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THE ARCHAIC PERIOD IN THE CENTRAL SAVANNAH RIVER AREA:
A STUDY OF CULTURAL CONTINUITY AND INNOVATION

by

Richard L. Smith

[Draft of a dissertation that was never formally defended and submitted.]

A Dissertation submitted to the faculty
of the University of North Carolina in
partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in the Department of Anthropology.

Chapel Hill
1974

Approved by:

Advisor

Reader

Reader
For my mother and father, who made this course worthwhile; and
for Deborah, who made it worthwhile
We (Americans) wipe out the artifacts of the past as if they have no curse...
Norman Mailer
R.S. No.177, p.46
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CHAPTER I
INTRODUCTION

This is primarily a study of a series of "middle" cultural expressions in the Central Savannah River area. These are frequently grouped under the infelicitous rubric 'archaic', from an Old Greek root meaning "old"; etymologically it is akin to archaeology itself; furthermore it is firmly wedded to eastern North American prehistoric studies.

However, as noted by Willey and Phillips (1958), Byers (1959a), Ford (1969) and others, in the first quarter of this century the term came to be used in some Mesoamerican studies to refer to certain pre-Maya traits. Spinden (1915) proposed that the Archaic represented a pre-Classic cultural foundation—common to both the Andes and Mesoamerica—which was characterized by agriculture, ceramics and hand-made figurines, and pyramidal mounds; Ford (1969) has revived the idea, though under another term. This early culture was thought to represent the base from which later American civilizations emerged.

In North American archaeology, the term Archaic was given an entirely different denotation when Ritchie (1932) applied it to the Lamoka site materials (New York). There it was applied to an assemblage which was characterized by such lithic and bone artifacts as beveled adzes, certain projectile-point forms, and antler pendant-like objects.

Later it was proposed as a pattern within the Midwestern Taxonomic Method; as thus applied to the Northeast, the Archaic pattern came to be associated with the absence of evidence for certain traits—particularly agriculture and pottery. To many, Archaic connoted a pre-horticultural,
pre-ceramic, cultural stage in North American prehistory. Excavations during the Depression years (and since) from a number of shell-midden sites in the Southeast disclosed some trait overlap between northern and southern sites; at certain of the southeastern sites, however, deep cuts pointed to a hunting-gathering-fishing subsistence in which pottery appeared as an addition—with no other marked cultural changes. Fairbanks (1942), for example, compared traits from Stalling's Island, Georgia, to those of Kentucky shell-middens and to Lamoka, and noted that: "Pottery was not present in the north or in the earlier levels to the south" (1942:231).

By the early 1950's, Spinden's and Ritchie's Archaic had become a cultural and taxonomic Pandora's box which included: foci, aspects, patterns, stages, cultures, periods, and so on. Some felt the Archaic developed from earlier Paleo-Indian manifestations, others saw it as distinctive and partly coeval; some maintained that the presence of pottery violated the idea of the Archaic as nonceramic, while others were willing to accept Archaic ceramics; some felt the Archaic developed into Woodland, while others noted cultural discontinuities or saw Archaic cultures persisting even into historic times in some areas of N. America.

In Griffin's (1952) summary, the Archaic was perceived as a period. With an ever-increasing number of available radiocarbon determinations, he has continued to refine the temporal boundaries of the Archaic (e.g., Griffin 1967). Others have further refined the concept of the Archaic as a cultural stage (e.g., Byers 1959b; Willey and Phillips 1958), with emphases upon the presence or absence of certain traits.

There is much actual overlap between these two perspectives; however, in this study the term Archaic is used merely in a temporal sense. In those few instances where I have employed a construction like "Archaic
culture, it is intended as a short-hand form of something like "a component of the Archaic period"; it does not denote an Archaic culture "type". Although use of the term Archaic here to refer merely to a period is primarily for convenience, it also underscores the conviction that there were too many different cultural varieties in North America between 8000 and 1000 B.C. to be subsumed under one inclusive Archaic "type" or stage. Put another way, if the attributes used to define an Archaic stage on a pan-continental level are to apply equally, they become so general that they are not particularly diagnostic.

The use of Archaic as a period marker of course means it followed the Paleo-Indian period and was replaced by the Woodland, or Burial Mound I, period. I would maintain there is also evidence for such a sequence of cultural development at both ends of the Archaic, although not much space is devoted here to either issue. The question of what followed the Archaic in the Savannah River area is still unclear, despite the occurrence of cord-marking on Stallings III ceramics and the stratigraphic picture at such sites as Deptford, Bilbo, and Refuge (Waring, in Williams 1968). One problem centers upon the exact chronological position of the Thom's Creek/Awendaw ceramic complex, which has a distribution that includes much of the South Carolina area immediately north of the Savannah River (cf, Map 4, p. 313), but which also shows some evidence of contemporaneity with Stallings III (see pp. 279-281). Until the placement and content of Thom's Creek/Awendaw is better understood, little can be said about what immediately succeeds the Stallings culture. Thus, though I would maintain there was a high degree of continuity from the Late Archaic into the Woodland period, I have not explored this to any extent here.

This study is within the framework of what Willey and Phillips
call "culture-historical integration" (1958:5); but throughout I have attempted to reinforce and to direct cultural-historical data toward a "processual interpretation" (1958:5) which—in this endeavor—involves the application of Steward's (1955) concept of cultural ecology. These two different approaches are not viewed as mutually exclusive but as complementary. This is partially outlined in Chapter IV (typology), and more fully in Chapters VII and VIII.

A central assumption of this study is that the natural environment was not simply a background for culture history, but was a more active agency which influenced the direction of Archaic cultural development. The view maintained here is not that of environmental determinism, but that of cultural adaptation to environmental potentials. For this reason, an outline of some of the more prominent lithologic and biotic characteristics of the area is given in Chapter II. The reader already familiar with these will find nothing radically different here; about the only departure is to arrange the accessible data into a series of econiches with reference to archaeological sites.

Chapter III deals with basic site survey and excavation data. Some idea of the quantity of materials reclaimed is specified, and sites are located with respect to probable econiche and cultural phase(s). A preliminary cultural identification is assigned (e.g., Savannah River focus), though these are made more explicit in Chapter V (e.g. Stallings I-II-III). Chapter IV briefly takes up the important issue of artifact typology and theoretical perspective; one outcome is the application of the "type-variety" method to projectile-point data recovered in the 1970 research.

The analysis, classification, and tabulation of cultural materials from some fifty sites is presented in Chapter V. Isolation of Archaic and later components is discussed and summarized, and three previously
undescribed projectile-point types are defined.

Chapter VI is devoted to the overall chronological framework of the Southeastern Archaic, including radiocarbon determinations and certain culture traits which serve as markers in subdividing the Archaic. The radiocarbon determination data from 9Cb15 are presented and assessed. A more detailed chronological framework for the Late Archaic of the Savannah River area is proposed and outlined later, on pp. 276-281.

Chapters VII and VIII are syntheses of the trends of cultural development in the Archaic. Chapter VII is from the perspective of culture-history, while Chapter VIII deals more with the issues of diffusion vs. local innovation and with the application of the method of cultural ecology.

It is concluded that the evidence for diffusion of Formative culture from the Intermediate-Mesoamerican areas is not as probable as Ford (1969) maintained, a finding supported by some recent research at other southeastern 'Formative' sites—such as Poverty Point (Gibson 1973; 1974).

Therefore, I attempt to develop an alternate explanation, based upon consideration of local changes in subsistence, population, and social organization. This results in the inference that fiber-tempered pottery was likely to have developed locally as Stallings culture became increasingly sedentary due to an expansion of subsistence goals to include riverine exploitation; i.e., pottery is correlated with sedentism itself.

Finally, it is suggested that both population 'disequilibrium' and riverine exploitation led to intensified harvesting of certain native plants to the point where they might be classified as cultigens, and that future research will disclose evidence of an "Eastern Agricultural Complex" in the Savannah River area—thus adding one further example of independent domestication to other, archaeologically known, 'nuclear areas'.

CHAPTER II

NATURAL ENVIRONMENT

The Savannah River has its origins within the eastern perimeter of the Appalachian mountains in southwestern North Carolina (Keowee R.) and northeast Georgia (Chattuoga-Tugaloo Rivers) (Map 1, p. 7). In this area of the southern Blue Ridge its headwaters are often less than five or ten miles from those of certain other drainages: i.e., the French Broad, Tuckaseigee, and Little Tennessee Rivers (which flow westward into the Tennessee), and the Chattahoochee River (which flows southwestward to the Gulf of Mexico).

As Coe has remarked in regard to the Carolina Piedmont: "People ... are not fish and they are not confined to the river course" (1964:9). Prehistoric movements and communications networks were extremely diverse; certainly we cannot reduce them to simple trails following streams and rivers. Nevertheless, this area of the Appalachians is fairly rugged mountain-and-valley terrain with many peaks over 4000 and 5000 feet. One can readily assume that much prehistoric east-west cultural contact in this area was along valleys. If people are not fish, neither are they mountain goats. In this connection, it might be noted that the Savannah River system is part of the "southernmost" cross-Appalachian valley network system in an east-west direction. None of the adjacent Georgia River drainage systems penetrate the Appalachians except for the Chattahoochee (which of course trends southwestward).

Fairbanks long ago underscored the potential significance of these
MAP 1
The Central & Lower Savannah River Drainage System

Price's Island (Lc-1)
Clark Hill Res.
9Ws19
9Cb15
Stalling's Island
9Ri4
Augusta

Rabbit Mount
Canoochee R.

Savannah

Bilbo

North
0 5 10 20 miles

Site

- Site
valley systems in his trait-comparison study of certain Kentucky (and other) sites with Stalling's Island, near Augusta (1942). Although he did not specify any particular cross-Appalachian route, the case for the above system would seem more likely now with preliminary identification of Price's Island (Lc-1), another "quite large" Stalling's Island-like Archaic (and later) site in Lincoln Co.; i.e., upriver from Augusta in what is now the Clark Hill Reservoir (Wauchope 1966:7). Another indication of the significance of this probable diffusion route is that along the next northerly major "cross-Appalachian" valley-stream system --- the French Broad (westward)-Broad R. (eastward) --- there are apparently no large "shell-midden" sites, even though artifacts of this phase are essentially similar to those of the Savannah River area (Coe 1952:305).

Southeastward from the mountains, the Savannah River flows about 250 miles through the Piedmont and Coastal Plains to empty in the Atlantic. The complete drainage system encompasses slightly more than 12,000 sq. miles. Of this, about 69% (over 8300 sq. mi.) is Piedmont terrain, while the remaining 31% (over 3800 sq. mi.) --- southeast of the Fall-Line --- is classified as Coastal Plain (Fenneman 1938). In an overall sense, the Savannah is one of many Atlantic slope rivers which have been widely interpreted as "consequent" streams, although there is much debate as to their exact "age" and evolution (Davis 1909; Johnson 1931). The Fall-Line, that portion along the total course of a river characterized by waterfalls and (often) downstream shoals, occurs on the Savannah River at the Clark Hill Reservoir dam. Its most direct bearing on man is, of course, the fact that it marks the head of navigation --- the uppermost point that can be reached by
modern vessels from the river mouth. For the aboriginals, of course, with smaller craft, the Fall-Line would not have been terminus, but it might well have been a point at which some portaging would have been necessary or, as pointed out by Coe, a shallow water area which would have been especially attractive for the exploitation of fish and mollusks (1964:9). The physical dimensions and refuse at Stalling's Island --- located in a favorable shoals locality just downstream from the Savannah River Fall-Line --- offers abundant support for this line of reasoning.

A second use of the term Fall-Line is to indicate the boundary between what might here be called "upstream" and "downstream" provinces. This is an imaginary cross-country line drawn so as to connect the Fall-Lines of successive rivers. Throughout the Eastern Seaboard, this line generally distinguishes Piedmont (upstream) from Coastal Plain (downstream) provinces (Fenneman 1938). Inasmuch as the 1970 survey located sites on both sides of this Line, and because there are some significantly different lithologic, topographic, river-gradient, and vegetational contrasts in each, a brief acquaintance with major contrasts between the two seems pertinent in light of later cultural-environmental relationships and the isolation of different Archaic site econiches.

In the Piedmont above the Fall-Line, topographic relief generally termed "mature" is characteristic; this is indicated by well-rounded hills with gently sloping sides and graded streams of the dendritic type, generally associated with lithologic complexes of uniform resistance implying lack of structural control; i.e., their formation mainly reflects climate, erosion, weathering and so on --- rather than
tectonics (Thornbury 1954:121). Locally there may be steep-cut hill-sides — as, for example 9Cbl8 (pp. 103-105) — due to slightly more resistant rocks and/or lateral stream incision. Drainage is generally well integrated, with few swamps or catchments.

The Savannah River here is (or was, before the modern construction of several dams) confined to a relatively narrow floodplain (about one-mile or less wide — compared with about ten-miles wide below the Fall-Line) and its valley walls are generally well-defined inclinations rising not far from the river's margins. Whether or not this portion of the river is at grade, it was surely not an aggrading section, i.e., one with extensive meander-shifts across its floodplain, along with alluvial deposition.

Before outlining some of the basic, common, ecological communities (or "econiches") in the Piedmont, it is necessary to make explicit my purposes in terms of this study. Obviously — in the absence of specific evidence correlating these data to Archaic cultures — a simple listing of native plants and animals is of little value in the archaeological interpretation of the culture-historical development through this period. (And, in any event, such a list would be rather lengthy in an area as environmentally bountiful as this one seems to have been; as Caldwell has remarked: "The Southeast is even now 'living country' ..." [1958:8].)

My first and most basic purpose then, is to indicate the natural subsistence potential of the Piedmont for prehistoric Archaic populations.

A second purpose is to delineate contrasts between typical ecological communities of the Piedmont as opposed to the Coastal
Plains, since most naturalists and ecologists have remarked on distinguishing features of the two (Odum 1971:380; Shelford 1963:310; Braun 1950:271-79). There are also prehistoric cultural contrasts here --- for example, those between the site conformations of Stallings Island and the Coastal "Shell-Rings" --- which will be explored later.

My third purpose in delineating "present-day" major ecological communities is to serve as a base-line, or background, for comparing these with paleoecological data for the area (later on), in order to indicate certain culture-environmental interrelationships which had important effects on the development of Archaic cultures through time.

However, the following Piedmont ecological outline does not represent a preface toward "explaining" the full sweep of Archaic cultures as simple, direct, linear expressions of their environment. It is not, as Kroeber long ago cautioned against: "... a relapse toward the old environmentalism which believed it could find the causes of culture in environment" (1939:1). In his monumental work, Forde summarizes this approach and its limitations with the following:

Often...there has been explanation [of culture] by the physical environment, that is, according to differences in climate and vegetation which lead men to one kind of activity, type of society, and even of religious belief in one region, and to different activities, social institutions and beliefs in other regions. Despite the intimate relation between human activities and the conditions and resources of the physical world, there are clear limits to this explanation, for in regions closely similar in relief, climate, and vegetation sharply contrasted types of human life are to be found" (1934:3).

In American archaeology, the reaction to "environmental determinism" was pervasive, although most archaeologists during the first half of the century continued to include descriptions of the natural setting in their site reports. In his extensive critique of the
archaeology of this period, Taylor (1964) traces this lack of interest to the influence of the Midwestern Taxonomic System — with its emphasis on "types", "traits" and "external comparisons" — leading to relegation of site-environmental consideration to a status of "secondary importance" (1964:77).

Following W. W. II, there has been a resurgence of interest in prehistoric culture-environmental relationships, which has been associated with the "new" or "processual" archaeology (Martin 1971). In Europe this perhaps stems from Clark's (1952) landmark synthesis of post-glacial "Mesolithic" cultures; in America perhaps with Willey's (1953) Viru Valley study, although the outline of the "cultural-ecology" approach was initially formulated by Steward (Steward and Setzler 1938). Caldwell's (1958) study is of course a more close-hand synthesis of this renewed focus.

A complete and systematic treatment of the "new" archaeology has yet to appear, although Clarke's (1968) work does undertake the task of introducing "General Systems" theory into archaeological research and one recent edition of a "standard" American introduction to prehistoric analysis outlines some aspects of the approach (Hole and Heizer 1969:340-368). As pertaining to immediate purposes of this study, the framework essentially follows that of Struvever, who states:

Assuming that the physical environment is structured and that culture as an adaptive system articulates with it, then the subsistence economy and the closely linked settlement pattern should reflect this environment. Plant, animal, water and soil resources are differentially distributed, and so are cultural activities related to them (1971:11).

With reference to one of the above elements (plants), Yarnell has recently remarked that:
Answers to questions about subsistence and ecology are coming more and more frequently to be derived with the assistance of botanists who in turn are often aided in their investigations of cultigen history and evolution by having access to plant remains recovered by careful excavators.

"...Analysis of plant remains from individual archaeological sites and groups of sites can be highly instructive of local patterns of technology and subsistence ... We need to know the habitat in order to understand the pattern of cultural adaptation..." (1970:215).

To summarize, in a crude sense (but also a basic one), denial of any correlations between culture and environment would lead to the expectation in archaeological surveying that sites would be evenly --- or randomly --- distributed over the landscape. This is, of course, never the case, although some of the components to be discussed later (e.g. Morrow Mountain) are more widespread than others. The archaeological problem here is not so much the identification of "skewedness", or departures from random artifact and site distributions, but the identification of the reasons and probable causes for these nonrandom distributions. It is here that the old environmentalist position confronts that of the culture-historian; at their extremes, the former offers "explanations" strictly according to environmental setting, while the latter denies environmental influences in favor of "explanations" more exclusively in terms of cultural-historical factors such as diffusion, migration and so on. The position taken in this study is a "middle" one; it focuses upon evaluation of evidence which will (hopefully) permit an objective assessment of the relative contribution of each to various Archaic cultural components in this area through time.

The Piedmont geologic history above the Fall-Line is complex, consisting mainly of various crystalline rock formations of Precambrian
and Paleozoic age which form what some geologists refer to as the "older Appalachians," or "Appalachia" — the "original" land surface (Fenneman 1938). Composed mainly of schists, gneisses, granite quartzite, and other metamorphics, this "continent" underwent a complex series of uplifts, folds, and faults. At the same time, it was subjected to erosion and weathering. The eventual result of this dissection was the formation of what are called (the Schooley and Harrisburg) peneplains, expressed in the rolling hills of the Piedmont today.

In various localities throughout this Piedmont area pegmatite and diabase dikes have thrusted igneous and basaltic rocks to the surface. Thus, in addition to the commonly observed "white-quartz" outcrops and "red-clay", numerous other minerals occur here in restricted localities; among the more notable of these minerals are: pyrite, copper ores, feldspar, gold, mica, and steatite (soapstone) (Furcron 1969). The survey located two steatite outcrops — 9Cb6 (near Kiokee Ck, p. 83) and 9Cb13 (near the Savannah R., p. 86) — which were utilized as "quarries" by the Indians. In addition, several types of clay are common in the area, including kyanite, vermiculite and Kaolin (Furcron 1969).

In the moist warm southern climate, chemical weathering ("decomposition") is rapid and — due to relatively mild winters — leaching continues throughout the year. Under these conditions, iron and aluminum oxides accumulate (which give the characteristic red and yellow soil hues) and only the most resistant rocks — such as quartz — remain relatively unchanged. The leaching process ("podzolization") upon the ancient "Appalachia" land mass in this area resulted
what are called "podzolized" and "melanized" lateritic soils (Kellogg 1936). The latter tend to be highly acid and rather infertile, with little or no humus horizon; the former are also acid, but are "humus-enriched" and fertile (Braun 1967:27).

The rolling hills and winding streams of the Piedmont uplands reflect a mature, generally well-drained, landscape; bottomlands are typically narrow and not swampy (the largest bottomland here was, of course, that of the Savannah R. prior to creation of the Clark Hill Reservoir). As a result, vegetation communities here possessed an overall uniformity which was not typical of the Coastal Plains. Braun characterizes the entire survey area as part of her "Oak-Pine" forest region, which ultimately extends from tidewater Virginia southwestward through Georgia and west to the Mississippi Valley (1950:259-67).

Kroeber's comprehensive classification of the area, drawn mainly from the earlier botanical studies of Shantz and Zon (1924), Shreve (1917), Shelford (1926), and Harshberger (1911), refers to this area simply as "Temperate Deciduous Forest" (1939:Map 3), with no further breakdown. However, Kroeber was explicitly interested in the delineation of "culture wholes", primarily those of the contact period, rather than prehistoric sequences (1939:2). Somewhat less evident, in view of more recent and precise ecological data, are Caldwell's reasons for lumping at least six major different forest regions under the term "Eastern Deciduous Forest," especially when one of his fundamental aims was delineation of "Primary Forest Efficiency" (1958:Fig.4; pp.11-14).

The following synopsis of Piedmont ecological communities is compiled chiefly from Braun (1950:259-67), Oosting (1942:56-93), Ashe
In pre-contact times, there were apparently three parallel northeastward-southwestward trending forest zones on the Piedmont uplands between the Appalachians and Coastal Plains; each seemingly correlated with slightly different soils. The westernmost was a "pine-belt" apparently dominated by loblolly and yellow pine, along with frequent occurrences of white oak and hickories. Chestnuts were rare here, but common in the mountains.

Of more direct concern here, because of its occurrence in the survey area, is the wide belt of "deciduous forest," or Braun's "Oak-Pine" climax (1950:264). On better soils, deciduous forests dominated by white oak and (shagbark, mockernut, and pignut) hickories prevailed; however, other oaks --- such as black, post, southern red, and scarlett --- and pine (loblolly and yellow) were well represented.

On poorer soils or under drier conditions, post oak was more frequent; and the poorest (or most eroded) soils, generally in the east, featured post-oak and blackjack-oak associations. Sour gum, dogwood, sourwood, red maple, mulberry, black cherry, red cedar, white ash, and elm were also represented to a lesser extent.

Braun notes that shrub and herbaceous growth were sparser here than in forests west of the Appalachians (1950:265), although blueberry, yaupon, and various ferns were prominent in the understory.

Succession, the natural replacement of one vegetation community by another (leading to a stable, self-perpetuating forest type, or
"climax") has been demonstrated for the area as follows: clear land → herbaceous growth → (open) pine invasion → pine forest → hardwood (understory) invasion → mixed pine-oak-hickory ("climax") (Korstian and Coile 1938).

Succession has implications not only for plants but for animal distributions as well. The idea that extensive areas of southeastern forests were systematically burned in pre-Columbian times has gained widespread recognition among ecologists (Shelford 1963:87-88; Odum 1971:131-37; Stoddard 1936; Komarek 1967; Heyward 1939; Garren 1943). There is as yet, unfortunately, no information bearing on the possible prehistoric period when intentional "surface fires" were first initiated, but their effects on wildlife are dramatic. Not only do these fires produce the so-called "edge-affect" which favors deer, they also provide econiches favorable to rapid population increases of bobwhite, rabbits, and probably, other small game (Shelford 1963:62; Stoddard 1939).

Forest succession may also impinge more directly upon prehistoric settlement patterns. It has been repeatedly observed that certain southeastern Archaic sites are frequently recovered on "hilltops"; Braun's remark that, in this area, "...originally the pines were confined to hilltops" (1950:264) is thus extremely interesting.

In bottomlands along streams large enough to possess floodplains and along the Savannah R. (which of course had the largest amount of bottomland in the survey area), a rather distinctive ecological community is typical. Along smaller streams the river birch, black willow, cottonwood, sycamore, and sweetgum form thickset forests. Along larger courses, such as the Little R. and Savannah R. in the
survey area, where a more developed and extensive floodplain exists, the typical species are (in order of frequency): willow oak, sweetgum, swamp red oak, white oak, white elm, water oak, tuliptree, ash, sugarberry, alder, and "Florida maple." The white beech sometimes forms extensive stands here, although it is more typical of the Coastal Plains.

Southeast of the Fall-Line there are distinctive changes in topography, drainage, soils, and ecology. Hilltop elevations are generally not above 300 feet, decreasing progressively until the extensive almost level lowlying terrain approximately 30 miles inland from the well-known Sea Islands.

Although the Savannah R. floodplain widens here to an average of about ten miles across (this increases toward the Coast) and it becomes a more typical meandering river, its total drainage area decreases to about 30 miles in lateral extent, giving a drainage area of about 3800 sq. miles. This narrower, funnel-shaped, drainage pattern is matched by the many adjacent rivers north and south. One obvious effect of this is that the potential for cross-country communication transversing the various rivers is increased, because the low-lying terrain reduces barriers when compared to that of the Piedmont. That this was probably a significant factor in late Archaic culture diffusion is seen in the distribution of fiber-tempered pottery all along the Coast south to at least the Cape Canaveral area of Florida.

Relief on the Coastal Plain is generally less than in the Piedmont, with more gently sloping hills, extensive areas of undissected plains and many swamps. The entire province has at various times been submerged, and successive stages of emergence are marked by a series of
terraces which become increasingly younger (more recent) toward the present Atlantic Coast (Fenneman 1938). As a result, the soil cover is one of sedimentary beds (both marine and alluvial) which tend to thicken toward the coast.

The soils throughout the Coastal Plain consist mainly of those derived from marine sands, loams, clays, and (along streams and rivers) alluvium. Ilmenite, zircon, and some other "heavy minerals" occasionally are found on the surface, but the most frequent lithologic exposures with prehistoric potential are limestone outcrops containing chert (flint) and dolostone (Furcron 1969). Fuller's earth, a kind of clay, occurs in extensive deposits about 60 miles from the Coast, though of course, there are local sources of other clays throughout the Coastal Plain. In general, the lithology of this province is more uniform than that of the Piedmont, and, due to the lack of surface outcrops of igneous and metamorphic rocks --- e.g., feldspar, granite, gneiss, quartz, steatite, and so on --- the overwhelming majority of stone tools were fashioned from cherts (flint).

The entire Coastal Plain is part of a rather unique vegetation biome which is usually termed the "Southeastern Evergreen Forest" (Braun 1950:280-304). Stretching south from the New Jersey "pine barrens" to Georgia and then west to the Mississippi Valley, it is "...floristically distinct from all other forest regions of temperate North America and contrasts strongly with the adjacent ancient Appalachian Upland" (Braun 1950:281-82).

Because of distinct soil differences and textures, geologic age, drainage, and dissection, there are a number of local ecological communities here. Thus, one encounters pure stands of coniferous trees,
mixed stands of conifers and hardwoods, deciduous hardwoods, and
mixed deciduous and broad-leaved evergreens on the higher elevations
(Braun 1950:282). Swamps, bogs, and bottomlands also have distinctive
associations.

On the higher elevations, Braun describes seven types of communities:
(1) longleaf pine forests, (2) pine-oak forests, (3) pine-hardwood forests,
(4) slash pine forests, (5) mesophytic mixed hardwoods, (6) beech-magnolia forests,
and (7) evergreen oak forests (1950:284-303).

The "uplands" here also contain two types of "wet" forest communities --- "savannahs" and "upland swamp forests" --- which form on flat interstream areas on the younger undissected (outer) terraces, where drainage is poor.

There are also different bottomland communities; the more "normal" are those along streams and rivers, but there are also distinctive communities associated with bogs and swamps (some of the latter --- such as the Okefenokee and Savannah-Broad R. --- including hundreds of square miles).

Finally, there are distinctive ecological communities associated with the Coast-Sea Island complex.

The outline which follows includes only those areas covered by the survey, although (later on) reference to some others will be included.

The driest (or xeric) soils throughout the area are those of the "Sand Hills," a narrow strip which is located on the extreme interior margin of the Coastal Plains; it parallels the outer perimeter of the Piedmont Fall-Line in an arc which extends throughout
Georgia and beyond. The characteristic growth on these infertile soils is longleaf pine. Under less xeric conditions these may be mixed in open stands with (generally somewhat stunted) second-story hardwoods, such as: Turkey oak, willow oak, and blackjack oak. "Bare areas of white sand are invaded by a few herbaceous xerophytes, and later by wire-grass" (Braun 1950:285).

Moving toward the Coast, one encounters extensive loblolly and slash pine forests with (or without) oaks. These are the "pine-oak" forests, which have been noted as "fire-subclimax" because, presumably, if protected from fire, natural succession would alter their make-up until they reached an oak-hickory climax (Braun 1950:285).

