Archeological Investigations at the Slipoff Branch Site, A Morrow Mountain Culture Campsite in Swain County, North Carolina

Archeological Reconnaissance and Test Excavation at the Marion Treatment Plant Site, McDowell County, North Carolina

Burton L. Purrington
1981
North Carolina Archeological Council Publication 15

Published jointly by the North Carolina Archeological Council and the Archeology Branch, Division of Archives and History, North Carolina Department of Cultural Resources

Archeological Investigations at the Slipoff Branch Site, A Morrow Mountain Culture Campsite in Swain County, North Carolina

and

Archeological Reconnaissance and Test Excavation at the Marion Treatment Plant Site, McDowell County, North Carolina

Burton L. Purrington

North Carolina Archeological Council
Publication No. 15

Published Jointly by the
North Carolina Archeological Council
and the Archeology Branch
Division of Archives and History
North Carolina Department of Cultural Resources

Raleigh, 1981

The research studies presented in this publication have been typed and edited under the supervision of the author. The Archeology Branch is responsible for printing, collation, binding, cover preparation, and distribution.

ARCHEOLOGICAL INVESTIGATIONS AT THE SLIPOFF BRANCH SITE, A MORROW MOUNTAIN CULTURE CAMPSITE IN SWAIN COUNTY, NORTH CAROLINA

Archeological excavation in the N-645 tract,
Nantahala National Forest

by

Burton L. Purrington
Appalachian State University
Boone, NC 28608

December 18, 1978

Project No. 602-366-177-01-24

A report submitted to the U.S. Forest Service,
National Forests in North Carolina, Asheville, N.C. and the
NC Department of Cultural Resources, Division of Archives and History,
Raleigh, NC

ABSTRACT

In early 1976, archeological excavation was conducted at the Slipoff Branch site, temporary number 31Sw-ASU-1, Swain County, North Carolina. This small site is located on a ridge toe beside an upland stream and is interpreted as a hunting and butchering station of Indians of the Middle Archaic Morrow Mountain culture dating to the period of about 5500 to 4000 B.C. This is one of the few known sites in which Morrow Mountain remains appear not to have been mixed with those from cultures representing other periods of time and it is the first single component Morrow Mountain site from an upland habitat to be described.

FIGURES

TABLES

INTRODUCTION

Project Description

The Slipoff Branch site is a single-component site of the Morrow Mountain phase located in southeastern Swain County, North Carolina. The site was discovered on March 22, 1976, when, at the request of the U.S. Forest Service, National Forests in North Carolina, I conducted an archeological reconnaissance of the N-645 Tract of the Nantahala National Forest near the head of Connelly Creek, a tributary of the Tuckasegee River of the Tennessee River drainage. This 16.5-acre tract is located 12 miles southeast of Bryson City, North Carolina (Figure 1). The reconnaissance was requested by the Forest Service in order to assure compliance with Executive Order 11593 in a proposed land exchange with Mr. Herbert H. Sumner, et al. The purposes of the reconnaissance were to locate sites in the impact area and evaluate any located sites as to their archeological significance relative to possible nomination to the National Register of Historic Places (Purrington 1976:1).

The reconnaissance was carried out over the entire tract with one or more 2 x 2 foot test squares excavated at 100-foot intervals on landforms considered sufficiently level for prehistoric human habitation (15 per cent or less slope). A single prehistoric Indian site was located in the study area. It was given the preliminary designation 31SwBP-1 and was subsequently re-designated 31SwASU-1. The site is located on a ridge toe near the confluence of Connelly Creek and Slipoff Branch and yielded several artifacts and waste flakes of quartz in an area no greater than 40 to 60 feet in diameter. Based on the facts that the site is located in an upland habitat, an environmental zone, which archeologists have only recently begun to systematically investigate, and that the remains were suggestive of a small,

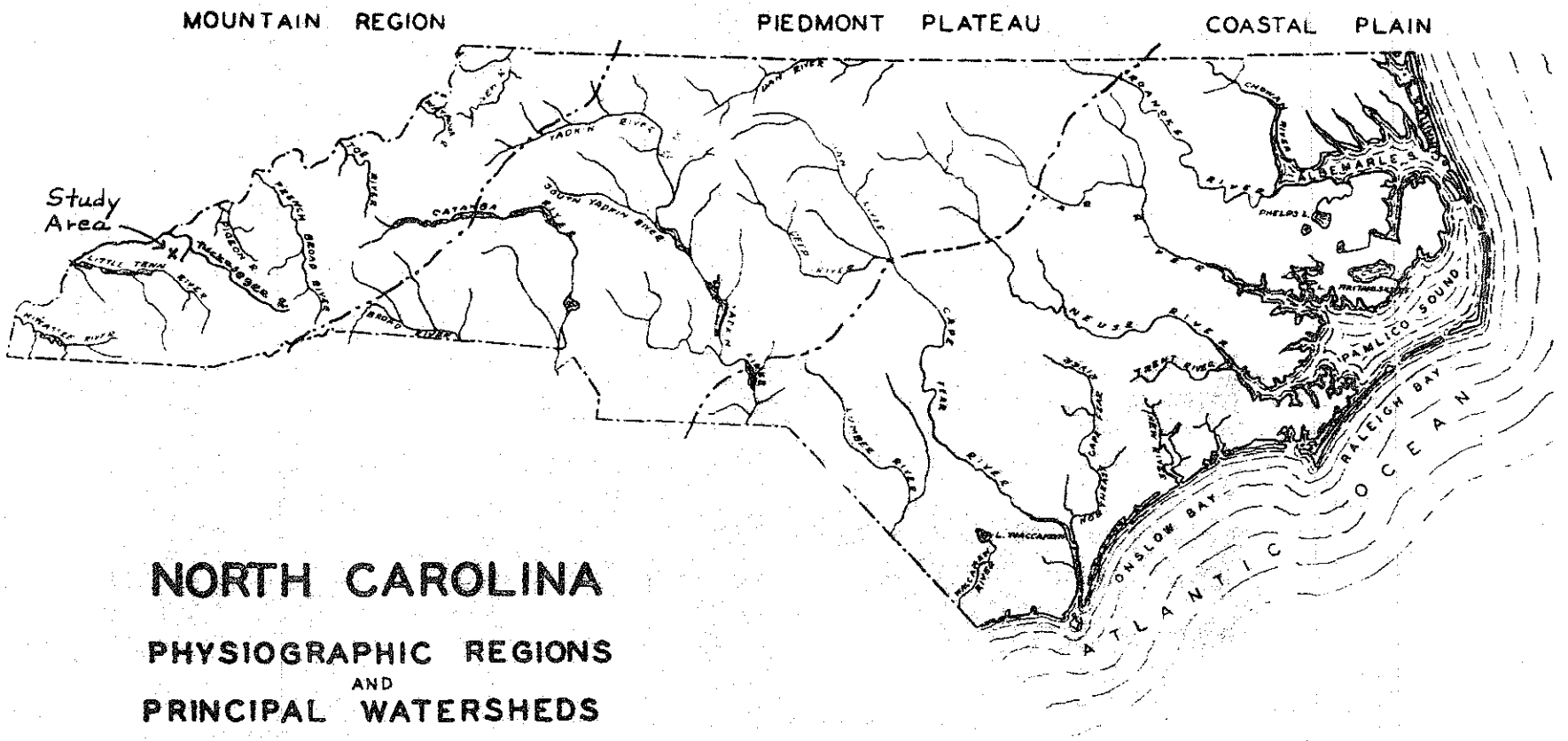


FIGURE 1: Location of the Study Area

relatively undisturbed single component site, i.e., a site occupied by a single cultural group over a relatively brief period of time, the site was deemed to be potentially significant in terms of possible nomination to the National Register, and test excavation was recommended (Purrington 1976: 10-11).

On May 3, 1976, funding for the test excavation phase was approved by the U.S. Forest Service (Purchase Order 717-11-76).

The phase two, test excavation, stage of the N-645 Project (No. 602-366-177-01-24) was designed to identify the dominant cultural and environmental characteristics of the Slipoff Branch site and to determine if the site was of such archeological significance as to warrant nomination to the National Register. These goals were to be accomplished by identification of the extent, stratigraphy, environmental context, archeological content, and cultural affiliation of the site. A broader goal of the excavation was recovery of a sufficient and hopefully representative quantity of archeological data to enable a reconstruction of prehistoric cultural activities at the site and a determination of the possible relationships of the site and its prehistoric inhabitants to the people and environments of the surrounding region. Finally, it was intended that the steps taken to determine the archeological significance of the site would also lead to mitigation of the impact on its archeological resources or suggest means for conservation or mitigation.

On May 7-9, test excavations were conducted with the assistance of Sandra Purrington. A grid was laid out on a magnetic north-south line nearly parallel to the long axis of the toe slope. Four randomly selected 5 x 5 foot squares were excavated in what was believed to be the primary area of artifact concentration, and five 2½ x 2½ foot squares on or near

the presumed periphery were dug. Only two squares, both located near the center of the excavation area, yielded artifacts. All artifacts, one of which was a Morrow Mountain projectile point/knife, were made from quartz.

These excavations verified the original interpretation of the site as a small campsite of Indians whose distinctive contracting-stemmed projectile point/knives have been termed Morrow Mountain (Coe 1964:37-39, 43) and have been dated to about 5500-4000 B.C. (Chapman 1977:4; Cridlebaugh 1977:90-92). There was no evidence that any other prehistoric groups had been at the site.

With the determination of the extent of the site, its cultural and temporal affiliation, and its general environmental characteristics, it was concluded that mitigation of adverse impacts on the archeological resources had essentially been accomplished and that the Forest Service should not be responsible for further investigation. In a letter of May 14, 1976, I recommended archeological clearance for the proposed exchange to the North Carolina Department of Cultural Resources, Division of Archives and History, and clearance was granted on May 24, 1976.

However, it was apparent that much additional data could and should be gathered from the site, particularly in the face of possible damage or destruction subsequent to the land exchange. Therefore, I asked Mr. R. C. Moore, Lands Staff Officer, National Forests in North Carolina, U.S. Forest Service, for permission to conduct additional excavation at the site prior to July 15, 1976, at no additional cost to the Forest Service. With the generous assistance of Mr. Moore this additional excavation was arranged with the future owner of the tract, Mr. Herbert H. Sumner.

I had hoped to use students from the Appalachian State University Archeological Field School for a week's excavation at the site, but was unable to do so because excavation at another important site demanded our complete attention. However, on the week-end of June 12-13, Sandra Purrington and I returned to the Slipoff Branch site, and on June 25-27, with the assistance of Glenn Everett and John Teague, ASU anthropology students, our excavations were concluded.

Summary of Findings

The prehistoric Indian remains at the Slipoff Branch site consisted entirely of projectile point/knives, scrapers, knives, choppers, and debitage of quartz. Three projectile point/knives and a stemmed knife have distinctive contracting stems; are quite similar to each other in size, form, and workmanship; and conform to the Morrow Mountain II type which represents a Middle Archaic hunting and gathering culture of about 5500 to 4000 B.C. The homogeneity of the artifact assemblage suggests that the site was occupied entirely or nearly so by Indians of a cultural tradition referred to as Morrow Mountain while the high proportion of weapons, cutting and chopping tools, and sharpening flakes suggests that the site was primarily utilized as a hunting and butchering station. Large steep-bitted scrapers and thinly scattered waste flakes suggest that working of wooden and stone tools, perhaps to be used in hunting, were secondary activities at the site.

Acknowledgements

I wish to express my gratitude to the U.S. Forest Service for providing the funds to mitigate the adverse impacts on a significant prehistoric site and for making it possible to continue work at the site beyond the contract period. I am particularly grateful to Mr. R. C. Moore of the

Forest Service for his information and assistance; to the new owners of the site, Mr. Herbert H. Sumner, et al, for permitting the additional excavation; to my wife, Sandra, who assisted me on two week-ends in the field when no student workers were available; to Glenn Everett and John Teague for their enthusiastic and very capable assistance on the final weekend at the site; and to Mrs. Teresa Isaacs for her customary excellent work in translating and typing my very rough drafts.

BACKGROUND

Physical Environment

Swain County, where the Slipoff Branch site is located, is one of the most rugged and scenic counties in the eastern United States. It includes a large portion of the Great Smoky Mountains National Park and many other attractions such as the Blue Ridge Parkway, Appalachian Trail, Nantahala Gorge, and Fontana Lake.

Geology - Swain County lies within the Blue Ridge physiographic province (Fenneman 1938). It includes several mountain ranges extending in different directions including the Great Smokies to the north, the Balsams to the east, and the Alarka and Cowee mountains to the south (Figure 2). In general the topography is extremely rugged, but although the ridges tend to be steep-sided and narrow, relatively broad, level areas can be found in some of the gaps, upland flats, and summits. These gentle slopes then descend steeply into narrow V-shaped upland valleys. Spurs branch out from the ridges and drop rapidly to the streams, but frequently they are interrupted by saddles, knobs, cross spurs, and gently sloping "benches" or upland flats.

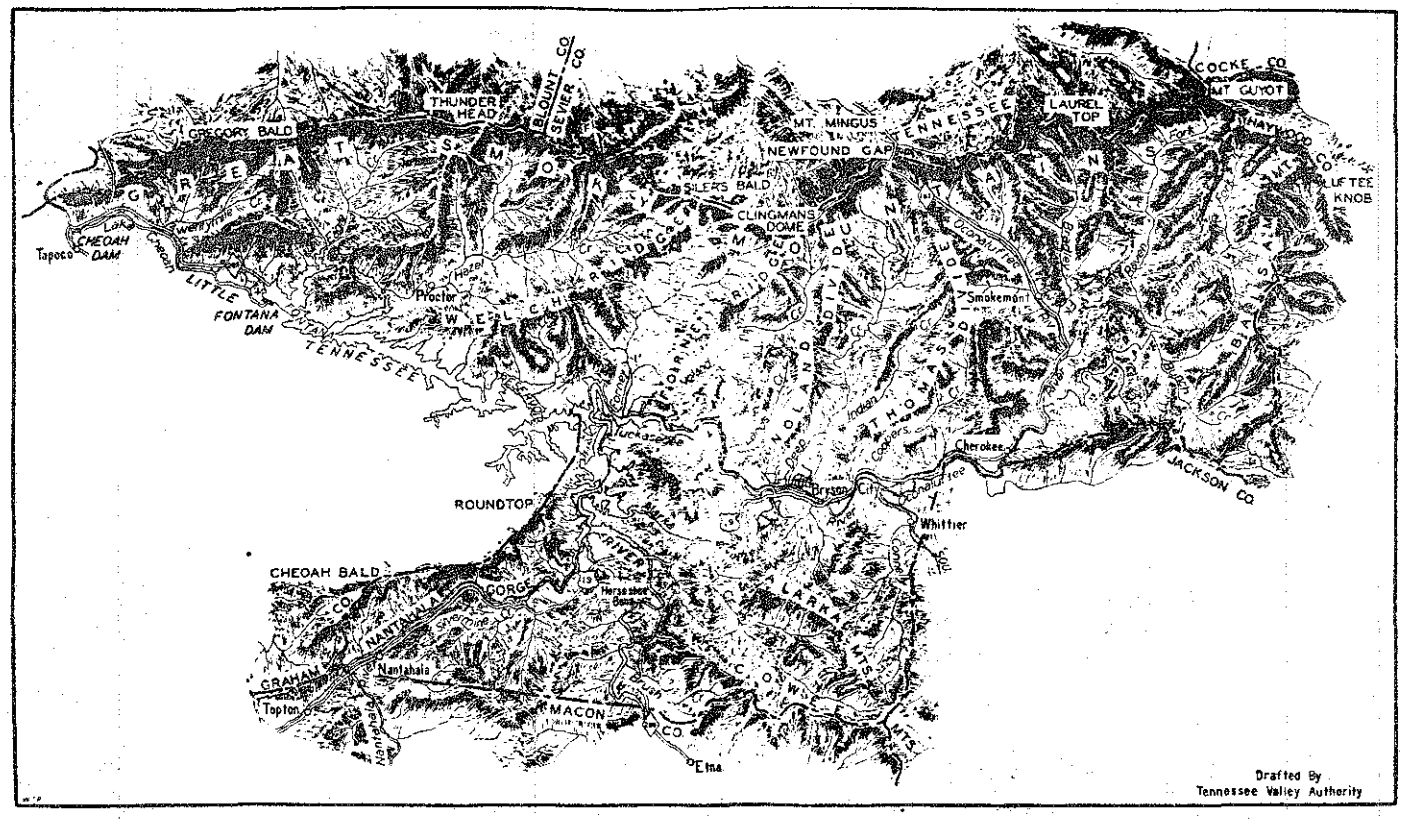


FIGURE 2.—Relief map of Swain County, with parts of adjacent counties in North Carolina and Tennessee.

