier societies in the East.

Town Creek on the Pee Dee River in North Carolina is the only intensively studied Mississippian site in the Carolina Piedmont (Reid 1967). Recent radiocarbon samples from Town Creek yielded thirteenth and fourteenth century dates (Reid 1967:59).

The Mississippian culture is extremely rich in artifactual materials and represents the development of highly complex customs and traits. Artifacts include clay pipes, globular pots, jars, bowls (some having complex artwork and designs), the use of copper, and conch shells. At many of the larger sites there are often one or more temple mounds. Projectile points remain small and triangular throughout the Mississippian period.

Although this reconnaissance located no Mississippian Period artifacts, I did examine the collection of Mr. August Cook who had found two Mississippian Period pottery sherds along the Pacolet River on his property (now owned by Spartanburg Water Works). An intensive search of that area was made but no additional material was located. At this stage it is uncertain if these two sherds were washed down from a site farther upstream, or if they were washed down from the ridgetop overlooking the Pacolet River where they were found. During the intensive survey phase it is recommended that this area (38SP35) receive closer attention.

Historic Period

The Historic Period in the Southeast began around A.D. 1600. During the Early Historic Period diagnostic traits for Indian sites include multiple temple mounds, small points, celts, an increased use of bone for tool making, and carinated bowls. The finding of these bone tools may

be partially attributed to better preservation of this material during Historic times. Point types include Pee Dee, Caraway, and Gaston (Coe 1964). Typical of this material is that from the Fort Walton and Pensacola sites in Florida. Excavations of Cherokee sites have recently been undertaken in South Carolina, Tennessee, and North Carolina. Reports by Keel (1976) and Dickens (1976) have recently described these groups.

During this reconnaissance phase no historic materials, Indian or European, were recovered, but once again the limited field work may be partially responsible for this. Stanley South (personal communication) has suggested the possibility of the existence in the impact area of eighteenth century iron works and associated charcoal kilns which are documented historically and archeologically (Combes 1974) for this portion of the state. South has pointed out that three main factors in determining the location of iron works are (1) the presence of iron ore, (2) hardwood forests for the production of charcoal, and (3) a body of flowing water. The iron works of this area are comparatively early and date to pre-Revolutionary War times. In addition to this, South has also mentioned the chance of finding early historic house sites and whiskey stills of European settlers in the vicinity.

There are reports of old grist mills located on the South Pacolet River (Dobbins 1971). Although the foundations are still intact, the associated dam has washed away. There are still parts of machinery present such as gears of cast iron with wooden teeth as well as some axles or shafts (Dobbins 1971).

Beginning in the late nineteenth century, the South Carolina Piedmont saw a marked change in economic patterns with large scale commercial farming replacing subsistence farming as a source of income for many people (Trimble 1972). It was this change in farming patterns that was responsible for the severe erosion which occurs throughout the entire Piedmont region of the State.

Summary

In the preceeding pages an attempt has been made to present a brief overview and summary of the cultural prehistory and history of the Piedmont region of South Carolina. It does not by any means provide all the information that has been collected over the years, but rather attempts to outline briefly what is known by drawing on various relevant sources.

METHODOLOGY

Prior to the beginning of fieldwork, a records check was made of the site files at the Institute of Archeology and Anthropology, University of South Carolina, in order to determine if there were any sites which were already recorded in the study area. The records showed that although there were some Historic Period sites southeast and northwest of the impact area, no sites have been recorded in the proposed reservoir area. Donald Sutherland of the South Carolina Department of Archives and History, Columbia, South Carolina, confirmed in letters to the South Carolina Water Resources Commission (1 November 1976 and 10 March 1977) that there were no prehistoric or historic sites on, or eligible for inclusion on, the National Register of Historic Places currently on record for the area to be impacted. He also mentioned that the area had never been closely examined for archeological resources.

Fieldwork consisted of a preliminary check of the maps provided by Spartanburg Water Works in order to determine prime locations for prehistoric and historic sites. During this field reconnaissance many of these likely areas were investigated. The investigation involved a close examination of the ground surface in order to locate any evidence of either prehistoric or historic sites. This method proved to be quite rewarding as thirteen prehistoric sites were found and recorded within the impact area. Visibility was often poor due to dense vegetation and therefore collections were restricted to areas that have been subjected to heavy erosion as the visibility is better.