The mixed mesophytic hardwoods community is usually found on low slopes; thus, it is not very common here. However, since several sites in the survey were noted on these slopes, it seems this econiche might have been intentionally favored over others. The typical trees here are white beeches (often cited as an "index" tree for this econiche), white oaks, red maples, sweetgum, and (occasionally) magnolia, bitter-nut hickory, Florida sugar maple, walnut, tuliptree, white ash, and holly.

On upland "terraces" between widely spaced streams, drainage is often poor, and a hardpan soil layer forms. In these areas longleaf pine dominates, along with loblolly and slash pines. In the wettest parts only pond pine is found, usually growing around the edges of the grass-sedge "savannahs".

Upland swamp forests also occur on these terraces. These have essentially the same trees as bottomland swamps; i.e., swamp black gum, cypress, swamp tupelo, and pond pine; occasionally white cedar, slash
pine, and sweet bay also thrive here.

Bottomland swamps, occurring along extensive floodplains, are characterized by alluvium. The primary differences here from the above are: (1) dominance by pond cypress and water tupelo, and (2) less (or no) occurrence of pond pine. Water-elm sometimes occurs in thick stands in these swamps. Other trees, never very common, are: silver maple, red maple, and water-and-pumpkin-ashes.

The hardwood bottom forests form dense stands along the major rivers throughout the Southeast, and trees many feet in diameter occur here. Although one may recognize different small communities — for example, glade bottoms vs. ridge bottoms — these blend together to form one massive canopy. The most frequent trees here (in rough order of abundance) are: sweet gum, red maple, swamp (cow) chestnut oak, swamp red oak, shingle oak, overcup oak, elm, sassafras, huckleberry, papaw, and dogwood. Hickories, poplar, sycamore, and pecan sometimes occur here as well.

Finally, along the Coast and on the Sea Islands, a distinctive ecological community occurs, with live oak as the predominant hardwood. Although this will be dealt with in more detail later, a brief summary follows. The live oak, with luxuriant drappings of Spanish moss, is usually the most frequent tree in this "Maritime" or "Evergreen Oak Forest", although myrtle oak and slash pine are additional constituents. Red cedar is found as an element in this forest as well, particularly "on shell mounds along the coast" (Braun 1950: 303).

The fauna available for prehistoric exploitation were generally more diverse and more numerous than present accounts would indicate;
with one major exception --- that of the white-tailed deer --- the overall trend since European contact has been toward reduction or extinction.

Animals are but rarely restricted to any given local econiche; however, most do have preferences and/or optimal environments in relation to ecological communities, and these will be stressed with reference to prehistoric hunting potential. The brief outline which follows is drawn from Hamilton (1963), Olsen (1964;1968), Kendeigh (1961), and Seton (1909;1953) (with others as cited), and is presented according to ecosystem trophic levels, i.e., top carnivores, carnivores, and herbivores. (As with plants, scientific equivalences are listed in Appendix 1.)

The top carnivores of the area were no doubt the (common or American) black bear and mountain lion (or panther), although both had ranges well beyond the area under consideration. The black bear seems to have been much more of an omnivore, since they are "...inordinately fond of fruits, consuming great quantities of blueberries, blackberries, and shadberries" (Hamilton 1953:117). Mountain lions, in contrast, are more exclusively carnivorous; Hamilton remarks that their most important food was deer, followed by wild turkey and rabbits (1953:187). As might be expected with large-sized carnivores, their populations were not overly abundant; Seton (1909) estimated that prehistoric densities of both were somewhere on the order of about one per 10 sq. miles; Sheldon, however, estimates there may have been as many as three per 10 sq. miles (1963:28).

Other (smaller) mammalian carnivores of the area included: gray wolf, gray and red fox, raccoon, skunk, mink, otter, bobcat, and
long-tail weasel. Most of these were wide-ranging species; however, the red fox seemingly did not occur beyond the Piedmont (Olsen 1964: 154), and the mink and otter are seldom found far from water since the bulk of their food is aquatic (raccoons are fond of crayfish, but are also wide-ranging forest omnivores who feed on fruits, nuts, berries, grains and insects). (The opossum --- the only common N. American marsupial --- might also be included here; although it is a wide-ranging feeder, much of its food is meat). Prehistoric population estimates for the gray and red fox were estimated by Seton (1909) as about two and one-half those of mountain lions; or approximately 1 per 4 sq. miles (again, Sheldon's estimate is larger; he suggests up to 30 per 10 sq. miles [±1963:29]). In any event, these higher densities would be in line with their smaller sizes relative to the larger carnivores, and some idea of their reliability as rough, overall, estimates can be gained from the fact that Kendeigh (among others) cites them in his recent survey of the fauna of the area (1961:296).

Reptilian predators include several types of poisonous snakes --- the timber rattlesnake, copperhead, and cottonmouth --- as well as a large number of nonpoisonous species. The alligator formerly occupied the streams, rivers and swamps throughout the Piedmont and Coastal Plains areas as far north as southern North Carolina (Olsen 1968:98).

Smaller mammalian herbivores native to the region include: squirrels (several species), eastern chipmunks, woodchucks (groundhogs), muskrats, pocket gophers, beavers, cottontails, and marsh rabbits. (There are also numerous species of rats, field mice, and moles-and-shrews.)
Several of these have preferences which tend to restrict their natural distributions. For example, the woodchuck (groundhog) -- which Hamilton thinks may have been much rarer prehistorically (1953:201) -- probably did not formerly occur further east than the interior Piedmont, although its range has extended with cutting of the forests. The eastern chipmunk and muskrat were apparently not found beyond the Piedmont in this area; while the pocket gopher was restricted to the Coastal Plains and the marsh rabbit (several species) was even further limited to the lower Coastal Plains and Sea Islands. Only the cottontail and beaver seem to have had a distribution which included both Piedmont and Coastal Plains in prehistoric times (and of course the latter's habitat centers on river bottomland and swamps).

Among reptilian fauna of the area are: the snapping turtle, mud turtle, musk turtle (all predominantly aquatic); and the box "turtle", "western pond turtle", cooter, softshell "turtle", and gopher tortoise (all predominantly terrestrial). Of these, the only species with restricted distributions in the survey area is the gopher tortoise, which occurs on the Coastal Plains, extending into South Florida and westward along the Gulf Coast.

The Southeastern forests were replete with bird life of many varieties. Some of these -- such as the great horned owl, broad-winged hawk, and eagle -- were of course predators; however, most were smaller seed-nut or plant-insect feeding "herbivores." Of note here are the bobwhite and wild turkey: the former has already been cited (p. 17) as particularly numerous in open fields; for the latter there is Kendeigh's statement that: "...ruffled grouse and wild turkey belong primarily to the forest proper, although they often feed
in the forest-edge, or brushland, and openings scattered through the forest" (1961:140). Olsen, however, remarks that: "... the wild turkey was in the past and is at the present time adaptable to a wide variety of range conditions" (1968:108). Since it is found all the way from southern Mexico and the Southwest, as well as throughout the eastern Woodlands, it would seem apparent that wild turkey were equally well at home in both the Piedmont and Coastal Plains forests of this area.

Olsen is much less convinced, however, that wild turkey was utilized as a food source; he prefers the idea that they were kept as a source of plumage for both utilitarian and ceremonial purposes (1968:107). Citing reports for both the Southwest and Florida, he states:

There is little evidence that turkeys were used as a source of food. This hypothesis is supported by the discovery of several turkey burials accompanied by mortuary offerings of corn and occasionally pottery. Complete turkey cadavers have been found in trash deposits as though the birds had simply been tossed out at the time of death (1968:107).

The Florida evidence is from four Volusia and Lake Co. sites --- Lemon Bluff Midden (8Vo61), Bluffton Midden (8Vo22), Silver Glen Springs (8La2), and Good's Shellpit (8Vol35) --- all on or near the St. Johns R. and all with reasonably acceptable stratigraphic evidence for preceramic occupations (Neill, Gut, and Brodkorb, 1956; Goggin, 1952).

Neill, Gut, and Brodkrob's analysis does not note any fully articulated turkey skeletons in these sites, although they do remark that, of all the (24) species of birds represented, the "... most abundant species was the wild turkey" (1956:387). They also report that several of these show evidence of fire (1956:389).
Regardless of the weight of evidence from the Southwest, I would submit that selection of wild turkey for plumage (or even as a "pet") is not incompatible with utilization as a food source. Furthermore, in the Southeast at least, with the broad-spectrum resource utilization which is almost a hallmark of Archaic subsistence, it would appear to me to be unlikely that a bird of the turkey's proportions, nutritive value, and frequency would be valued solely for its plumage. Thus, despite Olsen's cogent summary, it is included here primarily as a potential source of food (though again, they need not have been limited to this single purpose).

Consideration of the white-tailed deer as a food source might seem to be almost redundant, since in almost every Southeastern Archaic site with soil conditions favoring the recovery of faunal material at all, remains of this herbivore are ubiquitous. My present concern, however, is not so much with deer in relation to (archaeologically) documented prehistoric usage (this will be considered later), but with establishing some ecological controls (and the environmental potential) which will permit more objective evaluation of deer exploitation in overall relation to Archaic subsistence patterns; or, as they are sometimes termed in the "new" archaeology with special reference to fauna: "hunting strategies." In most Southeastern archaeological site reports of the last half-century, fauna have been tabulated according to species and (somewhat less frequently) estimates of minimum numbers of individuals present. This kind of attention to faunal remains is all to the good (and indeed, I am not in an advantageous position to criticize it in any case, since I earlier offered only the more simplified presence/absence type of identification
[Smith 1968:126-132]), but it is of limited value with respect to attempts to evaluate the relative importance of different types of subsistence patterns in relation to other aspects of Archaic cultural systems and to their environmental setting.

To illustrate --- by means of an extreme example --- suppose one were comparing faunal data from two "Archaic" sites, one in Southern California and one in Southern Georgia, and both tabulated the presence of a minimum of ten white-tailed deer. Superficially they would appear to have been about equally weighted with respect to emphasis upon deer as a feature of their respective subsistence strategies. However, examination of environmental data --- in this case simple distribution --- would immediately suggest quite different implications for subsistence "strategies" for the two, since white-tailed deer were rare or absent in California prehistorically but common in Georgia (Olsen 1964:158). The cultural meaning of the two "equivalent" tabulations would be quite different, as would their implications for subsistence patterns.

In the Eastern Woodlands, however, such idealized and simplistic situations do not generally prevail, and it is necessary to make more refined distinctions by more indirect means.

By almost all ecological measures, the white-tailed deer was the major mammal (other than man, of course) of the Eastern Woodlands. Shelford typifies this evaluation when he states that the: "...white-tailed deer was originally a dominant or major influent [i.e., an animal which affects many other plant and animal species in the total ecosystem] because of its abundance" (1963:28).

Although the distribution of white-tailed deer includes virtually all of the (coterminous) United States east of the Rockies, Seton ob-
served this "... omits details such as the absence of Deer from extensive bogs, open plains, rugged mountains, and wide marshes, as well as the fact that the species congregate in great numbers among the belts of nut-bearing trees" (1953:240). This reflects the preferences of white-tailed deer for habitats which include forests (for cover) with openings, or clearings (for feeding), and firm ground; and their avoidance of extensive open grasslands (where they of course lose the advantages of cover for protection against predators, leaving them essentially with speed). The avoidance of large marshes in the Southeast is of course not absolute, as can be attested by the presence of deer in the Everglades of South Florida. There, however, as is the case with the Sea Islands, the deer are usually smaller and have acquired other physical differences with sufficient consistency to be commonly distinguished as subspecies (or races) by mammalogists (Hamilton, for example, indicates seven in all for these "peripheral" areas of the Southeast alone [1963:401]). In other words, the distribution of deer in "marshy" environments would seem to be a type of departure from "normal"; one, which is decidedly selective in favor of smaller size (among other attributes) and hence, "atypical."

These "deviations" are not due to the supposed obstacle of water barriers per se, for deer are excellent swimmers, not at all reluctant to take to water. Seton remarks that:

In the water, Whitetailed Deer are very much at home.... They are, indeed, so confident of their swimming powers that they invariably make for the water when hunted to extremity. There are many cases on record of Deer so pushed, boldly striking out into the open sea, trusting to luck for finding another shore.

There are details of a Whitetailed Deer captured near Portland, Me., five miles from shore; and another
of one taken a mile and a half from Sachuest Point, R.I., as it was swimming at full speed away from land (emphasis his) (1953:296-97).

Of course, the natural distribution of the well-known Florida "Key deer", another subspecies which occurs only from Big Pine Key southward (thus more than 50 miles from the mainland Everglades, though only three from the next northermost Key) also attests to the swimming prowess of deer.

The selective factor involved in the avoidance of extensive marshes by "typical" deer seems to involve the difference between soft vs. firm terrain. Deer have small hoofs relative to their body-weight, and are thus at a comparative disadvantage in soft ground. Although I am not aware of any specific Southeastern studies on this, it is probably broadly analogous to the disadvantages of deer traction in northern winter snows. The deep drifts and extensive snow covers of northern winters make this season the most dangerous for deer, for their predators --- such as mountain lions and wolves --- can more easily stalk them down. Kelsall compared deer and moose track-weight-loads (the relationship between live weight of the animal and the size of its hoof print) and concluded that: "Deer are considerably restricted in movement when snow exceeds depths of 40 centimeters --- about 20 centimeters less than chest height....On the other hand, moose travelled freely through snow 44 centimeters in depth. They were restricted by depths of 70 to 99 centimeters" (1969:307-08). Both would of course be at a comparative disadvantage to the big cats in snow, because of the fact that these carnivores possess much more of a "snow-shoe" effect, and, hence, their traction is much better under soft-ground conditions.
Deer are wide-ranging herbivores who adapt to foraging on a diversified series of vegetation, ranging from broad-leaved deciduous trees, conifers and nuts, to herbs, ferns, mosses and fungi. In time of extremity, this wide-range foraging is no doubt a significant factor in their survival. Forbes and Bechdel, for example, have reported on Pennsylvania white-tailed deer consumption of mountain laurel and rhododendron leaves, which are known to be poisonous to cattle and sheep (and humans) (1931). They observed that: "Mountain laurel and rhododendron are eaten with considerable freedom by deer, especially in times of food shortages; but as thus eaten seem not to be poisonous ..." (1931:332-33). Deer are also reported to be "passionately fond" of "poison-oak" (a shrub of the Sumac family) (Seton 1953:281), and poison ivy is consistently analyzed in deer rumens (Short 1971:670).

Despite this wide range of foodstuffs, it has been repeatedly observed that deer possess certain food preferences which do in turn affect their overall health, reproduction, and numbers. Under "natural" conditions, deer are primarily browsers, although they also graze on many grasses in season. In one year-round study of Texas white-tailed deer stomach-contents (rumens), Short found that the major annual portion of the diet consisted of leaves and associated twigs of various deciduous and broad-leaved evergreens, except in early Spring (May) — when "forbs" (non-grass-like herbs) were preferred — and Fall (Sept.-Nov.) — when acorns constituted over 50 percent of the diet (1971:699). In contrast, pine leaves were consumed only in Winter when these preferred foods were least abundant, and even then these account for only about 20 percent of the total at maximum. Grasses, although consumed more consistently year-round, are even less favored, reaching
their maximum (17 percent) in Winter and early Spring (12 percent) (see Table 1).

**TABLE I**

AN AVERAGE YEARLY WHITE-TAILED DEER DIET-PREFERENCE INDEX
(Adapted From Short, 1971)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Browse(^1)</td>
<td>32</td>
<td>28</td>
<td>44</td>
<td>26</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>Forbs(^2)</td>
<td>1</td>
<td>50</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grass(^3)</td>
<td>17</td>
<td>12</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Pine</td>
<td>18</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>Acorns</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>64</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>10</td>
<td>3</td>
<td>34</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Other Fruit(^4)</td>
<td>22</td>
<td>7</td>
<td>7</td>
<td>2</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

1 - includes: red maple, elm, black gum, willow oak, water oak, waxmyrtle, dogwood and others.

2 - includes: all "non-grass herbs": e.g. greenbrier, sumac, baccararis, dewberry, honeysuckle, poison ivy, mistletoe, grape and others.

3 - includes: panic grasses, bluestems, bermuda, crabgrass, and others.

4 - includes: muscadine grape, blackberry, blackgum, haw, honey locust, chinaberry and others.

These data, selected for their proximity to the survey area and representitiveness, are largely borne out by other studies, although there are different tendencies with differing areas of observation. Thus, in the Ocala National Forest (Central Florida), forbs and acorns
assume more prominence in deer diets (Strode 1954); whereas the leaves and nuts of deciduous trees are preferred by deer in the Pisgah National Game Preserve (Western North Carolina) (Ruff 1938).

Overall, due to the consistently observed preferences of deer for the leaves, acorns and fruits of deciduous trees and broad-leaved evergreens, and their avoidance (except when other foods are not available or are out of season) of pines, it would seem likely that their optimum environment prehistorically would have been in the Piedmont rather than the Coastal Plains. Furthermore, within the Piedmont, they would probably have attained their maximum numbers in those upland "econiches" characterized by the presence of Braun's "Oak-Pine" climax (the "deciduous forest") and open spaces (pp. 16-17), rather than on bottomlands, with their extensive stands of dense tall-canopied hardwoods (pp. 17-18).

In the Coastal Plains, it would seem probable that deer would occur in maximum numbers in association with the "mixed mesophytic forests" (p. 21) and live-oak (and other oak) stands (p. 20), and would be less numerous in the more xeric pine flat-woods and Sand Hills (pp. 20-21).

However, this generalization does not account for changes in deer populations resulting from disturbances in the "natural" forest succession, particularly those associated with the "fire-subclimax" (pp. 16-17) (Braun 1950:280;285-86). Klein has indicated that the "... North American [white-tailed] deer are adapted to early successional stages of vegetation, which are transitory in nature..." (1970:30). They favor the forest-edges for feeding, and this is exactly the type of situation which would result from (localized) surface fires. McNaughton and
Wolf summarize this in another connection as follows:

North American [white tailed] deer...are colonizing species, subject to previous r-selection [population regulation] by the transitory nature of their favored habitats....

It seems likely that in the native [i.e., pre-Columbian Eastern Woodlands] forest average deer density was much lower, and occurrence tended to be concentrated in localized areas of disturbances (1973:522).

Thus, it seems likely that, prior to the appearance of the distinctive "fire-subclimax" vegetation, the Coastal Plains would have been characterized by lower white-tailed deer densities than occurred in the Piedmont. However, after the appearance of extensive vegetation associated with fire disturbances, local environments favoring white-tailed deer would have increased, and their numbers might well be expected to have been (at least) on a rough parity with those of the Piedmont.

From the perspective of prehistoric subsistence, the overall effects of an increased deer population in the Coastal Plains would have had obvious implications both for "hunting strategies" and more broadly---for the repeatedly observed contrasts between relative population densities of the "Coasts" vs. "Interior" in Contact times (Kroeber 1939:145-46; Driver 1961:36) (this topic is more fully explored later.

From an archaeological perspective, the critical issue centers on the time of the appearance of extensive "fire subclimax" vegetation in the Coastal Plains, for it seems logical to assume this would also be the earliest chronological horizon which we would expect to have been associated with supposed white-tailed deer population increases here.
Precise quantitative determination of "optimum" vs. "minimal" deer populations prehistorically --- while no doubt of paramount significance in considering possible Archaic exploitation and hunting techniques --- is unfortunately beyond the control of contemporary data on deer populations. This is primarily so because extensive disturbances in the natural distributions and frequencies of flora and fauna resulting from over 300 years of Euro-American settlement along the Eastern Seaboard make recent data extremely tenuous insofar as their reliability for predicting past conditions are concerned. First off, of course, there were such extensive inroads in the native deer population during (and after) the settlement of the area that by the mid-1800's they were rare or absent in many localities; Seton notes, for example, that: "In 1890, the Whitetail was virtually exterminated in New England, outside of Maine" (1953:247). Census data from various subareas in the Eastern Woodlands not uncommonly reported 5000-15000 deer shot annually, and "slaughters" of as many as 300 in one day in a 25 sq. mile area (Medina, Ohio, 1818) have been recorded (Seton 1953: 244-46).

On the other hand, there have been factors of the Euro-American settlement of the Eastern Woodlands which have favored the increase of deer populations. The two most prominent are probably: (1) clearing of the woodlands, which increased the forest-openings favored by deer in feeding, and (2) the elimination of the deer's natural predators, especially mountain lions and wolves. (A third important --- but non-ecological --- factor was enactment of various laws restricting deer hunting, beginning about 1900.)

The current "end-result" of these disturbances and traumas to the
white-tailed deer ecosystem has been an overall increase in deer populations in the Eastern Woodlands, especially in National Parks and Refuges where they are protected by conservation measures.

In several cases in the last half-century, the pendulum of conservation efforts swung so far towards restriction that deer populations "exploded" with disastrous results --- both for the deer and their plant food. One of the most dramatic and well-documented of these irruptions occurred in the Kaibob Plateau in Northern Arizona, where a deer population increased from about 4000 in 1906 to over 100,000 in 1924 (despite the presence of diminished numbers of] natural predators such as mountain lions and bobcats), resulting in extensive damage to the woodlands through over-browsing (Rasmussen 1941; Leopold 1943). With this type of rapid population increase potential (over 2000 percent), one is well-cautioned against over-confidence in estimating prehistoric deer populations.

In more recent studies of deer populations, estimates are usually made in areas where some predation (usually hunting) is permitted, thus approximating "natural" circumstances (but not natural predator patterns; the victims of mountain lions and wolves are usually very young and very old deer [i.e., the less "fit"]; human predation is much more indiscriminate and hence has a different effect on deer fertility).

As a base-line for conveying some quantitative image of prehistoric deer populations, there is Shelford's overall appraisal that:
"The deer population varied greatly and sometimes cyclically between 100 and 840 individuals per 10 square miles [10-84 per sq. mile] with 400 [i.e., 40 per sq. mile] the optimal number" (1962:28). In a
cursory survey of recent deer census data under controlled conditions, the range seems to be largely within those specified above. For example, the white-tailed deer population on the 18,000 acre Crab Orchard National Wildlife Refuge (southern Illinois) is approximately 2,250, or 79 per sq. mile (Hawkins, Klimstra and Autry 1971:216); that of the Ocala Forest (Central Florida) is approximately 40 per sq. mile (Strode 1954); and the Pisgah Game Preserve (western N. Carolina) had about 4,600 deer on 532 sq. miles (approximately 8 per sq. mile) in 1938 (Ruff 1938) (this latter, however, was noted as a "very small" number for the area).

If we take Shelford's (1963) "optimal" value of 40 per sq. mile as an approximation to Archaic environmental conditions, this would suggest a steady-state deer population of about 2,300,000 for Georgia as a whole, and about 10,000 for the survey area of this report (Map 1, p. 7).

Of more direct concern is the number of deer which can be taken each year without causing a population decline. Based on their rather high reproductive rate (Roseberry and Klimstra report this as rapid 1970:300), it can be estimated that about 25 percent of a population, or 2,500 deer, can be taken under steady-state conditions. If we allow that one-half of this are taken by natural predators, and one-half by hunters, this would give an annual "harvest" of about 1250 white-tailed deer in the 250 sq. mile survey area.

Now, to carry this further; what is the average weight of edible meat in a deer, and --- ultimately --- what would be the caloric "yield"?

Although there are documented cases of full-grown bucks weighing
up to 400 lbs. (with a dressed weight of 318 lbs.), Seton gives the average dressed weight of 562 deer (both sexes and all ages) from the Adirondacks in the 1895 season at 109.2 lbs. each (1953:232) (he notes, however, that this was one of the smaller averages). Guilday is somewhat more conservative, estimating the average usable meat at 75 lbs. per deer (1962;1970). The average of these two is 92 lbs.; since both are "conservative", I will assume here that the hypothetical take of 1250 deer would average out to 100 lbs. per individual, or 125,000 lbs. per year total for the survey area.

If one assumes, as was the case with Clark's analysis of the Star Carr data, tha caloric requirements of an adult human male are 3000 calories per day, those of an adult female are 2400 per day, and those of a child are 2000 per day, then a theoretical Archaic band (pp. 296-300) consisting of 25 individuals (of five nuclear families, each with three children) would require approximately 57,000 calories per day, or about 60.5 lbs. of meat a day (2.42 lbs. per individual per day) (Clark 1954:15-16). (This figure of over 2 pounds of meat per day seems generous, but it indicates uncooked meat.) If just one band had its territorial base in the survey area, it could meet these caloric requirements by taking approximately 221 deer per year --- or, about one every 1.65 days.

If we compute these data to obtain maximum potential population figures for the survey area, it turns out that, with a requirement of 2.4 lbs. per individual per day, the steady-state annual yield of 1250 deer could support --- by itself --- the daily caloric requirements of about 150 individuals in the survey area alone; or about six 25-member bands. (This is a population density of about 1.3 persons per square
mile; for contrast, Driver [1961:Map 5] estimates the average population of the area at Contact [i.e., with agriculture] at about 1.5 persons per square mile.)

My aim with the foregoing is not to attempt any absolute estimate of Archaic population densities by reference to white-tailed deer; obviously, the aboriginals were exploiting many different sources of food, both plant and animal. However, the deer is abundantly recovered in Archaic (and other) sites, and this, I would submit, does indicate that deer were one major factor in the total Archaic subsistence pattern. It is also interesting to note that, theoretically, the Archaic populations could have achieved almost the same densities as later agriculturalists just through minimum exploitation of this one species. Furthermore, since this could apparently have been achieved by means of a "hunting strategy" which required an average of only one deer every other day to maintain a 25-member band (which would not seem to be very demanding on either the prowess or time of the hunter), it does suggest to some extent one parameter of the effectiveness and tempo of the Archaic subsistence system in this area. Finally, I would submit, these data are completely at variance with the stereotypic image of hunters-and-gatherers as generally engaged in a precarious and arduous "struggle for existence". While this characterization might have some (slight) validity for hunters-and-gatherers in marginal environments (such as is the case with most of the groups reported in the "ethnographic present"), this kind of model is definitely not one which has much applicability to the prehistory of this area, for even if we merely limit ourselves to the range of flora and fauna actually recovered in sites, and the physical dimensions of
the refuse, it is difficult to imagine anything further from "marginal" than the Southeastern environment.

Before leaving the subject of white-tailed deer potential for aboriginal subsistence, it might be worthwhile to summarize certain information pertaining to their "social organization". Much has been written describing deer habits and movements, but most of these observations have been from the perspective of the hunter and/or conservationist; only in relatively recent years has information begun to be collected from the perspective of the ethologist (Severinghaus and Cheatum 1956:59). The following draws from this more recent data, especially that of Taylor (1956) and Hawkins and Klimstra (1970).

Does normally mate in late Fall or early Winter, and have a gestation period of about seven months (205-212 days) through the leanest period of the year. Although they may give birth to anywhere from one to four fawns, two seems to be the most common number. Throughout the summer fawning period, does and fawns (sometimes with siblings) are secretive, this "primary association" being observed only about one-half as frequently as at other times of the year (Hawkins and Klimstra 1970:410). In the Fall, does and newborn fawns come out of "seclusion", but the previous year's offspring (especially the males, who are now yearlings) often break away. These yearling bucks tend to move alone, and often disperse many miles from their birth place (in contrast, the yearling does often remain with the mother --- in the area they were born) (Hawkins and Klimstra 1970:414-415). This unit tends to break up in early Fall; thus, the "stable" family unit is not one of doe and buck, but of mother and daughter. All other units are regarded by Hawkins and Klimstra as "secondary
associations" because of their impermanency (1970:409).

During the period from late January to September, bucks are observed either singly or in social groupings of up to five (Hawkins and Klimstra report that 80 percent of these groupings are from two-to-four; only 11 percent are over five [1970:416]). Beginning in September and continuing through the mating season, these buck groupings break up as the males become aggressive toward each other (this is, of course, the time when their antlers are growing).

From October through January --- during the breeding season --- mixed groups of bucks with does (and their offspring) increased from 24 to 43 percent of the sightings (Hawkins and Klimstra 1970:417).

From this it seems evident that most deer groupings are small, the most enduring (and least "nomadic") being those of does and their female offspring. Hawkins and Klimstra remark that: "The age structure of adult does of family groups suggested that many groupings appeared to be matriarchal with three or even four generations of deer present" (1970:418). The next most common types of groupings seem to be those of bucks, except during the mating season.