Moderately sloping intermountain valley uplands are found in a few areas, particularly beside the lower Oconaluftee River at the Cherokee Reservation downstream to the Tuckasegee River valley to about two miles below Bryson City (Fig. 2). Slopes in the intermountain areas are generally in the 15 to 30 per cent range although many locations with a more gentle, rolling topography can be found in this zone too.

More gently sloping areas can be found on stream terraces and colluvial aprons and toe slopes at the valley margins. Truly level land is, for the most part, found only along the first bottoms of many of the streams, primarily the relatively broad bottoms of the Little Tennessee and Tuckasegee rivers. These level, arable first bottoms constitute less than 2 per cent of the total area of the county (Perkins and Gettys 1942:21).

Relief is substantial and often dramatic in Swain County. Vertical rock walls 200 to 300 feet high can be found along the Tuckasegee and Little Tennessee rivers and in particular in the Nantahala Gorge, the "land of the noonday sun." Elevations range from 6642 feet above mean sea level on Clingman's Dome in the Great Smokies to 1100 feet where the Little Tennessee River leaves North Carolina. Twenty-two peaks exceed 5000 feet, and the Great Smokies form a barrier that for 54 miles never drops below 5000 feet (Sharpe 1954:471).

The underlying rocks are primarily crystalline and mostly consist of two groups: 1) Great Smoky conglomerate which includes conglomerate, coarse gray sandstone, graywacke, black slates, and schists; and 2) gneisses and granites. The Smoky Mountain conglomerate is extremely hard and massive and underlies a large part of the mountainous country where it has been highly resistant to weathering. Native mineral and potential raw material resources include quartz, quartzite, mica, and copper (Perkins and Gettys 1942:11). The most important non-local raw material used by the Indians of this area is chert which is found in the fossil-bearing limestones of the Great Appalachian Valley to the west (King 1968:2-10).

3.11 inches of precipitation and March the wettest with a mean of 6.06 inches (Perkins and Gettys 1947:8).

The average frost-free period for Swain County is 176 days (Perkins and Gettys 1947:7). Snowfall is generally light and lasts only a few days in the valleys, but it may remain for the entire winter on the high mountain peaks. Ferocious thunderstorms and prolonged rains frequently occur and often cause flooding. Floods in 1916 and 1940 were extremely destructive in Swain County as they were over much of the Southern Appalachians. Although it is probable that destructive floods were not nearly as common in precolonial times prior to extensive logging of the mountain slopes, the interbedding of flood sediments and cultural deposits has been noted at Indian sites in the Tuckasegee and French Broad valleys (Keel 1976:27, 166).

Soils - The soils of Swain County largely reflect its humid, warm-temperate climate and deciduous forests. They include: 1) red-yellow podzolics (Hayesville, Hiwassee, and Talladega) in the intermountain valleys; 2) gray-brown podzolics (State and Tusquitee) in mountain coves and near the feet of mountain slopes; 3) brown forest soils (Burton) on the higher mountain slopes and crests and alluvial soils near streams which have parent material relatively rich in bases; 4) lithosols and shallow soils with incipient gray-brown podzolic characteristics (Porters and Ramsey) on hilly to very steep mountain slopes; and 5) alluvial soils (Congaree and Undifferentiated Alluvium) in the floodplains (Perkins and Gettys 1947:59-65).

Class I and II soils, which are rated as good to fair for agriculture, include Congaree, Hiwassee, State, Tusquitee, and Undifferentiated Alluvium. These soils comprise less than 10 per cent of the county's area.

Flora - Swain County is in the Oak-Chestnut forest region (Braun 1950: 192). Within this category, however, was, and still is to a large extent,

a great variety of trees, shrubs, flowering plants, mosses, lichens, and fungi. Nearly universal logging and the blight-induced demise of the chestnut have greatly altered the forest composition since aboriginal times, but there is still much to be learned even today from observing the distribution of different species in the variety of mountain habitats.

The following distributional data have mostly been taken from Perkins and Gettys (1947:9) and Stupka (1964):

High mountain peaks: Frazer fir and red spruce between 5000 and 6000 feet with almost pure stands of the former above that elevation. Heath and grassy balds occur on some of the summits (Bass 1977:8), but may not have been present in precolonial times (Bass 1977:98-99).

Ridges and slopes with shallow soil: Pitch pine, table-mountain pine, post oak, scrub oaks.

Mountain forests: White, chestnut, scarlet, northern red, and black oaks; chestnut; black walnut; hickories (probably bitternut, mockernut, and pignut with shagbark occasionally occurring); sourwood; cherry; red maple; honey locust; yellow birch; dogwood; blackgum; yellow poplar; white basswood; hemlock; cucumber magnolia; and buckeye.

Valley uplands and terraces: Oaks, hickories, small pines, sourwood, dogwood, and black locust. Prior to timbering, this habitat was dominated by oaks and pines (Perkins and Gettys 1947:9).

Colluvial slopes near the bases of mountains: Chestnut, chestnut oak, black walnut, butternut, honey locust, red maple, yellow poplar, and buckeye.

Bottomlands: River birch, sycamore, water oak, elm, ironwood, and a few hickories.

Fauna - Swain County falls within Shelford's (1963:38-42) oak-deer-chestnut faciation. The varied and abundant edible plants in this biotic zone supported a large and diverse biomass of animals among which were white-tailed deer, black bear, mountain lion, gray wolf, bobcat, woodchuck, cottontail rabbit, raccoon, squirrels, gray and red fox, beaver, striped and spotted skunks, muskrat and the ubiquitous marsupial opossum. Bison and elk were present into early historic times, but apparently were not very numerous (Linzey and Linzey 1971:74, 77). Important game birds include turkey, grouse, and passenger pigeon. A variety of fish, turtles, and mussels can be found in the streams.

Cultural Significance of the Swain County Environment - A number of culturally-significant characteristics of the mountainous deciduous forest of Swain County can be noted:

1. Rugged topography and limited navigable water. These factors were important limitations on transportation and mobility. The ethnographic record indicates that insularity and conservatism are common cultural phenomena in mountainous habitats, and such phenomena may provide an explanation for cultural processes in the prehistoric Appalachians. For example, Keel (1976:231) mentions the "basic conservatism of the mountain folk" as a prime mover in the reappearance of cord-marked surfaces in Middle-Late Woodland Connestee ceramics. Nevertheless, conservatism cannot be accepted a priori as a characteristic in Appalachian Indian cultures, nor must a rugged environment be implicitly assumed to be the only cause of mountain "conservatism." Such interpretations must be supported by archeological and ethnographic evidence. At present the best evidence for mountain Indian conservatism has been found in the Eastern Mountains of Kentucky (Dunnell 1972; Purrington 1978).

Topographic barriers would have also limited and channelled people's movements and settlement. Level, well-drained locations near a source of water are relatively scarce, and travellers undoubtedly established regular routes over the least difficult terrain, e.g., crossing ridges through gaps and following ridge lines and rivers for great distances.

2. Limited agricultural land. Relatively large areas of productive, easily tilled farmland are few in number and largely confined to the floodplains, terraces, and colluvial aprons of the major river valleys. This condition would have imposed limitations on movement, community size, and regional density of prehistoric village farmers.

3. Easy access to a wide variety of natural resources. Mica, quartz, and quartzite were raw materials that were readily available to the Indians of the region. However, chert apparently had to be brought in from outside - probably the Great Valley of Tennessee. For this reason, and perhaps cultural preferences during some periods, many prehistoric Southern Appalachian Indians made little or no use of chert.

4. Highly productive but geographically and seasonally diversified wild food resources. As is evident from the listing of various plant habitats above, there was a great variety and abundance of wild plant foods, and different species were available in different locations at different seasons of the year. The same was true for many animal populations particularly mast-consuming game animals such as deer, black bear, squirrels, turkey, and passenger pigeons who congregated in the uplands and valley margins during the fall. Riverine plants and animals, on the other hand, would have been most available from late spring through early fall. Such regular patterns of seasonal and geographical diversity in wild food resources would have favored mobile populations or sedentary populations with the ability to break up into mobile segments.

Cultural Environment

Swain County is one of the few areas in the eastern United States that still has a resident native Indian population. The Cherokee Reservation (Qualla Boundary) is located in eastern Swain County and neighboring Jackson County, North Carolina. The 6000 plus Eastern Cherokees are the descendants of about a thousand Cherokees who escaped the removal of most of their tribe to Oklahoma in 1838. Their ancestors were, for the most part, from the settlements in the upper valleys of the Tennessee (Middle Towns) and Hiwassee (Valley Towns) rivers.

Early historic and prehistoric Cherokee culture is well represented in the archeological record. Cherokee culture is archeologically known as the Qualla phase and dates from the Removal back to about A.D. 1500. Proto-Cherokee culture, known as the Pisgah phase, dates from about A.D. 1000-1500 (Dickens 1976:195-198; Keel 1976:218).

The earlier Woodland cultures (ca. 700 B.C. to A.D. 1000) are known primarily from their ceramics, their triangular and, in earlier phases, stemmed and notched projectile point/knives; a small number of symbolic and/or decorative artifacts, including human and animal effigies of clay, some of which were made locally and others of which were imported from Georgia and Ohio; and, in late Middle to Late Woodland times, their flat-topped platform mounds and rectangular houses (Keel 1976). However, we still know very little about the ways of life of these people. We do not even know for sure whether the Woodland people of western North Carolina are ancestral to the Cherokees (Coe 1961, Holden 1966:86, Keel 1976:214) or if the Middle to Late Woodland peoples had a chiefdom level of society (status ranking of individuals rather than egalitarian) (Collins 1976:36).

The hunting and gathering Archaic cultures of the western North Carolina Mountains (8000-700 B.C.) are only vaguely understood except for the fact that archeologists have developed a relatively comprehensive sequence of stone artifact types, particularly projectile point/knives. The Late Archaic through late prehistoric point sequence has been described by Keel (1976) and the entire North Carolina Montane Archaic sequence is closely analogous to that described for the eastern North Carolina Piedmont by Coe (1964), the lower Little Tennessee Valley by Chapman (1975; 1977) and West Virginia by Broyles (1971).

The earliest known Indian cultures in the western North Carolina mountains were those of the Paleo-Indians (10,000-8000 B.C.). A few of the distinctive, fluted lanceolate spearpoints of these people have been found in mountain counties (Keel 1976:17).

Previous Archeological Research

The history of archeology in the Appalachian Summit region up to 1972 has been summarized by Keel (1976:12-16). Since that writing the University of North Carolina - Chapel Hill has continued its excavations at the stratified Warren Wilson site in Buncombe County, and excavations and surveys have been conducted out of Western Carolina University by Susan Collins, John Dorwin, Peter Miller and Mike Baker and out of the University of Tennessee by Quentin Bass. Very little of the work in southwestern North Carolina has been published until recently. Notable among these recent publications are Keel's (1976) description of excavations at the historic Cherokee town of Tuckasegee on the Tuckasegee River in Jackson County and at the Garden Creek and Warren Wilson sites in Haywood and Buncombe counties respectively; Dickens' (1976; 1978) description and analysis of the Pisgah phase in western North Carolina; Collins' (1977) report on excavations at the Macon County Industrial Park site an apparent

Woodland habitation; and Bass' (1977) survey in the Tennessee and North Carolina portions of the Great Smoky Mountains National Park. Several hundred prehistoric Indian sites have been found in Swain County, and excavations were conducted at the Cherokee town of Nununyi (31Sw-3) by Keel in 1964.

SITE DESCRIPTION

The Slipoff Branch site is in southeastern Swain County, North Carolina, about 12 miles southeast of Bryson City. The site appears on the U.S.G.S. 7.5-minute Grassy Creek quadrangle map (UTM 17S 872164; 35° 22' 15" N. Latitude; 83° 20' 30" W. Longitude).

The site lies on the west side of a low ridge toe just above the confluence of Connelly Creek, a 4th-order stream, and Slipoff Branch, a 2nd order stream (Fig. 3). Stream order is determined by numbering all depressed contours shown on the U.S.G.S. quadrangle map that drain into a stream rather than blue lines only. The site is at an elevation of about 2880 feet with steep slopes rising immediately behind it to over 4700 feet at Pigpen Flats. Connelly Creek descends rapidly from the site through a narrow gorge to relatively broad bottoms (ca. 400 m. wide) about 2.7 miles below the site. Connelly Creek follows this valley for an additional 3.0 miles to its confluence with the Tuckasegee River (see Figure 7, p. 40).

The site is about 15 feet above Connelly Creek, about 6 feet above Slipoff Branch to which it is adjacent, and about 12 feet above the narrow, imperfectly-drained floodplain of Connelly Creek. The toe slope has a slope of about 4 to 8 per cent, a north northeast exposure (N34°E), and is about 100 feet long tapering from about 80 to 60 feet wide (Fig. 3).