The presence of archeological sites was based on the occurrence of surface material such as stone debitage or tools. Upon the discovery of an archeological site, the exact location and other pertinent information (environment, topography, vegetation, soil type) were recorded and a collection was made. Collection methodology involved a careful search of the immediate area. All surface material that was believed to be part of the site was collected and brought back to the laboratory for analysis. Upon return to the laboratory, the material from these sites was separated according to artifact type (thinning flake, biface, uniface, etc.). In the following section an indepth description of each of the thirteen sites is provided.

ARCHEOLOGICAL SITE DESCRIPTIONS

38SP28. This site consists of a scatter of prehistoric lithic material found in an area about 15 feet by 10 feet. This artifactual material consists of quartz flakes, bifaces and chunks. The lack of diagnostic material prevents the placement of this site in a known prehistoric cultural time period. The site is located on a hillslope and is 175 feet west of Buck Creek. It is at an elevation of 705 feet and slopes to the southeast. Vegetation consists of pine plantation and pasture land and the soil type is red clay. The area is currently being used as pasture land and has been badly damaged by logging activity and erosion. There are no specific recommendations for this site, however, during the intensive survey phase of the project, the site should be revisited and checked for further surface remains. It is too badly eroded to warrant subsurface testing of any type.

38SP29. Investigation of this area revealed a scatter of prehistoric lithic material covering an area of about 15 feet by 10 feet. The artifactual material collected consists of quartz flakes and chunks. As no diagnostic cultural material was found, the date of the site is presently unknown. The site is located on a hillslope and is 200 feet west of Buck Creek. It is situated at an elevation of 705 feet and slopes to the southeast. Vegetation is primarily pasture grasses with some pine near the creek. The soil is all red clay. The area is currently being used as pasture and has been severely damaged by erosion. During the survey phase of this project, the site should be revisited and checked for more surface remains. Erosion in the area is too severe to warrant subsurface testing.

38SP30. 38SP30 is characterized by a scatter of prehistoric lithic material. This material found in a 25 square foot area consists of fire cracked rock, quartz and Coastal Plain chert flakes, quartz chunks, one quartz biface and one quartz core. The absence of any temporally diagnostic prehistoric material prevents the assignment of this site to a cultural time period. The site is located on a ridgetop and is 100 feet south of the Pacolet River. It is at an elevation of 720 feet and is sloping north. Vegetation consists of pine and mixed hardwoods although the material was located in an area exposed by heavy erosion. The soil type is red clay. The area in which the site was found is currently being used as a garbage dump and logging road. It has been disturbed by erosion and logging but the surrounding areas appear not to have been severely damaged. During the survey phase it is recommended that this site be revisited and tested with the use of a post hole digger or a small test pit.

38SP31. This site is characterized by a scatter of prehistoric lithic material which was found in an area measuring approximately 300 feet by 120 feet. This material consists of quartz flakes, chunks and one quartz biface. As no diagnostic material was found associated with these artifacts, the date of the site is unknown. The site is located

on a ridgetop, 170 feet north of the Pacolet River. It is sloping south and situated at an elevation of 700 feet. Vegetation consists of pines and the predominant soil type is red clay. The site has been damaged badly by clear cutting and erosion, therefore, no subsurface testing is recommended. Further erosion may expose more artifactual material and the site should be revisited during the survey phase of the project to collect recently exposed surface material.

38SP32. Investigation of this area revealed a scatter of prehistoric lithic material covering about 80 feet by 60 feet. The artifactual material collected consists of quartz flakes, chunks and two biface fragments. The lack of any diagnostic cultural material prevents the placement of this site in a cultural time period. The site is located on a ridgetop and is 175 feet north of the Pacolet River. It is south sloping and is located at an elevation of 720 feet. Vegetation consists of pine plantation and the soil is exposed red clay. During a survey phase of this project, the site should be revisited and checked for further surface remains. Erosion appears to have damaged the site severely and subsurface testing is not recommended.

38SP33. 38SP33 is a scatter of prehistoric lithic material. This material consists of quartz flakes, chunks and one biface and was found over an area of about 75 feet by 75 feet. The absence of any prehistoric cultural material prevents the assignment of this site to a cultural time period. The site is located on a south sloping hilltop and is 50 feet north of the Pacolet River. It is at an elevation of 701 feet. Vegetation consists of primarily pine plantation and the soil type is red clay. The site has been affected by erosion but should be revisited so that another surface collection can be made.