Finally, unlike the wapiti (elk) and other ungulates, white-tailed deer are not true "herd" animals. Other than the "matriarchal" family grouping, all associations tend to be temporary. With regard to larger groupings, Hawkins and Klimstra state that:

...groups of up to 25-30 deer consisting of an intermingling of family and buck groups were common, especially in late winter and early spring. Such grouping was temporary; the deer did not move together as a herd (1970:418).

Thus, in connection with possible Archaic hunting strategies and "seasonal economic cycles"(Caldwell 1958:18), if one assumes that
collective hunts by aboriginal groups would have their maximum yield at times when deer were also congregated in larger groupings, the effective annual schedule of these would seemingly have included the late Winter - early Spring segment of the cycle.

The foregoing sketch of the natural potential of the survey area is merely indicative of the more prominent flora and fauna, and should not be regarded as exhaustive. Such treatment would no doubt add to our knowledge of the potential, but since quantitative controls on both the archaeological and environmental aspects are generally lacking, it would be futile (at this time) in terms of specifying prehistoric cultural-environmental relationships in causal terms. I have attempted to draw attention to some of the major ecological characteristics of the area, including a rather diverse number of vegetational econiches which would have possessed differential subsistence potentials for Archaic inhabitants. These will now be correlated with available site survey data (Chap. III) in an attempt to discern possible correlations between site locations and specific prehistoric ecological communities.

It should be mentioned, however, that no assumptions were made during this survey between present vegetation and the past. This area has been subjected to over 300 years of Euro-American farming and hunting practices, and obviously the present ecological situation is much different now than in immediate pre-Contact times (which in turn was no doubt different than in the Archaic period). Today, the area overall is characterized by crop farming and (increasingly) large stands of slash pine, and even the dense bottomland forests of the region are secondary growth which is selectively exploited for silviculture. Thus,
while there are many wooded areas, and many species which grew here prehistorically remain important, the selective nature of some three centuries of intensive agriculture have drastically altered most of the "natural" distributions and proportions which obtained prehistorically. In short, the present environmental setting, while retaining gross continuity with the aboriginal situation, does not seem to be a reliable guide to the past in terms of the specific make-up of econiches which were favored in Archaic times as site localities.

As but one example of this divergence, we may take the account of William Bartram, who ventured up the Savannah R. and treked through much of the survey area in 1773. Of the land between Wrightsboro (McDuffie Co.) and Washington (Wilkes Co.), not far from 9Wsl6 and 9Wsl9 (see pp. 93;94), Bartram remarks:

...we continued eight or nine miles through a fertile plain and high forest, to the north branch of Little River, being the largest of the two, crossing which, we entered an extensive fertile plain, bordering on the river, and shaded by trees of vast growth, which at once spoke its fertility. Continuing some time through these shady groves, the scene opens, and discloses to view the most magnificent forest I had ever seen. We rise gradually a sloping bank of twenty or thirty feet elevation, and immediately entered this sublime forest; the ground is perfectly a level green plain, thinly planted by nature with the most stately forest trees, such as the gigantic Black Oak (Q. tinctoria) Liriodendron, Juglans nigra, Platanus, Juglans exaltata, Fagus sylvatica, Ulmus sylvatica, Liquid-amber styraciflua, whose mighty trunks, seemingly of an equal height, appeared like superb columns. To keep within the bounds of truth and reality, in describing the magnitude and grandeur of these trees, would, I fear, fail of credibility; yet, I think I can assert, that many of the black oaks measured eight, nine, ten, and eleven feet diameter five feet above the ground, as we measured several that were above thirty feet girt, and from hence they ascend perfectly strait, with a gradual taper, forty or fifty feet to the limbs; but, below five or six feet, these trunks would measure a third more in
At present, the largest hardwoods adjacent to 9Wsl6 and 9Wsl9 have diameters estimated at most to be only four feet, or about one-half those observed by Bartram. However, it is not only maximum size-differences per se which are significant; it is the percentage composition of different tree species which are crucial to recognition of a given vegetation-succession "type" and hence to given econiches. The intensive, selective cutting of certain species over a long time period by Euro-Americans has drastically altered the various "natural" proportions of one species of tree to another, and hence renders observation of most modern forest composition of little relevance toward the task of describing the "original" forests of the area. Oosting, for example, states (concerning the Piedmont) that:

Virgin forest, as it was before the local appearance of the white man, is today completely lacking in the region. Only small isolated stands of relatively great age (200 to 300 years) and relatively little disturbance remain as apparent relics of what the original extensive forest of the uplands must have been like (1942:12).

And Braun comments that: "These practices [recent cultivation and forest clearing] have resulted in a patchwork of fields, second-growth forest communities of various ages, and culled hardwood stands of varying composition" (1950:263).

Since optimal herbivore populations (and ultimately of course, mere survival) are correlated with plants (often specific types), and since carnivore numbers are a function of the animals which are their prey, alterations in vegetation have effects which ramify throughout...
the ecosystem from its (photosynthetic) base upwards. Thus, the naive observation that the survey area is today characterized by extensive forests has little relevance of itself to reconstructions of possible prehistoric ecological communities, since the present woodland tracts must be regarded (albeit in some cases indirectly) as "man-made".

One rather ingenious illustration of the contrast between present and early contact vegetation in the survey area has been presented by De Vorsey (1971) as a result of the examination of early maps and plat records along the Ogeechee R. just southeast of Union Point, Greene Co., Ga. (about ten miles upstream from 9Hk2 [p. 88] and five miles south of the upper Little River Greene Co. sites reported on p. 72). The results of the comparison between tree species of the area noted on the original plats (dating to the 1700's) and today's coverage are rather dramatic:

Of these [original forest cover], 80% were hardwoods with oaks alone accounting for 57% of the total number. Only 18% of the identified trees were pines. A check of recent aerial photography of the study area revealed that hardwoods account for only about 40% of the cover with pines accounting for 60% of the total (De Vorsey 1971:28; see also Fig.6).

The effects of a fifty percent "loss" of hardwoods and a 300 percent "gain" of pines --- not to mention differences in cleared land vs. forest for the area during the period --- cannot be quantified. However, there is no doubt that such a change (which constitutes an almost exact reversal of the original species composition forest cover with regard to pine vs. hardwoods) has had extensive influence on the fauna of the area.

It would seem evident from the foregoing summary that the natural environment of the survey area was bountiful in terms of species diver-
sity and numbers of flora and fauna in prehistoric times. The forego­ing sketch of those which are directly relevant to this study includes some fourteen distinctive "econiches" (five in the Piedmont and nine in the Coastal Plain), each with its own characteristic flora and (to a lesser degree) fauna. Although it is possible to classify each of these units within two broad natural environments — i.e., Piedmont "Deciduous Forest" and Coastal Plain "Evergreen Forest" (e.g., Caldwell 1958: Fig.4) — this approach ignores and/or minimizes a central assumption of this study; namely, that Archaic subsistence systems functioned within (and were adapted to) local, specific econiches, or as Coe and Flannery (1964) term them: "microenvironments". If this be granted (and it is at least implicit in most recent discussions of Archaic subsistence [see, for example, Griffin 1967:178; Willey and Phillips 1958:111; Caldwell 1958:12-14]), then it behooves us to attempt to understand the nature of these discrete econiches, rather than lumping them under inclusive headings which do not reveal much about specific cultural-environmental adaptations.

Regarding vegetation, evidence has been presented indicating that the present forest cover is not an accurate reflection of the early-Contact period, except in a gross sense. Examination of botanical data on the "original" forests suggest that the overall trend during the past three hundred years has been towards reduction of the former diversity of econiches by selective cutting, clearing for farmlands, and silviculture. Thus, while one can classify the survey area into two broad forest categories — the "Oak-Pine" of the Piedmont and the "Southeastern Evergreen Forest" of the Coastal Plain — data concerning the specific econiches in which sites were located (which were presumably
the immediate factors in their selection by aboriginals) cannot be inferred from their present vegetation. These must be approximated from data pertaining to the "original" forest types, and from more specialized studies, such as palynology. Beyond this, extending back to the Archaic, it is necessary to consider changes in forest composition as a result of prehistoric Indian practices. (These are taken up in more detail later on.) The botanical evidence concerning the "fire subclimax", for example, strongly suggests that the "original" early-contact vegetation was not altogether the result of nature alone, although it seems certain just from available prehistoric population estimates that aboriginal disturbances to natural succession were not as intensive as those brought about by Euro-American settlers.

Finally, although much emphasis in the foregoing has been accorded to delineation of vegetation econiches in the survey area, this has been because of the fact that vegetation constitutes the essential basis of support for the entire ecosystem, including fauna. In this regard, an outline of some of the more characteristic animals of the area has been presented, for the purpose of indicating the animal potentials for prehistoric subsistence. The white-tailed deer received special attention, since this species was almost certainly the major "game" animal for Archaic populations. A cursory review of available information on deer populations - when correlated with the data on "original" vegetation --- leads to the presumption that a hypothetical Archaic population of 150 persons (or, six bands --- by exploiting just this one resource in the survey area in a "steady-state" condition (i.e., indefinitely) --- could have existed by the not very rigorous schedule of obtaining one deer per band every other day.
Disregarding momentarily the precise quantitative validity for actual Archaic populations in the area (as well as the unrealistic assumption of their exclusive reliance upon deer), I would nevertheless maintain that the trend of the implications are valid when measured against the few controls we do possess (e.g., population densities for the area at Contact, site frequencies, and others). Furthermore, they underscore a recurrent, unavoidable proposition of all of the information on the natural environment of the survey area presented so far: namely, that this was not (and even today is not) a "marginal" environment; it was, rather, a "bountiful" one. On this basis alone (not accounting for culture-historical factors), I would here submit that the entrenched image of hunter-and-gatherer subsistence as unproductive, unrelenting, undernourished and precarious (among others) has little applicability to this area and to the southeastern Archaic (at least) as a whole.
CHAPTER III

SURVEY PROCEDURES, SITES AND EXCAVATIONS

The survey was initiated in March and continued through early July 1970; from then until early September most effort was devoted to preliminary testing --- although some half-dozen additional sites were also surveyed during this latter phase of the program. Materials recovered were initially washed (and otherwise processed when time permitted) and stowed at the various field camps. Periodically, as these began to exceed our temporary field storage capacity, they were transferred to space generously provided by the Augusta-Richmond County Museum, and here further processing and cataloguing was accomplished during (the relatively few) days of bad weather. (Without the generous assistance --- and watchful eye --- of the Museum staff, and especially the director, Clemens de Baillou, our logistics would have been much more difficult.) Following termination of preliminary testing in September, all recovered materials were transported to Florida Technological University, Orlando, Fla., where the remaining cataloguing and all analyses were conducted at the F.T.U.-Archaeological Research Laboratory.

A total of fifty previously unreported Georgia sites were recovered by this survey. Of these, nineteen (38 percent) were recorded in the area south of the Fall-Line, and thirty-one (62 percent) were located north in the Piedmont (see Maps 2 & 3, pp. 56;80).
In addition to controlled surface collections, for each site data on location, spatial dimensions, soil type and vegetation, disturbances, and any other pertinent data were recorded. In accord with the aim of obtaining information concerning site locations as correlated with prehistoric econiches — and also with the overall aim of maximizing the precision of surface collecting — close attention was given to the problem of site boundaries and extent.

In general, I assumed that the greatest probability of recovering material reflecting valid prehistoric cultural contexts would be obtained by careful delimitation of materials into their smallest apparent surface extent. Thus, in most instances, any changes in topography (e.g., elevation), soils, present vegetation, and so on, were carefully noted as potential clues to the extent of a given site (or on occasion, possible different components of a site). In the initial stages of surveying a given site, this was accomplished by collecting everything in a given area (usually defined by soil changes) into one bag (or more), and keeping it separate from others. Many times the slightest change, even just in soil compaction, were seen as justification for such separation, and often at the end of this preliminary scrutiny a given hill or streamside would be dotted with a number of differently bagged materials. After this (often quite arbitrary) segregation into smallest observable units, the materials from different bags were compared, as were soil differences and vegetation, and materials were either lumped with others or kept isolated on these bases.

Due to the "usual" problems of cultural admixture and disturbances in surface collecting, the end result of these procedures was generally to lump materials into a few (or many) bags representing the entire
site; i.e., in a technical sense, the gross outcome was usually not much different than if I had simply ignored all possible intra-site differences. This is because of the fact that, in almost any surface collection (in this area, at any rate), materials from one occupation may be readily mixed with those of another (either due to natural forces, such as erosion, or to subsequent prehistoric activities, or [not infrequently], to post-Contact disturbances). The usual result of these disturbances is that apparently similar artifacts (say, given projectile point forms or pottery) occur throughout a given site.

Nonetheless, despite the seeming "failure" of those procedures to yield neatly restricted, isolated components in a gross sense, I do not regard them as altogether futile exercises. In many instances, there were differential frequencies of given artifacts (e.g., projectile point forms, pottery) over a single site, or other preliminary types of differential associations (e.g., projectile points occurring with waste flakes vs. those in isolation) which gave information about possible components or site utilization. There were also, fortunately, a few seemingly "pure" sites; i.e., sites which possessed little variation in material throughout.

In any event, my overall approach was initially to isolate materials as much as was possibly warranted by observation, and then to lump them, recording what seemed to be significant frequencies or other data. No doubt many of the separations were arbitrary, and certainly the lumping resulted in some mixing of different components; but --- overall --- I feel these procedures are methodologically much better than simply collecting materials into containers as one rambles back and forth across a given site (which most certainly does destroy the basis for possible
inferences as to differential components and/or utilization of space within a given site).

Now, in many instances, sites were separated by a number of miles, in most instances there were natural features (such as streams or hills) which suggested the "boundaries" of nearby sites, and in all instances of relatively closely-spaced sites (e.g., 9Ge5-9Ge15) there was culturally sterile intervening space. Although the precise definition of what constitutes the boundary of an archaeological "site" can be difficult, as Willey and Phillips (1958:18) state, in the field --- for this research --- my presumption was to limit the extent of a given site to the extent of "continuously" occurring surface materials (and their soil associations, where these were evident).

The site measurements which follow reflect this uniformly applied criterion, despite recognition that it often (always?) results in arbitrary site boundaries. On the whole, I would evaluate myself as "conservative" in this regard, in that I probably err more in the direction of site "smallness" than "largess". In any case, so long as one recognizes the arbitrariness of site boundaries and their estimation from surface data, the issue of size can be viewed as a secondary (but not unimportant) function of this problem; thus it must be resolved by further information, such as excavation.

Beginning in mid-July (and ending in early September), preliminary test excavations were conducted at five of the sites recorded in the survey. These were selected from the sample both for their stratigraphic potential and for their presumptive significance, in terms of the analysis of surface-collected material, for the purposes of this study. Leaving aside consideration of pragmatic factors --- such as accessibil-
ity and land ownership (of which neither were burdensome, as it turned out in this case) --- there were two other factors taken into account in selecting sites for testing: (1) preliminary suggestions of possible different econiche correlations, and (2) consideration of Coe's hypothesis concerning the higher probability of recovering natural (and cultural) stratification in alluvial flood plains, especially those near river Narrows (Fall-Lines) areas in the Southeast (1964:9-13).

Technically, three of these excavated sites --- 9Cbl2, 9Cbl5, and 9Cbl8 --- are in the Coastal Plain area, while two --- 9Ws16 and 9Ws19 --- are in the Piedmont. However, as will become apparent, these gross classifications have little meaning per se in terms of site contrasts. In part, this is due to the fact that all of the sites tested were within ten miles of the Fall-Line and hence would be more accurately classified as within that zone.

More importantly, there is no a priori reason to expect that the aboriginals were culturally differentiated into "Piedmont" and "Coastal Plain" ethnic groupings (in a sociolinguistic sense), even though evidence will be presented underscoring what seem to have been different site and subsistence patterns in the two areas. Furthermore, the bulk of the archaeological data (such as projectile point types and ceramics) show considerable homogeneity throughout the survey area. Thus, if comparisons of this type of data are one basis for cultural classification and for delineation of different "culture-areas", they do not seem to me, on the whole, to argue for extensive ethnic diversity in this area during the Archaic period. For what it's worth (and I should say here that I regard any attempt at ethnic identification on an Archaic time-level as essentially futile and decidedly peripheral in a scheme of
Southeastern archaeological "priorities"), I am inclined more toward acceptance of the idea that sociolinguistic diversity tended to increase through time; hence I would estimate (speculate) that there was much more ethnic diversity in the Contact period (and Woodland) than was the case during the Archaic --- at least in this area of North America.

In any case --- anticipating the data which follow --- the preliminary testing of these five sites, while not supporting any neat binary division into "Piedmont" vs. "Coastal Plain", did yield evidence suggesting that Archaic subsistence systems were rather finely adjusted to specific econiches. It was seemingly the specific potential(s) of these localized econiches, I would submit, which were of prime importance in Archaic site selection. Furthermore, I would interpret these rather specific cultural-environmental adaptations not as evidence for highly differentiated (or isolated) Archaic groupings, but rather as evidence for a highly flexible and rather effective set of viable alternative responses to different "micro-environments", all functioning within the cultural repertoire of most Archaic social units. To me, it was this set (or "bundle") of alternative, yet specific, subsistence strategies --- mostly as registered archaeologically in the sphere of what is usually termed technology --- which distinguish between "Archaic" and "Paleo-Indian" (or Lithic) as cultural "stages", in the phrasing of Willey and Phillips (1958:64-72; and see also pp. 79-81 and 104-111 for the two examples above). However, this "interpretation" jumps ahead of my purpose here, which is the presentation of survey data.

In the outline which follows, explicit directional descriptions are minimized, since locations are marked on Maps 2 and 3 (pp. 56;80).
(These are not intended to be "field" guides to site locations, although they are specifically designated as to nearby topographic features, and I would suspect no one with archaeological survey experience would have difficulty locating them. All locational data are of course recorded on regular Site Survey forms on file; these are readily available.)

For convenience and cross-reference, the analysis and tabulations of Chapter V are here presented simply as "preliminary cultural affiliation(s)". Although this scheme is out of sequence, since the information on artifacts has not yet been presented, these labels will serve the present purpose of giving some rough idea of correlations between site locations, probable econiche, and cultural phases (these are of course more fully developed later on. Inasmuch as palynological data were gathered only from 9Cb15, the designation of "probable econiches" rests mainly upon the data presented in Chapter II, and should of course be regarded as tentative.

A summary of the following information is presented in Table II (p. 57).

**Piedmont Sites (Map 2, p. 56)**

**Site Designation:** 9Ws12

**Location:** Wilkes Co., north (adjacent) of Little River and east (adjacent) of Rocky Creek.

**Physical Dimensions:** Site occupies a wooded knoll rising approx. 50 ft. above small level floodplain of Little R. The top and slope are today densely wooded (mostly pines), although the presence of erosion gullies suggest this is recent. Soil, where exposed, consists of a thin veneer of humus overlying red clay (subsoil) on the rise, and alluvium at the base. Site measurements were difficult, but are approximately 40 ft. around the crown and 150 ft. along the stream slope.
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<th>Site Designation</th>
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<th>Extent of Site</th>
<th>Amount Materials Recovered</th>
<th>Probable Econiche</th>
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<tbody>
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<td>9Wsl2 Wilkes</td>
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<td>S*</td>
<td>Pine-Oak-Hickory Knoll</td>
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<td>55, 60</td>
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<td>S</td>
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<td>Pine-Oak-Hickory Knoll</td>
<td>Mississippian</td>
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<td>9Wsl9 Wilkes</td>
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<td>L</td>
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<td>O</td>
<td>Pine-Oak-Hickory Bluff</td>
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<tr>
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<td>Mixed Mesophytic Knoll Slope</td>
<td>Quarry Site</td>
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<tr>
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<td>S</td>
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<td>M</td>
<td>Pine-Oak-Hickory Stream Terrace</td>
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<td>9Mcd2 McDuffie</td>
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<td>(see p. 73)</td>
<td>Woodland</td>
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<td>(see p. 74)</td>
<td>(see p. 74)</td>
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<td>M. Mtn. I &amp; II, Savannah R., &amp; Woodland</td>
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<td>Kiokee Creek &amp; Woodland</td>
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<td>Cypress-Tupelo-Black Gum Swamp Rise</td>
<td>Savannah R. (?)</td>
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<td>9Cb10 Columbia</td>
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<td>Savannah R.</td>
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<td>9Cb14 Columbia</td>
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<td>9Cb15 Columbia</td>
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<td>9Cb16 Columbia</td>
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<td>M. Mtn. I</td>
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<td>9Cb18 Columbia</td>
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<td>Pine-Oak-Hickory Knoll</td>
<td>Early to Late Archaic (Intermitt.)</td>
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<td>9Cb19 Columbia</td>
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<tr>
<td>9Hk2 Hancock</td>
<td>L M</td>
<td>Mixed Mesophytic Slope</td>
<td>M. Mtn. I &amp; II, Woodland</td>
<td>88</td>
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<tr>
<td>9Bur6 Burke</td>
<td>S O</td>
<td>Cypress-Tupelo-Blackgum Swamp Rise</td>
<td>Savannah Ceramic Complex (?)</td>
<td>88-89</td>
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<tr>
<td>9Bur7 Burke</td>
<td>L M</td>
<td>Hardwood Bottom Forest</td>
<td>Unclassified; Prob. Multiple Archaic</td>
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<td>9Bur9 Burke</td>
<td>S S</td>
<td>Pine-Turkey Oak-Willow Oak; Upland</td>
<td>Early Woodland</td>
<td>90</td>
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</table>

*L="Large"; M="Medium"; S="Small"

(For specific quantities, see text.)
Materials Recovered: One bag of material was recovered, all from various gullies eroded into the rise and along an abandoned dirt road leading to the River. Most of the material consists of quartz chips, but a few projectile points were recovered. No ceramics were evident.

Discussion: Although almost every exposed ground surface yielded some material, it was all in disturbed contexts, and no preliminary associations were evident. It would seem probable that most of the materials were in process of migration downward, and that the crown area was thus the original site locus. This is perhaps strengthened by the fact that the crown area contains several large quartz nodules, although no outcrops per se were visible. The small crown area, coupled with the infrequency and scattered distribution of materials, suggest brief, small-scale utilization.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16)

Preliminary Cultural Affiliation(s): Morrow Mtn. (I and II) and Kiokee Ck. (p. 154).

Site Designation: 9Ws13


Physical Dimensions: Site occurs on gentle rise (approximately 10 ft. high) and 150 yds. in diameter, located in modern pasture. Presence of micaceous sand overlying clayey soil in exposed areas suggest natural formation (perhaps, a small levee); no evidence of midden deposit observed. (The entire area had been cultivated until 1968, according to informants.)

Materials Recovered: Less than one bag of lithic materials were collected here, although informants stated that "much" material has been taken from the spot for many years while it was cultivated. No particular distribution patterns were discernible.

Discussion: Unfortunately, previous collections were by numerous individuals, and are now probably past retrieval. The few remains retained by our informants differed from those reported here mainly in showing that sand-tempered ceramics (all small plain body sherds) have been recovered at the site. Judging from informant statements, there was seemingly a fair-sized prehistoric occupation here, although it is difficult to determine whether the accumulation was due to Archaic or post-Archaic populations.

Probable Econiche: Natural levee (?) in river-bottom hardwood stands (p. 17)
Preliminary Cultural Affiliation(s): Kiokee Ck. (present data and informant collection) and Woodland (informant collection). (p. 154)

Site Designation: 9Wsl4

Location: Wilkes Co., on streamside slope of knoll rising approximately 40 ft., located 75 yds. from "north" (i.e., magnetic west) bank of Morris Ck. at point approximately 2 miles upstream from confluence with Savannah R. (now Clark Hill Reservoir here).

Physical Dimensions: Difficult to determine because area today has dense mixed deciduous and pine growth. There are two gently sloping knolls divided by Morris Ck.; both about the same height. Both were inspected, and both possess a thin sandy humus overlying red clay subsoil in exposed areas (all the result of present logging operations).

Materials Recovered: One small triangular projectile point, and less than one bag of worked flakes (no ceramics evident).

Discussion: If logging continues to expose more ground surface here, it would appear likely that more cultural evidence will be recovered, on the basis of the few worked flakes we recovered and the location.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll (p. 16)

Preliminary Cultural Affiliation(s): "Mississippian". (p. 155)

Site Designation: 9Wsl5

Location: Wilkes Co., on slope rising from floodplain of south bank of Broad R., just upstream from Anthony Shoals (at "head" of Clark Hill Reservoir).

Physical Dimensions: Materials collected around 30 ft. "zone" on heavily wooded slope which rises to 70 ft. hilltop above Broad R. floodplain. As measured, the site is roughly rectangular (90 ft. by 40 ft.) along the riverside slope (about 45° incline), but this is highly arbitrary, since it represents only part of the ground surface visible due to logging. Although the remainder of the entire hill was searched with negative results (leaf litter was heavy, with few exposures), I have little doubt that future logging disturbances will reveal cultural evidence all along the riverside slopes of the hill (a minimal area of 500 x 25 yds.). The slope is mantled by dark, sandy humus; no red clay subsoil exposures were evident. The level floodplain (in this area consisting of boulders and micaceous sand) is about 100 ft. wide here, and Broad R. widens across the shoals to about 300 ft.
Materials Recovered: Less than one bag of materials were recovered, including several lithic specimens and (sand-tempered) ceramics. The ceramics were all recovered at lower elevations, although the sample area is probably too small to permit any generalization as to different components from this at present.

Discussion: The site occurs on the first high ground back from Broad R.; furthermore, it is situated at a point such that the River arcs around it on three "sides". The River is narrower and deeper just upstream, becoming shallower and broader in the area of the site itself. Although the north bank of the River also features backset hills, there are extensive "boulder-fields" separating these from the channel itself. In short, the site area had much to recommend itself from the perspective of prehistoric settlement in the immediate locale. Whether recovery of materials on the slope represents (part of) the true area of occupation, or is the result of erosion is problematical; but --- on the basis of present soil cover --- I am inclined to think that erosion has not been a significant factor. This suggests that occupation was on the slope (and probably the hill crown as well, of course). This site is approximately five miles upstream from the former confluence of the Broad and Savannah Rivers; it is interesting to note, in terms of possible prehistoric trade (exchange) routes, that several chert artifacts were recovered here (the closest sources for these is over sixty air miles to the southeast in the Coastal Plain).

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16).

Preliminary Cultural Affiliation(s): Savannah R. and Woodland (p. 155)

Site Designation: 9Wsl6
For location, see Map 2 and Fig. 1 (pp. 56;100); for excavated material, see pp. 93-94.

Site Designation: 9Wsl7 & 9Wsl8
(See 9Tf7, p. 66)

Site Designation: 9Wsl9
For location, see Map 2 and Fig. 1 (pp. 56;100); for excavated material, see pp. 94-101.
Site Designation: 9Tf2

Location: Taliaferro Co., floodplain area south of Little R., and adjacent bluff rising 75 ft.; both just southwest of confluence of Williams Ck. and Little R.

Physical Dimensions: At least two sites are represented here; one is in the alluvial bottomland of the Little R. floodplain (approx. 500 yds. wide here); the other is a nearly level plain which extends back at least 100 yds. along steep bluffs marking the valley wall. The floodplain features typical bottomland hardwood stands; the bluff area was in cultivation until 1960 and now exhibits typical "old field" successional growth (mostly grasses and young pines --- see p. 17). Informants state that much of the original topsoil has eroded from this area.

Materials Recovered: In deference to the owner, no materials were collected at these sites; hence they are not included in the tabulations. However, Mr. Macfie very generously permitted inspection of the area, and made available for observation and photography an extensive collection of materials which had been obtained over a number of years. The ceramics, which according to him have been recovered mostly from the bottomland floodplain, reflect virtually all of the Woodland occupations currently recognized in this area; most, however, would seem (on the basis of my brief observation) to be within the Lamar series; no fiber-tempered sherds were observed. There are several rather complete specimens in this (important) collection. Lithic specimens, most of which were stated to have been recovered from the blufftop area, included numerous CSPP's, "manos-and-metates", "bannerstones" (atlatl weights), and groundstone axes. Again, a wide range of lithic materials were represented, although no fluted specimens or Hardaway points were evident. My superficial impression was that the bulk of the CSPP's were Morrow Mountain and "straight-stemmed" (Savannah R. and Kiokee Ck. ?). A number of the lithic specimens are (non-local) chert.