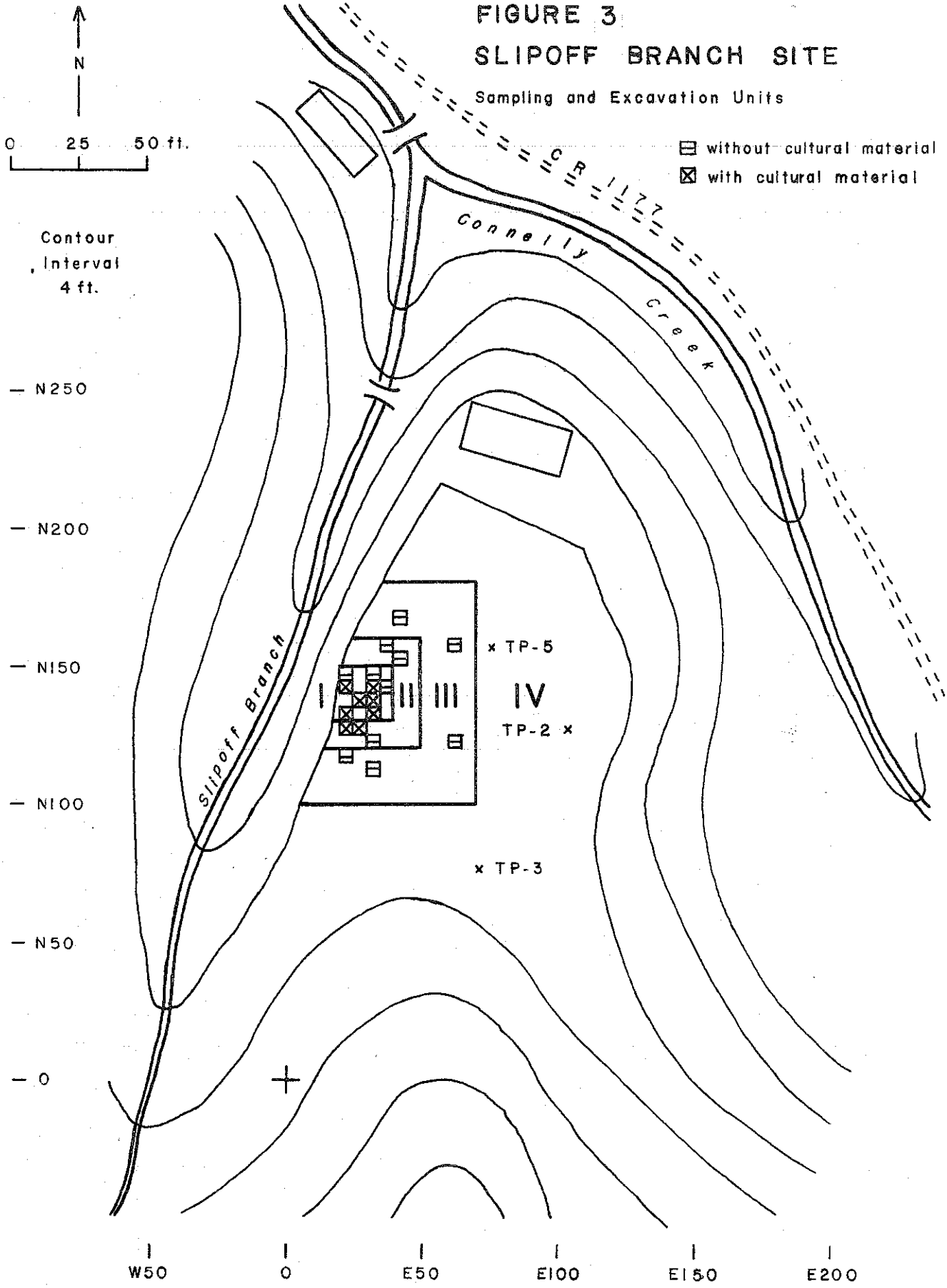


FIGURE 3
SLIPOFF BRANCH SITE
Sampling and Excavation Units
without cultural material
with cultural material
N
0 25 50 ft.
Contour Interval 4 ft.
CR 1177
Connelly Creek
Slipoff Branch
TP-5
TP-2
TP-3
I
III
IV
N250
N200
N150
N100
N50
0
W50
0
E50
E100
E150
E200

The soil at the site has been classified as Tusquitee stony loam (Perkins and Gettys 1946), a gray-brown podzolic soil of colluvial slopes. Field inspection showed that the A_2 horizon is dark brown (10YR3/3) and 0.45 to 0.65 foot thick. The B_{2t} is a yellowish-brown (10YR5/6) stony clay loam about 1.3 foot thick, and the C horizon is a yellowish-brown (10YR6/6) stony clay. The site does not appear to have been plowed.

The terrace is well-drained with modern vegetation dominated by tulip poplar, chestnut oak and northern red oak. In prehistoric times chestnut would have probably been present too. The site is in a well-drained upland location which is quite close to pure rapidly moving water and provides easy access to upland, floodplain, and stream resources.

The site was revisited by the author in August, 1978. The toe slope has been bulldozed for apparent construction of a house, and the Slipoff Branch site has been totally destroyed. No artifacts were found in the disturbed soil.

RESEARCH METHODS

Reconnaissance and Preliminary Test Excavation

In the reconnaissance phase four small test squares, numbered 2-5, were excavated in arbitrarily chosen locations on the toe slope, and a cut bank on the north end was investigated. Only test square 4 next to Slipoff Branch yielded archeological remains. Six quartz flakes of various sizes and a fire-cracked rock were found in the 2 x 2 foot square. Five of the flakes have been worked or utilized. These include a worked end scraper and utilized flakes including a naturally-backed chopper, two flake knives, and a combination scraper/bipointed reamer. In addition, the organic horizon in this square was 0.60 foot deep, one or two tenths of a foot deeper than in the other squares, and it contained

charcoal flecks which only one other test square, number 5, did. Eleven test squares were excavated in the stream bottom immediately below the site and the small spur and ridge immediately above the site. No archeological remains were found in these locations (Purrington 1976).

The small size and upland location of the site suggested that it may have been a seasonal hunting and/or gathering camp. The exclusive use of a single stone type, quartz, led to the admittedly premature speculation that it could be a single component site, perhaps Morrow Mountain or Early Woodland (Purrington 1976:9).

Test Excavation

The field methods described in the test excavation proposal to the Forest Service included excavation of "at least two 5 x 5 foot squares in the main area of concentration and scattered 2½ x 2½ foot squares on the periphery of the concentration." On arrival at the site a grid was established with its baseline following N34°E, roughly paralleling the long axis of the toe slope on which the site is located.

In order to avoid sampling biases, squares to be excavated were randomly selected. The entire terrace was divided into five-foot squares on paper and then divided into arbitrary sampling strata, each with its own set of numbers to be randomly selected. The subdivision of the terrace into sampling strata was done in order to concentrate our efforts on what appeared to be the only area of artifact occurrence on the toe slope while still allowing other parts of the landform to be sampled.

The four sampling strata (Figure 3) included:

Area I - a core area of 16 five-foot squares centered around test square 4, the artifact-bearing square excavated during the reconnaissance.

Area II - a ten-foot wide intermediate area outside the core area and consisting of 34 five-foot squares.

Area III - a twenty-foot wide peripheral area outside the intermediate area and consisting of 112 five-foot squares.

Area IV - the remainder of the toe slope on which the site is located and consisting of about 460 five-foot squares.

The squares in each of the four sampling strata were numbered consecutively and squares from each were selected from a Table of Random Numbers. In the initial phase of excavation two 5 x 5 foot squares were selected from Areas I and II respectively and five 2½ x 2½ foot squares were selected from Area III. These squares were excavated one foot into the B horizon and then augered to the C horizon. No evidence of cultural material was found below the A horizon in any of these squares, and all subsequently excavated squares were dug to the top of the B horizon and trowelled to determine if any features or post molds were present. None were observed.

Excavation was in 0.2 foot arbitrary levels within the A horizon and 0.5 foot levels in the B horizon. Because of the limited time available, the excavation strategy was to shovel and screen each sampling unit rather than excavate largely by trowel and plot the horizontal and vertical locations of individual artifacts. Nevertheless most recovered artifacts were spotted in situ or nearly so and their horizontal locations and depths below datum were recorded. The soil was sifted through one-half inch wire screen.

In the initial week-end's excavation all squares selected for excavation were completed. None of the squares in Area III yielded cultural remains nor did square N140-145, E35-40 on the east edge of Area I or N120-125, E30-35 on the south edge of Area II. However two squares N125-130, E20-25 and N130-135, E30-35 did yield artifacts. Although the cultural

material was not present in the abundance anticipated, it still was represented only by quartz and included a diagnostic artifact, a Middle Archaic Morrow Mountain projectile point/knife.

Intensive Excavation

At the conclusion of the test excavation I felt that since the approximate size, artifact density, and cultural affiliation of the site had been determined, a small but seemingly representative sample of artifacts collected, and the limited possibility of features or structures noted, mitigation had been essentially accomplished and the Forest Service's responsibility for protection of archeological resources had been fulfilled. Nevertheless, given the interesting and, up to this point, unique situation of an upland site apparently occupied by only a single group of people over a relatively brief span of time, further study seemed highly desirable. So, as noted above, I obtained permission to engage in what turned out to two week-ends of very rapid but systematic excavation. This resulted in the excavation of five additional randomly selected squares in Area I and three in Area II. Four of the squares in Area I and one in Area II were artifact-bearing.

Four randomly chosen 5 x 5 foot squares believed to be on the edge of or just outside the limits of artifact distribution were first excavated as 2½ x 2½ foot squares in the corner nearest the site. Three of these small squares did not yield cultural material and were terminated while one, the south-east quarter of N145-150, E20-25, did contain artifacts and was consequently excavated in its entirety. On the final day of work at the site three squares, N130-135, E20-25, in the center of the artifact concentration, and N140-142½, E30-32½ and N135-137½, E35-37½ on the north-

east and east edges respectively were non-randomly selected and were excavated in order to augment our artifact sample and allow a clearer definition of the limits of the site.

A total of ten 5 by 5-foot squares and ten 2½ x 2½-foot squares, comprising 312.5 square feet, were excavated. Eight of the larger squares and one of the smaller, a total area of 206.25 square feet, were artifact-bearing. The site appears to have a semi-circular outline and covers about 375 square feet, therefore roughly 55 per cent of the site was excavated.

An interesting note on the results of the sampling method: All but one of the artifact types in the total inventory, the Morrow Mountain knife, were found in the reconnaissance and systematic test excavation at the site. These randomly selected squares apparently provided a representative though small, sample of the total artifact inventory. However, as we shall see, what the initial sample could not show was significant variation in the distribution of artifact types over the site. These distributional patterns provide valuable insights into the way human activities were patterned at this prehistoric habitation area. In retrospect, it is quite evident that recommendation for archeological clearance of the land exchange should have followed the intensive excavation phase rather than test excavation.

ARTIFACT DESCRIPTION

A total of 93 quartz artifacts and waste fragments were found at the Slipoff Branch site including 6 from the initial test excavations. They have been placed in general functional categories based on inspection of wear patterns with a hand lens. These categories basically follow those developed by Ahler and McMillan (1976) in their analysis of artifacts from the Rodgers Shelter in the western Missouri Ozarks. The functional types have been subdivided into formal or stylistic categories based on attributes of outline and production technique.

Table 1: Slipoff Branch Site - Distribution of Artifacts by Type

Artifact	Number	Location
Projectile Points/Knives		
Morrow Mountain	3	IR-5, IIR-22, IR-10
Fragments	4	IR-1, IR-5, IIR-22, IR-10
Hafted Cutting Tools		
Morrow Mountain	1	IR-5
Generalized Cutting Tools		
Bifacial Ovate	2	IR-15, IR-11
Bifacial Fragments	1	IIR-23
Large flake	1	IR-11
Small-Medium flake	3	IR-5(2), IR-10
Specialized Cutting Tools		
Serrated	2	IR-15, IIR-23
Scrapers		
End	3	IIR-22, IR-10, IR-5
Large, steep edge, end	2	IIR-22, IR-11
Flake	4	IR-1, IA-13, IR-11(2)
Choppers		
Worked, bifacial	1	IR-10
Flake	2	IR-5, IR-10
Core	1	IR-5
Combination Tools		
Knife/Chopper	1	IA-13
Knife/Scraper	2	IR-15, IR-10
Scraper/Graver	1	IR-15
Scraper/Reamer	1	IR-5
Scraper/Chopper	1	IR-5

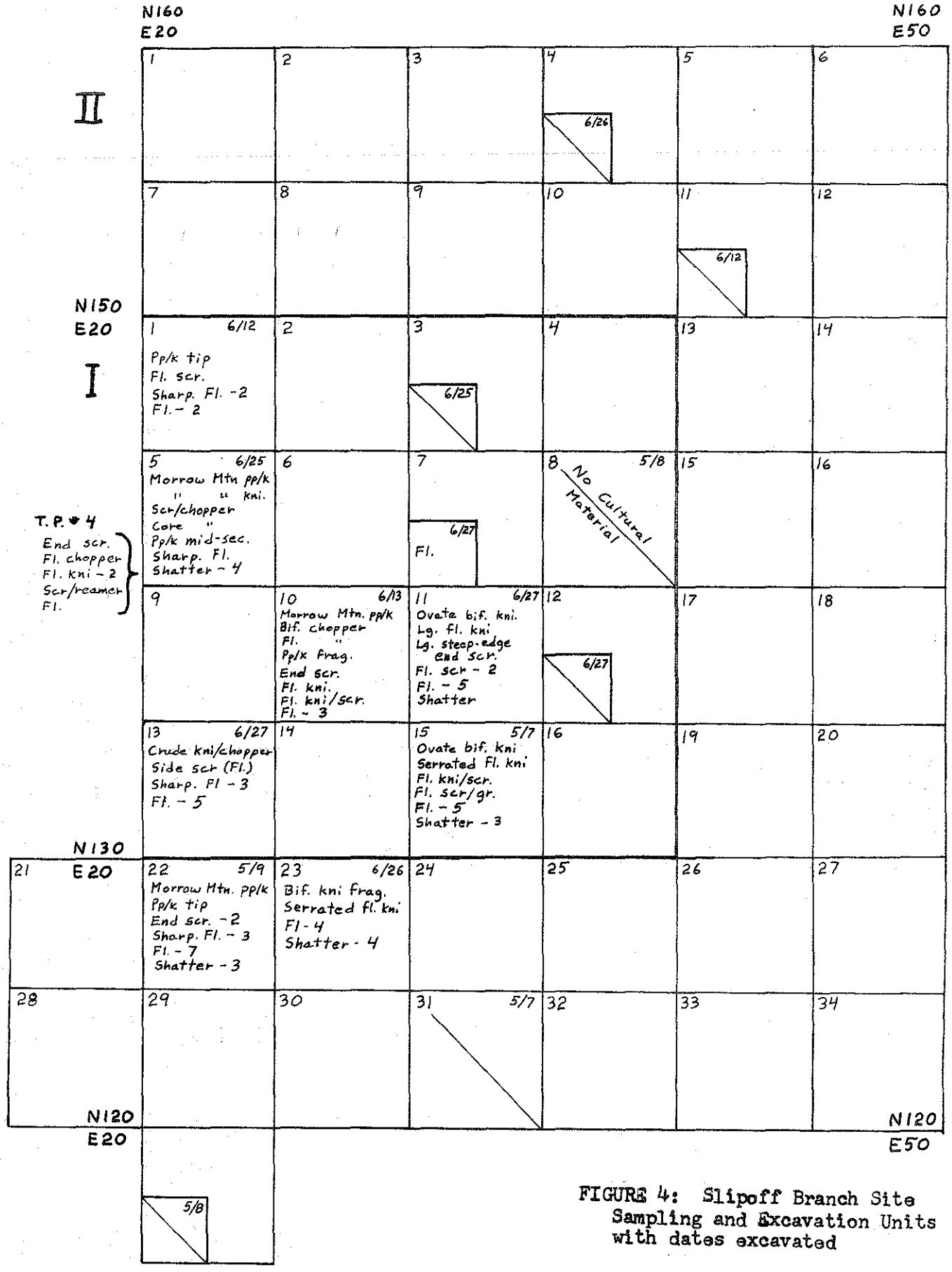


FIGURE 4: Slipoff Branch Site Sampling and Excavation Units with dates excavated

Scale: 1 in. = 5 ft.