38SP34. This site is characterized by a scatter of prehistoric lithic material which was found over an area of approximately 60 feet by 75 feet. This artifactual material consists of four quartz flakes. The lack of any diagnostic material prevents the placement of this site in a known prehistoric cultural time period. The site is located on a ridgetop and is 75 feet north of the Pacolet River. It is situated at an elevation of 706 feet and slopes south. Vegetation is primarily pine plantation and the soil is red clay. The area has been badly damaged by erosion. During the survey phase of this project the site should be revisited and checked for further surface remains. If any diagnostic material were to be located, it would be possible to date the site. The site is too badly eroded to warrant subsurface testing of any type.

38SP35. The artifactual material from this site belongs to Mr. August Cook who was kind enough to let us study it. He had located three bifaces, seven points and two prehistoric pottery sherds on his property along the Pacolet River. These points were Guilfords and one Savannah River point; the two sherds were of the Mississippian Period. This would be representative of a Middle and Late Archaic Period occupation, as well as a Mississippian occupation. The exact site size is not known as the artifacts were found scattered around his property. The

site is on a ridgetop although he informed us that the two pottery sherds were found washing out of the Pacolet River. The material was found 10 to 50 feet south of the river and at an elevation of 690 feet. Vegetation consists of mature pine with some oak. During the survey phase this area should be intensively searched and subsurface testing should be implemented.

38SP36. Investigation of this site revealed a scatter of prehistoric lithic material covering an area of about 100 feet by 30 feet. The artifactual material collected consisted of quartz flakes, bifaces and one quartz Guilford point. This is indicative of an Archaic occupation. The site is located on a ridgetop and is 100 feet south of the Pacolet River. It is situated at an elevation of 720 feet and is sloping southeast. Vegetation is primarily pine plantation and the soil is red clay. The material was found in a dirt road indicating that the site has been badly damaged. Erosion has also contributed to the deterioration of the site. During the survey phase of this project, the site should be revisited and recollected, however, surface testing is not recommended as the site has been so severely damaged.

38SP37. This site is an isolated find consisting of one slate Savannah River Point. The area was searched for associated material but no other artifacts were recovered. The Savannah River point is indicative of a Late Archaic occupation. The site is located on a ridgetop and is 800 feet southwest of the Pacolet River. It is at an elevation of 700 feet and is sloping northeast. Vegetation is pine plantation and pasture land which makes ground surface visibility poor. The soil is all red clay. Four post holes were excavated along the floodplain but no other artifactual material was recovered. During the survey phase of this project, the site area should be subjected to subsurface testing either with a post hole digger or small test pits and should be searched for surface material again.

38SP38. 38SP38 is characterized by a scatter of prehistoric lithic material which was found over an area of about 45 feet by 75 feet. This material consists of quartz flakes, chunks and one quartz biface. The absence of any diagnostic cultural material prevents the assignment of this site to a cultural time period. The site is located on a ridgetop and is 300 feet south of the Pacolet River. It is at an elevation of 720 feet and is sloping north. Vegetation consists of pine plantation with the soil type being red clay. The site has been badly damaged by erosion and subsurface testing would not be feasible. Continued erosion may expose more artifactual material and the site should be revisited during the survey phase of the project.

38SP39. Investigation of this area revealed a scatter of prehistoric lithic material covering an area of about 150 feet by 90 feet. The artifactual material which was recovered consists of quartz flakes, chunks, one biface, one scraper and one core. As no diagnostic material was found, the date of the site is presently unknown. The site is located on a hilltop and is 300 feet west of the Pacolet River.

It is situated at an elevation of 700 feet and is sloping southeast. The vegetation in the site area consists of pine plantation and pasture land. The soil type is red clay. Although part of the site has been damaged by erosion, there are areas where subsurface testing, either with a post hole digger or small test pit, may be worthwhile. The site should definitely be revisited during the survey phase of this project and subjected to a closer examination.

38SP40. This site is characterized by a scatter of prehistoric lithic material which was found over an area measuring about 300 feet by 300 feet. The artifactual material recovered at the site consists of quartz flakes, chunks, preforms, bifaces, and two Guilford points. This cultural material is representative of the Middle Archaic period as evidenced by the presence of Guilford points. The site is on a ridgetop and is 175 feet north of Buck Creek. It is south facing and at an elevation of 701 feet. Vegetation consists of pine, pasture land and some hardwoods with the soil being all red clay. Some of the material has washed off the ridgetop and is in the floodplain area along Buck Creek. This site should definitely receive a closer examination during the survey phase of the project. Subsurface testing should be implemented in the form of test pits or with the use of a post hole digger. Part of the site has been damaged by erosion and material was found exposed in these areas. Some artifactual material was located in the floodplain and this area should be tested.