Discussion: It is evident that at least two sites are designated under this one heading, but it was felt to be more expedient (though inaccurate) to lump them together, since no material basis for separating them is available by means of controlled surface collections. Harper notes (1958:343) Bartram's reference to "magnificent monuments" occurring in this area, and Mr. Macfie did indeed lead us to a rather impressive rise situated on the floodplain near the confluence of Williams Creek and Little River. Covered with (some rather large) hardwood trees, the "mound" is approximately 40 ft. high and about 120 yds. in diameter at its base. There were no cultural materials observed in the few exposed areas on and near the rise. This, and the presence of several large rocks in the slope, suggests it is the result of natural forces, but further investigation might well show some prehistoric utilization nonetheless.
Probable Econiche: Pine-Oak-Hickory (blufftop area only) (p. 16)

Preliminary Cultural Affiliation(s): No data available, but Mr. Macfie's collection suggests primarily Archaic occupations (blufftop only).

Site Designation: 9Tf3

Location: Taliaferro Co., 200 yds. north of N. Fork Ogeechee River on valley wall slope approximately 30 ft. above river bank (the Ogeechee here is only about ten ft. wide and rather shallow). Site is two miles southeast of Robinson (western part of Co.).

Physical Dimensions: The site area is roughly oval, measuring approximately 150 x 60 ft. along an incline leading down to the "river". Materials were collected from a sandy yellow clay surface, and several quartz nodules were visible.

Materials Recovered: Less than one bag of materials were recovered. No ceramics were evident, and the lithic specimens are not diagnostic.

Discussion: On the basis of soil type (i.e., the absence of indications of midden-like deposits), materials, and size I would assume this was a small-sized "temporary" campsite or, more probably a "quarry-site". (However, a search of the immediate area did not disclose any other remains within 1000 yds. along the Ogeechee.)

Probable Econiche: Mixed Mesophytic (Beech-Sweetgum-Magnolia) (p. 21).

Preliminary Cultural Affiliation: Unclassified, "quarry-site" (chipping station)? (pp. 155-156)

Site Designation: 9Tf4

Location: Taliaferro Co., east of Edgewood Crossroads Rd. at a point approximately 0.4 miles north of its junction with Ga. Rt. #22 (approximately 2 miles north-northwest of Crawfordville).

Physical Dimensions: Materials were recovered in a roughly circular area approximately 50 ft. in diameter in a thin gray sandy humus which overlies red clay subsoil. No soil differences between this and surrounding areas were discernible. This site occupies a broad topographic ridge (or upland) approximately one mile west of Ellington Branch and 1.5 miles east of Stephens Creek. It is thus rather far from the nearest water sources (today, at any rate), and served to caution me against over-emphasis of the often-voiced idea that Indian sites are "never" far from permanent fresh-water. Despite this occurrence, the small size, lack of soil differentiation and infrequency of materials suggest it was never occupied for very long or by very many people at one time.
Materials Recovered: Less than one bag of material was recovered here, including several projectile points and other chipped stone implements (but no ceramics).

Probable Econiche: Post-oak/Blackjack-oak/Sour gum ("Xeric" Deciduous) Upland (p. 16).

Preliminary Cultural Affiliation: Morrow Mtn. I (p. 156)

Site Designation: 9Tf5

Location: Taliaferro Co., south (adjacent) of south bank of Little River at a point 0.5 miles upstream from Ga. Rt. 22 bridge.

Physical Dimensions: Site is located atop first knoll adjacent to River; it is approximately 100 ft. above River floodplain. The top half of the knoll is gently sloping and about 700 yds. in diameter; below this are steep bluffs descending to the floodplain. Today the knolltop is red clay "subsoil" (abandoned field), but patches of the former topsoil were thinly scattered about. Material were recovered over the entire knolltop surface, but most came from an area approx. 100 yds. in diameter at the summit. Several large quartz nodules were noted.

Materials Recovered: Two bags of material were recovered here, including projectile points and other chipped stone artifacts (but no ceramics). A few chert specimens were recovered as well (the nearest source for these is approx. 30 air miles southeast).

Discussion: Although cultivation and erosion have extensively disturbed contexts here, over 50 percent of the materials were recovered near the summit of the knoll, suggesting this area as the primary locus of occupation. (It might also be noted that whoever had the task of bearing water up from the River would very soon have developed powerful leg muscles!).

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16).

Preliminary Cultural Affiliation: Morrow Mtn. I & II. (pp. 156-157)

Site Designation: 9Tf6

Location: Taliaferro Co., on low knoll rising approx. 20 ft. above branch of Lick Creek within boundary of Alexander H. Stephens Memorial State Park, Crawfordville, Ga.

Physical Dimensions: Knoll top measures approx. 40 ft. in diameter; most materials recovered eroding from roadcut bank featuring thin
sandy humus overlying red clay subsoil.

Materials Recovered: Less than one dozen specimens recovered, only two of which were diagnostic (projectile points).

Discussion: This "site" was noticed while walking one evening after dinner at one of our temporary campsites (Stephens was vice-President of the Confederacy; the present park includes most of his plantation). It is of course possible the artifacts recovered were simply discarded by someone associated with the plantation, or, by some contemporary camper. However, the presence of miscellaneous worked quartz flakes in the same area suggest a valid context of sorts (on the assumption that "relic-hunters" do not usually bother to retain less than whole specimens). In any event, it seemed worthwhile to place them on record.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll (p. 16).

Preliminary Cultural Affiliation: Palmer-Kirk and Morrow Mtn. I (p. 157)

Site Designation: 9Tf7

Location: Taliaferro Co., on bank rising approximately 20 ft. above (small) floodplain on north side of Harden Creek; this site is approximately 1000 ft. southwest of 9Ws19.

Physical Dimensions: Materials were recovered in a strip approximately 150 x 20 ft. lying parallel to the Creek; however, this might well extend back further from the rise (into what is now dense underbrush). Approximately 0.5 ft. of sandy humus remains, overlying red clay subsoil.

Materials Recovered: One bag of chipped stone materials were recovered, none of which were particularly diagnostic. No ceramics were evident. (This latter is interesting in view of the proximity of this site to 9Ws19 [where ceramics do occur]; there is little doubt the two sites are related over at least part of their respective utilization spans.)

Discussion: Initial surveying suggested two small, separate sites here. Subsequent observation revealed materials in the humus all along the rise, so the two were combined. Also, my initial field designations --- 9Ws17 and 9Ws18 --- were in error, since a check of maps revealed the County line passes between this site and 9Ws19. Although lack of diagnostic materials superficially indicate primary use of this site as a "chipping station", it may well be that it was also small sized campsite (lack of time at the end of the season precluded further checking on this).

Probable Econiche: Pine-Oak-Hickory (Deciduous) stream terrace (p. 16).
Preliminary Cultural Affiliation: Unclassified "chipping station". (pp. 157-158)

Site Designation: 9Ge5

Location: Greene Co., north (adjacent) from north bank of South Fork, Little River, approximately 0.75 miles upstream from Daniel Springs, Ga.

Physical Dimensions: The site occurs some 50 ft. north of River channel, approximately 20 ft. above water on a rise which inclines gradually to approximately 80 feet 500 yds. north (i.e., the site is on gradually inclined terrain, much nearer the River than the ridge top). Materials were recovered in a circular area of sandy red clay subsoil and remnant lenses of sandy humus measuring 60 ft. in diameter.

Materials Recovered: Less than one bag of materials recovered, including lithic specimens and one (sand-tempered) sherd. No associations were evident.

Discussion: The entire slope of this ridge extending all along the River for approximately one mile had just recently been "clear-cut" of timber. Although this no doubt further disturbed any surface "contexts", it was also instructive to be able to observe an area this size virtually denuded of vegetation (it was the largest such area observed in the course of the survey). If the number of distinct sites recorded in this area is at all representative of the potential "site-density" of the survey area as a whole, it indicates that prehistoric occupations are not at all infrequent. It also would imply that the total sites recorded in this study represent less than 5 percent of the total of prehistoric potentials of the CSRD as a whole! In any event, it certainly is further caution to this student of southeastern prehistory concerning statements in the literature about "site-sampling error" and site-representativeness.

Probable Econiche: River Bottom Hardwood stand (p. 17).

Preliminary Cultural Affiliation: Morrow Mtn. I and Woodland (p. 158)

Site Designation: 9Ge6

Location: Greene Co., along north bank of River, 60 ft. west of 9Ge5.

Physical Dimensions: Materials recovered in sandy red clay subsoil with scattered remnant sandy humus lenses in roughly circular area measuring 85 ft. across. It begins 20 ft. back from the River channel.
Materials Recovered: Less than one bag of chipped stone materials (mostly quartz, but a few of chert), including several projectile points (but no ceramics). No associations were discernible.

Discussion: Partially related to 9Ge5, 9Ge7, 9Ge10, and 9Ge12, although most of the diagnostic artifacts indicate different specific components. Both this and 9Ge5 seem to have been small, temporary campsites, if judged on the basis of amount of recovered materials.

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Morrow Mtn. I, Kiokee Creek, Woodland (p. 158)

Site Designation: 9Ge7

Location: Greene Co., along north side of River, approximately 300 ft. west of 9Ge6.

Physical Dimensions: Site occurs on slight ledge-like prominence rising approximately 30 ft. above River; it grades into the larger ridge incline described above. Materials were recovered from an ovate area 100 x 200 yds. along the terrace-like surface. Present soil cover is as described above. A quartz outcrop measuring approximately 10 x 20 ft. occurs north of the site approximately 100 yds. on the ridge slope.

Materials Recovered: One bag of chipped stone specimens (again, mostly quartz, but also some chert), including several projectile points (but no ceramics).

Discussion: This site was the largest of the immediate series, and occupied the most nearly level ground in the area. It is partially related to both of the foregoing sites, but the lack of ceramics indicates primarily Archaic affiliations. Although no evidence of midden lenses was noted, the relative abundance of worked flakes and its size suggest a somewhat more intensive occupation here than with the previous two sites.

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Morrow Mtn. I and Kiokee Creek (p. 159)

Site Designation: 9Ge8

Location: Greene Co., on north bank of River, approximately 100 ft. west of 9Ge7.
Physical Dimensions: This site is situated on a slightly lower rise (approximately 20 ft. above water) which grades into the larger ridge slope beyond. Materials were recovered from a roughly circular area measuring 50 ft. in diameter. Soils are as previously described.

Materials Recovered: Less than one bag of chipped stone specimens, including several projectile points (but no ceramics). Most of the (quartz) waste-flakes were recovered in the same area as the points; otherwise no associations were discernible.

Discussion: Partially related to 9Ge7 (earlier component).

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Morrow Mtn. II. (p. 159)

Site Designation: 9Ge9

Location: Greene Co., on "north" (i.e., magnetic east) bank of River, approximately 200 ft. southeast of 9Ge5.

Physical Dimensions: Materials collected from knoll crown --- rising approximately 30 ft. --- which is situated approximately 45 ft. from River edge. Site area was approximately 40 ft. in diameter. Soils as previously indicated for the area.

Materials Recovered: Less than one bag of chipped stone specimens, of which none were particularly diagnostic (no ceramics evident).

Discussion: Generally related to other sites in this series, but paucity of materials suggests only peripheral use (no occupation) as a "chipping station".

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Unclassified "chipping station" (p. 160)

Site Designation: 9Ge10

Location: Greene Co., on "north" (i.e., magnetic east) bank of River, approximately 400 ft. southeast of 9Ge9.

Physical Dimensions: Materials collected from roughly circular area 150 ft. in diameter on slope leading 30 ft. down to River (and continuing back beyond site to a 50 ft. rise). Soils as previously indicated for this series.
Materials Recovered: One bag of chipped stone specimens, including several projectile points (most materials were quartz, but several chert specimens occur). No ceramics were evident.

Discussion: Partially related to 9Ge7, but seemingly a smaller (more temporary) campsite. Although no ceramics were recovered, a small triangular CSPP indicated later use.

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Kiokee Creek and "Mississippian" (p. 160)

Site Designation: 9Ge11

Location: Greene Co., on "north" (i.e., magnetic east) bank of River, approximately 500 feet south of 9Ge10.

Physical Dimensions: Materials collected from knoll crown rising approximately 40 ft. above water, located 45 ft. back from River bank. Site area is roughly oval, approximately 150 x 75 ft. Soils are as previously indicated for this series.

Materials Recovered: One bag of chipped stone specimens, including several projectile points, and one metamorphic rock slab pitted on both sides. A few (sand-tempered) ceramics were recovered here as well.

Discussion: Partially related to 9Ge5, 9Ge7, 9Ge8, and 9Ge12. This was the third largest site of the series, and was seemingly a campsite (on the basis of worked-specimen frequency).

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Morrow Mtn. I and II; Woodland (pp. 160-161)

Site Designation: 9Ge12

Location: Greene Co., on north bank of River, approximately 300 ft. northeast of 9Ge11.

Physical Dimensions: Materials were recovered within an oval shaped area measuring 50 x 200 yds. along the crown of a knoll rising approximately 50 ft. above the River and located some 75 ft. back from the channel. Soils are as previously described.

Materials Recovered: One bag of chipped stone specimens were recovered, including several projectile points; in addition, a few (sand-
tempered) sherds were recovered here. Most of the materials were concentrated near the top of the crown area, and several of the projectile points were recovered in small lense-like concentrations of quartz chips. Since the soil here is highly eroded, it is problematical whether or not these represent some sort of valid association.

**Discussion:** Because of the relatively high frequency of Morrow Mtn. projectile points (and despite the presence of ceramics), this site is considered the most important of the series for information pertaining to that component. It was the second largest site of the series, and was probably the primary occupation locus in this area for the Morrow Mtn. phase. It is of course related to the other Morrow Mtn. sites in this series (though I do not mean to imply they were necessarily occupied simultaneously by one group).

**Probable Econiche:** River Bottom Hardwood Stand (p. 17).

**Preliminary Cultural Affiliation(s):** Morrow Mtn. I and II; Woodland (p. 161)

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**Site Designation:** 9Ge13

**Location:** Greene Co., on north bank of River, approximately 150 ft. east of 9Ge12.

**Physical Dimensions:** Materials were recovered from an oval area approximately 30 x 60 ft. along the slope of a knoll some 10 ft. above the River and 50 ft. back from the channel edge. The soil was much more sandy here than elsewhere in the series, and included a number of fist-sized quartz nodules.

**Materials Recovered:** Less than one bag of chipped stone specimens (mostly quartz, but also several of chert), including projectile points (but no ceramics).

**Discussion:** I suspect the materials recovered here represent a former small sized campsite located directly along the River margin and subsequently disturbed by a shift in the channel. This site is partially related to 9Ge7, 9Ge10, and 9Ge12.

**Probable Econiche:** River Bottom Hardwood Stand (p. 17).

**Preliminary Cultural Affiliation(s):** Morrow Mtn. I and Kiokee Creek (p. 162)

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**Site Designation:** 9Ge14

**Location:** Greene Co., on north bank of River, approximately 300 ft.
northeast of 9Gel3.

**Physical Dimensions:** Materials were recovered from a roughly circular area 60 ft. in diameter on the crown of a knoll rising approximately 30 ft. above the water and set back approximately 60 ft. from the present channel. Soils are as described previously for the series. A quartz outcrop measuring approximately 20 x 10 ft. occurs some 500 ft. east.

**Materials Recovered:** Less than one bag of chipped stone specimens recovered, of which none were particularly diagnostic.

**Discussion:** The frequency of CS blanks and cores indicate primary utilization as a "chipping station", primarily associated with 9Gel2 and 9Gel5.

**Probable Econiche:** River Bottom Hardwood Stand (p. 17).

**Preliminary Cultural Affiliation(s):** Unclassified "chipping-station" (p. 162)

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**Site Designation:** 9Gel15

**Location:** Greene Co., on north bank of River, approximately 200 ft. east of 9Gel14.

**Physical Dimensions:** Materials were recovered from an oval area measuring 50 x 150 ft. along the crown of a knoll rising 80 ft. above water and set back approximately 200 ft. from the present channel. Soils are as previously described. A large quartz outcrop occurs some 200 ft. east (see 9Gel4).

**Materials Recovered:** Less than one bag of chipped stone specimens were recovered here, although the crown of the knoll was littered with loose quartz. None of the specimens were particularly diagnostic.

**Discussion:** Again, this site seems to represent a "chipping-station" primarily associated with 9Gel2 and 9Gel14.

**Probable Econiche:** Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16).

**Preliminary Cultural Affiliation(s):** Unclassified "chipping-station" (p. 163)

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**Site Designation:** 9Wr2

**Location:** Warren Co., along edge of knoll crown rising 80 ft. from steep bluffs immediately adjacent to south bank of Little River
and west of confluence with Bull Creek.

Physical Dimensions: Materials were recovered only along the margins of the knoll crown, which is approximately 400 ft. across and another 20 ft. higher. Although covered with a dense hardwood and pine stand, the crown is extensively eroded, exposing granite-like and quartz outcrops. Below the crown are steep rocky bluffs leading to the River. The south bank of the River lies within 30 ft. of the foot of these bluffs, and seems to be cutting laterally toward them (i.e., the bank is undercut in this area).

Materials Recovered: Less than one bag of chipped stone specimens, including one projectile point (but no ceramics).

Discussion: It seems likely that the materials recovered are the result of redeposition due to erosion, but no materials were found in any of the exposed areas higher up on the crown. This led me to suspect that the crown area was simply a type of "sentinel" outpost station to a primary campsite on the floodplain below. A check of the River bank, however, revealed no cultural evidence, nor any soil differentiation indicative of former occupation. Thus, I can offer no very convincing explanation for the few scattered knoll-top remains.

Probable Eco niche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16).

Preliminary Cultural Affiliation(s): Morrow Mtn. I (p. 163)

Site Designation: 9McD2

Location: McDuffie Co., former knollside (now shoreline cutback in Clark Hill Reservoir) back 50 ft. from south bank of Little River approximately 1 1/5 miles east of Ga. 78 River bridge. Site was approximately 30 ft. above (former) River channel.

Physical Dimensions: Not determinable at present; materials were recovered on small (ten ft. wide) quartz pebble "beach" fronting undercut ledge with approximately 0.5 ft. humus overlying red clay subsoil. No materials were observed in the (now thickly wooded) surface beyond the undercut bank, but quartz litter occurs around an outcrop higher on the knoll.

Materials Recovered: Less than one bag of materials recovered, including chipped stone specimens and one waterworn (sand-tempered) sherd. All of these came from the quartz "pebble beach" area.

Discussion: The lack of context here precludes much in the way of discussion. Purely as a guess (based on remains elsewhere recovered), I would say the materials were originally from the humus layer; however, whether the site was once further down the slope (i.e.,
closer to the River) or up the slope (i.e., toward the knoll crown and quartz outcrop) is impossible to determine.

**Probable Econiche:** Undetermined; either River Bottom Hardwood Stand or Pine-Oak-Hickory knoll (pp. 17; 16)

**Preliminary Cultural Affiliation(s):** Woodland (pp. 163-164)

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**Site Designation:** 9Mcd3

**Location:** McDuffie Co., east of Germany Creek on knoll crown rising approximately 75 ft. located 200 ft. back from the Creek bed. Site area is approximately 2000 ft. north of confluence of Germany and Little Germany Creeks.

**Physical Dimensions:** Materials were recovered from knoll crown area approximately 60 ft. in diameter. Crown (and slope) is mantled with light sandy humus; several erosional gullies expose red clay subsoil about 1 ft. below the surface. There were no discernible soil differences between the crown area and the slope (e.g., there was no discernible "midden-like" zone). Granite-like outcrops occur on nearby knolls, and one quartz outcrop occurs on a knoll on the west side of the Creek (see 9Mcd5) approximately 500 ft. from this site.

**Materials Recovered:** Less than one bag of chipped stone materials (mostly quartz, but also a few chert specimens). No ceramics were evident.

**Discussion:** This area, like the Greene Co. series (but smaller), had recently been "clear-cut" of timber. Erosion has begun to form gullies in the slopes, but it is not yet extensive. On the basis of recovered materials, their area of occurrence, and lack of soil differentiation, this would appear to have been a small-sized campsite, probably related to 9Mcd5.

**Probable Econiche:** Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown ? (p. 16).

**Preliminary Cultural Affiliation(s):** Morrow Mtn. I and II (p. 164)

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**Site Designation:** 9Mcd4

**Location:** McDuffie Co., on east side of Germany Creek, approximately 200 ft. northwest of 9Mcd3.

**Physical Dimensions:** Materials recovered atop small knoll rising approximately 30 ft. above Creek, set back from streambed approximately 75 ft. Soil cover is as for 9Mcd3.
Materials Recovered: One (quartz) CSPP; virtually nothing else evident.

Discussion: This is an instance of a "technical site". How to assess both is situational; however, in the case of 9Mcd4, I am inclined to the view that this point was simply "lost" or dropped here.

Probable Econiche: not classified

Preliminary Cultural Affiliation(s): not classified

Site Designation: 9Mcd5

Location: McDuffie Co., on knoll rising approximately 75 ft., located west of Germany Creek approximately 300 ft. back from the streamside. This site is due west of 9Mcd3.

Physical Dimensions: Materials were recovered from an area approximately 40 ft. in diameter on the stream-facing slope just below the knoll crown. A small quartz outcrop occurs here, and quartz litters the area. Soil cover is as for 9Mcd3.

Materials Recovered: Less than one bag of chipped stone materials were retained, none of which were particularly diagnostic. Several fist-sized (and larger) quartz cores occur here, as well as small flakes.

Discussion: This is seemingly a "chipping-station" (or, quarry site), probably associated with 9Mcd3. However, it is curious (to me, at any rate) why a group would not choose to camp nearer an obvious source of lithic material. The crown of this knoll (which, like the others here, has recently been "clear-cut") was rather thoroughly scrutinized, but not even so much as a worked flake was evident here. In addition, the entire stream-facing slope was also checked, with negative results. This knoll and 9Mcd3 seem almost identical in all respects except for the occurrence of a quartz outcrop here. I suppose it is possible that some "relic-hunter" could have collected from a hypothetical site here; but if so, he must have retained virtually every scrap of evidence.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll (p. 16).

Preliminary Cultural Affiliation(s): Unclassified "chipping-station" (p. 164)

Site Designation: 9Mcd6

Location: McDuffie Co., on slope and knoll crown lying between confluence of Little Germany and Germany Creeks. Knoll rises approx-
imately 60 ft. above the streams, and is set back approximately 60 ft. from each.

**Physical Dimensions:** Materials were recovered over a large inverted "V-shaped" area roughly 200 yds. long and 100 yds. at the base of the slope. The area is today a mixture of pasture and (mostly hardwood) groves. Soil consists of a light gray sandy humus, which is seemingly about 1 ft. thick, overlying red clay subsoil.

**Materials Recovered:** One bag of chipped stone specimens were recovered scattered diffusely from the crown along the slope. Most of these were quartz, but several chert specimens occurred (the nearest source for the latter is approximately 30 air-miles southeast). No ceramics were evident.

**Discussion:** Since no distinct concentrations of material (or soils) were discernible, it may be that the extent of this site has been exaggerated by erosional redeposition and/or the cattle which forage here today. However, I am inclined to view both of these disturbance factors as minor in this instance, because in many of the peripheral pasture areas worked flakes were recovered --- seemingly in situ --- when small surfaces were troweled out.

**Probable Econiche:** Mixed Mesophytic (Beech-Sweetgum-Magnolia) knoll slope (p. 21).

**Preliminary Cultural Affiliation(s):** Morrow Mtn. I and Kiokee Creek (pp. 164-165)

For site descriptions of 9Cb3-9Cb7, see the following, under Coastal Plain sites (pp. 79-83).

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**Site Designation:** 9Cb8

**Location:** Columbia Co., on ridge-like rise north of Greenbrier Creek and approximately 2 miles east-southeast of Cobham, Ga.

**Physical Dimensions:** Materials were recovered from oval area measuring approximately 200 x 50 ft. which lies on stream-facing slope about 40 ft. above Creek bed (the incline continues north another 300 ft. to a height of approximately 100 ft.). A portion of the site occupies an abandoned field, now overgrown, exhibiting thin, sandy, slightly humic soil overlying red clay subsoil. The remainder of the incline is a slash-pine tree farm. A small bluff occurs just south of the site, sloping to the Creek floodplain (which is approximately 200 ft. wide here). Exposed surfaces, both above and in the floodplain, were checked, with negative results.
Materials Recovered: Less than one bag of chipped stone specimens were recovered here, including several projectile points (mostly quartz, but also several of chert). A few (sand-tempered) ceramics were recovered, but no particular "surface-contexts" seemed evident (the materials were thinly scattered throughout the site area).

Discussion: Seemingly this was a small-sized, multiple-component, campsite.

Probable Econiche: Mixed Mesophytic (Beech-Sweetgum-Magnolia) ridge slope (p. 21).

Preliminary Cultural Affiliation(s): Kiowee Creek & Woodland (p. 165)

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For site descriptions of 9Cb9-9Cb16, see the following, under Coastal Plain sites, (pp. 84-87).

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Site Designation: 9Cb17

Location: Columbia Co., just south of Keg Creek and west of Dickey Branch (approximately 500 yds. from their confluence). The knoll is at present approximately 15 ft. above the Clark Hill Reservoir high water line.

Physical Dimensions: Most materials were recovered along quartz-littered red clay subsoil bank eroding into the Reservoir. However, some materials were also recovered in exposed areas of the knoll crown, which has a diameter of approximately 100 ft. (the surface is mostly a pine wood at present). A gray sandy humus mantles the crown to about 0.5 ft., overlying red clay subsoil. I would guess that, originally, the area was approximately 25 ft. above the Creek bed.

Materials Recovered: Less than one bag of chipped stone specimens, including several projectile points (but no ceramics), were retained, although the "beach" was littered with quartz flakes eroding into the Reservoir.

Discussion: Seemingly this was a small-sized, multiple-component, preceramic campsite, situated advantageously on the slight knoll between these two Creeks. Although no quartz outcrops were discovered, the amount of material littering the exposed "beach" would indicate there is one not far away.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll (p. 16).

Preliminary Cultural Affiliation(s): Morrow Mtn. I and Savannah R. (pp. 165-166)
Site Designation: 9Cb18

For location, see Map. 3 and Fig. 2 (pp. 80;104); for excavated material, see pp. 103-105.

Site Designation: 9Cb19

Location: Columbia Co., on knoll north of Chigoe Branch, approximately 4 miles upstream from former confluence with the Savannah R. (area is now adjacent to the Clark Hill Reservoir).

Physical Dimensions: Most materials were recovered on a red clay subsoil "beach" from a 200 ft. long area which forms the tip of a promontory extending into the Reservoir. However, some materials were also recovered in exposed areas on the knoll which rises approximately 30 ft. above the present water level (before creation of the Reservoir, the knoll crown was at least 60 ft. above Chigoe Branch). The known site extent would thus form a rough isosceles triangle approximately 130 ft. at its base and 200 ft. along its sides. However, since materials were recovered into the water to a depth of 3 ft., this would be a minimum estimate of its true original dimensions. Along the present shoreline there occurs a topsoil strata of tan sandy humus approximately 1 ft. thick overlying red clay subsoil. In addition, several darker ("brown") areas of sandy humus were noted eroding into the Reservoir, suggesting "midden-like" lensed deposits. (No diagnostic materials were actually recovered from any of these, but several were recovered not far away on the clay beach surface.)

Materials Recovered: One bag of chipped stone specimens were recovered here (mostly quartz, but also some weathered granite and chert), including several projectile points. No ceramics were recovered, but several curious water-worn, cream-colored, "daub-like", small clay lumps were recovered along the beach. Whether these are "natural" or "cultural" is problematical; I am inclined to see them as the result of the latter (because I do not see how any natural agent --- such as a forest fire --- would select just these from all the other clay around), but I have no ready explanation as to their cultural provenience or purpose.

Discussion: Although no really compelling contexts were discernible here, there are some surface indications of associations of several of the remnant "midden-like" lenses with cultural materials. Furthermore, the frequency of materials and their distribution suggest a medium-sized campsite here. Also, since analysis of available materials indicates this was primarily a "single-phase" (Morrow Mtn. I) site, perhaps future testing of the one-foot or so of topsoil might yield some (sorely needed) undisturbed cultural contexts which would add to our understanding of the complex in this area.
Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16)

Preliminary Cultural Affiliation(s): Morrow Mtn. I. (p. 166)

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Site Designation: 9Cb20

Location: Columbia Co., on ridge north of Chigoe Branch, approximately 4 ½ miles upstream from its former confluence with the Savannah R. This site is approximately 2000 ft. west-northwest of 9Cb19.