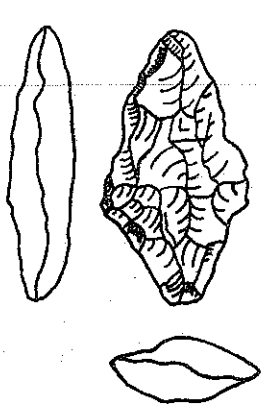
References to locations of artifacts are made in terms of the number of the square in the standard grid system, i.e. the number of feet of each corner of the square north and east of an arbitrary datum point. The squares are also referenced in terms of their place in the random sampling process. The first position (I or II) refers to the sampling stratum of the square; the second (R or A) refers to whether the square was randomly or arbitrarily selected; and the third to the sequential number of the square within its particular sampling stratum (Fig. 4, Table 1).

Projectile Points/Knives

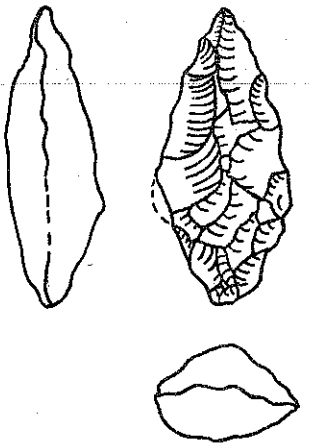
Under this heading are three classifiable projectile point/knives, three unclassifiable tip fragments, and one fragmentary mid-section. On the basis of outline these artifacts would traditionally be classified as projectile points with the implication that they were used on the tips of spears. This inferred usage is supported by the fact that two of the three classified points show impact fracture on the tip while the tip of the third is broken. The tips of two of the three tip fragments have been broken too. However, all of these artifacts show slight to heavy grinding along one or usually both edges which suggests use as cutting tools too.

Morrow Mountain (Figure 5 a-c)

This point type was defined by Coe (1964:37-43) to describe contracting stemmed, triangular-bladed points from the North Carolina Piedmont. The type has subsequently been recognized over much of the Southeast. Coe (1964:121-122) placed the type in a Middle Archaic context dating from about 4500-3500 B.C. Radiocarbon dates of about 4500-4000 B.C. have been obtained for this type in northern Alabama (Griffin 1974:13; DeJarnette et al 1975:113) and over 5000 B.C. in east Tennessee (Chapman 1976:8; Cridlebaugh 1977:91).

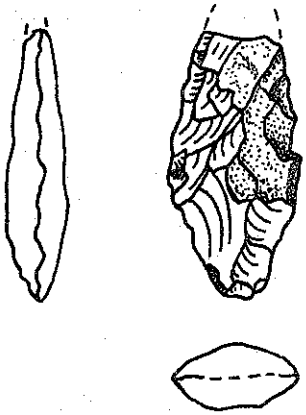


A N135-140, E25-30
(IR-10), 0.2-0.4 ft. b.s.

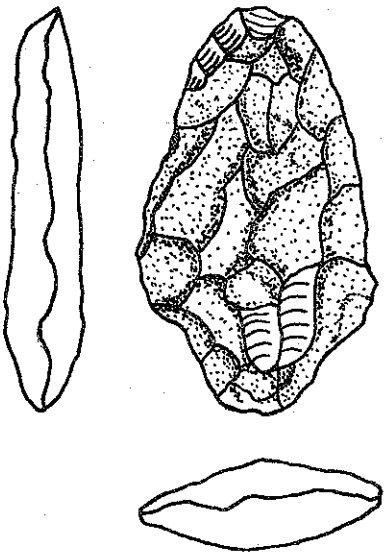


B N125-130, E20-25
(IIR-22), 0.4-0.6 ft. b.s.

0 2 cm



C N140-145, E20-25
(IR5), 0.2-0.4 ft. b.s.



D N140-145, E20-25
(IR5), 0.2-0.4 ft. b.s.

FIGURE 5: Slipoff Branch Site - Morrow Mountain Projectile Point/Knives and Knives

The three Morrow Mountain points from the Slipoff Branch site are made of quartz and are very similar to each other in size, form, and production technique. They are proportionately narrow with triangular blades, moderately to poorly defined shoulders, and tapered stems which are about one-fourth of the total length of the specimen. They correspond well with Coe's (1964: 37, 43) Morrow Mountain II category.

Size: Length: 37.4-38.8 mm, mean 38.1 mm; Width: 17.6-20.8 mm, mean 19.2 mm; Thickness: 8.0-11.4 mm, mean 9.2 mm; Stem Length: 10.9-11.4 mm, mean 11.2; Stem Width: 13.6-15.9 mm, mean 14.8 mm.

Hafted Cutting Tools

Morrow Mountain Knife (Figure 5 d)

This artifact has the typical Morrow Mountain form - a triangular blade with slightly excurvate sides; rounded, poorly defined shoulders; and a tapered stem with a subconvex base. It differs from the points/knives described above in that it is relatively large, has a blunt tip with unifacial scraper wear, and has lateral blade edges which have been significantly dulled by grinding along their entire length.

Size: Length: 53.6 mm; Width: 32.5 mm; Thickness: 11.0 mm; Stem Length: 10.6 mm; Stem Width: 21.0 mm.

Generalized Cutting Tools

This category includes bifacially- or unifacially-worked tools with one or more sharp edges, which have been dulled by lateral grinding, and by the absence of a haft element and/or specialized features on the cutting edge.

Bifacial Ovate Knives (Figure 6 E, H)

Two crude bifacially worked tool fragments are entirely percussion-flaked with roughly ovate bases and slight to moderate dulling of the lateral edges. They have rough outlines with irregular plano-convex cross-sections and are quite thick.

Size: Width: 28.1-39.8 mm; mean 34.0 mm; Thickness: 14.9-16.0 mm, mean 15.4 mm.

Bifacial Knife Fragment

A single bifacially-worked tool fragment exhibited somewhat better workmanship than the bifacial ovate knives including a thinner more regular cross-section, better controlled percussion flaking, and pressure flaking along the edges. The edges are heavily ground.

Size: Thickness: 8.3 mm.

Large Flake Knife

A large, unmodified flake has slight grinding along two edges.

Size: Length: 56.0 mm; Width: 33.7 mm; Thickness: 14.9 mm.

Small-Medium Flake Knives

Three small to medium-sized flakes (no dimension greater than 50 mm) including two from the initial testing of the site in Square #4 (Purrington 1976:8) have one or more edges with moderate grinding.

Specialized Cutting Tools

Serrated Flake Knife (Figure 6 A-B)

A thin, otherwise unmodified flake from N130-135, E30-35 (IR-15) has slight serrations (less than 1.2 mm. deep) continuously along a working edge 31.5 mm. long. A second broken flake has three or more moderately deep (2.0 mm) serrations on a corner of a thin working edge. No edge wear is evident. It is quite clear that these unifacially worked artifacts are modified flake tools rather than fragments of serrated points such as Kirk or Palmer types.

A	Serrated Flake Knife	IR-15
B	Serrated Flake Knife	IIR-23
C	End Scraper	IR-10
D	End Scraper	IR-5 (Test Square 4)
E	Bifacial Ovate Knife	IR-15
F	Large, Steep-edge, End Scraper	IIR-22
G	Large, Steep-edge, End Scraper	IR-11
H	Bifacial Ovate Knife	IR-11

Figure 6: Knives and Scrapers from the Slipoff Branch Site

Scrapers

Use wear on scrapers consists of tiny flake scars removed from one face of a relatively steep edge which is in general unifacially worked or not worked at all.

End Scrapers (Figure 6 C-D)

Three small to medium flakes, including one from the initial test, have a steep, worked bit on a proportionately narrow edge. Two show tiny, unifacial utilization scars, while the third (from N125-130, E20-25, IIR-22) is ground on the distal end and for a short distance down the adjacent lateral edges.

Large, steep edge, end scrapers (Figure 6 F-G)

Two large, thick flakes have a rounded edge which has been steeply worked over about a 140-degree arc. Tiny use flakes are evident along the working edges.

Size: Length: 53.2-54.5 mm, mean 53.8 mm; Width: 49.6-52.7 mm, mean 51.2 mm; Thickness: 23.2-25.7 mm, mean 24.4 mm.

Flake Scrapers

Four small to medium, unmodified flakes have tiny pressure flakes removed from one face along one or more edges. Such use wear is suggestive of a scraping function.

Choppers

The general classification "chopper" includes tools with one or more edges that have been crushed by battering against a resistant material. Such tools tend to be relatively large and thick.

Bifacial Chopper

A roughly ovate, bifacially worked artifact of low grade quartz with numerous inclusions shows extensive battering on the end and both lateral edges.

Size: Length: 65.5 mm; Width: 37.0 mm; Thickness: 19.9 mm.

Core Chopper

A large (39 mm thick) core shows extensive battering on one end and one contiguous lateral edge. The working edge has been thinned unifacially by well-controlled soft percussion flaking.

Flake Choppers

Two large unmodified flakes, including a naturally-backed one from the initial test, have one edge each with slight to moderate battering.

Combination Tools

These tools have surfaces which show wear patterns indicative of two or more uses. One thick (15.0 mm) flake from N130-135, E20-25 (IA-13) has been crudely shaped by percussion flaking and has one thin edge which has been slightly dulled by grinding and another thicker edge which shows moderate battering. This worked tool is classified as a knife/chopper.

All other combination tools have unprepared edges which have been used for two or more purposes. The wear patterns found on these edges are clues to their multiple usage. These flake tools include two knife/scrapers, a scraper/graver, a scraper/chopper, and a bipointed flake from the initial test which shows scraper wear along one edge and polish on both points suggesting use as a scraper/reamer.

Sharpening Flakes

These flakes have been struck from the dulled edge of a previously worked tool in order to sharpen it. The striking or pressure platform

characteristically retains a portion of the dulled edge which distinguishes these flakes from those struck during the primary production of artifacts. Nine sharpening flakes were found at the site.

Flat Flakes

These unmodified flakes were struck in the process of primary tool production. They taper to at least one thin sharp edge. Thirty-three flat flakes were found.

Shatter Pieces

Shatter pieces or "chunks" are the unmodified products of percussion flaking which have hinged off leaving no thin sharp edges. Fifteen shatter pieces were recovered.

Fire-Cracked Rock

Although no hearths, fire pits or other features were identified at the site, six fragments of fire-cracked rock were found in the squares.

ARTIFACT DISTRIBUTION

Horizontal and vertical proveniences of the cultural remains from the Slipoff Branch site were recorded, at the minimum, within the standard excavation units for the site - the five-foot square and the two-tenths foot level. When artifacts were located in situ or in place, the precise horizontal coordinates and depths below surface and below datum were measured. Exact proveniences on 37 of the 93 artifacts and debitage fragments recovered from the site were recorded.

The artifact sample from the site is quite small, so the statistical reliability of any apparent distributional patterns is not great. Never-

theless, it can be said with some confidence that, whereas there is no apparent variation in the vertical distribution of cultural remains from the site, there is notable variation in the horizontal distribution of artifacts (Tables 2-4).

Despite the small sample size, certain patterns are apparent in the square-by-square distribution of artifacts by usage/functional and technical categories (Tables 2-3). Projectile point/knives, hafted cutting tools, choppers, combination tools, and sharpening flakes were concentrated on the west side of the site, closer to Slipoff Branch ("Creekbank"). Generalized cutting tools, scrapers, and primary chipping debris were more uniformly distributed over the site, and the two serrated knives which were interpreted as specialized cutting tools were on the east side of the site somewhat back from the creek ("Backside"). Finished artifacts (those with intentionally prepared surfaces and edges) and sharpening flakes were relatively more abundant on the creekbank portion of the site while artifacts which were utilized without preparation, flat flakes, and shatter pieces were more uniformly distributed.

Distributional patterns appear to be even clearer when the artifacts are classified into categories representing inferred cultural activities and lumped in two general locational units. The inferred activity categories are based on those which Bass (1977:65) applied to the Great Smoky Mountains material and those used with western Ozark material by Ahler and Wood (1976). Piper's (1977) activity categories for the Mount Rogers, Virginia material were also useful. The locational units include those squares approximately 15 feet or less from the west edge (the Slipoff Branch side) of the ridge toe ("Creekbank") and those squares located more than 15 feet east of the edge ("Backside").

Three activity categories, hunting/butchering, heavy butchering, and lithic tool maintenance, are found exclusively along the creekbank, and hideworking/woodworking tools are more abundant here than on the backside. Tool production

	CREEKBANK					BACKSIDE				
	IR-1	IR-5	IA-13	IIR-22	IR-10	IIR-23	IR-11	IR-15	IA-7	Total
Projectile Point/Knives	1-16.7	2-12.5	---	2-11.8	2-20.0	---	---	---	---	7- 7.5
Hafted Cutting Tool	---	1- 6.3	---	---	---	---	---	---	---	1- 1.1
Generalized Cutting Tools	---	2-12.5	---	---	1-10.0	1-10.0	2-18.2	1- 8.3	---	7- 7.5
Specialized Cutting Tools	---	---	---	---	---	1-10.0	---	1- 8.3	---	2- 2.2
Scrapers	1-16.7	1- 6.3	1-10.0	2-11.8	1-10.0	---	3-27.3	---	---	9- 9.7
Choppers	---	2-12.5	---	---	2-20.0	---	---	---	---	4- 4.3
Combination Tools	---	2-12.5	1-10.0	---	1-10.0	---	---	2-16.7	---	6- 6.5
Sharpening Flakes	2-33.3	1- 6.3	3-30.0	3-17.6	---	---	---	---	---	9- 9.7
Primary Chipping Debris (Flat Flakes and Shatter Pieces)	2-33.3	5-31.3	5-50.0	10-58.8	3-30.0	8-80.0	6-54.5	8-66.7	1-100.0	48-51.6
TOTAL	6	16	10	17	10	10	11	12	1	93

TABLE 2: Slipoff Branch Site - Distribution of Artifacts by Usage/Functional Categories

	CREEKBANK					BACKSIDE				
	IR-1	IR-5	IA-13	IIR-22	IR-10	IIR-23	IR-11	IR-15	IA-7	Total
Finished artifacts	1-16.7	4-25.0	---	4-23.5	4-40.0	1-10.0	2-18.2	1- 8.3	---	17-18.3
Utilized flake & core artifacts	1-16.7	6-37.5	2-20.0	---	3-30.0	1-10.0	3-27.3	3-25.0	---	19-20.4
Sharpening flakes	2-33.3	1- 6.2	3-30.0	3-17.6	---	---	---	---	---	9- 9.7
Flat flakes	2-33.3	1- 6.2	5-50.0	7-41.2	3-30.0	4-40.0	5-45.5	5-41.7	1-100.0	33-35.5
Shatter pieces	---	4-25.0	---	3-17.6	---	4-40.0	1- 9.1	3-25.0	---	15-16.1
TOTAL	6	16	10	17	10	10	11	12	1	93

TABLE 3: Slipoff Branch Site - Distribution of Artifacts by Technical Categories

The relatively high percentage of hunting and butchering tools including projectile point/knives, cutting tools, combination cutting tools, and choppers (26.9%) suggests that processing of game animals was the primary activity at the site while tool making was secondary and was carried out at the site by its Indian inhabitants only because they were already there and/or in conjunction with hunting and butchering.