RESULTS, SIGNIFICANCE AND RECOMMENDATIONS

During this five day field reconnaissance, thirteen sites were located along the Pacolet River in the area to be impacted by reservoir construction. The majority of these sites were located on ridgetops, although due to the severe erosion that has occurred, much of the material was found washing down along the ridge slopes. All but one of the sites may be characterized as prehistoric quartz scatters typical of many South Carolina Piedmont sites. The remaining site consisted of an isolated Savannah River point (Table 2).

At present, the majority of sites cannot be assigned to a specific temporal period. This is because most of the material found at the sites consists of non-diagnostic artifacts such as quartz cores, bifacially worked tools, unifaces (Fig. 4c), and flakes resulting from the manufacturing and maintenance of these tools (Fig. 4a and 4b). However, several of the sites did contain diagnostic artifacts, and these sites may be individually assigned to cultural time periods. Three of the sites (38SP35, 38SP36 and 38SP40) represent the Middle Archaic Period as determined by the presence of Guilford points. Two sites (38SP35 and 38SP37) are representative of a Late Archaic occupation as evidenced by the occurrence of Savannah River points. Two Mississippian sherds were observed in the private collection of Mr. August Cook, and a site number, 38SP35, was assigned to the area where they were found. Due to the limited time spent in the field, no subsurface testing was done here. During the intensive survey phase of the project, this area, which is now the property of Spartanburg Water Works, should be subjected to more rigorous examination, including subsurface testing.

As only five days were allotted for field work, only a very small portion of the impact area was covered during the reconnaissance stage of investigation. The location of thirteen sites during this limited search suggests an overall, high site density within the impacted area. A more complete and systematic investigation during the survey phase should yield a more accurate picture of the magnitude of pre-historic exploitation in the study area.

In summary, none of the thirteen sites located during this reconnaissance appears eligible for nomination to the National Register of Historic Places primarily because individually they possess limited potential for adding to the historical heritage of the state of South Carolina. Taken together, however, they do possess great scientific value as they do have potential for yielding information about the pre-history of the riverine zone in the South Carolina Piedmont. The reconnaissance did yield evidence of prehistoric use of the area over several thousand years. The number of sites located in the small sample of the project area observed indicates a high probability that many other sites exist in the area of the proposed reservoir not yet observed. The design of the reconnaissance study was adequate to determine whether or not archeological sites are present in the impact

TABLE 2: ARTIFACTUAL MATERIAL RECOVERED

SITE NUMBER	FIRE CRACKED ROCK	THINNING FLAKES	OTHER FLAKES	CHUNKS	BIFACES	PREFORMS	PPK'S	UNIFACES	SCRAPERS	CORES	PREHISTORIC CERAMICS	OTHER PREHISTORIC	HISTORIC CERAMICS	OTHER HISTORIC
38 SP 28	0	1	0	2	1	0	0	0	0	0	0	0	0	0
38 SP 29	0	2	2	2	1	0	0	0	0	0	0	0	0	0
38 SP 30	2	20a	6	15	1	0	0	0	0	1	0	0	0	0
38 SP 31	0	4	2	5	1	0	0	0	0	0	0	0	0	0
38 SP 32	0	20	13	12	2	0	0	0	0	0	0	0	0	0
38 SP 33	0	13	2	5	1	0	0	0	0	0	0	0	0	0
38 SP 34	0	4	0	0	0	0	0	0	0	0	0	0	0	0
38 SP 35	0	0	0	0	3	0	7b	0	1	0	2	0	0	0
38 SP 36	0	12	1	0	1	0	0	0	0	0	0	0	0	0
38 SP 37	0	0	0	0	0	0	1c	0	0	0	0	0	0	0
38 SP 38	0	11	2	10	1	0	0	0	0	0	0	0	0	0
38 SP 39	0	6	3	4	1	0	0	0	1	1	0	0	0	0
38 SP 40	0	15	10	1	4	2	2d	0	0	0	0	0	0	0

a. 2 chert flakes recovered

b. 6 Guilford points
1 Savannah River point

c. Slate Savannah River point

d. 1 Guilford, 1 unknown point
tip

area; however, useful information concerning their distribution, micro-environments, and the relative proportions of site types could not be obtained under the limited temporal and personnel constraints of the present project. This distributional information is perhaps the most important data which could be developed from a study of the reservoir area.