Physical Dimensions: Materials were recovered from a clay and sand beach adjacent to the Clark Hill Reservoir. Shoreward (north) is an erosion-cut bank of red clay subsoil with a thin veneer of sandy humus. The land surface inclines gradually to a height of approximately 40 ft. above the present water surface some 500 ft. northward. Although the area today features an extensive pine forest, the presence of several large erosion scars suggest it has been cleared until recently.

Materials Recovered: One bag of chipped stone specimens — mostly quartz, but including some chert as well — and several (sand-tempered) sherds were recovered along a 75 ft. stretch of the beach and in adjacent waters. Presumably, these have eroded from the topsoil, but only two worked flakes were recovered there, and there are no soil indications as to whether or not the site extends further up the slope.

Discussion: No cultural contexts were discernible here; this is, in effect, an assortment of artifacts without observably defined spatial dimensions! However, I am inclined to think the primary focus of the original site was further downslope (i.e., now under-water) and our survey simply recovered materials on its periphery. In any case, it seemed worthwhile to put them on record.

Probable Econiche: Pine-Oak-Hickory (Deciduous) ridge (p. 16).

Preliminary Cultural Affiliation(s): Morrow Mtn. I, Kiokee Creek & Woodland (p. 167)

Coastal Plain Sites (Map 3, p. 80)

Site Designation: 9Cb3

Location: Columbia Co., 600 ft. north of Greenbrier Creek and 1000 ft. west of Kiokee Creek, on first knoll above the floodplain confluence of the two Creeks. This site is approximately 2000 ft. north of 9Cb12 and 9Cb18 (pp. 101; 103).
Physical Dimensions: Materials were collected from a roughly circular area 200 ft. in diameter on the knoll crown, which rises approximately 50 ft. above the floodplain. Today it has the appearance of an "unkempt" slash-pine tree "farm", but extensive erosion gullies and the general lack of topsoil indicate it was formerly cleared.

Materials Recovered: Less than one bag of chipped (quartz) stone specimens (but including one chert flake) and one (Dunlap Fabric-Marked) sherd were recovered.

Discussion: No particular intra-site associations were evident, but it is interesting that the (few) materials recovered here contrast typologically with the majority of the materials from 9Cb12 and 9Cb18. Judging from the amount of recovered materials, this was a small-sized, temporary campsite.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16).

Preliminary Cultural Affiliation(s): Savannah R. and Woodland (p. 167)

Site Designation: 9Cb4

Location: Columbia Co., approximately 150 ft. east of Little Kiokee Creek and directly south of small unnamed branch creek. Site is approximately 300 yds. northeast of Ga. Rt. #232.

Physical Dimensions: Materials were recovered from an oblong "old field" area approximately 150 x 90 yds. The western limit seems to be a gentle slope which descends approximately 10 ft. to the Little Kiokee Creek floodplain. The "terrace" on which materials were recovered inclines about 5 ft. to the east over a distance of 90 yds., where it terminates at the margin of a massive granitic outcrop (approximately, 1000 x 500 yds.) which rises to over 70 ft. beyond. There is a small rise (3 x 20 x 10 ft.) located near the west (i.e., "Creek-ward") margin of the "terrace" from which much material was recovered. The surface soils throughout consist of gray-tan sandy humus and "weathered" granite spall-litter.

Materials Recovered: More than two bags of chipped and groundstone specimens (mostly quartz, but also some chert and granite), steatite, and (fiber-and sand-tempered) sherds were recovered at this site. The cultural materials generally increased in frequency toward the "terrace" edge, suggesting that the primary occupational alignment was parallel to Little Kiokee Creek. Sand-tempered ceramics were recovered throughout the field, but most of the fiber-tempered sherds (and also much of the lithic material) were recovered on and adjacent to the low western rise.
Discussion: This site illustrates (to me, at any rate) the potential value of the survey procedures adopted at the outset of this fieldwork (p. 50). Despite the fact that cultural materials were continuously "scattered" throughout the area, it was possible to discern differential distributions which suggest different components. The two tentative components identified at 9Cb4 are: (1) a small late Archaic (Savannah R.) occupation associated with the western portion of the site on and adjacent to the low rise, and (2) an early Woodland occupation which extended more-or-less over the entire site area.

On the other hand, the limitations of surface-survey distributional inferences are also illustrated at this site, since a number of Morrow Mtn. (and other) CSPP's were recovered possessing no discernible "contexts".

Probable Econiche: Pine-Turkey Oak-Willow Oak ("less xeric") Sand Hills (p. 20).

Preliminary Cultural Affiliation(s): Morrow Mtn. (I & II), Savannah R. and Woodland. (p. 168)

Site Designation: 9Cb5

Location: Columbia Co., approximately 100 ft. east of Little Kiokkee Creek and directly south of small unnamed branch creek. This site is approximately 1000 yds. north of 9Cb4.

Physical Dimensions: Materials were recovered from a roughly circular area approximately 150 ft. in diameter in the northwest portion of an abandoned field. The topography and soils here are essentially similar to 9Cb4, but there is no small rise (and of course the site is smaller).

Materials Recovered: One bag of chipped stone specimens (mostly quartz, but also including granite and chert), including several projectile points, were recovered here. No ceramics were observed.

Discussion: Although few diagnostic artifacts were recovered here, other quartz artifacts and flakes were relatively abundant. I am inclined to view this seeming "disparity" as a result of selection on the part of "relic-hunters", and thus classify the site as a small campsite rather than a "chipping-station", or quarry. Materials recovered here suggest some cultural overlap with those of 9Cb4 further upstream.

Probable Econiche: Pine-Turkey Oak-Willow Oak ("less xeric") Sand Hills (p. 20)

Preliminary Cultural Affiliation(s): Palmer-Kirk and Morrow Mtn. II (pp. 168-169)
Site Designation: 9Cb6

Location: Columbia Co., 200 yds. east of U.S. Rt. #221 at a point 0.5 miles south of Pollard's Corner.

Physical Dimensions: Materials were recovered from an area approximately 100 x 200 yds. along knoll crown and slope which descends southeast to Kiokee Creek (two miles distant). The entire area is today pine forest, making ground observation difficult. However, steatite slabs and nodules litter the surface, suggesting the presence here of an outcrop. Quartz and granite rocks are also strewn along the slope. The soil cover consists of tan-reddish sandy clay.

Materials Recovered: Several amorphous steatite nodules bearing tool-marks were recovered, but the few small areas of exposed surface revealed no further evidence of cultural materials.

Discussion: Primarily for lack of contrary evidence, and secondarily because of the distance from available water, this would seem to have been a "quarry site" (rather than an occupational site).

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll (p. 16).

Preliminary Cultural Affiliation(s): Undetermined (unspecific); probable primary cultural affiliations with "Late Archaic".

Site Designation: 9Cb7

Location: Columbia Co., 150 yds. south of Kiokee Creek at a point approximately 1000 yds. west of its confluence with the Savannah R.

Physical Dimensions: Materials were recovered on northern portion (i.e., facing Kiokee Creek) of a levee-like deposit which rises approximately 20 ft. above Kiokee Creek. The area which includes the site is now in cultivation, and several low stacks of various rocks and bricks are piled on the field perimeter. The soil consists of sandy (but non-micaceous) humus extending at least 1.5 ft. below the surface (this is inferred from a lack of any other soil indications throughout the acre-or-so plowed field; permission was kindly granted to look and "collect" from the surface only).

Materials Recovered: Less than one bag of chipped stone specimens (but no ceramics) were recovered from the rise and adjacent areas of the field; most of these are quartz, but some chert and steatite are also included. No more precise contexts were discernible.

Discussion: Our spry (septuagenarian) informant related that a good number of "arrowheads and pottery" had been garnered from this field, but his "collection" had long since been given away and was unavailable for inspection. Since only one projectile point was recovered here at the time we surveyed, the cultural assignment is tenuous.
Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Morrow Mtn. II (our data) and Woodland (?) (Informant data) (p. 169).

Site Designation: 9Cb9

Location: Columbia Co., approximately 100 yds. east of Long Branch, 200 yds. west of Uchee Creek, and 700 yds. southwest of their confluence. This site is approximately 3 miles upstream from 9Cb15.

Physical Dimensions: Materials were recovered in a roughly circular area approximately 100 ft. in diameter which occurs on a very gradual rise of about 10 ft. above the Creeks, both of which are shallow, sluggish and less than 10 ft. across in this area. The area surrounding the site is low-lying and swampy, featuring an extensive bottom hardwood vegetation. The site extent estimate is based more on the occurrence of a brown sandy humus (which contrasts with surrounding gray sandy humus) than of recovered materials. Several "pot-holes" (and numerous beer cans) are evident (this site occurs less than 1000 yds. from the main road connecting Augusta with Clark Hill recreational areas).

Materials Recovered: Less than one bag of chipped stone materials and steatite fragments (but no ceramics) were recovered here, none of which are particularly diagnostic.

Discussion: If the soil differences reflect the actual dimensions of this rather small site, it would seem that: (1) it was only temporarily utilized, and/or, (2) "relic-hunters" have previously visited the area (the two are not mutually exclusive, of course).

Probable Econiche: Cypress-Tupelo-Black Gum, Swamp rise (p. 22). 

Preliminary Cultural Affiliation(s): Savannah R. (?) (p. 170)

Site Designation: 9Cb10

Location: Columbia Co., 100 ft. north of Greenbrier Creek and 1000 ft. west of Hickory Branch (i.e., the two join approximately 1000 ft. east of the site).

Physical Dimensions: Materials were recovered from an area of a bluff sloping some 40 ft. toward the Creek, which is about 15 ft. wide here. Most of the materials came from large erosional gullies which have formed in the red clay subsoil. The area above the bluff rises more gradually to a knoll crown some 30 ft. higher and 500 ft. north. The bluff and floodplain are forested (mostly
in pine), while the knoll is (recent) pasture. Only scant patches of the former topsoil were observed; the exposed surface consists overwhelmingly of red clay "subsoil".

Materials Recovered: Less than one bag of chipped stone specimens (mostly quartz, but also including some weathered granite and chert), including one projectile point (but no ceramics), were recovered here. No contexts were discernible.

Discussion: Although most of the cultural materials were recovered in bluff gullies, the incline would apparently render this unlikely as the primary occupational locus. This, and the recovery of a few worked flakes on the area above, suggest the knoll was the primary area of occupation. In addition, an informant related that many "arrowheads" used to be collected from the field when he farmed it (he had no interest in them himself, however).

Probable Econiche: Pine-Turkey Oak-Willow Oak ("less xeric") Sand Hills knoll (p. 20).

Preliminary Cultural Affiliation(s): Kiokee Creek (p. 170)

Site Designation: 9Cbl1

Location: Columbia Co., approximately 100 ft. south of Kiokee Creek just east of confluence with Greenbrier Creek.

Physical Dimensions: Materials were recovered from an oblong area approximately 125 x 75 ft. which occurs on 10 ft. rise just above Kiokee Creek floodplain. The incline continues to a height of approximately 50 ft. some 600 ft. southward. Today the area is thickly wooded. The topsoil consists of at least 1.5 ft. of sandy humus overlying red clay subsoil.

Materials Recovered: One bag of chipped and groundstone specimens --- including several projectile points --- as well as (fiber- and sand-tempered) sherd s were recovered from the site. No differential distributions were discernible.

Discussion: This appears to have been a small campsite located on the first higher ground back from Kiokee Creek. There is overlap between materials here and those recovered at 9Cbl2 and 9Cbl8 less than 2000 yds. west-northwest across Kiokee Creek.

Probable Econiche: Mixed Mesophytic (Beech-Sweetgum-Magnolia) upland slope (p. 21).

Preliminary Cultural Affiliation(s): Morrow Mtn. I and II, Kiokee Creek and Woodland. (pp. 170-171)
Site Designation: 9Cb12

For location, see Map 2 and Fig. 2 (pp. 56;104); for excavated materials, see pp. 101-103.

Site Designation: 9Cb13

Location: Columbia Co., on hilltop approximately 500 yds. south of Lloyd Creek and 100 yds. west of the Savannah R. (i.e., not far from their confluence), approximately 1.5 miles south of Clark Hill Dam.

Physical Dimensions: Materials were recovered from area approximately 300 ft. in diameter on hill crown which rises 100 ft. and along slope. Steatite slabs and nodules litter the entire surface, and several apparent outcrops were located.

Materials Recovered: Several worked (but "unfinished") steatite specimens were recovered, none of which are particularly diagnostic.

Discussion: As with 9Cb6 (p. 83), but on a larger scale, this seems to have been a steatite "quarry" site. Although no diagnostic materials per se were recovered, on the basis of information from other sites, it seems definite it was utilized in "late Archaic" times (if not earlier).

Probable Econiche: Pine-Oak-Hickory (Deciduous) hilltop (p. 16).

Preliminary Cultural Affiliation(s): Savannah R. (p. 171)

Site Designation: 9Cb14

Location: Columbia Co., approximately 150 ft. south of Lloyd Creek and 75 ft. west of the Savannah R. (i.e., this is the first rise southwest of their confluence).

Physical Dimensions: Materials were recovered from an area approximately 100 ft. in diameter centered 40 ft. above the floodplain surface on a knoll slope which rises to over 75 ft. further west. The area had been recently cleared of what is otherwise a thick (mostly deciduous) forest, exposing a thin layer of gray sandy humus and gravel (there are several granitic outcrops on the knoll) overlying reddish clay subsoil.

Materials Recovered: Less than one bag of chipped and groundstone specimens -- including one projectile point -- and steatite were recovered here. No ceramics were observed.
Discussion: Since cultural materials occur throughout the exposed area and no soil changes are discernible beyond (in the woods), it seems probable this site extends beyond the limits given above. It also seems probable — on the basis of the topsoil — that some of these materials may well have eroded downward. In any event, there seems little probability of recovering much in the way of cultural contexts at this site.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll (p. 16)

Preliminary Cultural Affiliation(s): Savannah R. (pp. 171-172)

Site Designation: 9Cb15

For location, see Map 2 and Fig. 3 (pp. 56; 106); for excavated materials, see pp. 192-199.

Site Designation: 9Cb16

Location: Columbia Co., on knoll approximately one-half mile south of Uchee Creek and 3/4 miles west of the Savannah R.

Physical Dimensions: Materials were recovered in ill-defined area approximately 200 ft. across, which centers on a dirt road near the crown of a knoll rising approximately 75 ft. above the floodplain. The area today is a pine tree "farm". There is a thin veneer of gravelly topsoil overlying red clay subsoil.

Materials Recovered: Less than one bag of chipped stone specimens, including several projectile points (but no ceramics) were recovered along the road margins and in exposed areas up- and down-slope.

Discussion: As with 9Tf4 (p. 64), this seemingly (small-sized) campsite is situated rather far from naturally available fresh water. There are indications — from the analysis of materials — that this may have been more of a "workshop" or "chipping station" than an occupational campsite, although no quartz outcrops were discerned and the site area was not littered with debris.

Probable Econiche: Mixed Mesophytic (Beech-Sweetgum-Magnolia) upland slope (p. 21).

Preliminary Cultural Affiliation(s): Morrow Mtn. I
Site Designation: 9Hk2

Location: Hancock Co., approximately 150 ft. west of the Ogeechee R. and 0.5 miles east of Ga. Rt. 248 at a point 2.1 miles south of Mayfield, Ga.

Physical Dimensions: Materials were recovered on a knoll rising approximately 60 ft. above the River. This is the first knoll back from the River, and has a crown area approximately 300 x 75 yards, which roughly parallels the River trend. Several other somewhat smaller knolls occur in the immediate area, all of which has been recently logged in part. None of the other "immediate" knolls had evidence of occupation. The soil cover here is a "rich-looking" gray-black sandy humus approximately 1.5 ft. thick overlying clay subsoil. Some erosion gullies are present, but none are extensive.

Materials Recovered: One bag of chipped stone specimens (mostly quartz, but also some chert), including several projectile points, were recovered here. Two (sand-tempered) sherds were also recovered.

Discussion: Most of the materials were recovered along the crown-top and River-side slope of the site; very few were noted on the gentle "backslope" portion of the knoll. This suggests the primary occupation area was on the "water-side" slope, perhaps for convenience. The two sherds were recovered within ten ft. of each other approximately in the center of the slope. Although evidence for "midden-like" deposits was lacking (and the fact that other -- culturally sterile -- knolls in the area also had the same type of soil cover argues for natural origins), virtually every area of ground surface exposed by logging revealed some cultural materials. This suggests a rather extensive campsite occupation. In addition, analysis of the materials suggests an almost "pure" Morrow Mtn. component here.

Probable Econiche: Mixed Mesophytic (Beech-Sweetgum-Magnolia) upland slope (p. 21).

Preliminary Cultural Affiliation(s): Morrow Mtn. (I & II) and Woodland (p.172).

Site Designation: 9Bur6

Location: Burke Co., on "north" (i.e., magnetic east) side of Brier Creek, approximately 0.75 miles south (downstream) of confluence of Parker and Spring Hill Branches; or, approximately 4 miles southeast of Keysville, Ga.

Physical Dimensions: The site is a small, low sand mound --- measuring approximately 3 ft. high and 50 ft. in diameter --- located in the swampy floodplain directly adjacent to Brier Creek.

Materials Recovered: Observations (only) were permitted; hence, no
materials were recovered, and the site is not included in the materials tabulations. Numerous chert waste flakes and (sand-tempered) ceramics litter the surface, and more than one-half dozen "potholes" scar what remains of the mound.

Discussion: None.

Probable Econiche: Cypress-Tupelo-Black Gum, Swamp rise (p. 22).

Preliminary Cultural Affiliation(s): Savannah Complex ?

Site Designation: 9Bur7

Location: Burke Co., south of Little Sweetwater Creek and approximately 1 mile west of the Savannah R.; or, approximately 9 miles due east of Girard, Ga.

Physical Dimensions: Materials were recovered from an oblong area approximately 2000 x 1000 yds. which occurs on a 10 ft. rise above the floodplain. The area is in open forest (mostly pine), and several dirt roads transverse the site. Soil cover consists of gray sand over the entire area, including the "sites".

Materials Recovered: Three bags of chipped chert specimens were recovered here, none of which are particularly diagnostic. No ceramics were evident.

Discussion: This site was only visited once (and then only for three hours), during the final days of the project, and only preliminary observations were conducted. Although the materials recovered throughout were mostly (non-diagnostic) chert flakes, on the basis of extent alone there is almost certainly more than one occupational locus represented here. I am inclined to attribute the lack of diagnostic materials to "sampling error" rather than true absence. The two factors involved are: (1) lack of sufficient time to thoroughly scrutinize the area and, (2) the fact that the area contains numerous, locally popular, fishing spots and is probably well-known.

Probable Econiche: Hardwood Bottom Forest (p. 22).

Preliminary Cultural Affiliation(s): Unclassified; probably primarily multiple "Archaic" (p. 173)

Site Designation: 9Bur8

Location: Burke Co., north of Brier Creek and 2.7 miles south along Ellison Bridge Rd., from Girard, Ga.
Physical Dimensions: Materials were collected from an area approximately 100 x 50 yds. along the bank, which rises to over 15 ft. above the Creek. (The Road bisects the site.) The soil cover is gray sand, seemingly about 4 ft. thick, overlying clay subsoil.

Materials Recovered: As with 9Bur7, several bags of chipped chert specimens were recovered here, none of which are particularly diagnostic. Again, there was no evidence of ceramics.

Discussion: The circumstances here are similar to those at 9Bur7 (above), except this is a much smaller site, and might well have been primarily a "chipping-station".

Probable Econiche: Mixed Mesophytic (Beech-Sweetgum-Magnolia) upland slope (p. 21).

Preliminary Cultural Affiliation(s): Unclassified; probably primarily multiple "Archaic" (p.173).

Site Designation: 9Bur9

Location: Burke Co., west of Brier Creek on knoll top located midway between McIntosh Creek and Fitz (or Moore) Branch; or, approximately 4.2 air-miles due east of Waynesboro, Ga.

Physical Dimensions: Materials were recovered from a roughly "half-circle" area measuring approximately 150 x 75 ft. on a knoll crown rising some 40 ft. above the floodplain. Westward, the "knoll" blends into an extensive upland, and the entire region is a slash-pine tree "farm" today. Most materials were recovered along a logging road and in exposed areas, which feature gray sand (to approximately 1.0 ft.) overlying clay subsoil.

Materials Recovered: Less than one bag of chipped chert specimens, none of which are particularly diagnostic, and one Deptford Check Stamped sherd were recovered here.

Discussion: The lack of diagnostic lithic specimens is attributed to "sampling error" rather than reality. Most of the ground is covered with pine-needle litter, so that less than 5% of the estimated site extent was visible. I would guess that removal of the litter would reveal a small "Deptford" campsite here.

Probable Econiche: Pine-Turkey Oak-Willow Oak ("less xeric") upland terrace-knoll (p. 20).

Preliminary Cultural Affiliation(s): Early Woodland (?) (pp. 173-174)
As mentioned earlier, five sites were selected for preliminary testing on the basis of surveyed material, stratigraphic potential, and their probable econiches. Due to the limitations of personnel (usually three, although at various times on weekends we were generously assisted by members of local archaeological associations), resources, and time, my basic aim was to obtain a more representative sample from each of these sites and to recover whatever further information there might be concerning prehistoric contexts.

Essentially the same field procedures were utilized at each of the five sites tested.

First, the site was surveyed and measured with transit and tape, and distances to nearby topographic features (e.g., streams, bluffs, knolls and so on) were recorded. A datum (sometimes supplemented as needed) was established, which served as a reference point for both horizontal and vertical measurements. From this information, I obtained a preliminary idea of the possible extent of the site, and was able to prepare site maps.

Second, the areas to be tested were determined, and measured squares (usually 10 x 10 ft., but in some instances 5 x 5 ft.) were laid out. The excavations were then conducted. All materials were sifted (either through ¼ or ¼-inch mesh) and placed in appropriately labelled bags. Various arbitrary levels were utilized (e.g., 0.2, 0.3, and 0.5 ft.) as seemed appropriate to the given test square in conjunction with observations on the natural stratigraphy as excavations proceeded. In certain instances, preliminary observation of either the materials recovered and/or the soil prompted me to open an adjacent test square after one had been completed. All tests (except Test Pit #4 at 9Cb15)
were carried to sterile subsoil (which was tested as well) or --- in the case of 9Cb15 --- to as far beneath groundwater as possible. Pits and features were of course treated separately and recorded.

Third, the recovered materials were washed and processed in our field headquarters as time permitted, and then taken to the Augusta-Richmond Co. Museum for temporary storage and further processing.

Finally, all the test squares were back-filled at the close of excavations.

In anticipation of what follows, it should be mentioned that natural stratigraphy which could be correlated with cultural components was obtained only at 9Cb15. This site generally conforms to the criteria outlined by Coe (1964:9-13), and is considered to be further confirmation of his hypothesis concerning the stratigraphic potential of alluvial sites in the Southeast.

In the other four sites tested, there was generally less than two feet of topsoil remaining, and some admixture of cultural components was evident in most of these. However, there were some remnant indications of relatively undisturbed contexts in some of these topsoil test squares, and they did serve the purpose of revealing information about certain intra-site distributions of different components which were scattered throughout on the surface, especially at 9Ws19.

The following presentation is in accordance with the outline established for the surveyed sites, with additional information concerning the excavations. Analysis of the cultural materials is presented in Chapter V.
Site Designation: 9Ws16

Location: Wilkes Co., 600 ft. west of 9Ws19 (see Map 2, p. 56, and Fig. 1, p.100).

Physical Dimensions: Materials were recovered in an ovate area approximately 150 x 100 ft. atop a slight rise just beyond the perimeter of the Little River floodplain.

Excavations and Stratigraphy: Two 5 x 5 ft. test squares were placed on the eastern side of the site and excavated to sterile subsoil. The topsoil consists of compacted light tan sandy humus to approximately 0.3 ft. Below is a layer of yellow-tan sandy soil containing what appear to be magnesium dioxide pellets which extends to approximately 0.7 ft. below the surface. Below this, compacted yellow clay subsoil occurs. Cultural materials were recovered in the top two layers, decreasing in frequency with depth. No artifacts were recovered below 0.5 ft., and no features were observed.

Materials Recovered: Three bags of chipped stone specimens (mostly quartz, but also some chert), including several projectile points, were recovered at this site. Three (sand-tempered) sherds were also recovered.

Discussion: Since virtually all the materials recovered here are duplicated at nearby 9Ws19, there can be little doubt that the two are linked. Perhaps the most economical explanation for the shared attributes between the two would be that 9Ws16 served as a small outlying campsite to the much more extensive occupation at 9Ws19. (It will be recalled that there is also another small site --- 9Tf7 --- located approximately 1000 ft. southwest of 9Ws19, which might also be considered an "outlier".)

This explanation for 9Ws16 is supported by two "positive" criteria, namely: (1) the close similarity of cultural materials, and (2) the close spatial relationship between 9Ws16 and 9Ws19. There is one "negative" criterion which might also favor this interpretation: there was no evidence of an intensive occupation at 9Ws16, i.e., no evidence of hearths, soil-stains, and so on.

Although the above suggest that 9Ws16 was a small, temporary campsite, there is almost no evidence bearing on the question of "why" it was occupied to begin with. Did people move from 9Ws19 to 9Ws16 (and 9Tf7) because of "over-crowding" at the former? Does 9Ws16 perhaps represent a small separate "family" (or microband) grouping? Was it simply some kind of "sentinel" outpost, or perhaps a station occupied for some hypothetical advantages related to subsistence? There is, unfortunately, no way I can differentiate between these alternatives with the available evidence; all that seems certain is that this site (and 9Tf7) was also occupied during certain brief periods of the much more continuous occupational span of 9Ws19.
From an archaeological perspective, 9Wsl6 is instructive precisely because it exhibited more restricted temporal occupations than 9Wsl9. Typologically, the diagnostic materials fall mainly into two separate "components": (1) "late" Palmer, and (2) Morrow Mtn. II (this is of course disregarding the few ceramics, which can be "explained" as intrusive).

Probable Econiche: Pine-Oak-Hickory (Deciduous) rise (p. 16).

Preliminary Cultural Affiliation(s): Palmer-Kirk and Morrow Mtn. II (pp. 181-183).

Site Designation: 9Wsl9

Location: Wilkes Co., approximately 200 ft. west of the confluence of Harden Creek and Little River; or, 0.5 miles southeast of Ficklin, Ga. (see Map 2, p. 56, and Fig. 1, p.100).

Physical Dimensions: Materials were recovered in a roughly triangular area 500 ft. on a side on a knoll which rises some 40 ft. above the floodplain. Materials occur over the entire slope and knoll crown; however, over 50% were recovered from the eastern one-half of the site, and approximately 25% were recovered from the knoll crown area above the 365 ft. contour. Several quartz outcroppings occur within this latter area (see Fig. 1, p.100), the largest of which is approximately 5 x 2 ft. The area has been cultivated, but has been pasture for over ten years now.

Excavations and Stratigraphy: Eleven 10 x 10 ft. test squares were placed at various points throughout the site and excavated to sterile subsoil. The most shallow of these, Test Pit #1, extended approximately 0.5 ft. below the surface; the deepest, Test Pit #5, extended 1.7 ft. below the surface.

The remnant natural stratigraphy is essentially similar throughout the site, and can be assigned to three zones.

The topmost zone consists of a thin veneer of loose brown sandy humus, generally not over 0.3 ft. deep. As might be expected, this zone was best documented for the peripheral test pits, where plowing had not disturbed it; on the knoll crown proper (e.g., Test Pits 1 & 2) this zone was either absent or mixed with lower soils.

The second soil zone consists of tan sandy soil which becomes increasingly compacted with depth. In places it is mottled with orange or yellow sandy soil. This zone tends to thicken downslope. On the knoll crown, it is mixed with topsoil and red clay subsoil; further downslope (e.g., in Test Pits 3 & 11) it is approximately 0.5 ft. thick; and in Test Pits 5, 7 & 8 it is almost 1.0 foot thick. This tendency is no doubt partly due to erosion; i.e.,
soils are eroding downslope from the knoll crown area.