It would appear, therefore, that the primary use of the site was as a station where game animals were brought for butchering or that this location was a favorite site for ambushing and subsequently butchering game animals. The location of the site in one of the uppermost habitable areas along Connelly Creek (Figure 7) would make it an ideal secondary base camp for Indian hunters to transport deer or other game animals killed in the uplands for butchering. This location would also provide an excellent watering and yarding area for deer and hence a prime kill site.

One of the major problems in archeological interpretation, the determination of which activities are associated with which cultural group at a site, appears to have been avoided at Slipoff Branch. The homogeneity of lithic raw materials (all quartz) and diagnostic artifacts (four Morrow Mountain pp/k's) suggest that prehistoric Indians representing a single technological and, perhaps, cultural tradition occupied the site within a limited span of time (ca. 5500-4000 B.C.). The low artifact density at the site (0.45 artifact per square foot; 0.83 artifact per cubic foot) suggests that cultural activities at the site were relatively short-term, infrequent, and/or produced relatively little artifact debris. In all likelihood, the site represents a temporarily-occupied (perhaps seasonal) Morrow Mountain hunting/butchering camp.

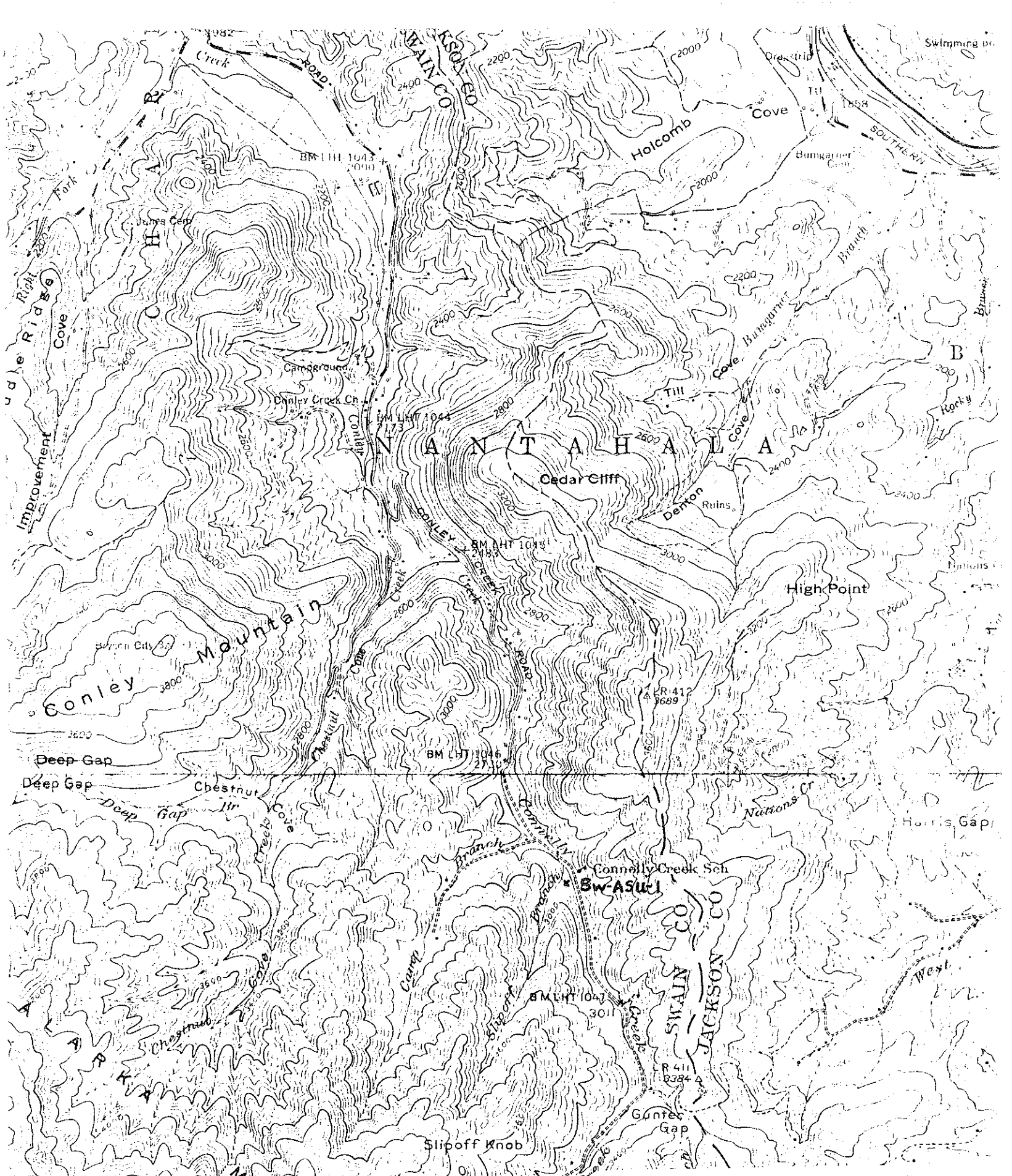


FIGURE 7: The Connelly Creek Locality
Scale 1:24,000
Contour Interval 40 ft.

The Place of the Slipoff Branch Site in Local and Regional Systems

It is obvious that a temporarily-occupied site like Slipoff Branch is only a single component in a set of complex social, cultural, and environmental systems. Morrow Mountain sites have been found in a wide range of environmental settings in the Southern Appalachians and Piedmont (Bass 1977; Purrington and Douthit 1976) and, undoubtedly, these occupations represent a variety of cultural activities which are part of a single cultural system or several closely-related systems.

The characteristics of the various site types in the Morrow Mountain settlement/subsistence system are, as yet, poorly understood. In part our understanding is limited by the large number of Morrow Mountain components which are mixed with the remains of other cultures thus severely restricting the opportunity for reconstructing cultural activities. Single component horizons in bottomland sites such as those along the Little Tennessee River (Cridlebaugh 1977) and upland sites such as Slipoff Branch provide the relatively uncontaminated data from which separate phases of the lives of these people may be reconstructed. Ultimately it should be possible to determine the relationships between the various site types and concomitant activities of the Morrow Mountain people so that a better understanding of their overall way of life may be obtained.

REFERENCES CITED

Ahler, Stanley A., and R. Bruce McMillan
1976 Material culture at Rodgers shelter: a reflection of past human activities. In Prehistoric man and his environments: a case study in the Ozark Highland, edited by W. Raymond Wood and R. Bruce McMillan, pp. 163-199. Academic Press, New York.

Bass, Quentin R., II
1977 Prehistoric settlement and subsistence patterns in the Great Smoky Mountains. Unpublished M.A. thesis, Department of Anthropology, University of Tennessee, Knoxville.

Battle, J., et. al.
1892 Climatology of North Carolina: from records of 1820 to 1892. North Carolina Agricultural Experiment Station.

Braun, E. Lucy
1950 Deciduous forests of eastern North America. Blakiston, Philadelphia.

Broyles, Bettye J.
1971 Second preliminary report: the St. Albans site, Kanawha County, West Virginia, 1964-1968. West Virginia Geological and Economic Survey, Report of Archaeological Investigations, No. 3. Morgantown.

Chapman, Jefferson
1975 The Rose Island site and the bifurcate point tradition. Department of Anthropology, University of Tennessee, Report of Investigations, No. 14. Knoxville.

1976 The archaic period in the lower Little Tennessee River valley: the radiocarbon dates. Tennessee Anthropologist, 1(1):1-12.

1977 Archaic period studies in the lower Little Tennessee River Valley: Retrospect, 1977. Tennessee Anthropological Association. Newsletter, 2(4):1-7.

Coe, Joffre L.
1961 Cherokee archaeology. In William N. Fenton and John Gulick, eds., Symposium on Cherokee and Iroquois culture. Smithsonian Institution, Bureau of American Ethnology, Bulletin 180.

1964 The formative cultures of the Carolina piedmont. Transactions of the American Philosophical Society, n.s., 54(5).

Collins, Susan M.
1977 A prehistoric community at the Macon County Industrial Park site. North Carolina Archaeological Council, Publication 2.

Cridlebaugh, Patricia A.
1977 An analysis of the Morrow Mountain component at the Icehouse Bottom site and a reassessment of the Morrow Mountain complex. Unpublished M.A. thesis, Department of Anthropology, University of Tennessee, Knoxville.

DeJarnette, David L., John Walthall, and Steve Wimberly
1975 Archaeological investigations in the Buttahatchee River valley II: excavations at Stucks Bluff rock shelter. Journal of Alabama Archaeology, 21(2):99-119.

Dickens, Roy S.
1976 Cherokee prehistory: the Pisgah phase in the Appalachian Summit region. University of Tennessee Press, Knoxville.

Dunnell, Robert C.
1972 The prehistory of Fishtrap, Kentucky. Yale University, Publications in Anthropology, No. 75. New Haven.

Fenneman, Nevin M.
1938 Physiography of Eastern United States. McGraw-Hill, New York.

Griffin, John W.
1974 Investigations in Russell Cave. National Park Service, U.S. Department of the Interior, Publications in Archeology 13. Washington, D.C.

Holden, Patricia P.
1966 An archaeological survey of Transylvania County, North Carolina. Unpublished M.A. thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

Keel, Bennie C.
1976 Cherokee archaeology: a study of the Appalachian Summit. University of Tennessee Press, Knoxville.

King, Philip B.
1968 Geology of the Great Smoky Mountains Park, Tennessee and North Carolina. U.S. Geological Survey, Professional Paper, 587.

Linzey, Alicia V. and Donald W. Linzey
1971 Mammals of the Great Smoky Mountains National Park. University of Tennessee Press, Knoxville.

Perkins, S.O. and William Gettys
1947 Soil Survey of Swain County, North Carolina. U.S. Department of Agriculture, Washington, D.C.

Piper, Harry M.
1977 Prehistoric settlement-subsistence pattern in the Mount Rogers National Recreation Area, Virginia. Unpublished M.A. thesis, Department of Anthropology, University of South Florida.

Purrington, Burton L.
1976 An archeological reconnaissance of the N-645 tract, Nantahala National Forest, near the head of Connelly Creek, Swain County, N.C. Report to the U.S. Forest Service, National Forests in North Carolina, Asheville, N.C.

1978 Prehistoric and Modern Appalachia: archeological models and contemporary social policy. Paper presented at the annual meeting of the Southern Anthropological Society, Lexington, Kentucky.

Purrington, Burton L., and Mary Lee Douthit
1976 Soils and site distribution in the upper Watauga valley, North Carolina: a preliminary report. Paper presented at the 6th Middle Atlantic Archaeology Conference, Front Royal, VA.

Sharpe, Bill
1954 A new geography of North Carolina. Sharpe Publishing Co., Raleigh.

Shelford, Victor
1963 The ecology of North America. University of Illinois Press, Urbana.

Stupka, Arthur
1964 Trees, shrubs and woody vines of Great Smoky Mountains National Park. University of Tennessee Press, Knoxville.

ARCHEOLOGICAL RECONNAISSANCE AND TEST EXCAVATION AT THE MARION TREATMENT PLANT SITE, MCDOWELL COUNTY, NORTH CAROLINA

by

Burton L. Purrington
Appalachian State University
Boone, NC 28608

July 6, 1977

A report submitted to the City of Marion
and the North Carolina Department of Cultural Resources,
Division of Archives and History

CONTENTS

Figures

Table

INTRODUCTION

As part of the Marion Sewers Project (C-370-354-EPA) a waste treatment plant will be constructed east of the City of Marion in McDowell County, North Carolina. In compliance with the National Environmental Policy Act of 1969 (NEPA) and Executive Order 11593 the City of Marion through O'Brien and Gere, Inc./Engineers requested an archeological survey of the treatment plant site, which was authorized on May 6, 1976.

On May 30, 1976, I conducted a reconnaissance of the site of construction of the treatment plant and the surrounding property to be included with the treatment plant (Figure 1). One prehistoric Indian site, the Corpening Creek site (preliminary number 31McASU-1), was discovered at the construction site, and test excavations were proposed so that the archeological significance of the site might be determined. These excavations were authorized on June 24, 1976.

On June 26 and 27, 1976, five 5 x 5 foot test squares were excavated at the site by a crew consisting of James Arney, Carolyn Bridges, Eddie Campbell, Wanda Harris, Bertis Little and Dale Reavis under the field direction of the author. These excavations and the survey recovered a sufficient body of data from which to construct a picture of some of the prehistoric cultures and their environments at the site covering a time range of approximately 3000 B.C. to A.D. 100. In addition the test excavations showed that the site was quite shallow with a low artifact density and that further investigations at the site would not be likely to contribute new information to the archaeological data base. With the recovery of a small but apparently representative sample the adverse impacts of construction on the site were, in effect, mitigated, and archeological clearance was recommended to the Archeology Section, Division of Archives and History, North Carolina Department of Cultural Resources on August 6, 1976.