It has been suggested by House and Ballenger (1976) that sites located in the inter-riverine zone of the Piedmont are predominantly limited activity sites indicative of deer hunting or lithic quarrying. Habitation sites, on the other hand, are expected to occur in the riverine zones of the Piedmont due to the high diversity of resources these environments offer. An intensive archeological survey in this impact area would be extremely valuable in providing the greatly needed riverine data necessary to understand the settlement subsistence pattern of the Piedmont. There is an excellent possibility that habitation sites are located along the Pacolet River floodplain and these sites would provide data that are necessary to evaluate House and Ballenger's models.

From the standpoint of archeology and anthropology these sites do have major analytical worth for several reasons. They exist in the riverine zone of the Piedmont, an area which has been for the most part unexplored. Many of the riverine areas have already been destroyed by the construction of dams without receiving the proper archeological attention. Because of this, riverine sites are a disappearing non-renewable resource. All but one of the sites (38SP37) were quartz scatters with varying amounts of artifactual material. Previous research done in the Piedmont has revealed that sites such as these occur quite frequently (House and Ballenger 1976; Goodyear, Ackerly and House n.d.) but presently we are unable to adequately determine their significance in terms of prehistoric human behavior. It is important that we obtain as much data as possible from different regions of the Piedmont in order to build a suitable model for settlement and subsistence patterns operative during prehistoric times.

As all thirteen of these sites are small lithic scatters (primarily quartz), it seems that they are representative of limited activities (quarrying, hunting sites). Sites such as these present many problems for the archeologist. First, with very few exceptions, the majority of archeological sites in the Piedmont have been disturbed by plowing and heavy erosion. As a result, vertical stratigraphic relationships once present no longer exist. Second, in many cases it is difficult for the archeologist to place these sites in a cultural time period if they occur with no diagnostic artifacts. What is needed is the location and excavation of sites which will provide stratigraphic data in order that these sites may be placed in the proper time sequence. Currently, we are forced to draw on information from buried sites in Georgia and North Carolina (cf. Coe 1964 and Stoltzman 1974). This is acceptable to a certain extent, but there are certainly some differences in settlement and subsistence strategies which can only be understood through the investigation of sites in South Carolina.

Due to the lack of riverine data from the Piedmont, it is necessary that an intensive survey of the impact area be undertaken in order that sites existing here are not destroyed without investigation. There are several problems to be investigated should an intensive survey be funded. First, all of the sites that were discovered during the field reconnaissance were located on ridgetops or hilltops. Previous work has shown that Woodland and Mississippian Period sites are often located in the floodplain and terrace environments. The reconnaissance did not allow sufficient time to investigate the floodplain area as it was in most cases covered with dense vegetation and recent sterile alluvium. During an intensive survey, the floodplain should be subjected to a close examination. In several areas the floodplain is accessible and a pattern of post holes could be laid out across such areas to locate and define the extent of sites. Second, an attempt should be made to determine if any Woodland Period sites exist within the impact area since at present none have been located. The I-77 survey (House and Ballenger 1976) noted the relative dearth of Woodland sites in the inter-riverine zone and it is possible that the South Carolina Piedmont, in general, was witness to a reduction in population after the Late Archaic Period. A third objective of the intensive survey should be to obtain a more controlled collection of artifacts from sites discovered during the reconnaissance. This should be undertaken so as to recover materials which would better explain site function. At sites with some depth (that is those not existing completely on the surface), limited subsurface testing, with screening for specimen recovery, should be undertaken.

One of the major problems to be dealt with concerns the settlement subsistence pattern operative during prehistoric times in the Piedmont. This would include such problems as looking at settlement density in order to determine if it varies by time period. If this were to be the case, then the causes for this variation would need to be explored. Another problem to be examined concerns site location and function.

Currently, this project is in the reconnaissance stage. This has been defined in the following manner:

This study requires an on-the-ground investigation of the surface cultural manifestations found in a portion of the project area. Such surveys are generally based on sampling designs and are primarily used as a predictive device for estimating archeological potential. These supply information relating to numbers and types of sites and other data in representative locations related to the project area. Study results are most appropriate to the preliminary planning stage, or, if not accomplished earlier, to the alternate design stage of sponsor planning (McGimsey and Davis 1977:47).