The third zone consists of red clay subsoil, which forms the bulk of the knoll. Although this zone is culturally sterile, artifacts were recovered from several shallow pits which were dug into it at various points.

Although no burials or post-hole patterns were discerned in the excavations, a total of thirty-six subsoil intrusions were recorded. Of these, twenty were found to be small, shallow depressions lacking cultural material altogether; these seem to have been nothing more than slight, natural, random dips or irregularities in the hillside itself.

Of the sixteen remaining subsoil intrusions, twelve yielded evidence — in terms of overall shape, disposition, or materials — indicating the cultural materials were brought in by non-human agents (most seem to have been animal burrows; two were old, burned tree-root system disturbances containing charcoal admixed with the cultural materials).

The remaining four seem to have been intentionally utilized aboriginal pits, although their function is not absolutely known in every instance.

The first of these, Pit #3 (in Test Pit 3), was a circular, bowl-shaped pit approximately 0.7 feet in diameter and 0.6 feet deep, consisting of hematite-stained tan sand. It contained the base of one Kiokkee Creek stemmed point (quartz), a single (chert) scraper, several worked quartz flakes, and a fire-cracked cobble fragment. This is interpreted as the basal portion of a "rubbish pit" which formerly extended from Zone 2.

The second, Pit 2 (in Test Pit 7), was also a circular, bowl-shaped pit approximately 0.9 ft. across and 0.5 ft. deep, consisting of reddish sand-clay fill and five weathered granite rocks. Beneath one of these was recovered a weathered chert cruciform drill — the only artifact in the pit. (Several other depressions featuring weathered granite rock clusters were recorded in this square; none, however, contained cultural material.) Despite the lack of charcoal, or other evidence of fire, I am inclined to view this as the basal portion of an aboriginal hearth area; one in which the "original" fill and contents (except for the rocks and the single CS drill) had been washed downslope and the pit was subsequently reburied with "new" (sterile) fill.

The third, Pit 1 (in Test Pit 8), was a larger, circular, "conoidal-shaped" pit approximately 1.3 ft. across and 2.4 ft. deep, consisting of loose, brown, sandy soil. Several weathered granite rocks were recovered at random throughout the pit. Cultural materials included: three sand-tempered sherds (one Dunlap fabric-impressed and two plain), seven quartz "waste flakes", and two chert flakes. Although this might have been merely an old
tree-root system, the presence of rocks throughout argues against that. It was more likely some kind of "rubbish pit" which originated in Zone 2, though there was little in the way of "trash" recovered.

The fourth, Pit 3 (in Test Pit 10), was a shallow, amorphous "rectanguloid" depression approximately 5.4 x 3.0 ft. extending from Zone 2 0.2 ft. into the clay subsoil. The fill consisted of tan-brown mottled sand; weathered granite and quartz cobbles occurred throughout (one of several quartz outcrops on the knoll occurs less than three feet west of the pit). Cultural materials included: two Stalling's Island drag-and-jab punctated sherds, one CS scraper (quartz), eight quartz cores, and twenty-one quartz "waste flakes". There was no evidence indicating this shallow "pit" was intentionally dug; instead, it seems to have been simply a natural depression near a quartz outcropping. Hence, it probably functioned as a "catch-all" rubbish-and-chipping area for aboriginals who camped here during the period when fiber-tempered pottery was in use.

Despite the presence of the relatively undisturbed contexts discussed above, the overwhelming bulk of materials from 9W19 were recovered in soils which had been disturbed by both previous plowing and erosion. In all the Test Squares excavated, materials from several cultural periods were mixed together, and the only archaeological contexts remaining are those which penetrate the subsoil. Furthermore, in every Test Square with any depth, cultural materials become quite infrequent beyond about 0.6 ft. below the surface.

Nevertheless, two factors seemed to warrant continued research at the site: (1) the abundance of cultural material (e.g., approximately one-third of the projectile points and ceramics of the entire survey were recovered here), and (2) the hope of determining some evidence from the excavations which might give some indications of different intra-site occupation areas throughout its apparently long period of use.

The first objective is indicated below and in Chapter V (pp. 151-217); the second is taken up under the "Discussion" which follows.

Materials Recovered: Ten bags of material were recovered in surface collecting this site, and forty-eight bags of material were recovered in excavations. The materials mainly include: chipped stone specimens (projectile points, scrapers, blanks, and so on), groundstone artifacts, steatite fragments, and ceramics (mostly sand-tempered, but also a few fiber-tempered).

Most of the lithic material is quartz or other local rocks; however, there are also significant quantities of chert specimens (the nearest sources for these are over 40 air-miles southeast in the Coastal Plain). Over 100 amorphous fired clay lumps were recovered, some bearing daub-like stick or reed impressions. No bone or other organic material were observed, and the occurrences
of charcoal were all in disturbed contexts. In short, the over­
whelming bulk of the materials in this large sample fall in the
"non-perishable" category.

Discussion: At minimum, this site includes an area of 25,000 sq. ft.;
our eleven Test Squares from various portions of the site totalled
1100 sq. ft. of surface; thus, approximately 4½ percent of the
total area was sampled in our excavations (though of course the
surface collections covered the entire area).

As previously indicated, most materials were recovered from the
eastern portion of the site, primarily from the knoll crown area
above the 365-foot contour. This is of course the area which is
most heavily eroded, and it might be expected that more material
would be recovered here due to that factor. However, the excavations
also tended to confirm this distribution; i.e., less material was
recovered from those Test Squares below the 365-foot contour.
Hence, it seems that the knoll crown area was actually the primary
locus of activity throughout the site's history. Presumably this
preference was due to: (1) the proximity of the eastern portion
to water, (2) the occurrence of quartz outcrops on the knoll crown,
and, perhaps, (3) its elevation above the surrounding landscape.

The next most favored area of occupation — judging by fre­
quency of materials — was the lower northeastern "apron" in the
area of Test Squares 7-9. Access to water is of course even
easier from here than from the knoll crown area.

The least favored areas of activity (in terms of frequency of
materials, at any rate) were the western and southern slopes below
the 365-foot contour. (For example, only two CSPP's and five
sherds were recovered from Test Pit 5, although this was the
deepest excavated square at the site [1.7 feet below surface].)

Since I have earlier alluded to soil disturbances, it may appear
that venturing beyond the observations just given would be futile.
However, there are some interesting, if tenuous, differential dis­
tributions of cultural materials recovered in the eleven Test
Squares. And, though not intended here as conclusive evidence, I
feel the consistencies at least deserve mention.

Of the "pre-Morrow Mtn." occupations, not much can be said due
to the sample size (fifteen, or six percent, in all). It is
interesting, however, that although only three of these projectile
points were struck from quartz (such as the outcrops which occur
on the knoll crown), almost all of the fifteen were recovered on
the knoll crown. If the surface-recovered points in this category
(six) are included with the excavated sample, then 86 percent of
the "pre-Morrow Mtn." points were from the knoll crown area. This
could be interpreted as an indirect indication that the knoll crown
was favored for reasons other than the occurrence there of suitable
artifact "quarry-materials". Other than this, if the sample is
representative, about all that can be inferred is that the "pre-
Morrow Mtn." occupations were not intensive or extensive.

The case is otherwise with the Morrow Mtn. "component". Taken together (I & II) the excavated Test Squares yielded some sixty-one Morrow Mtn. projectile points, or 43 percent of the total points recovered in excavated squares (they make up 46 per cent of the grand total of the points classified from this site). Points of this type were recovered in virtually every Test Square; they constitute the single most frequently encountered diagnostic artifact type. However, the distribution of these points in excavated Test Squares was not equal. Most of them were recovered from the knoll crown Test Squares; next in frequency were the northeast "apron" Test Squares; and the least numbers (three) were recovered from Squares 5 & 6.

Thus, from the frequency-distribution criterion which I have employed, if the sample is indeed representative of aboriginal preferences, it would seem reasonable to infer that people making Morrow Mtn. projectile points also possessed culturally shared preferences for campsites in a greater diversity of econiches than their predecessors, though — like others — they tended to favor elevated areas. (Evidence from other sites surveyed in this study also give support to the idea that the "Morrow Mountaineers" were rather "generalized" and "flexible" with respect to site-econiche choice.)

However, although it seems plausible to infer some diversification in Morrow Mtn. site-preferences, I do not think the distributional data from 9Wsl9 can be interpreted to mean that any given, specific, occupation of the site by Morrow Mtn. aboriginals extended throughout the entire site (or even the eastern portion). Such an interpretation, while inviting, is, I think, simplistic.

As Coe has elsewhere suggested (1964:37), with Morrow Mtn. we are probably dealing with a cultural continuum, one which has some evidence — at least in projectile point attributes — of evolution and change through time. Archaeologically, in other words, with Morrow Mtn. we are apparently confronted with something more like a cultural "tradition" rather than a "horizon". From this perspective, I view the predominance of Morrow Mtn. materials at 9Wsl9 as representing several (rather than one) discrete, probably short-span, occupations by different groups within the total "tradition". Each re-occupation might well have been limited to but one small portion of the site, although the knoll crown and northeast apron were apparently the recurrent preferences.

The interpretation that the Morrow Mtn. materials are the result of several intermittent occupations rather than one intensive habitation has some support in evidence recovered at the site.

First, several Guilford lanceolate projectile points, thought to be approximately contemporaneous (at least with Morrow Mtn.II),
were recovered at the site. Unless one is willing to assume either:
(1) intimate contact (or conflict) between two groups, or (2) that
one group was making two (very different) types of points, then
some interruptions in the Morrow Mtn. utilization would be
probable (and, to me, the last alternative is a more economical
explanation).

Second, if the Morrow Mtn. materials represent a single exten-
sive occupation, it seems odd that not one subsoil intrusion
featured their most diagnostic artifacts; i.e., projectile points.

Finally, comparisons with the frequency of Morrow Mtn. materials
from other sites, as well as their spatial extent, is more in
agreement with the idea of multiple, intermittent "re-occupations"
than with a single, extensive occupation.

The next major utilization of 9Ws19 was apparently by people
of the Savannah River "focus". Forty-five projectile points of
this phase (including Kiokke Creek stemmed), or 33 percent of the
total excavated points, were recovered in certain Test Squares.
(In terms of grand totals, these were the second most frequent
diagnostic points, accounting for 36 percent at 9Ws19.)

These points had a more restricted distribution than those of
Morrow Mtn. None were recovered in Test Pits 5 & 9, and only
three were recovered from Test Pit 6. Four each were recovered
from Test Pits 7 & 8 on the northeast "apron". Most were recovered
from the knoll crown area.

If these distributions are representative, they suggest a
somewhat more restricted (or specialized) site preference than was
the case with Morrow Mtn. Furthermore, if the various subsoil
"pits" containing Stalling's Island sherds, a "cruciform" CS drill,
and a Kiokee Creek base are to be associated with this phase, they
suggest a more intensive occupation of the knoll crown and north-
est "apron" area than previous components; perhaps due to an
increase in the duration of single occupations?

In any event, following this late Archaic phase, recovery of
projectile points and ceramics indicate the site was occupied
from early through late Woodland times.

Although one subsoil pit on the northeast "apron" indicates some
intensity of occupation there, over 95 percent of the ceramics were
recovered from the knoll crown area, suggesting continued preference
for the elevation. I entertained the possibility that post-Archaic
aboriginals might have utilized the more nearly level area between
9Ws16 and 9Ws19 as a "village", with the knoll crown as an ancillary
extension. However, a check of the area revealed no surface
cultural material or other indications of aboriginal use. Since
there was no evidence of post-holes, wall trenches, or other
features in the subsoil of any of the eleven Test Squares, it
appears the site was intermittently occupied by groups throughout
Fig. 1 - Site Diagrams: 9Ws16 & 9Ws19

- Excavated Test Pit(s)
- Outcrop(s)
- Wooded Area
- B.M. Contour Interval ±1.0

A.E.(9Ws16) = 360.00
A.E.(9Ws19) = 373.00

Scale in Feet
0 50 100
much of the post-Archaic period. (The only contrary evidence to this line of reasoning are some 100 "fired clay lump" specimens which were recovered in various excavated Test Squares. None of these is over 1 inch in length, and only about twenty bear evidence of "stick" impressions. Although their function is problematical, I do not feel they represent structural fragments.)

The apparent continuities in utilization of the site well into post-Archaic times --- despite the almost certain assumption that we are confronted here with cultural groups whose subsistence base includes increasingly effective "agriculture" --- are not, to me, entirely due to "accident" or "chance". However, presentation of the (admittedly meager) evidence arguing for some cultural carry-over, or continuities, is reserved for later in this study.

To summarize, evidence recovered from this site suggests it was intermittently occupied from early Archaic through protohistoric times, a time span of perhaps 9000 years. The two major components (isolated typologically) identified were those pertaining to the Morrow Mtn. and Savannah River phases; the former was seemingly the result of a series of more "diversified" temporary occupations by small-sized groups; the latter seemingly pertains to more "specialized" and intensive utilization by fewer groups (or, perhaps, a single occupation by a larger group). In post-Archaic times, the site seems to have continued to be utilized intermittently.

Probable Econiche: Pine-Oak-Hickory (Deciduous) with pine-topped knoll crown? (p. 16).

Preliminary Cultural Affiliation(s): Early Archaic to protohistoric (Morrow Mtn. and Savannah R.) (pp. 184-192).

Site Designation: 9Cb12

Location: Columbia Co., north of Kiokee Creek and west of Greenbrier Creek, approximately 1000 ft. northwest of their confluence; or, approximately 5 miles northeast of Appling, Ga. (see Map 2, p. 56 and Fig. 2, p.104).

Physical Dimensions: Materials were recovered from a "triangular" rise (approximately 100 yds. per side) about 10 ft. above the Kiokee Creek floodplain; the higher ground projects almost to the Creek margin. The area forms the "toe" of a much larger knoll rising to the north; it is probably the result of erosion by Kiokee Creek. Sandy soils predominate, and the site vegetation today consists of scrub growth and pines; swamps occur to the west and east in the floodplain area.

Excavations and Stratigraphy: Five 10 x 10 ft. Test Squares were excavated to sterile clay subsoil at this site.
The natural stratigraphy on the rise consisted of a sand zone overlying clay subsoil.

The sand zone was divided into two units: (1) an upper portion, consisting of loosely packed humic-stained, tan-gray sand, which varied in depth from 0.3 to 0.5 feet; and (2) a lower portion, consisting of hard, compacted gray mottled sand, which varied from 0.5 to 0.8 feet in thickness. Both of these are considered to be the combined result of wash from the northward knoll and stream flood deposition.

Below the sand is sterile clay subsoil, which is also very compacted, extending at least three feet.

Several animal intrusions were removed, but no structure remains or other cultural features were observed in any of the Test Squares.

It was hoped that this site might contain natural stratigraphy, since it is adjacent to Kiokkee Creek and subject to deposition from floods. However, the bulk of the cultural materials were recovered from the upper portion of Zone 1 (the loose sand), and generally by about 0.7 feet below the surface, cultural materials were absent.

Materials Recovered: Two bags of materials were recovered during preliminary surface surveying here, and ten bags were recovered during excavations of the five Test Squares. These include chipped stone specimens, (such as projectile points, cores, and scrapers), worked steatite, one atlatl weight fragment, and one "nutting stone". Most of the lithic specimens were quartz, but some (non-local) chert was also recovered. 9Cb6, a steatite "quarry site" (p.83 ), is located some two miles east of the site, but there may well be closer sources of steatite in the area. Fifty-five sand-tempered sherds were recovered from the site in addition.

Discussion: Since contexts were lacking at this site, the recognition of different components is based entirely upon typological comparisons, mainly of the projectile points and ceramics. Judging by frequency of occurrence, the "major" occupations were those of people making Morrow Mtn. (I) and Kiokkee Creek stemmed points; but Palmer, Badin, and Yadkin points were also recovered. The ceramics are in poor condition; only five of the fifty-five were classifiable, and these were all Dunlap fabric-impressed.

Typological affinities to 9Cb18 are noted for both the Morrow Mtn. and Kiokkee Creek periods, but overall this site seems to have been used intermittently.

Probable Econiche: Hardwood Bottomland Forest Stand (p. 22).

Preliminary Cultural Affiliation(s): Morrow Mtn. (I) and Kiokkee Creek (pp. 176-179).
Site Designation: 9Cbl8

Location: Columbia Co., approximately 700 feet north of 9Cb12 (see Map 3, p. 80, and Fig. 2, p.104).

Physical Dimensions: Materials were recovered from the north portion of a knoll crown rising approximately 60 ft. above the Greenbrier Creek floodplain and along the southern slope approximately 200 ft. The site is approximately 650 ft. west of the present course of Greenbrier Creek, and approximately 900 ft. north of Kiokee Creek. The area has been cultivated, but is now an overgrown field.

Excavations and Stratigraphy: Five 10 x 10 ft. Test Squares were set in various areas throughout the site and excavated to sterile clay subsoil.

Due to previous clearing and cultivation, extensive erosion is apparent throughout the site. The plowzone topsoil, which varies from about 0.2 to 0.6 ft., consists of sandy humus, gravel, and clay.

Below this, the remaining natural stratigraphy, recorded in Test Pit 3, consists of compacted tan, mottled, sand which varies from 0.6 to 1.8 ft. thick. This seems to be wash from above.

Below this, sterile clay subsoil occurs to at least 3.0 ft.

Other than plow-scars and root intrusions, no features were observed in the five excavated Test Squares.

Materials Recovered: Two bags of material were recovered during preliminary surface surveying here, and seven bags of material were recovered from the excavated Test Squares.

These included chipped stone specimens (such as projectile points, cores, and scrapers), worked steatite, and one mortar. Most of these were struck from quartz, but some (non-local) chert specimens are also included. In addition, one Irene Incised sherd was recovered.

Discussion: Most of the materials were recovered in the plowzone; in the deepest Test Square (3), which extended 1.8 feet below the surface; cultural materials were not encountered below 1.0 ft. The excavations also suggest that the primary locus of activity was on the knoll crown and eastern margin of the site; virtually no diagnostic materials were recovered in Test Square 4, and only a few occurred in Test Square 5.

As with 9Cb12, the lack of archaeological contexts resulted in the classification of materials by typological comparisons, mainly of projectile points.

In all, twelve of these were recovered (including three distal
portions). They include: Hardaway (1), Martin (2), Stanly (1), Morrow Mtn. I & II (1 each), Savannah River stemmed (1), and Kiokee Creek stemmed (2). If the typological variation indicated by analysis is representative of aboriginal utilization, it would suggest the site was intermittently occupied throughout most of the Archaic period.

A relatively large number of CS blanks and cores were recovered here, as well as several steatite "net-sinker" fragments and one steatite container "sherd". The absence of ceramics (with one exception) tends to support the idea that these lithic specimens are primarily Archaic.

Probable Econiche: Pine-Oak-Hickory (Deciduous) knoll, with pine-topped crown? (p. 16).

Preliminary Cultural Affiliation(s): Early to Late Archaic (Intermittent) (pp. 179-181).

Site Designation: 9Cb15

Location: Columbia Co., south (adjacent) of Uchee Creek, just west of its confluence with the Savannah (Little) River (see Map 2, p. 56, and Fig. 3, p.106). This site is approximately 3 miles upstream from Stalling's Island, Ga.

Physical Dimensions: The determined extent of the site includes the area east approximately 150 ft. from the former dam "borrow pit" along the south bank of Uchee Creek and south at least 25 ft. Materials are eroding from the south bank of Uchee Creek, but there are no indications of cultural materials from either the west bank of the Savannah (Little) River or from the (recently cut) indentation to the southeast of the site. No surface indications of cultural materials occur, except in the "pot-holed" areas, but there are stratigraphic indications the site extends southward beyond the limits of our test excavations. (There are no surface indications of aboriginal occupations in the immediate area of the north bank of Uchee Creek.)

Excavations and Stratigraphy: Four adjacent 10 x 10 ft. Test Squares were excavated here; all were taken to sterile soil (approximately 5.5 ft. below surface) with the exception of Test Pit #4, which was terminated at the base of the midden deposit (approximately 1.5 feet below surface) due to lack of time for further investigation.

The excavations were conducted utilizing a combination of arbitrary levels which were adjusted to the various natural strata (as perceived during the course of excavation). Thus, these arbitrary vertical-control units varied from 0.3, 0.4, and 0.5 feet up to 1.5 feet (in Zone 3). Features, pits, and intrusions were,
of course, recorded and treated as separate units.

From a stratigraphic perspective, this site was the most rewarding investigation undertaken during the project, for it contained two superimposed components: (1) a Savannah River "focus" component, and (2) an underlying Morrow Mtn. (or "Old Quartz") component.

With the exception of the midden deposits (Zone 2), all of the stratigraphic Zones (Fig. 4, p.109) are the result of recurring river flood depositions. They are described as follows.

Zone 1. This is composed of a mixture of sand, silt, and red clay. It varies in thickness from about 0.2 to 0.5 feet, and tends to thicken northward toward Uchee Creek. It represents the most recent overbank deposit preceding construction of a small dam across Uchee Creek some 15 years ago. This Zone, which contains admixed cultural materials ranging from Savannah River through protohistoric, forms a kind of overburden cap which is readily distinguishable from the underlying strata. It contained no evidence to indicate it was an occupation zone, and no pits extended downward from it into the midden below.

Zone 2. This consists of loose, deep brown, sand containing much cultural refuse and several mussel shell lenses. It varies in thickness from approximately 0.3 to just over 1.1 feet. Although it is thickest in the central portions of the excavated Test Squares, it may well have been even more extensive northward toward Uchee Creek, since that Creek is now cutting into the site. To the south, the Zone becomes thinner, and is partly overlain by a layer of (relatively sterile) tan micaceous sand (Sub-Zone 2A). Several reddish (hematite ?) stained sand and clay filled pits extend downward from this Zone; these are labelled Sub-Zone 2B. This midden Zone represents the primary occupation at 9Cb15, and is culturally identified with the Savannah River "focus", or phase.

Zone 3. The predominant soil of this Zone is tan micaceous sand alternating with a number of thin, horizontal fine clay and silt lenses. These banded lenses suggest that Zone 3 was the result of several discrete flood episodes, some of which were followed by a period during which there was standing water over the site (at least for a period sufficient for the precipitation of the fine clay and silt bands). Zone 3 is approximately the same thickness (2.2 ft.) throughout the site, although there are some stratigraphic "breaks" in its continuity.

The largest of these discontinuities, Sub-Zone 3A, is a wedge-like area approximately five feet long and wide at the top, and 1.5 feet at its base; it is composed of coarse gray-tan micaceous sand. Due to the occurrence of cultural materials, and the absence of thin banded clay-and-silt, Sub-Zone 3A was apparently an intentionally dug pit extending from the midden. However, this was not recognized during the course of excavations.
Sub-Zone 3B indicates lenses of mottled tan sand and clay, which are apparently the result of seepage. In addition, one (of several) small burrow- or root-like intrusions --- consisting of white compacted sand --- is indicated in the southern portion of the profile.

Cultural materials --- for the most part those of the "pre-ceramic" phase of the Savannah River focus --- became less frequent with depth throughout this Zone.

Zone 4. This is composed of tan-reddish (hematite-stained?) sand and clay. The Zone extends throughout the areas excavated; it varies from approximately 0.3 to 0.7 feet thick, tending to increase gradually in breadth southward (i.e., away from Uchee Creek). In terms of clay content, this Zone is comparable to Zone 1, and it would appear that the presence of clay here would indicate a (considerable?) period of standing or sluggish water following the deposition of Zone 5. In any event, no cultural materials were recovered in this Zone, and it formed an effective seal above Zone 5.

Zone 5. Like Zone 3, this is composed of tan micaceous sand. It exhibits a gradual southward sloping contour, approximately 1.3 feet thick at the Uchee Creek end and 0.9 feet in Test Pit 1, which suggests it formed part of an old natural levee. The upper portion of this Zone revealed the remains of a small Morrow Mtn. component; this reconfirms the temporal priority of this phase over that of the Savannah River "focus", as previously documented by Coe (1964:122-23) and Caldwell (1954:37-39). The basal portion of the Zone is culturally sterile.

Zone 6. This is composed of coarse gray-white sand. Due to groundwater seepage, only the upper 0.2 feet of this Zone were investigated, although one 2 x 2 foot core revealed the Zone continues at least 1.5 feet deeper. No cultural materials were recovered in our sampling of this Zone, although that hardly constitutes sufficient evidence to assert there is no possibility of yet earlier components in this (or even lower) Zones at the site.

A total of twenty-one pits, features, and disturbances were isolated and recorded at the site. Of these, seven were apparently "natural" disturbances caused by tree roots and animal burrows. The remaining fourteen were apparently the result of various aboriginal activities; one of these originated from above Zone 2, twelve originated within Zone 2, and one was recovered in the upper portion of Zone 5. These are summarized as follows, in descending order.

Pit 1 (in Test Pit 3) was only detected after removal of Zone 1. In plan view, it had a "flattened-teardrop" outline, approximately 2.5 feet across at its widest point. In cross-section, it curved gradually inward, extending 0.5 feet into Zone 2. The fill consisted of dark brown sand, burned clay fragments, and charcoal flecks. The cultural contents --- two each of Dunlap Fabric-marked, Deptford
STRUIGRAPHIC COMPOSITE, WEST PROFILES,

9Cb15

Fig. 4

UCHEE CREEK (10.0')

SCALE IN FEET

0 5 10

Zone 1 - Red Clay, Sand, & Silt
Zone 2- Brown Sand Midden w/ Shell Lenses
Sub 2A-Tan Micaceous Sand
Sub 2B - Reddish-Tan to Brown Sand & Clay
Zone 3-Tan Micaceous Sand
Sub 3A - Gray-Tan Micaceous Sand
Sub 3B - Mottled Tan Sand and Clay (See page?)
Zone 4- Reddish-Gray with Clay
Zone 5-Tan Micaceous Sand
Zone 6-Gray-White Coarse Sand
Compacted White Sand-Burrow or Root (?)
Simple-stamped, and residual plain, one Stalling's Plain, and about two dozen miscellaneous chips --- suggest it functioned as a refuse pit.

Since Zone 1 has been interpreted as the result of alluvial deposition, this pit can only be "explained" in one of two ways: (1) it actually originated at the very top of Zone 2, or (2) there was originally a post-Savannah River "focus" occupation at 9Cb15 which was subsequently disturbed by inundation. The evidence to be presented below is, I think, more consistent with the second line of reasoning.

Twelve pits originated in Zone 2. Six of these were composed of irregularly shaped shell lenses and associated dark brown soil extending over 1.0 foot horizontally and about 0.5 feet in depth; i.e., they terminated within Zone 2. Although archaeologically all of these showed up as "pits", some actually had been "heaped-up" rather than "scooped-down", as is indicated in Fig. 4. All were essentially small refuse accretions, yielding mostly mussel shells, cooked bone fragments, and "waste-flakes". Artifacts such as steatite "net sinker" fragments, Stalling's series ceramics, projectile points, and CS drills, were occasionally recovered as well (in descending order of frequency). Although most of these were recovered in Test Pit 1, there was no discernible pattern in their distribution (or in that of the sixteen other --- smaller --- shell lenses recovered), except that they were all associated with the brown sand midden area and all contained cultural materials pertaining only to the Savannah River "focus".

The remaining six pits were somewhat larger, and extended into Zone 3.

Pit 3 (in Test Pit 1) was rather 3/4 "boot-shaped" in plan view, measuring 2.1 feet from "toe" to "heel", and 1.7 feet from "heel" to "leg"; it was concave, extending approximately 0.6 feet into Zone 3. The top fill consisted of dark brown, slightly organic-stained ("greasy") sand, which graded into reddish-tan stained sand at its base (Sub-Zone 2B). Two small mussel shell lenses --- one toward the "toe" and one toward the "heel" --- four cooked deer bones, and one sandstone fragment were recovered from this "refuse" pit.

Pit 9 (in Test Pit 1) was less rewarding. It was a bowl-shaped pit approximately 1.2 feet across and 0.6 feet deep, consisting again of dark brown "greasy" sand grading into reddish-tan stained sand at its base. Although charcoal flecks occurred, there were no associated cultural materials, and the function of this pit is problematical.