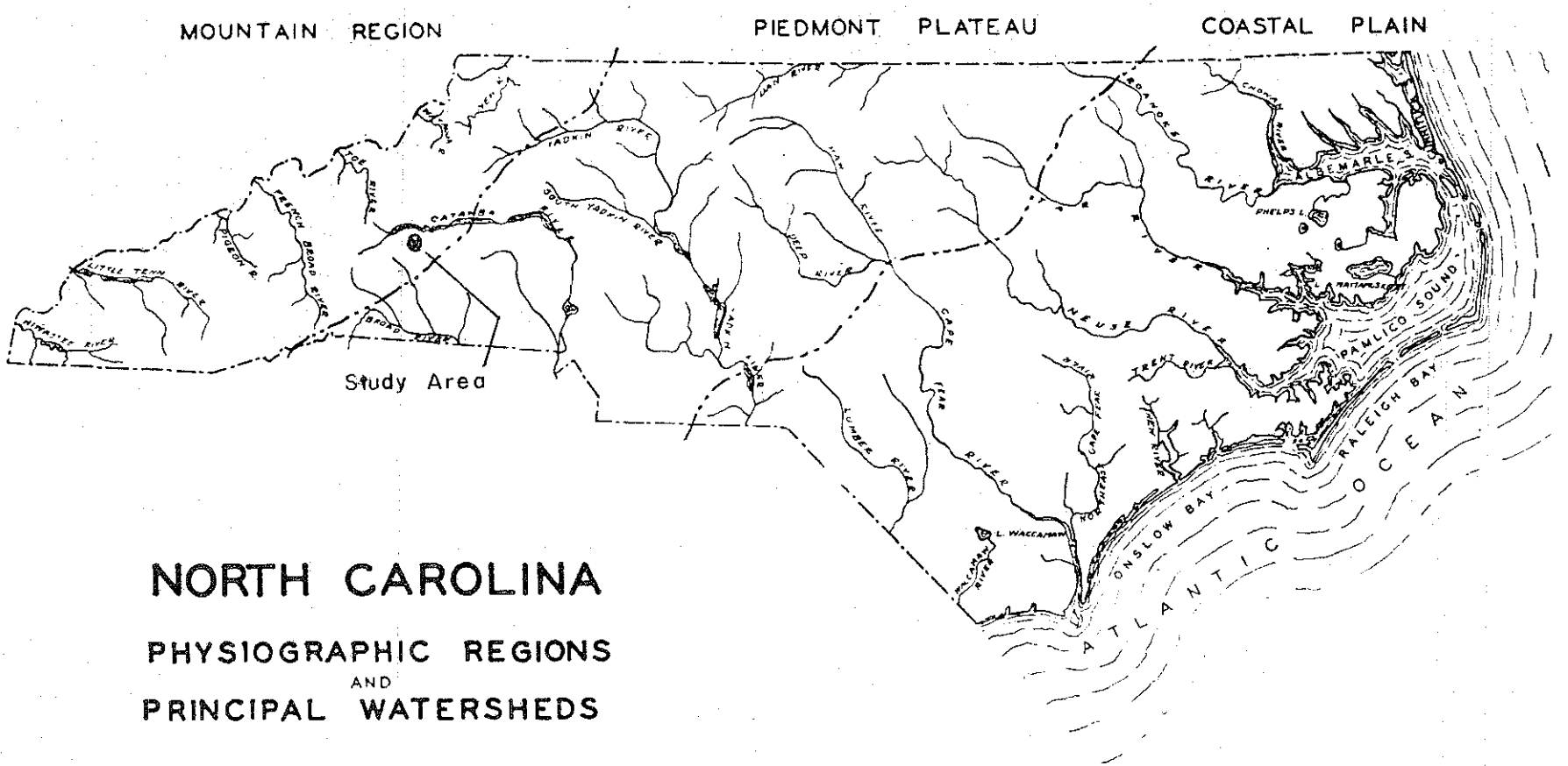


Figure 1: General Location of Study Area

Although both provinces lie within the Temperate Deciduous Forest biome (Shelford 1963:Chapters 2-3), their environments are substantially different even within the immediate range of the study area (i.e., within a ten-mile radius). The southern Blue Ridge was dominated in aboriginal times by an oak-chestnut forest with many other food producing trees such as maple, beech, and hickory present in varying proportions depending on altitude, drainage, soil, lithology, slope direction, and climate. The great variability of these environmental characteristics contributed to a mosaic of plant and animal communities and a wide range of potentially exploitable biotic resources.

The Piedmont may have presented less environmental variability to the native peoples in the study area, but the oak-hickory forests characteristic of this province were probably more productive of wild plant and animal resources. In addition the Piedmont terrain was much less rugged, rivers flowed more gently and flooded less violently, river bottoms were much broader providing extensive areas of fertile soil, and winters were much shorter and milder. Farming populations of later prehistoric times would have found the Piedmont portion of the study area particularly attractive because of the broad, fertile floodplains and a lengthy growing season of some 200 to 250 days.

The dominant rocks in the study area are fine-grained gneiss with thin biotite schist and amphibolite layers which show extreme folding. The quartzite-dominated Grandfather Mountain window appears a few miles to the north on the north side of the Catawba River (White n.d.).

The dominant Piedmont soils are red-yellow podzolics. Reddish-brown lateritic soils occur on uplands underlain by basic crystalline rocks, and planosols are associated with them on foot slopes or wet upland flats.

Shallow sol bruns acides soils are found on strongly rolling to steep slopes (Austin 1965:61-62). Alluvial soils are in river and stream bottoms and less intensely weathered gray-brown podzolics are in the higher elevations of the adjacent Blue Ridge province.

The well-drained alluvial soils of the main bottoms are agriculturally superior to the more poorly drained bottoms of the smaller streams (including Corpening Creek) and the less fertile and frequently rockier and more erosion-prone soils of the uplands and valley margins. The dominant soils in the study area are red-yellow podzolics and poorly drained alluvial soils.

Previous Archeological Research

Bennie Keel (1976:223) has noted that "although a great deal is known about the prehistory of the eastern edge of the Carolina Piedmont, where Joffre L. Coe has carried out extensive research over the last three decades, virtually no details are known about the western edge of the Piedmont." Several cursory investigations have been conducted in the upper Yadkin Basin in the northwestern Carolina Piedmont which suggest that there was little influence from or on Blue Ridge Mountain cultures in prehistoric times (Keel 1976:223). However, a recent survey on the upper Catawba River by Robert Keeler (1971) found significant Mountain influence on prehistoric Piedmont cultures with influence diminishing as distance from the Blue Ridge escarpment increased. In addition, a number of recent studies using relatively sophisticated research designs are being conducted in the South Carolina Piedmont (House and Ballenger 1976).

With the exception of Keeler's survey, relatively little formal archeology has been conducted in the upper Catawba valley. However, a number of

sites from McDowell County have been recorded by the Research Laboratories of Anthropology at the University of North Carolina - Chapel Hill, and one of these sites in the McDowell Bottom of the Catawba two miles northwest of Marion and about five miles northwest of the Corpening Creek site was excavated by the Research Laboratories in the summer of 1977.

Cultural Environment

Evidence of the four known prehistoric Indian cultural traditions of the Eastern U.S. -- the Paleo-Indian, Archaic, Woodland, and Mississippian -- is present in McDowell County and the upper Catawba valley. The Paleo-Indian culture (10,000-8000 B.C.) is characterized by its distinctive fluted lanceolate spearpoints and a hunting and gathering way of life probably oriented to one or more base camps and resource zones (Gardner 1974:39-44). In the western and northwestern United States the Paleo-Indians were adapted in varying degrees to the environmental conditions of the late Pleistocene glacial period, including the hunting of large, now-extinct animals (e.g. mammoths and mastodons) and northern species (e.g. reindeer). However, in the lower elevations of the Southeast climatic and environmental conditions were changing to those of early historic times (Watts 1970; Whitehead 1972), i.e., a humid temperate to subtropical environment dominated by oaks and hickories with deer the dominant large game animal.

Given an environmental setting substantially different from the West and Northeast, it is likely that the adaptive strategies and overall culture of the Southeastern Paleo-Indians were considerably different too.

The Archaic culture (8000-1000 B.C.) was in all probability the product of a gradual adaptation of the Paleo-Indians to the southeastern deciduous

forests. The Eastern Archaic way of life was based on the increasingly efficient utilization of the region's abundant and varied natural resources. In many areas it has been shown that these Indians followed seasonal cycles, i.e. moved from one resource zone to another at their respective peaks of seasonal productivity. Archaic cultures of the Carolina Piedmont are known for a variety of distinctive spearpoint types with each type characteristic of a different period (Coe 1964).

The Woodland cultures (1000 B.C.-A.D. 1000) show few apparent differences with the Archaic except for the appearance of pottery and perhaps a somewhat more settled way of life and a higher population density. It is still uncertain that horticulture was added to the subsistence of the Piedmont Woodland Indians as it was over much of the Southeast during the Woodland period. Caldwell (1962:294) included the Woodland cultures of the Carolina Piedmont in his Middle Eastern tradition which he believed was largely a continuation and augmentation of the Archaic hunting and gathering way of life. Diagnostic artifacts of the Piedmont Woodland include crude triangular points (Coe 1964) and ceramics tempered with sand or crushed stone with surfaces molded by paddles wrapped in cord or fabric or with checked stamped designs and sometimes smoothed or partially smoothed.

The Mississippian culture (A.D. 1000-1700) of the Piedmont is part of the South Appalachian Mississippian (Ferguson 1971). The only intensively-studied Mississippian site in the Carolina Piedmont is Town Creek on the Pee Dee River in east-central North Carolina, but surface collections and limited excavations at other Piedmont Mississippian sites suggest that as in other areas of the Southeast a substantial population increase and town life based on improved varieties of corn took place. Over most of the East

Mississippian culture is characterized by small triangular arrowpoints and in the Piedmont predominantly by complicated stamped pottery. The Mississippian ceramics found by Keeler in his Upper Catawba survey were predominantly those of the Pisgah type, a ceramic style characterized by collared rims with punctate designs and rectilinear complicated stamping which typifies the culture of the prehistoric Cherokees.

The historic native tribes of the upper Catawba -- and the Piedmont as a whole -- are poorly documented. This unfortunate situation is attributed by ethnologist Charles Hudson (1970:29) to the fact that the Piedmont and Atlantic Coast Indians lay directly in the path of English colonization and were quickly destroyed or disrupted. In addition, Hudson notes, the English recorded much less information about the Indians than either the French or the Spanish.

Mooney (1900) asserted that the Cherokees once claimed the Piedmont west of the Catawba River, and traded and raided through much of the western Piedmont into the mid-eighteenth century. However, the Catawbas at one time also claimed the Catawba valley from deep in South Carolina to its headwaters (Wetmore 1975:51).

PROJECT RESEARCH DESIGN

In accordance with the National Environmental Policy Act of 1969 (NEPA), Executive Order 11593, and other federal legislation and directives, the City of Marion requested an archeological survey of the impact area of the proposed Marion Treatment Plant site. The primary goals of this survey were threefold: (1) to locate any archeological sites in the impact area, (2) if any sites were present, to determine whether they were of such archeological significance as to warrant nomination to the National Register, and (3) to

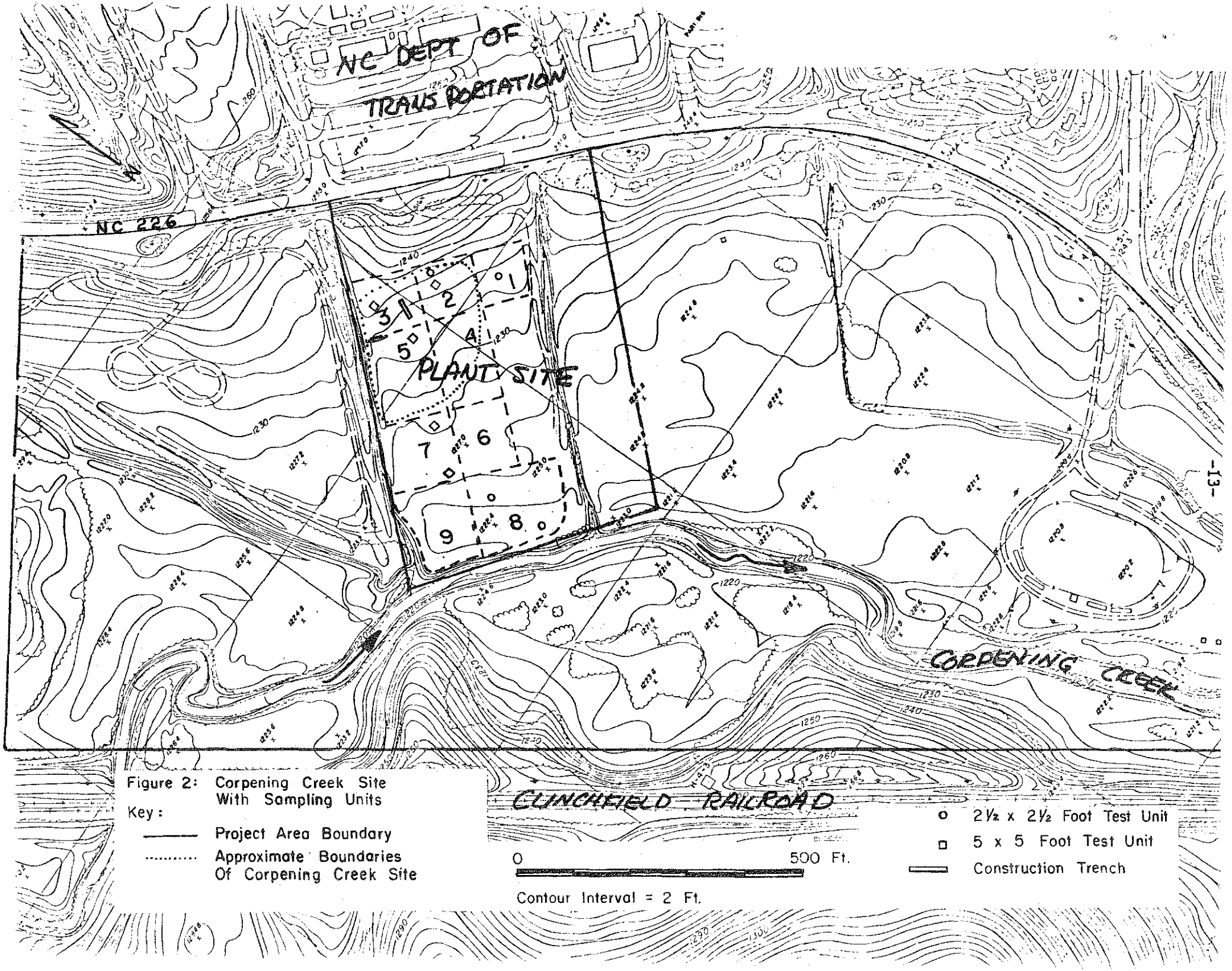


Figure 2: Corpening Creek Site With Sampling Units

fan; and one was in the flood channel of Corpening Creek.

In a sense the site was statistically stratified since each of the three major topographic zones in its immediate area was tested. However, the selection of squares for excavation was made selectively rather than from a table of random numbers. The test units were placed in widely separated locations with minimal ground cover. A random sampling method was not used because of the small sample size and the desire to space the excavation units rather widely and evenly across the site. The plowzone of each square was excavated in 0.25-foot levels.

ANALYSIS AND DESCRIPTION

Environmental Characteristics of the Study Area

The study area is dissected by several streams the largest of which is Corpening Creek, a shallow, swift-flowing third-order stream with numerous riffles. Jacktown Creek, a second-order stream, meets Corpening Creek just above the plant construction site. Three impermanent first-order streams flow into Corpening Creek from the north, two of which bound the colluvial fan on which the plant site and 31McASU-1 are located.

Four major landforms were observed in the study area (Figure 3) including: (1) bases of the steep slopes to the north and south of the study area; (2) a moderately sloping (ca. 6 per cent) colluvial fan on the north central edge of the study area; (3) a flood channel (T-0) of varying width on both sides of Corpening Creek; and (4) a natural levee on the north side of a meander of Corpening Creek in the southeast corner of the study area and several possible levees of small size in the broader bottoms downstream.