Due to the data that were recovered during this phase it is strongly recommended that an intensive survey phase be undertaken. This stage is defined as follows:

Essentially a comprehensive field survey of the project area, this type of study is initiated when total ground coverage is necessary, normally because specific alternative designs are being considered, or, if not accomplished earlier, when final designs have been set. Intensive surveys document in detail a project's impact on the cultural resource base, and collect the data to evaluate this base in light of the archeological context and accepted mitigation alternatives. Reports generated from such studies relate to the sponsor's design stage. When the results of these studies are developed, mitigation recommendations and budgets must be included (McGimsey and Davis 1977:48).

In order to obtain the needed information and to cover as much of the area as possible, the most appropriate method would be to lay out a pattern of transects on each side of the river ranging from 100 meters to 400 meters in length. The proposed sampling method would involve the use of a stratified random sample of the two types of physiographic areas in the impact zone. By stratified sampling it is meant that the population is broken up into strata, and from each of these strata a number of units are selected in a random fashion (Read 1975:58). The population strata in this case would be the floodplain and the ridgetops (including ridge slopes as much of the material is washing down off the ridgetops due to erosion). A random sample from each zone would be obtained. Each transect would be walked over and searched for surface remains and post holing would be done when appropriate. All the dirt would be screened using a 1/4 inch mesh in order to retrieve as much artifactual material as possible. To supplement this sampling design, there would be a continued inspection of predicted site location. This would involve a close examination of stream confluences, ridgetops which overlook streams, terrace edges, terrace remnants and other areas that are believed to be likely locations for sites. Certain sites would be subjected to subsurface testing in order to determine if they were stratified and to estimate site content more reliably.

Destruction of archeological sites is occurring at an increasing rate with the rapid development of South Carolina and the nation. Prime areas for the recovery of archeological information, such as major river valleys, are also prime areas for modern development and destruction of the archeological remains (e.g. Clark Hill, Lake Hartwell, etc.). Much of the Piedmont riverine area has already been developed and the archeological resources destroyed. Further such developments should be accompanied with scientific study to avoid a possible future situation in which the data base will be totally destroyed.

For these reasons, it is highly recommended that an intensive survey for archeological materials be undertaken. Such a survey would generate data sufficient to evaluate existing models of subsistence and settlement of the various cultural periods represented in the Pacolet Reservoir.

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SUGGESTED BUDGET FOR INTENSIVE SURVEY

I. SALARIES

A.	Off-Campus	
1.	Archeologist, 1 week @ \$6.49/hr.	\$ 260
2.	2 Assistant Archeologists, 4 weeks @ \$3.73/hr.	<u>\$1,194</u>
	Off-Campus Subtotal	\$1,454
B.	On-Campus	
1.	Archeologist, 1 week @\$6.49/hr.	\$ 260
2.	2 Assistant Archeologists, 8 weeks @\$3.73/hr.	\$2,388
3.	Secretary typist, 1 week @\$4.40/hr.	\$ 176
4.	Photographer, 1 week @\$5.45/hr.	\$ 218
5.	Draftsman-illustrator, 1 week @\$4.36/hr.	<u>\$ 174</u>
	On Campus Subtotal	\$3,216
	SALARIES SUBTOTAL	\$4,670

II. FRINGE BENEFITS

A.	OASI (@13.55% of salaries)	\$ 633
B.	Hospitalization Insurance (@\$26.08 per man/month)	<u>\$ 183</u>
	FRINGE BENEFITS SUBTOTAL	\$ 816

III. TRAVEL AND PER DIEM

A.	Travel to, from and within site area; 1000 miles @\$.14 per mile	\$ 140
B.	Per diem for permanent employees off-campus; 45 man-days @\$20	<u>\$ 900</u>
	TRAVEL AND PER DIEM SUBTOTAL	\$1,040

IV. OPERATING COSTS

A.	Expendable supplies	\$ 200
B.	Printing and reproduction costs	<u>\$ 300</u>
	OPERATING COSTS SUBTOTAL	\$ 500

V. INDIRECT COSTS

A.	Indirect costs off campus, D.H.E.W. rate of 25% of Salaries	\$ 364
B.	Indirect costs on campus, D.H.E.W. rate of 53% of Salaries	<u>\$1,672</u>
	INDIRECT COSTS SUBTOTAL	<u>\$2,036</u>

TOTAL SUGGESTED BUDGET \$9,062