Pit 1 (in Test Pit 2) was roughly circular (ca. 1.8 feet in diameter) with an asymmetrical concave cross-section extending approximately 1.0 feet into Sub-Zone 3A (i.e., the large, undetected, probable "pit" extending to the base of Zone 3 in Fig. 4). A
mussel shell lense was recovered south adjacent to this pit, and a second, "C-shaped" mussel shell lense approximately 0.7 feet across was recovered within the pit. The pit fill consisted of dark brown "greasy" sand, which graded into tan sand and clay at its base. One steatite "netsinker" fragment was recovered within this "refuse" (?) pit.

Pit 4 (in Test Pit 2) was a circular, deeper, "conoidal-based" pit approximately 1.8 feet in diameter extending 1.2 feet into Zone 3. This curious pit, consisted of homogeneous, non-micaceous, reddish-tan-gray sand fill. Because of the surface contrast of this pit, I suspected it might contain a (small) burial, but there was virtually no evidence for anything within the pit.

Pit 3 (in Test Pit 3) was ovate in plan view (measuring 1.4 x 1.1 feet), with concave sides extending 0.7 feet into Zone 3. The fill consisted of dark brown sand and occasional small flecks of charcoal. Cultural materials, scattered throughout, included: seven Stalling's Plain sherds, two steatite "netsinker" fragments, one Kiokee Creek stemmed point, one sandstone abrader, eight small fired clay lumps, and thirty-five worked flakes. This refuse pit was of course an excellent context for radiocarbon dating, but unfortunately there was simply not enough charcoal available for testing.

Pit 2 (in Test Pit 4) was a larger, shallow, circular area, some 5.0 feet in diameter on the surface, within which a smaller, deeper pit was recovered. The larger area consisted of dark brown "greasy" sand fill and (several) small mussel shell lenses extending approximately 0.2 feet within Zone 2. The same fill and shell lenses occurred within the smaller, deeper pit (approximately 1.5 feet across, extending 0.7 feet into Zone 3), indicating they were contemporaneous. Charcoal occurring within the fill was sufficient for about one sample test, and a further fill sample retained from the pit also contains charcoal. The cultural remains include: two Stalling's Plain sherds, one steatite "netsinker" fragment, and twenty-eight worked flakes. Five cooked bone fragments were also recovered in the pit fill. This feature probably began with the smaller refuse pit, and after that was filled, other refuse was discarded in the surrounding area. Although the cultural materials are sparse, they all pertain to the Savannah River "focus".

Feature 1 (in Test Pit 3), consisted of an ill-defined area some 2.6 x 2.1 feet (and 0.2 feet thick) which was recovered in the upper portion of Zone 5. This was a small "heap" area which was subsequently buried by tan micaceous alluvial sand. The refuse consisted entirely of small, worked-quartz chips (over two hundred were recovered), one quartz blank, and one river cobble.

In Zone 5 of the adjacent square, Test Pit 2, less than two feet from the perimeter of this area of chips, there were recovered six more quartz blanks, two quartz cores, one fired (?) steatite lump, one Morrow Mtn. I point, and one chert drill. Further beyond in the same square there were recovered one Morrow Mtn. I base, 1
quartz blank, and two quartz scrapers.

Although the associations here are not as ideal as one might wish, and though there is no evidence for pits in the tan micaceous sand, nevertheless all of these materials were recovered below the Zone 4 flood deposit, and they all seem to pertain to the Morrow Mtn. complex. Probably Feature 1 represents a small "work-area" refuse deposit at which the more diagnostic artifacts (except for the chert drill, of course) were struck.

In summary, the natural stratigraphy at 9Cb15 is largely the result of a series of discrete overbank flood depositions which resulted in the gradual accumulation of superimposed surfaces. The absence of evidence for old (i.e., buried) humus accumulation suggests that none of these ground surfaces were exposed for very long periods; however, the presence of clay-silt bands in Zones 3 and 4 suggest there were periods when the site was completely inundated for some (considerable?) intervals. Due no doubt to its location next to freshwater and its subsistence potential, from time-to-time, as the surfaces were exposed, they were an attractive area for various "temporary" aboriginal settlements.

The earliest of these recorded at 9Cb15 was that of a people who briefly occupied a natural levee and who made Morrow Mtn. projectile points. Perhaps soon after their departure, the entire area was subject to extensive flooding, which completely buried the levee under a clay-silt deposit (Zone 4). This "event" constitutes both the major stratigraphic and cultural break at the site, for subsequent aboriginal occupants fashioned projectile points in a different form.

The infrequent occurrence of cultural materials in Zone 3, coupled with the stratigraphic evidence --- which has been interpreted as representing several overbank depositions --- suggests that the earlier (i.e., preceramic) Savannah River phase people utilized the site only intermittently; probably their utilization was not much different than that of the Morrow Mtn. phase. There is no evidence in this Zone for the exploitation of shellfish, for example, nor were any pits or other features recovered to suggest more intensive occupation. (However, it should be noted that the only faunal remains recovered throughout were those that had been "stabilized" through cooking, and even these were not frequently encountered.)

Eventually, during the later (i.e., fiber-tempered ceramics) Savannah River phase, the most intensive utilization of the site occurred. This is indicated by the accumulation of about one foot of shell-lensed midden deposit (Zone 2), containing much refuse, and by numerous aboriginal pits. Although continuities in projectile point form suggest these later occupants were participants in the same cultural tradition as those of Zone 3, there are some notable changes, or innovations. Among the more prominent of these are: (1) the exploitation of hitherto unutilized subsistence resources, such as freshwater mussels, (2) the increasing frequency and elabor-
ation of certain items of "material" culture, such as projectile points, drills, groundstone objects, and steatite "net-sinkers", (3) the increased utilization of non-local materials, such as chert, and, (4) the appearance of fiber-tempered pottery.

The cultural implications of these will be explored in more detail later, but at this point it might be well to observe that there can be little doubt these "later-phase" Savannah River "focus" people at 9Cbl5 were participants in a cultural tradition which extended well beyond their immediate environment. In terms of known site distributions, this would include not only Claflin's Sites 1 & 2 (on Germain [Walton] Island and near Furry's Ferry Bridge S.C. respectively), but also, of course, Stalling's Island itself (1931:Fig. 1). An even more extensive cultural exchange network towards the Coastal Plain is implied in the relatively numerous chert artifacts (and "waste flakes") at 9Cbl5, since their ultimate source is in this direction.

There is also some evidence for cultural connections (northward) upriver; the Lake Spring site (9Cb61), containing stratified Morrow Mtn. and Savannah River "focus" components (Miller 1949; Caldwell 1954), is located some seven miles up the Savannah River; and Price's Island (9Lcl), also with a Savannah River "focus" component, is perhaps another twenty miles further upriver (Wauchope 1966: 431-32). 9Ws19 (pp. 94 – 101) is approximately 35 air-miles due west of 9Cbl5.

Materials Recovered: One bag of materials was recovered eroding from the south bank of Uchee Creek, and several items were recovered from potholes, but no material was recovered over the surface per se of this site. Forty-two bags of material were recovered from the four excavated Test Pits. These materials include: projectile points, other chipped stone artifacts, steatite, groundstone specimens, (fiber- and sand-tempered) ceramics, fired clay lumps, and a few faunal materials.

As might be expected, Zone 2 yielded most of the cultural materials. Although detailed correlations between cultural materials and Zones is presented in Chapter V, laboratory analysis supports the field observation that Zone 2 (the midden) is an "early" Stalling's Island component overlying a yet earlier Morrow Mtn. component (Zone 5).

No structural features or burials were recovered at 9Cbl5, and faunal materials in general were infrequent; this is probably because of the moist, acid soil conditions. Soil and pollen samples were recovered from each Zone below Zone 1; their analysis is discussed later.

Discussion: Next to the stratigraphy, perhaps the most important aspect of the investigations at this small site was the recovery of an almost "pure" Savannah River "focus" component. Although some sand-tempered sherds were recovered in Zone 2, virtually 100 percent
of the Stalling's series ceramics were undecorated plain --- regardless of provenience. If notions concerning chronological relationships between plain and decorated fiber-tempered pottery from other southeastern sites (e.g., Bullen and Greene 1970) apply here as well, then the Zone 2 midden represents an "early" fiber-tempered phase within the Savannah River "focus".

Although previous tests in the Carolina Piedmont (Coe 1964) and Savannah River area (Caldwell, 1954) have underscored the chronological priority of Morrow Mtn., the component recovered in Zone 5 reconfirms this relative chronology and adds some new data as well.

Finally, from the perspective of southeastern archaeological field methodology, the excavations at 9Cb15 serve as yet one further confirmation of Coe's hypothesis concerning the stratigraphic potential of alluvial sites (1964:9-13).

Probable Econiche: River Bottom Hardwood Stand (p. 17).

Preliminary Cultural Affiliation(s): Morrow Mtn. & Savannah River "focus" (pp. 192-199).
CHAPTER IV

TYPOLOGICAL CONSIDERATIONS

In the following Chapter I will present the results of analysis of the cultural materials recovered during this project. Since many of these artifacts are organized in terms of "types", and since I will offer descriptions of some "new" types, it would seem appropriate beforehand to make explicit some of my basic assumptions, procedures, and rationale concerning archaeological typology. However, I do not intend here to attempt a general excursion into the (sometimes labyrinthine) realm of archaeological typology, nor am I foolhardy enough to suppose that what follows represents some sort of "final word" (even my own) on typology. My purpose here is the more plebian task of making explicit those conceptual, analytical procedures by which I organized, classified, and differentiated the various archaeological materials recovered during the course of this project. If this more limited goal is clearly transmitted to the reader, then this Chapter will have served its purpose --- regardless of one's thoughts concerning the ultimate "validity" and/or "meaning" of the specific types to be discussed in the next Chapter.

Typology, as is often cited (e.g., Taylor 1964:111-150; Krieger 1944; Ford 1954; and others), is in many ways a fundamental aspect --- a cornerstone --- of the total archaeological endeavor. It is not only a major means by which one systematically orders and describes cultural
material, but also it is often the framework upon which many inferences concerning prehistoric culture traits and cultural processes are based. Some recent trends in the "new" archaeology toward the nomothetic approach, with increased emphasis upon testing hypotheses and the use of computerized statistics, have not (to me) lessened the importance of typological studies at all; rather, these trends further increase one's reliance upon clear (explicit) typological procedures and "thinking".

It seems theoretically incongruous that, until recently, typology has been largely ignored in the anthropological curricula of most American universities. Certainly there are a number of U.S. institutions which have achieved an excellent reputation for their field schools and have exerted broad influence in the sphere of excavation techniques and laboratory methods. But who can cite an American university which is acclaimed for its course offerings or influence in the area of archaeological typology? To be sure, a number of the foremost archaeologists in the Americas have written monographs on archaeological typology; but this only underscores the contention here that the profession as a whole has seemingly assigned the subject to a status of academic limbo, one in which each student is more-or-less on his own to assimilate the significance of different --- and often competing --- typological concepts from a combination of various authorities and his own field experience.

In my opinion, an otherwise excellent field research program can be rendered almost useless by a vague or implicit typological approach; but a clearly formulated conceptual approach to typology can do much toward eliciting a maximum amount of information from "deficient" (for whatever reason) field research. As an example of the latter case, there is
Willey's (1949) monumental synthesis of Northwest Florida Gulf Coast prehistory, which provided a much fuller comprehension of the cultural affiliations of the large-scale ceramic collections of an earlier era of less precise fieldwork. This was accomplished largely by means of an explicit typological framework (albeit aided by more refined stratigraphic testing techniques). Closer afield, though not avowedly typological in a narrower sense, there is the example provided by Fairbanks' (1942) study of the Stalling's Island materials, although here too, further field research assisted the isolation of certain cultural traits.

I am not arguing here that a clearly formulated typological framework alone can salvage a muddled excavation, or that typology takes precedence over field research; it seems evident that the two must go together. My argument is simply against a sometimes expressed attitude that typological analysis is simply an appendage, an accessory, and that field research constitutes the only essential basis of prehistoric cultural research.

In order to explicate the typological framework utilized in the present study, it of course will be necessary to refer to the work of many archaeologists who have previously dealt with the topic. In this manner, it is hoped that certain shared typological concepts will be reinforced and those points of departure be more clearly contrasted. For this purpose it is not necessary to review the rather extensive corpus of monographs on typology which are available in the literature (see, for example, references in Hole and Heizer, 1973:222-24). In most instances, I would assume the reader is already familiar with many of the more general typological articles which have appeared in professional
journals and certain site reports.

The organization of my discussion will be roughly chronological. This is partly a matter of simple convenience; however, it seems evident to me that, in the area of archaeological typology, there has been a rather consistent development of ideas on the various ramifications of artifact types throughout the last half-century (and there is every reason to suppose that the trend of adding and refining upon earlier typological concepts will continue in American archaeology --- at least, that is my hope, since I am convinced that our typological premises must change along with other areas of the archaeological endeavor if the discipline is to continue to develop toward more precise, rigorous explanations for the prehistoric cultures of the Americas).

In much of the following, in those instances where ideas concerning specific artifact forms are discussed as examples, I usually have in mind reference to lithics --- especially to projectile points. This, again, is largely for convenience, since I would maintain --- along with many other students of prehistory, I think --- that the broad outlines of a given typological framework would be essentially the same in reference to almost any artifact form, going all the way from waste flakes and potsherds to house types and temple mounds. (I do not mean to imply by this, however, that all those aspects of material culture which can be grouped into types change at some uniform rate through time. I would simply argue that the broad implications for a given typological framework concerning say, ceramics, is also applicable to other manifestations of prehistoric cultures.) There is a certain relevance in my choice of projectile points, however, since this study is primarily concerned with the Archaic and the new types proposed in the following
With the foregoing caveats in mind, I would divide the history of American typological thought into three successive phases: (1) Descriptive Typology, roughly up to Rouse's Haitian study in 1939, (2) Historical Typology, roughly from 1939 to Coe's 1964 Piedmont synthesis, and (3) Functional Typology, a phase which has as yet barely been explored. The labels are of course a bow to Willey (1968), though my phases differ from his periods.

These boundary dates are somewhat arbitrary; furthermore, the labels are merely for the purpose of conveying what I conceive to be the characteristic (rather than exclusive) focus of attention for a given phase. For example, Holmes, in 1903, took pains to indicate the relative chronology of some of his ceramic groupings on the basis of available data; and --- in Mesoamerica --- Spinden (1917) noted the temporal priority of certain hand-made figurine types in conjunction with his (early agricultural) "Archaic" hypothesis. Holmes (1913) was also a pioneer in calling attention to the possibilities of recovering information on the functional aspects of artifacts. On the other hand, as recently as the last decade artifact studies which I would characterize as primarily Descriptive Typology have been published --- i.e., White, Binford and Papworth (1963).

These (and other) exceptions need not detract from the validity of the phase scheme just outlined, nor from my contention that there has been a consistent, accretional development of thought in the sphere of archaeological typology. Rather, they underscore my previous allegation that the area of typology has developed largely without "benefit" of institutionalization in formal anthropological curricula; it has been
most closely associated with individual thinkers and their personal field experiences. Thus, it is perhaps inevitable that this sphere should be not only more idiosyncratic, but also more eclectic, contentious, and — I think — creative.

The output of monographs dealing with typological concepts and methods on a more general level (i.e., more abstract or theoretical) is larger than one might suppose; one popular publication lists over sixty references touching on the topic (Hole and Heizer 1973:222-24), and this is far from exhaustive.

This attention, however, has not so far resulted in anything which approaches standardized (or even "typical") agreement on the definition of what constitutes a "type". Krieger's (1944:271) statement that: "... archaeology has no generally accepted, impersonal methods of establishing the scope and application of these terms [type and variation]" remains as valid today as then. This holds, despite the "... general working agreement among American archaeologists about what constitutes an artifact type," as "happily" asserted by Willey and Phillips (1958: 13). (However, others have diagnosed this situation as more "hapless" than "happy"; Ford, for example, notes: "... this [archaeological concern with types] hardly redounds to the credit of this branch of the profession" [1954:42].)

Before W.W.II, named (and otherwise designated) types were scattered mainly throughout numerous journal monographs and site reports. In recent years, there have appeared some special publications and summaries which list and/or describe some of the more prominent artifact types in eastern prehistory. To date, these have been concerned mainly with ceramics — e.g., Prehistoric Pottery of the Eastern United States
(Sears and Griffin 1950, et. seq.) and a Bibliography of Pottery Types (Broyles 1965) --- and projectile points. --- e.g., the various Bulletins of the Oklahoma Anthropological Society --- but there is potential for summaries, dealing with other artifact types as well.

In these primary reports, in collected summaries, and in various monographs on typological concepts, there is repeated emphasis upon type attributes, dimensions, or aspects, and their implications. Although the specific interest in type dimensions often varies from one writer to another, three are broadly discussed; these are: (1) morphology, (2) space-time distribution, and (3) socio-cultural context and function, or probable usage (often inferred).

In the period prior to W.W.II, which I have labelled Descriptive Typology, the primary aim of typological monographs seems to have been establishment of neutral artifact nomenclatures which would facilitate communication between different researchers. The bulk of the efforts in these monographs seems to have been directed toward introduction of systematically defined artifact terminologies, in hopes that widespread acceptance would lead, perhaps, to clearer understanding between different professionals. Thus, for example, as early as 1909, a Committee proposed certain standardized applications for terms such as "rim", "lip", "body", "base" and so on with reference to ceramics (Wright et. al. 1909). For lithics, there were the diagrammatic outlines proposed by Black and Weer (1936) and Finklestein (1937). As previously alluded, descriptive lithic terminology reached some kind of culmination with the exhaustive attribute listing study of White, Binford and Papworth (1963), who leave almost no "morphological stone" unturned.

To many contemporary prehistorians (myself included), these earlier
monographs are typological only in a marginal sense. Black and Weer (1936), for example, outline a systematic classification scheme for lithic artifacts utilizing geometric shapes. Under projectile points, they include the term "Folsom" — surely a type by current standards — but nowhere in their article can one find an answer to the question of why "Folsom" instead of "lanceolate" or "trianguloid", except the statement that: "Whether the descriptive term applied to a culture form be geometric or otherwise, it indicates a very definite culture alignment" (1936:291). A moment's reflection makes it obvious that any projectile point — even a modern copy of some bygone form — possesses a definite "culture alignment"; the archaeological problem is, of course, to determine that alignment.

What Black and Weer seem to advocate is a scheme which operates on two levels; one purely descriptive, in which classification is by reference to geometric shape; the other purely typological, in which classification is by reference to a given cultural context. The unresolved issue here is how the two levels articulate.

By analogy, if their outline were applied to N. American motor vehicles by an archaeologist from another galaxy, his initial descriptive criteria might be something like: two-wheeled, four-wheeled, six-wheeled, eight-wheeled; motorbike, car, pick-up, van, semi, and so on. Subsequent research would then disclose information concerning these vehicles' cultural contexts; e.g., Honda, VW, Edsel, Rolls Royce, GMC, Mack, etc.

Most prehistorians today would, I think, agree that the name Rolls Royce conveys more about cultural context (i.e., is closer to what we would call today a type) than does the alternative classification of
four-wheeled car, yet the scheme proposed by Black and Weer is silent on the question of how one proceeds from descriptive to cultural (typological) levels; furthermore, the redundancy built into the scheme (by utilizing two sets of terminology to refer to the same objects) would seem to lead to greater confusion rather than greater clarity.

The preceding comments are somewhat in the vein of a straw man argument, for it was not Black and Weer's (or most other authors in the era of Descriptive Typology) primary purpose to consider the cultural implications of their artifact descriptions (also, there was scant stratigraphic data published at that time for consideration of the space-time implications of artifact types in any event). Instead, the grail of "scientific objectivity" which seems to pervade general typology monographs of the phase explicitly stressed concern with organized schemes and terminologies directed at the measurement and description of observable morphological artifact attributes, such as length, width, cross-section, stem-shape, overall shape, manufacturing techniques, and so on.

In fact, to this student at any rate, there seems to have existed at this time a definite bias (some might say extreme caution) against consideration of the chronological, cultural, or functional implications of the very artifacts being so meticulously arranged by means of geometric principles. Not a few articles feature explicit cautions against imputing functional or chronological significance to archaeological artifacts. Wright et al., for example, state:

It is of course taken as an axiom that a classification based on form assumes no theory of the development, interrelation, or conventionalization of forms or types in any manner whatsoever; it has been the particular aim of the Committee to avoid
or to get rid of those classes and names that are based on uses assumed but not universally proved for certain specimens (1909:114, emphasis mine).

Likewise, in an American Antiquity editorial comparing methodological similarities between the Southwest and the Midwestern Taxonomic Method used in eastern archaeology, Gladwin remarks --- concerning ceramic typology --- that:

"... we proposed a binomial system of naming various pottery types, the main idea being a generic name based on colour, such as black-on-white, and a specific name based on some geographical feature, such as Tularosa. By this means we would avoid any chronological or cultural connotation such as is implied in such terms as pre-Pueblo Black-on-white, or Caddoan redware (1936:256, emphasis mine).

The Midwestern Taxonomic Method itself (McKern 1939), though not specifically concerned with any particular typological framework, was nevertheless influential in the thinking of eastern archaeologists who formulated artifact types. Since the Method was conceived as a systematic way for ordering and comparing culture traits and even entire patterns, it thus embraced all given artifact type descriptions. The well-known ahistorical bias of the Method is clearly evident in the following statement:

"... the archaeologist requires a classification based upon the cultural factor alone; temporal and distributional treatments will follow as accumulating data shall warrant" (McKern 1939:303).

It is evident from this sampling that the era of Descriptive Typology was primarily one in which the focus was upon one of the type dimensions previously identified; namely, it was concerned with morphology. Inasmuch as the space-time dimensions and possible functional
implications of artifacts were largely ignored, the era could actually be characterized as precursory to archaeological typology as today conceived.

Nevertheless, the various typological monographs of the period before W.W.II did lay the groundwork for later studies by virtue of establishing and refining artifact description nomenclatures to the point where some level of standardization was achieved. Most of the terms used and illustrated today in the description of various parts of projectile points, for example, are but little changed from those developed by the Descriptive Typologists; and even where there is significant departure, there is almost always a recognition in the current literature of the abiding need to make our terms explicit, so that ambiguity in describing even integral parts of artifacts is minimized. This is no mean achievement in an era when one typologist's shoulder might be another's barb!

On the other hand, it is one thing to be mentally armed with a systematic morphological or geometric nomenclature which will describe a projectile point adequately. It is quite another matter to classify that point with reference to its space-time and/or functional attributes. Some archaeological studies seem almost to equate geometric form with cultural context, as if one could infer a valid cultural type by classifying its shape into some exclusive morphological category. Other studies have seemingly reified morphological attributes into an ill-defined archaeological limbo somewhere beyond geometry but short of cultural validity.

One prominent instance of over-reliance upon morphological "types" is provided in Wauchope's (1966) presentation of projectile point data which were recovered mostly from surface surveys in northern Georgia in
the late 1930's. Here (1966:92-163), the reader is treated to hundreds of projectile point illustrations organized into some thirty-three morphological "classes", such as: "Indented Base Lanceolate", "Crude Pentagonal or Trapezoidal", "Stemmed Large Blade", and so on. In many instances, these "classes" indiscriminantly cross-cut named projectile point types with known cultural affiliations. Thus the utilization of morphological classes limits, rather than augments, understanding of the distribution of certain prehistoric projectile point types across northern Georgia. (It should be noted, however, that Wauchope states that his analysis was conducted largely prior to stratigraphic research which has resulted in the definition of some of these point types [1966:92].)

In any case, one typological premise of the present study is that morphological attributes --- while inseparable from a description of a valid type --- do not per se constitute a full definition of a given type. Morphological attributes are a fundamental part of the definition of a given type by virtue of specifying archaeologically recovered data concerning the physical characteristics and variability within a given type (e.g., for projectile points, such features as length, width, stem shape, chipping techniques, and so on).

Thus, those morphological attributes pertinent to the definition of a type are somewhat analogous to a recipe. If they are adequately (clearly and precisely) explicated, they enable other investigators to discriminate between artifacts of one type and another. The determination of which morphological attributes are pertinent and which are not rests inescapably with the archaeologist. It often involves countless, small, cumulative decisions, (ideally) based upon close examination of the
materials; but even this procedure will never guarantee that all the pertinent morphological attributes have been discovered, or that they have been properly described. This is an inescapable consequence of the simple fact that a typologist is always dealing with a portion, a sample, and never with an entire universe of artifacts.

In the case of the present study, it is obvious that my sample was in part geographically determined by the extent of the survey area I chose. If I assumed that, wherever encountered in space, a given artifact would possess a nearly identical set of morphological attributes (e.g., somewhat along the lines of the culture area concept), then this sampling problem would not exist (i.e., I could assume that the given types from this area were representative of the whole). However, this is precisely the kind of naive assumption which has been criticized on theoretical grounds by Ford, with his people of Gamma-gamma (1954:48-50), and by Steward (1955:78-82). It is also one of the assumptions which has been shown to be much too simplistic, since data accumulating from prehistoric research has revealed artifact variation across space. (Even if one could maintain that the earlier notions of culture-area and climax are applicable to the Southeast in late prehistoric times, their utility for many current ideas on the Archaic period is marginal at best. Would anyone seriously maintain that there is a "center" for Morrow Mtn. points, or a Savannah River Stemmed "climax"?)

A further sampling limitation facing the typologist is, of course, that of the temporal factor. Since artifacts are produced within cultural traditions, and it is an axiom of prehistoric research that cultures change through time, it follows that the morphological attributes of types also change temporally. However, since consideration of the
chronological implications of types takes us beyond strict morphology (and into the next phase of this discussion, Historical Typology), it will be merely noted here.

Another problem at the more strictly morphological level must be confronted by the typologist in determining those attributes pertinent to the definition of a given type. This relates to accounting for the variability within the given sample collection. In dealing with projectile points, for example, if examined closely it is apparent that no two similar specimens are exactly identical. Each differs in some detail from another, even if they are from the same level at one site, as was the case at 9Cbl5.

It makes little difference, in my opinion, whether one assumes the variability is due to a larger number of individuals knapping points at the same time, or a few individuals (or even one) who became "part-time specialists" and knapped projectiles for the entire group. Whatever its sources — e.g., one or many knappers, individual differences in skill, the exigencies of some task, choice of materials, and so on — the fact that we are dealing with man-made objects means the typologist is confronted with what is often termed idiosyncratic variation. Rouse (as well as Goodman 1944:415-416; Krieger 1944:272; Ford 1954:45-47, among others) has stated this ubiquitous typological problem succinctly, as follows:

Each artifact is a product of the interaction of a number of abstract factors which have moulded the artisan's procedure, including a type, several modes, the environment, the personality of the artisan, and chance. In the case of each artifact, these factors may be said to reach an equilibrium. The equilibrium will be slightly different in each case, and consequently every artifact will differ more or less from all other artifacts (1939:20).
The problem, of course, lies in separating the idiosyncratic factor(s) from those due to culture, for it is the latter (only) with which the definition of a valid type is concerned. Rouse, again, makes this explicit when he remarks that:

Parts of the artisan's procedure are probably peculiar to himself. These parts cannot be considered cultural. Other parts, however, undoubtedly conform to the behavior of the rest of the artisans in the community. These conforming elements, apparently, are the ones which give cultural significance to the procedure, and to the artifacts which result from the procedure (1939:17).

This basic dilemma of distinguishing (and eliminating) those idiosyncratic factors from truly cultural ones unfortunately has no magic solutions. Furthermore, in my opinion, for archaeologists there will never be a time in the future when our typological concepts and/or observations become so refined as to enable us to be exempt from error on this critical issue, although there is certainly evidence that we will have greater confidence in our type definitions with accumulated research.

If one cannot infallibly distinguish idiosyncratic from culturally transmitted behavior in the production of an artifact, then the reader may well inquire how a typologist determines those morphological attributes pertinent to the definition of an artifact type.

I would imagine that the answer to this somewhat rhetorical statement would differ for every prehistorian. For Taylor, for example, it seems to require a combination of archaeological field and laboratory data which include "... provenience, association, qualitative and quantitative.....relationships.....in addition to.....chemico-physical
properties" (1948:122). To these must be added --- to make a valid cultural type --- "... any specification which he (the archaeologist) is willing to assume is the material embodiment of a consistent idea in the mind(s) of the former maker..." (1948:129). Krieger (1944) outlines some eight conceptual criteria for the definition of a valid type, including two with relevance to the ideas just discussed. These are the notions that a type "... should approximate... that combination of mechanical and aesthetic executions which formed a definite structural pattern in the minds of a number of workers..."; and the idea that: "Each type, with its probable variations, must hold its form with essential consistency..." (1944:278). There are many other statements concerning features pertinent to the definition of a type, of course, but emphases differ from one typologist to another.