All four landform types were walked and the last three had 2½ x 2½ or 5 x 5 foot test squares excavated in them. Only the colluvial fan yielded archeological remains. Unfortunately the large levee in the forested south-

eastern corner of the study area was given low priority because of its dense shrub cover and its location well away from the construction site and on the other side of a small stream (Figure 2). There were no surface indications of a site on this landform and time did not permit test excavation here.

The vegetation in the study area is dominated by bottomland trees especially black willow (Salix nigra) and sycamore (Plantanus occidentalis). Other bottomland plants include such edible species as cat-tail (Typha latifolia), lambs-quarter (Chenopodium album) and "pigweed" (Amaranthus sp.).

On the somewhat better-drained colluvial fan a mixed forest of such trees as willow oak, sweet gum, white and winged elms, red maple, tulip poplar, and ash may have been present in aboriginal times (Braun 1950:265). There are relatively few nut-bearing trees in the study area, but edible herbs would have been readily available in spring through early fall in addition to fish, turtles, and shellfish in the shallow, rapidly flowing

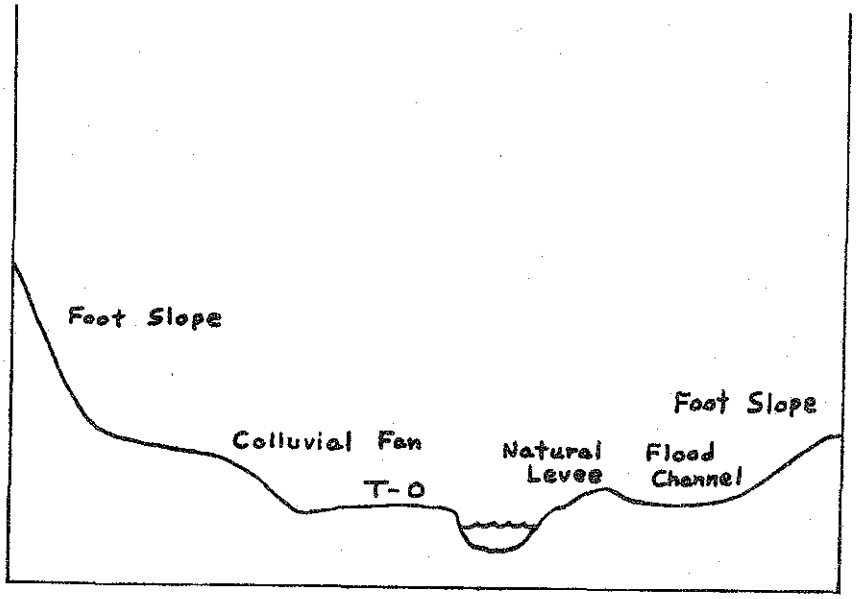


Figure 3: Generalized Landforms in the Study Area

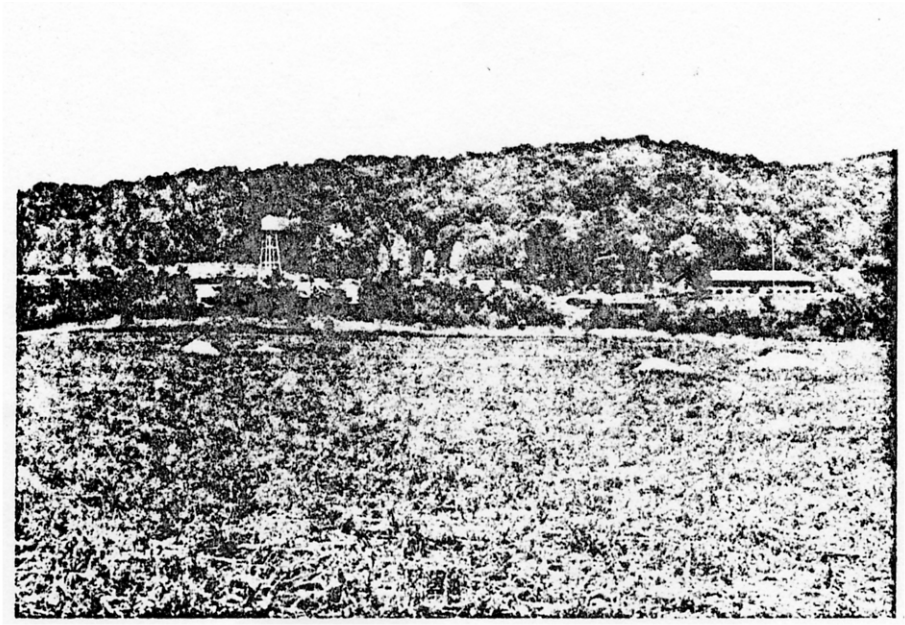


Figure 4: General view of Corpening Creek site from southwest.

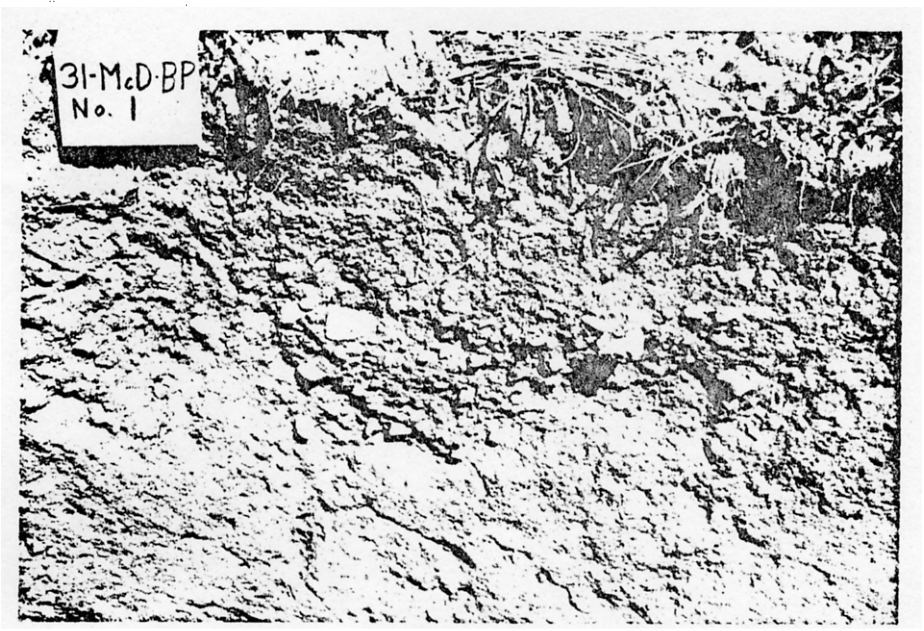


Figure 5: Profile of 1977 trench in Unit 3. The site identification marker is 6½ inches wide.

stream. For people following a seasonal cycle of food gathering, the wild food resources of the study area probably would have been most abundant in the spring and summer and least so in fall and winter.

Sampling Methods

Only one site, the Corpening Creek site, temporarily numbered 31McASU-1, was found in the study area. It is situated on the Marion East U.S.G.S. Quadrangle map at approximately 35 degrees 39 minutes north latitude and 81 degrees 57 minutes west longitude. The Universal Transverse Mercator coordinates are: Zone 17S 134456.

The site extends over the upper and middle portions of the gently sloping colluvial fan on which the treatment plant is to be located at an elevation of about 1230 feet above mean sea level (Figure 4). It was difficult to estimate the dimensions of the site because it was overgrown with weeds (surface visibility about 10 per cent), but archeological remains were found over an area of roughly 200 x 220 feet (Figure 2).

As soon as it became evident, from the presence of chert flakes among the corn stubble and weeds, that an archeological site was present on the colluvial fan, the immediate area was divided into rectangular sampling units approximately 100-150 feet on a side (Figure 2). Unit 1, which had been tested prior to locating the site, is in a low area on the east side of the fan next to an impermanent stream draining into Corpening Creek (it was trickling at the time of the survey).

Units 2-7 were created by the division of the fan longitudinally (perpendicular to the stream) into arbitrary east and west sides with subdivisions parallel to the stream representing the upper, middle and lower portions of the fan. Units 8 and 9 represented the east and west halves of the flood channel.

All units were walked in parallel transects about 20 feet apart, and any archeological material found was bagged by unit. In addition 2½ by 2½ and/or 5 by 5 foot test pits were excavated in the upper, middle, and lower portions of the fan as well as in Unit 1 and the flood channel immediately below (Figure 2). The greatest quantity of archeological material was found on the upper part of the fan, a small amount in the middle, and none in Unit 1, the lower portions of the fan or the flood channel into which the fan gradually grades.

Soils

In an effort to expand our understanding of the environmental context of the Corpening Creek site the soil profiles exposed in the excavated test squares were subjected to cursory field description and analysis. This includes identification of horizons, based on pedogenic characteristics, and the depth, color, and texture of each horizon. Colors were identified from the Munsell color chart while textures were determined by feel rather than the more objective but much more time-consuming process of particle size analysis in the laboratory. Chemical attributes and pH have not been determined either. However, samples were taken from each horizon of several test squares and are available at Appalachian State University's Anthropology Department for more intensive soil analysis.

Test squares were excavated in the following sampling units: 1, 2, 3, 5, 7, and 8. In this way the major subdivisions of the colluvial fan were investigated as well as the flood channel.

A 2½ x 2½ foot square was excavated in Unit 1 on the initial reconnaissance. The following profile was exposed:

Horizon	Depth (feet)	Color	Texture
1 Ap	0 -0.95	Brown 10YR 4.5/3	Sandy clay loam
1 B_{2t}	0.95-1.30	Reddish brown 5YR 5/3	Clay loam
2 A_1	1.30-1.55	Dark brown 10YR 3/3	Heavy silt loam
3 A_1	1.55-1.75	Very dark grayish brown 10YR 3/2	Silt loam
3 B_{2t}	1.75-2.60	Light yellowish brown 10YR 6/4	Silty clay
3 C	2.60 +	Light brownish gray 2.5Y 0.5/2	Sandy clay (water table reached at 2.70 ft. bs.)

No archeological remains were found in this square or the unit as a whole, and although the buried organic horizons suggest a remote possibility of buried cultural zones, it is more likely that there are two or more former ground surfaces buried by colluvium from the slope above. The dark organic material can be attributed to the relatively poor drainage of this portion of the fan and the vegetation which it supported.

Unit 2, the upper east portion of the fan, produced the greatest quantity of prehistoric remains. A 2½ x 2½ foot test square was excavated at about S 75-80, E 0-5 during the reconnaissance and a 5 x 5 foot square during test excavation (S 90-95, W 0-5). The former square revealed a 7.5YR 4/4 clay loam plowzone with a buried organic horizon (10YR 3/2, heavy silt loam) at 1.8 feet below surface. Subsequent excavation was needed to determine whether the buried horizon was due to former conditions of poor drainage or past human activity. Five 5 x 5 foot squares in areas 2, 3, 5, and 7 verified the former interpretation.

The test squares in Units 2, 3, and 5 (Figure 2) exposed basically similar profiles. A subsequent visit to the site in May of 1977 enabled me

to look at a six-foot deep trench dug for construction in Unit 3 which conformed to the earlier profiles and exposed deeper strata. The profile of the 1977 trench is described below and shown in Figure 5.

Horizon	Depth (feet)	Color	Texture
Ap	0.0-0.8	Dark brown 7.5YR 4/4	Clay loam
B_{2t}	0.8-2.5	Reddish brown 5YR 4/4 with mottlings of iron (2.5YR 4/8) and manganese	Gravelly clay
C	2.5-5.5	Yellowish brown 10YR 5/6	Micaceous clay Crystalline arrangement of bedrock still evident.
D	5.5 +		Highly micaceous amphibolite schist.

The soil on the fan upon which the Corpening Creek site is located has the general characteristics of a red-yellow podzolic and can be tentatively classified as an ultisol. Since this soil has weathered from a micaceous schist, it can be classified as a Madison soil (Soil Conservation Service n.d.). There is no evidence of alluvium in these profiles, but accumulation of colluvium is apparent in the gravels and pebbles present in the B horizon. The Ap horizon has a relatively high clay content for a Madison soil which suggests that the site has been deflated by sheet erosion and that a portion of the B_{2t} horizon has been mixed with what is left of the former A_1.

Square S265-270, W275-280 was excavated in Unit 7 on the lower end of the fan. No artifacts were found in this location. The fact that sheetwash was less intensive in this topographic situation is apparent in the following profile which shows a relatively well-preserved A horizon:

Horizon	Depth (feet)	Color	Texture
Ap	0.0-0.9	Dark brown 10YR 4/3	Clay loam
B_{21t}	0.9-4.0	Reddish brown 5YR 4/4	Sandy clay
B_{22t}	4.0-4.7	Yellowish brown 10YR 5/6	Clayey sand with gleying throughout.
C	4.7 +	Yellowish brown 10YR 5/6	Sand, groundwater encountered.

This profile suggests that the parent material consists of an older sandy alluvium overlain by a clayey sand colluvium or alluvial-colluvial mix. More recent sandy clay colluvium has lain on the surface for a sufficiently long period of time (i.e. several thousand years) for the finer soil particles (clay) to have percolated (eluviated) from the A horizon to form a deep argillic (clayey) B horizon. This profile and others from the fan suggest a very slow accumulation of soil in the last several thousand years, therefore, we cannot expect archeological remains more than a few inches below the surface.

The test square in the flood channel exposed a dark yellowish brown (10YR 4/4) friable loam Ap horizon which is underlain by a mottled light yellowish-brown silt. This is an imperfectly drained, frequently flooded alluvial soil which fits the criteria for a Chewacla loam (Soil Conservation Service n.d.; Leighty et al 1944:9-10). This soil is not a prime candidate for prehistoric occupation when it is imperfectly drained and/or frequently flooded, and the absence of archeological remains in this location is not surprising.

Artifact Description

Archeological remains were found in four of the nine units at the site. These were Units 2-5 on the upper and central portions of the colluvial fan.

It is apparent that prehistoric human occupation of the study area along the valley margins of Corpening Creek was concentrated on high, relatively level, well-drained ground. The archeological remains found in each of the units are described below and they are listed in Table 1.

Unit 2

Two squares, one 2½ by 2½ and the other 5 by 5 feet, were excavated in Unit 2. The artifact yield from the squares was quite meager with two quartz flakes found in the former square and one quartz flake and one chert flake in the latter. These flakes were all found in the plowzone; the subsoil was culturally sterile. Nevertheless, a moderately large quantity of cultural debris was found on the surface of Unit 2. Artifacts found on the surface include:

POINTS

Otarre Stemmed (Figure 6-c) A single straight-stemmed Otarre point possibly of rhyolite or "Carolina slate" was shaped almost entirely by percussion flaking. The tip and a portion of the stem have been broken, but measurable dimensions include: blade width - 28.2 mm, stem length - 9.6 mm; thickness - 7.3 mm. This type is considered by Keel (1976:196) "to be the latest point type produced in the Southern Appalachians prior to the introduction of ceramics." It is transitional between the large stemmed Late Archaic Savannah River points and the smaller stemmed Early Woodland types such as Plott and Swannanoa and may date to about 1000 to 700 B.C. However, recent excavations in the lower Little Tennessee River Valley indicate that this generalized style may have appeared as early as about 5000 B.C. (Cridlebaugh 1977).

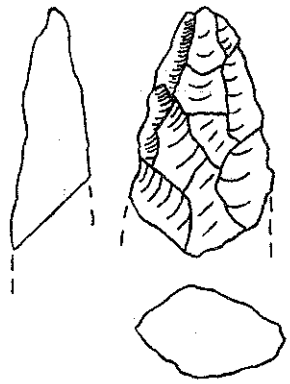
Pigeon Side Notched (Figure 6-d) A small trianguloid point of chert has shallow side notches near the base which have been pressure flaked on opposite sides of each face which is characteristic of Pigeon points. The

Table 1

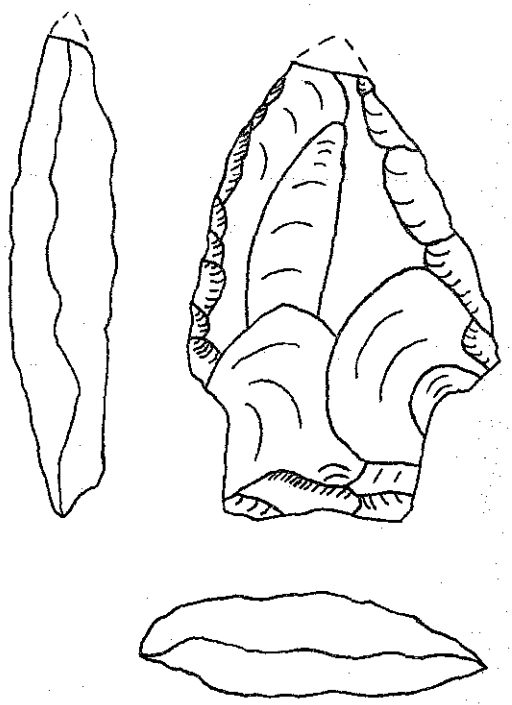
Artifact Distribution at the Corpening Creek Site

	Unit				
	2	3	4	5	Total
Guilford (?) point	1-Qt				1
Savannah River point		1-Qt			1
Otarre point	1-R				1
Pigeon point	1-C				1
Chopper/knife	2-Q				2
Chopper		1-Q			1
Alternately beveled side scraper			1-Q		1
End scraper			1-Q		1
Utilized flake scraper	2-C 2-Q 1-R	4-C 1-Q		1-Q	11
Utilized flake knife/scraper	1-R				1
Utilized flake graver	1-C				1
Interior flake, non-utilized	8-C 5-Q 1-Qt 4-R	2-C 1-Q	2-Q 1-R	2-C 1-Q	27
Shatter piece, non-utilized	2-Q 1-Qt	2-Q			5
Core			1-Q		1
Total Chipped Stone	33	12	6	4	55
Pigeon Plain	3				3
Pigeon Check Stamped	1				1
Pigeon Cord-Marked		1			1
Total Ceramics	4	1			5
Total Artifacts	37	13	6	4	60

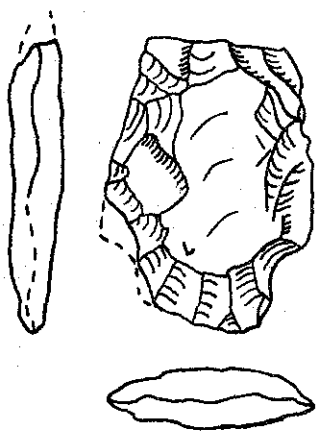
C = Chert
Q = Quartz
Qt = Quartzite
R = Rhyolite or Carolina Slate (?)



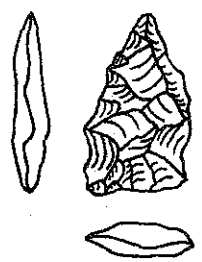
a. Point Tip (Guilford?)



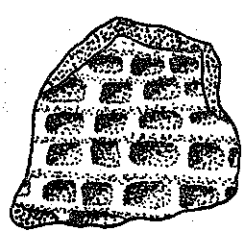
b. Savannah River Point



c. Otarre Point



d. Pigeon Point



e. Check Stamped Pottery

f. Side Scraper

g. End Scraper

Figure 6: Artifacts from the Corpening Creek Site.

tip has been finely pressure flaked to produce an effective perforating or engraving instrument. Dimensions are: length - 23.6 mm; blade width - 14.3 mm; basal width - 12.9 mm; internotch width - 12.4 mm; thickness - 4.3 mm. These points are associated with the ceramic Pigeon phase in southwestern North Carolina which Keel (1976:241) suggests dates to about 300 B.C. to A.D. 100. In northern Georgia and east Tennessee these points are found in a slightly earlier Early Woodland context (Keel 1976:129).

Point tip, possibly Guilford (Figure 6-a) A tip of a quartzite point cannot be positively identified. However quartzite was used as a raw material primarily by people of the Guilford (4000-3000 B.C.), Savannah River (3000-1000 B.C.), and Early Woodland (1000-300 B.C.) cultures, and the proportionate narrowness and thickness of the tip clearly fall within the range of the thick, narrow, lanceolate Guilford points (Coe 1964:43).

CHOPPER/KNIFE

The tip of a thick (18.7 mm) bifacially worked quartz core shows considerable grinding and battering of the lateral edges. Such wear patterns suggest use for heavy cutting and chopping. A large chunk of residual quartz from this area shows heavy battering on one edge (the opposite edge has natural backing) and this piece of stone may have been an artifact too.

UTILIZED FLAKES

Several stone flakes had tiny utilization flakes removed from one or more edges. These include:

Utilized Flake Scrapers. These artifacts exhibit tiny pressure flake scars along one or more lateral edges. These tools include two scrapers of chert, two of quartz, and one of rhyolite(?).

Utilized Flake Graver. One small chert flake has tiny pressure flakes with slightly polished edges near a sharp tip suggesting use for engraving wood, bone, shell, and/or antler.

Utilized Flake Knife/Scraper. A medium-sized rhyolite(?) flake shows both edge grinding and use flakes along several edges suggesting use of this tool for both cutting and scraping.

LITHIC WASTE

Flakes. Of the total of 14 waste flakes found on the surface, seven are of chert, four of rhyolite(?), two of quartz, and one of quartzite. The chert flakes are quite small ranging from 8 to 13 mm long while the rhyolite(?) flakes range from 16 to 27 mm long. The quartz flakes are each 13 mm long and the quartzite flake is 22 mm long.

Shatter Pieces or Chunks. There were two chunks of quartz and one of quartzite from this area of the site which exhibit negative bulbs of percussion or remnants of a flaked face and appear to be products of human workmanship rather than weathering of local bedrock. Residual chunks of low-grade quartz are common at the site.

FIRE-CRACKED ROCK

One small (ca. 45 mm diameter) cobble of partially metamorphosed sandstone is heavily oxidized, blackened, and cracked suggesting that it has been burned.

CERAMICS

Four sherds of pottery made with a sandy, micaceous clay and tempered with crushed quartz were found in Unit 2. They range from 5.0 to 8.0 mm in thickness with a mean of 6.3 mm. Three sherds have smoothed surfaces while the thickest, a fragment of a flaring neck of a jar, has check stamping with deep

rectangular checks averaging 4.5 x 3 mm (Figure 6-e). The paste is compact but not contorted and exterior colors are light brown to reddish brown with interiors ranging from reddish orange (oxidized when fired) to dark gray (reduced).

The general color, paste, temper, vessel form, and surface treatment characteristics of these sherds fit comfortably within the Pigeon series of ceramics of southwestern North Carolina (Keel 1976:226-229, 256-260). Pigeon ware is associated with the early Middle Woodland Pigeon phase of about 300 B.C. to A.D. 100. Quartz tempering is also characteristic of the Middle Woodland Yadkin series of ceramics of the eastern North Carolina Piedmont, but in the Yadkin series the temper fragments tend to be larger and much more abundant, and fabric-impressed and cord-marked surfaces predominate (Coe 1964:30-32).

Unit 3

Unit 3 on the west side of the upper end of the fan was second in artifact productivity at the site. Artifacts found include:

POINTS

Savannah River Stemmed (Figure 6-b) A medium-sized Savannah River point of quartzite has the following dimensions: length - 65 mm (est.); blade width - 42.4 mm; stem length - 14.3 mm; stem width - 28.3 mm; thickness - 13.1 mm. This type is associated with the Late Archaic Savannah River phase (3000-1000 B.C.)

CHOPPER

A chunk of residual quartz shows percussion flaking and extensive battering along two parallel edges.

UTILIZED FLAKE SCRAPERS

Four chert flakes and one of quartz have been utilized on one or more edges for scraping.

LITHIC WASTE

Two flakes of chert and one of quartz and two quartz chunks fall into this category.

CERAMICS

One quartz-tempered sherd has the same paste as the sherds from Area 2, but its surface has been impressed with a cord-wrapped paddle and lightly smoothed. The sherd is 8.2 mm thick with a reddish-brown exterior and a dark gray interior.

Units 4 and 5

Unit 5, on the west side of the middle portion of the fan yielded one utilized flake scraper of quartz and one nonutilized chert flake on the surface and a single flake each of quartz and chert in the plowzone of a 5 x 5 foot square. The surface of Area 4, on the east side of the middle portion of the fan, produced one alternately beveled side scraper of white quartz (Figure 6-f), one end scraper of white quartz (Figure 6-g), one white quartz core, and one rhyolite(?) and two white quartz flakes. The quartz is of superior quality to the residual quartz at the site, but could have been obtained from outcrops within a few miles of the site.

Summary and Cultural Reconstruction

The Corpening Creek site is located in the western North Carolina Piedmont on a colluvial fan about 10 feet above the bottomlands of Corpening

Creek at an elevation of about 1230 feet. The archeological remains from the site are all in the plowzone and extend over about an area about 200 x 220 feet. No archeological remains were found on the lower end of the fan or in the imperfectly drained stream bottom. The site was probably selected for its proximity to the stream resources combined with good drainage and a safe height above the floodplain.

The artifacts from the Corpening Creek site appear to span a continuous period from perhaps as early as 4000 B.C., as suggested by the possible Guilford point, through Late Archaic and Transitional Archaic times up to early Middle Woodland times ending about A.D. 100. The Savannah River and Otarre points and Pigeon-like point and pottery are indicators of these respective periods. There is no evidence of cultures earlier than 4000 B.C. or later than A.D. 100 at the site.

The evidence obtained from the Corpening Creek site suggests that it was a temporary hunting, gathering, and/or fishing camp. The temporary nature of the occupation is suggested by the apparent absence of post molds which would indicate that whatever structures the Indians built during their stays at the site were not meant to be occupied year-round.

Another valuable piece of negative data from the site is the apparent absence of storage pits. Although in part this may also indicate short term occupancy, it also suggests that the foods utilized at the site were eaten quickly with minimal preparation rather than stored. Bottomland plants which are most abundant in spring through summer and are eaten fresh fit this pattern much better than nuts, the dominant fall resource, which are readily amenable to winter storage. The location of the site

also supports a hypothesized spring-summer utilization of non-storable stream resources rather than a fall nut-gathering and hunting occupation since both nuts and the game that consumed them such as deer and turkey were probably more abundant in the uplands in the fall.

Since the area of the site is not large and cultural remains are relatively sparse, it is likely that small groups -- perhaps bands of 10 to 30 individuals -- occupied the site at any one time. In summary, the site would appear to have been occupied over a 3000 to 4000 year period by small groups of native people who hunted, gathered, and/or fished in the surrounding area during the spring and/or summer seasons.

The absence of evidence of late prehistoric farming peoples at the site is interesting. However, until a systematic study of the region around the site is carried out, it cannot be determined if their absence is due to diminished use of small stream habitats because of a stronger need to remain in the large, fertile bottoms during the spring and summer with their crops or if they simply moved to a similar site nearby. If the former were true, it would pose an interesting situation in which increasing dependence on horticulture and related activities necessitated a rescheduling of subsistence activities by late prehistoric farmers.

EVALUATION

Despite the relatively small size of the artifact sample collected from this site, a sufficient amount of information was obtained to allow some preliminary hypotheses on the nature of prehistoric life in the western North Carolina Piedmont over the past several thousand years. The salvaging of this information from a soon-to-be destroyed site has performed a service to those interested in the archeology of North Carolina and to the field of archeology in general.

Bibliography

Austin, Morris E.
1965 Land resource regions and major land resource areas of the United States. Agricultural Handbook 296, Soil Conservation Service, U.S. Department of Agriculture, Washington, D.C.

Braun, E. Lucy
1950 Deciduous forests of eastern North America. Blakiston, Philadelphia.

Caldwell, Joseph R.
1962 Eastern North America. In Courses toward urban life, edited by Robert Braidwood and Gordon Willey, pp. 288-308. Aldine, Chicago.

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

Cridlebaugh, Patricia A.
1977 An analysis of the Morrow Mountain component at the Icehouse Bottom site and a reassessment of the Morrow Mountain complex. Unpublished M.A. thesis, Department of Anthropology, University of Tennessee, Knoxville.

Fenneman, Nevin
1938 Physiography of the eastern United States. McGraw-Hill, New York.

Ferguson, Leland G.
1971 South Appalachian Mississippian. Unpublished Ph.D. dissertation. Department of Anthropology, University of North Carolina, Chapel Hill.

Gardner, William M. (Editor)
1974 The Flint Run Paleo-Indian complex: a preliminary report, 1971-73 seasons. Occasional Publication, No. 1, Archeology Laboratory, Department of Anthropology, The Catholic University of America, Washington, D.C.

House, John H. and David L. Ballenger
1976 An archeological survey of the Interstate 77 route in the South Carolina Piedmont. Research Manuscript Series, No. 104. Institute of Archeology and Anthropology, University of South Carolina, Columbia.

Keel, Bennie C.
1976 Cherokee archaeology: a study of the Appalachian Summit. University of Tennessee Press, Knoxville.

Hudson, Charles M.
1970 The Catawba Nation. University of Georgia Monographs, No. 18. University of Georgia Press, Athens.

Keeler, Robert W.
1971 An archaeological survey of upper Catawba River valley. Undergraduate honors thesis, Department of Anthropology, University of North Carolina, Chapel Hill.

Shelford, Victor E.
1963 The ecology of North America. University of Illinois Press, Urbana.

Mooney, James
1900 Myths of the Cherokees. Smithsonian Institution, Bureau of American Ethnology, Annual Report, 1897-98. Washington, D.C.

Soil Conservation Service
n.d. Soil map and interpretations: Rutherford County, North Carolina. U.S. Department of Agriculture, Washington, D.C.

Watts, W. A.
1970 The full-glacial vegetation of northwestern Georgia. Ecology, 51:17-33.

Wetmore, Ruth Y.
1975 First on the land: The North Carolina Indians. Blair, Winston-Salem.

White, William A.
n.d. Guide for geologic field trip in McDowell County for Earth Science.

Whitehead, Donald R.
1972 Developmental and environmental history of the Dismal Swamp. Ecological Monographs, 42(3):301-315.