One feature which occurs in many of these monographs, though sometimes unstated, is the idea of repetition in artifact morphology; and this is, to me, an important criterion for distinguishing between idiosyncratic and culturally transmitted behavior in prehistoric artifacts. Thus, in a simplistic way, to answer the question posed in the preceding paragraph, I would say that I relied heavily upon the recognition of morphological redundancy in the artifacts examined in this research in order to distinguish between idiosyncratic and cultural attributes.

In any event, I would hope that it is explicit at this point that I regard the morphological attributes of an artifact type as forming but one part of the definition of that type. These may, after analysis, be verbally summarized and described by reference to such models as geometric forms. However, it is not valid, to me, to reverse this procedure. One cannot begin the process of a valid type description simply
by sorting, for example, all triangular, ovate, rhomboidal and other-shaped projectile points into separate classificatory piles and then label them with different type names merely on that basis. This is not a typological perspective original to this study; it is precisely an insight offered the American archaeological community thirty years ago (but, as they say, often more honored in the breach) by Alex Krieger. In evaluating then-current typological systems, he summarized as follows:

Most of these classifications consist of balanced outline divisions, each symbolized by a combination of letters and numbers which provide the key to the outstanding features of shape, proportions, workmanship, etc. For the sake of symmetry and ease in memorization the headings and subheadings are usually carried out into a complete system of pigeonholes, whether or not specimens are found to represent all of them... Whatever the reason and method behind such schemes, their authors automatically refer to each grouping as a "type" (Krieger 1944:275, emphasis his).

It is as if some grand typological framework for projectile points, one replete with Classical symmetry and made "scientific" by exhaustive Linnean classificatory principles, had somehow come into existence, and the only research questions remaining for archaeologists were the lackluster chores of spading enough square holes in North America to provide tangible specimens to fill each sub-heading.

With this prelude, it is perhaps not hard to comprehend why an essentially spurious side-issue about the "reality" of artifact types attracted so much attention in the phase I have labelled Historical Typology.

I have already alluded to what I consider to be two key typological
monographs in the succeeding phase of Historical Typology; i.e., Rouse's (1939) study of the Ft. Liberte (Haiti) materials, and Krieger's (1944) succinct outline of a typological method.

Though influenced by Ford (1938) and Linton (1936), Rouse's 1939 study was a pioneer effort in formulating and applying a set of explicit typological procedures aimed at placing artifacts in a chronological perspective. There were --- to be certain --- some earlier studies in which attempts to both formulate and apply typological concepts to chronological problems were made (see, for example, Strong [1935]), but it seems fair to state that it was Rouse's study whose impact was most extensive among eastern prehistorians; especially his emphasis upon the distinction between "modes" (single morphological attributes, or traits) and "types" (morphological attribute clusters, or patterns) which has been widely (though often implicitly) utilized in eastern type systems (Rouse 1939:11-12).

Two of Rouse's postulates deserve mention here. The first, the premise that "culture does not consist of artifacts" (i.e., artifacts are the products of cultural behavior) (1939:15), is of course widely encountered today in discussions of archaeological cultures; this premise flows from the widespread anthropological concept that culture itself is not tangible, but is an abstraction from human behavior (Kroeber and Kluckhohn 1952:155), or as Taylor states:

"... culture is a mental construct, having to do with the contents of minds and not with material objects or observable behavior" (1948:98).

The second premise to which I call attention is stated as follows:

Artifacts are concrete objects. Types and modes, on the contrary, are conceptual patterns set up by
the archaeologist to represent ideas possibly held by the artisan (Rouse 1939:15).

With the first portion of this statement there can be but little dissent; I would venture the opinion that there is virtually no American archaeologist who is not acutely aware that the processes (and frustrations!) of sorting and classifying field materials into some systematic typological scheme are almost entirely his (or her) own.

The second portion of the statement, however, helped set loose a debate concerning the "reality" of types which is even yet rekindled. With acknowledgment to Ford (1954:42), in essence, to me, the issue Rouse refers to can be stated in the form of a single question, as follows.

Is an archaeological type, which is formulated entirely by the prehistorian, an authentic counterpart to the aboriginal group's concepts concerning the "proper" or acceptable way to manufacture any given artifact within the type?

Now, since archaeologists are dealing with artifact types whose makers are long gone, this question is essentially insusceptible to resolution one way or the other; this is one reason I would maintain the issue is largely spurious. Nonetheless, some prehistorians seemingly align themselves with the idea that the archaeologically defined types are valid reflections of the aborigine's concepts (e.g., Byers and Johnson 1940:33; Krieger 1944:278; Spaulding 1953), while others, such as Ford, maintain that archaeologically defined types have no prehistoric cultural "reality" (1954:42).

Though I feel uncomfortably like a fence-straddler with respect to this polemic, my sentiments are entirely with those of Willey when he
remarks that: "The two outlooks ('arbitrary' vs. 'real' types) are not fully antagonistic, and both seem to arrive at similar results" (1962:177). In fact, I would view some of the projectile point types discussed in the following Chapter as authentic or "real" (e.g., Morrow Mtn. and Savannah River Stemmed) on the basis of their frequency distribution, while others are distinctly more arbitrary (e.g., Burks Mtn.) and --- I would surmise --- would be less likely to have been isolated by an Archaic period American as a distinctive "type".

Although Rouse certainly recognized the chronological implications of his types, his discussion of how that chronology is derived is vague and rather unsatisfactory (1939:12-14). This is not the case with Krieger however, whose brief outline of "The Typological Concept" (1944) I regard as one of the clearest statements on the topic in the entire professional literature.

With Krieger's remonstrance that a: "... type as a whole is also understood to occupy a definable historical position, that is, its distribution is delimited in space, time, and association with other cultural material" (1944:277-78), the chronological dimension was firmly attached to eastern American typological studies, and the information transmitted by means of type definitions substantially increased. The addition of this historical dimension to type definitions (which was, of course, substantially enhanced by refined stratigraphic procedures and the advent of radiocarbon dating) marks a threshold in American typological thought, in my opinion. First, it refined and enhanced the usefulness of artifact types in clarifying problems of culture history and change by enabling prehistorians to specify time-space relationships with more precision. Second, it seemingly had the effect of reducing
the emphasis upon pre-conceived pigeonhole schemes characteristic of the Descriptive Typology phase. The compulsion to focus exclusively upon the niceties of morphological symmetry abated, though it of course has not yet disappeared.

Furthermore, Krieger's emphasis upon rigorous examination of the morphological materials, his disavowal of the necessity for "absolute consistency" in morphological traits, and his assertion that the "distinguishing criteria for type determination are not of constant value" (1944:278), lent a hitherto unpermissable flexibility to type definitions, since it did away with the necessity for the typologist to attempt to force his artifacts into pre-determined outlines. In addition, this new flexibility, with its emphasis upon a combination of "consistency" and recognized variability, meant that typologists could meaningfully include variant forms.

In short, the artificial pigeonhole arbitrariness of Descriptive Typological schemes was abolished, and the former priorities of descriptive orderliness over cultural associations were reversed. The implications of this more flexible approach for describing prehistoric cultural continuums more accurately are obvious --- though of course the potential for abuse of this newfound flexibility is also present.

The phase of Historical Typology initiated by Rouse and Krieger, and further elaborated in the typological statements of such writers as Whiteford (1947), Taylor (1948), Willey (1949), Phillips, Ford and Griffin (1951), Ford (1952,1954), and Spaulding (1953) --- to cite but a few of the more prominent easternists --- was one which was not only characterized by increasingly sophisticated and explicit (overall) typological awareness, but also increasing refinement in field research
(especially stratigraphic and recovery) techniques and the advent of radiocarbon dating.

Stoltman recently remarked that:

"... the modern period (1942-72) has seen an unparalleled sharpening and refining of conceptual tools (type, phase, tradition, horizon, region, locality, period, etc.). None of these was developed uniquely for Southeastern data. However, Southeastern scholars like Willey, Phillips, Caldwell, Ford, and Goggin have been instrumental in their development, so that such concepts have attained wide acceptance in the Southeast" (1973:143).

The most recent development in Historical Typology has come to be known as the "type-variety method". Although initially proposed for Southwestern ceramics by Wheat, Gifford and Wasley (1958), experimental considerations of its utility for both Eastern ceramics (Phillips 1958; Sears 1960) and Maya pottery (Smith, Willey and Gifford, 1960) have been published, while Gifford (1960) has appraised some of its theoretical implications for the study of culture.

It is somewhat ironic that part of the stimulus for development of the type-variety method came from the proliferation of ceramic types, which in turn largely occurred during the Historical Typology phase. Wheat, Gifford and Wasley state that:

During the past 20 years the number of named pottery types in the Southwest has increased at such a rate that it is now virtually impossible for the archaeologist to know and be familiar with more than a small percentage of them (1958:34).

Although Phillips (1958) does not comment on this point in applying the method to Eastern ceramics, much the same situation prevails here, as the recent listing of nearly one thousand Eastern pottery types in Broyles (1965)
attests. (Somewhat similar observations hold for recent increases in projectile point types, though the type-variety method has not as yet been applied to these. I will have more to say on this later.)

Discussion of the type-variety method centers upon two primary areas: (1) the definition and mechanical procedures of the method, and (2) its implications for understanding cultural processes. These are taken up in turn.

The type-variety method, though new, draws heavily upon typological concepts which have become widespread in the Historical Typology phase. The primary innovation (or, as Sears sees it, relapse into rigidity [1960:324-325]), is not in the area of a revision of the concept of type, but in the organizational scheme (taxonomy) of types and type-variants. Wheat, Gifford, and Wasley explicitly affirm their intention of retaining traditional definitions of the type concept when they state that:

To depart from or redefine the pottery type would be to scrap all previous ceramic classification.... This is neither desirable nor necessary...(1958:34).

Phillips (1958:118-119) likewise does not propose a radical change in concept of ceramic type, though he does alter its application to the type-variety method.

The other key term in the method, variety, also departs but little from established usage. A variety, according to Wheat, Gifford and Wasley: "... differs from the type to which it is related only in one or more minor particulars" (1958:35). For ceramics, for example, a variety may differ somewhat from the related type in terms of such attributes as temper, decorative style, rim treatment, shape, and so on.
It may also differ slightly in terms of spatial and/or temporal distribution (usually in the direction of being more restricted than the related type, according to Wheat, Gifford and Wasley [1958:35]). However, Wheat, Gifford and Wasley impose limits to the amount of acceptable variation; they assert that:

A variety cannot be temporally and areally distinct from the type in any radical sense; nor can it differ conspicuously from the type in the manner of design execution, surface finish, or character of paint or paste utilized, else the variety warrants designation as a type (1958:35).

The amount of permissible variety departure from the given type is determined by the investigator, but is not unlimited, and must of course be explicitly defined (as far as is known from available data).

Neither of the concepts of type or variety represent basic departures from the customary usage of Historical Typology. The type concept, for example, is in accord both with Rouse's "pattern of artifact characteristics" (1939:18) and Krieger's "specific and cohesive combination of features" (1944:277). The variety concept is likewise analogous to what Rouse refers to as a mode (1939:18-19) and Krieger terms a sub-type (1944:283).

From these bases, the type-variety method can be systematically expanded by more inclusive terms (e.g., type cluster, series, sequence, ceramic system, and so on) which usually denote ever larger spatial-temporal segments and cultural (ceramic) relationships.

It is this latter aspect, the hierarchical taxonomy, to which Sears has objected (1960). His objections seem to be resolved into three areas: (1) extant Eastern ceramic type concepts have developed into flexible yet precise tools, thus the type-variety method is unnecessary;
(2) the hierarchical taxonomy of the type-variety method is too rigid — i.e., it predetermines artifact attributes and space-time relationships; and, (3) the adoption of the type-variety method would necessitate re-analysis and redefinition of extant Eastern ceramics and types.

Though I have a deep admiration for Sears' many insightful contributions to Southeastern prehistory, and a keen appreciation of the breadth of his archaeological experience, I must disagree with his critique of the type-variety method.

First, while not disputing that there are indeed some thoughtfully defined Southeastern pottery types which are sufficiently precise to be of assistance in tackling cultural-historical relationships here, there also exist not a few Southeastern pottery definitions which are of dubious typological value. There are also areas in the Southeast — including parts of Alabama, Georgia and S. Carolina — where the type definitions and their space-time relationships might be considerably clarified by application of the type-variety taxonomy (or, at least some kind of organizational structure!).

Second, I fail to discern rigidity and the quality of pre-determination in any of the type-variety monographs cited above. I do perceive a systematic structure, but it is one with abundant flexibility. Certainly, in these monographs and trial formulations, there is nothing which approaches the predetermined artifact classifications which characterized the Descriptive Typology phase discussed earlier (pp. 121-126). However, I suppose this is essentially a matter of individual perspective; one student's "structure" is another's "strait jacket"!

Finally, I cannot see, after the explicit statements by Wheat, Gifford and Wasley (1958:34-35) and Phillips (1958:117-118) concerning
the use of established type concepts (and published descriptions), that the adoption of the type-variety method will necessitate redefinition of the entire corpus of established Southeastern ceramic types. Even if that were to be the outcome, it might well lead to greater clarification, since Phillips has already characterized the present situation with the rather baleful observation that: "... the result of 20 years of such untrammeled activity (Southeastern ceramic typing) is a condition bordering on anarchy" (1958:122).

In any event, the idea that every Southeastern pottery type which is currently established in the literature should thus be sanctified and perpetuated bespeaks an authoritarian attitude which is diametrically opposed to the trial-and-error canons of scientific methodology to which we have nominally subscribed as professionals; since Sears himself has often been in the vanguard of those espousing a more precise and scientific methodology, I find it difficult to see why the re-analysis and re-alignment of certain dubious Southeastern pottery types should cause him any concern.

Phillips (1958) seems in the main content with the task of refining the type-variety method into a workable taxonomic (ceramic) system which could be applied to Eastern pottery; he modestly prefers "... to keep the discussion on the working level...." within the constraints of the outlook that "... the primary aim of ceramic taxonomy is to facilitate the daily operations of archaeology, such as stratigraphy and seriation" (1958:123). Modesty aside, however, his adroit explication of the potential of the type-variety framework for Eastern ceramics reveals a thoroughly discerning grasp of its more purely conceptual implications,
as he has abundantly demonstrated with the Lower Yazoo Basin survey report (Phillips 1970).

Turning to the implications of the type-variety method for increasing one's understanding of certain cultural processes, perhaps the initial point to be made is that the type-variety method (and for that matter, any typological framework) does not automatically, or directly, lay open any prehistoric culture. The type-variety method is but an analytical and classificatory tool, a conceptual device by means of which data concerning prehistoric artifacts can be systematically organized and directed toward elucidation of certain aspects of culture.

The responsibility for making cultural inferences from the type-variety method lie of course with the archaeologist; these more purely "cultural" inferences are not inherent in the typology. Phillips makes this point explicit when he states that:

Going up the taxonomic scale from mode to type is an easy grade, but from type to horizon or tradition we have to shift gears from the mainly technological to the mainly cultural and historical... I would ... [free] ... the concept of all but the most general implications of area, time, and culture. If we do this, there will be no excuse for making the mistake of expecting it to yield automatic solutions to cultural and chronological problems (1958:124).

Gifford likewise makes this distinction between a typological system and the cultural inferences which can be made from it with the statement that:

Classificatory schemes [e.g., the type-variety method] applied to archaeological materials are in part useful as a means toward this end [discovering cultural regularities] 1960:342, (emphasis mine).

I do not wish to further belabor this, since more comprehensive discussions of the distinction between the recovery of archaeological data...
vs. reconstruction of prehistoric cultures are readily available: Kluckhohn (1940), for example, long ago offered some cogent criticisms on this point regarding Mesoamericanist researches; Taylor's (1948:48-88) reproving critique impaled many of the foremost N. American archaeological reports of his time on the issue; and, as late as 1958, Willey and Phillips lamented that: "... there has been a lack of progress in processual [i.e., cultural] interpretation in American archaeology to date precisely because unit formulations have been put together with so little reference to their social aspect" (1958:6).

Having thus (I hope) established that a given typologically derived statement is not ipso facto an assertion about the nature of a prehistoric culture, I return to the previous view concerning the relationship between the two; namely, that a typological system can be utilized to make inferences about prehistoric cultural processes. (And, indeed, to me, this is after all its primary utility --- otherwise the various typologies which have been proposed are merely intellectual exercises.)

As Gifford (1960) has pointed out, one conceptual asset of the use of the type-variety method (over others) in the study of culture is its ability to accommodate archaeological data on artifact variability on more flexible and economical bases. These result from the somewhat broadened definitions of the type, and an increased emphasis upon modes (or, single attributes). As expressed by Phillips: "... the type... always includes its varieties... the type is the sum total of the established variety and all other varieties" (1958:119). Thus with the analysis of ceramics, for example, if the differences between sherds of a given group are on the order of one (or a few) attributes --- say different decorative techniques --- these can be expressed as varieties of the type rather than
separating each into a different type. Other variations, including (slight) time-and-space distributions, can also be accommodated, resulting in a less cumbersome (thus more economical) typological treatment.

Descriptive economy aside, the type-variety method also seems to be capable of more accurately reflecting the artifactual standards and variability which are assumed to have existed in prehistoric social groups. Gifford states this as follows, with regard to ceramics:

Types generally include several or many varieties, and as a result are summations of individual and small group variation. The basic attributes involved in any type came together in the combination of a mental image plus the motor habits of the prehistoric artisans of a culture in such a way that when executed in clay, they fulfilled the requirements of the ceramic and stylistic values of that culture...And so it is that "types", having grown out of a blending of individual variation, both reflect cultural values and are determined by them. A type is regarded as being the material outcome of a set of fundamental attributes that coalesced, consciously or unconsciously, as a ceramic idea or "esthetic ideal" --- the boundaries of which were imposed through the value system operative in the society by virtue of individual interaction on a societal level....(1960:342-43).

In contrast, varieties:

....were the result of work produced within the confines of relatively small social groups or by individual potters who indulged preferences as to the locale where temper or clay must be gathered or who were able to give vent to artistic flairs... (1960:343).

If I understand Gifford's intention here, he is affirming that the type-variety method can reflect social reality. Put bluntly, the attributes which define a "type" are analogous to the "least common denominator" (ceramic) values pertaining to the entire prehistoric
community; while those attributes pertaining to varieties are (ceramic) values which pertain to however many sub-groupings occurred within the larger community.

The interrelationship of a type to its varieties just quoted would of course apply mainly to spatial variation --- e.g., the several "microbands" in one region at one instant in time which might form a society. But the type-variety method can also be applied to diachronic situations, in which case the "type" would represent those widely shared (ceramic) values which endured, while varieties would represent more ephemeral departures ("fads"), some of which might in turn become widely accepted "types" in succeeding generations.

I have ventured into the systematics of the type-variety method not as an exercise, but because I am convinced of its applicability to this study. I would maintain it possesses sufficient flexibility to make it useful in discussing lithic artifacts, although to my knowledge the principles of the type-variety method have not as yet been applied outside the realm of ceramics. More specifically, I will utilize the type-variety method later in this study, in connection with certain Archaic projectile point data.

I have designated 1964 as the end date for Historical Typology, with the choice of Coe's Piedmont synthesis. Although this is obviously arbitrary to an extent, it is not entirely so.

To an unparalleled degree, Coe's synthesis of the Piedmont marks a culmination in the application of Historical Typology to Eastern Archaic chronological problems --- this despite the fact that nowhere in this slender volume does there appear a chapter or section which is exclusively devoted to explicating his typological approach (the word typology is not
even included in the index). Instead, his typological method and overall perspective are illustrated (often literally) and manifested in the numerous type definitions presented in the study (and, interspersed throughout are equally succinct comments on what, to him, a type is not). In short, the study, though not without shortcomings (for example, some of his distributional statements are unnecessarily vague, to me), will endure for some time as the outstanding example of what can be accomplished in Eastern archaeology with careful, consistent, and balanced attention to both stratigraphic and typological principles.

That these comments are not mere truckling (or patronizing) to one's former mentor can, I think, be partially demonstrated by referring the reader to the post-1964 archaeological literature; not one prominent article on the Eastern Archaic since then omits reference to the framework which Coe published in 1964.

That I close the phase of Historical Typology in 1964 should not be taken to mean I would maintain that the chronological perspective has ceased to exist, or that Eastern North American archaeology has arrived at the final resolution to chronological problems. In my opinion, even that limited Elysian day has not yet dawned! However, with the establishment of a relatively "workable" chronological framework for Eastern North America (made partially absolute by virtue of radiocarbon dating), prehistorians need no longer feel constrained by a transcendent urgency to devote their typological schemes solely to chronological problems.

The mid-1960's also marks the emergence of what is sometimes called the "new" archaeology, or the "revolution" in archaeology (Martin [1971:7] puts the year of his own "radicalization" somewhere around 1965).
This so-called "revolution", which is to be marked by a shift from ideographic to nomothetic principles (see, for example, Harris 1968:1-3, for distinctions between the two) in prehistoric researches, would alter the emphasis of American archaeology from Historical Particularism (for example, the emphasis upon narrower problems of chronology and culture-history) to research whose aims involve consideration of causal factors in prehistoric cultural change.

That there have been some decided changes in American archaeological perspectives in recent years cannot be denied; however, it is sometimes difficult for this student to discriminate what is new by simple virtue of publication from that which is new by virtue of altered methodology in the "new archaeology". Be that as it may, there can be no doubt that American archaeology is in transition, and there are signs of certain shifts in research aims and data treatment. The evaluation of these await some future Study of Archaeology, but I simply want to make the point here that a concern with cultural causality is not exclusive to the "new archaeology".

To my knowledge, there have been as yet no radically different typological proposals in what I have termed the phase of Functional Typology, so in a sense this label covers an empty domain. My reasons for designating such a phase beginning in 1964 center on two considerations: (1) this year marked the publication in English of Semenov's 1957 study of the functional attributes of Old World prehistoric artifacts, and (2) it marks the appearance of Longacre's succinct study concerning the application of typological variation to eliciting prehistoric patterns of social organization (1964:1454-55).

These two seminal studies reflect some of the potential directions
which the "new" archaeology might take (though, of course, I doubt Semenov would align himself with the Americanist version); they also illustrate the point that the term Functional Typology has two primary referents.

In one sense, Functional Typology refers to the literal examination and analysis of possible artifact uses, through the use of microscopes (and other devices) which reveal traces of wear patterns as well as more refined information on techniques of manufacture. This is, of course, supremely illustrated to date by Semenov's (1964) research, although it has also been tentatively applied in the Americas. (I originally intended to include information of this kind in this study, but time --- and other factors --- have intervened, so that these results will have to be reported separately at a later date. It can be stated here, however, that the observations I have so far conducted on the materials of this report have convinced me that further examination along these lines will add significantly to our understanding of many Archaic lithic classes --- and, by inference, Archaic technico-social patterns.)

In a second sense, Functional Typology refers to inferences concerning prehistoric social organization which are based upon the analysis of typological variation (usually by means of computerized statistical treatments). This utilization of typological data is of course exemplified by Longacre's (1964) dissertation synopsis, in which ceramic design element variations from the Carter Ranch Pueblo site (Arizona) were analyzed. The nonrandom distribution of some 175 design elements in some 6000 sherds suggested to Longacre that "localized matrilineages" were a feature of Pueblo social organization by A.D. 1000 (Longacre 1964:1454–55).
Thus, if there is as yet no explicit statement of Functional Typology (as analogous to the outlines of Historical Typology proposed earlier by Rouse [1939] and Krieger [1944]), it nevertheless seems useful to set off recent typological studies from earlier ones. For, it seems evident to me that —— though some recent prehistoric researchers have utilized certain traditional typologies within the overall framework of Historical Typology —— their aims are different.

Finally, whether or not some future prehistorian devises some explicit outline of a Functional Typological method (and I think such a statement will be forthcoming), it will not, I think, exclude consideration of the utility of types as chronological indicators, even though a Functional Typological scheme might well lessen the emphasis upon the chronological dimensions of artifacts (just as Historical Typology decreased the earlier emphasis upon the niceties of morphological symmetry [p. 135]).

After all, time is but one (albeit essential) factor in a holistic study of prehistoric cultures. In his critical review of Descriptive Typology, Krieger inquired that:

... considering the vast amount of time and thought put into them, is there any reason to believe that their groupings will help to discover the true historical meaning of the myriad works of man (1944:277)?

Recently it seems as if analogous questions concerning the ability of the Historical Typology framework to discover the meaning of these myriad works are being posed.

To summarize (but by no means ultimately resolve) the preceding typological discussion, I list the following as guidelines which apply
to the types considered in the next Chapter:

1. the morphological attributes of artifacts are an essential part of a type description, but they do not per se define a type;

2. a type definition includes morphological variability across space and through time; no single artifact specimen exhibits the total range of variation (i.e., there is no "archetypal" or "Aristotelian" artifact of a given type);

3. the responsibility for assigning those attributes pertinent to a given type lie with the typologist, and are based upon examination of the provenience of the particular sample (among other factors); they do not automatically flow from consideration of geometric (or other) preconceptions;

4. sampling error --- due to space, time, and the stone-smith's individual make-up --- is inevitably present; however, it is partially counterbalanced through the factor of morphological redundancy (repetition);

5. the type-variety method is modified for application to projectile-point definitions in this study;

6. artifact type-varieties are constructs of the typologist; they can be utilized to make inferences concerning prehistoric cultural processes, but the two operations are distinct;

7. the conviction that an adequate type definition is an authentic reflection of prehistoric social reality cannot be dogmatically maintained. It is an assumption open to continual testing as research data accumulate. (Thus, an archaeological type can be valid and persist; the assertion of its cultural relevance is always tentative and subject to revision as further data warrant.)
In closing this brief outline of typological considerations, I should perhaps reiterate that the discussion has been solely directed toward the present study. There is a definite need in American archaeology for a thorough-going critique of typological concepts, but the preceding comments fall far short of such a comprehensive treatment. I am aware that I have been extremely selective, not only with regard to area differences in typological thought (e.g., I have almost entirely ignored Mesoamericanist and Southwestern North American contributors and ideas), but also certain approaches (e.g., seriation studies [Ford 1962; Rouse 1967, among others], and statistical procedures and applications [Spaulding 1953], as well as others).

However, even if my mental antennae have been primarily attuned to the frequencies of the more "Eastern" bands of North American typological thought, and my harmonics have been even further narrowed to the cadence of projectile points, if I have made some of my typological thoughts explicit to the reader, then this Chapter will have accomplished its aim.
CHAPTER V
SITE ANALYSIS AND CLASSIFICATION

Under this heading are included data pertaining to the cultural materials recovered in 1970. The available information relating to cultural features, such as refuse pits, midden areas, and waste-flake concentrations, has been summarized in Chapter III (pp. 49-114). Since no direct structure evidence and no burials were recovered, and since the few faunal and freshwater mussel shell remains recovered at 9Cb15 could not be utilized for subsistence analysis except on a present/absent basis, this Chapter is devoted almost entirely to artifacts.

The materials are listed initially by site following the sequence established in Chapter III so that the reader can obtain some idea of the relative quantities and types of different artifacts. From this it will be apparent that not all the sites covered in this report are on even terms; although all are considered, some are "more equal" than others both in material analyzed and in terms of interpretation --- 9Cb15 is an obvious example.

Following this, I present a description and analysis of the cultural materials. Over 10,000 bits and pieces of prehistoric craftsmanship were recovered from some fifty sites (as well as some historic materials which are not included, since none of them date much before A.D. 1900). Of these thousands of fragments, only a small number are treated here as "artifacts", and an even smaller number were sufficiently diagnostic to be typed. For the most part, the various artifact
categories follow established usage: e.g., chipped stone drills and scrapers, netsinkers, groundstone axes and atlatl weights, and so on. Although these categories are summarily presented in the initial site listing, they are subsequently defined (pp. 199-213).

As might be anticipated, the two artifact categories which bear the brunt of the interpretations are ceramics and chipped stone projectile points (CSPP's).

Some 2566 sherds comprise the total ceramic sample; of these 2007 (78 percent) are various sand-tempered wares, while 559 (22 percent) are fiber-tempered (of these latter, 516 — or 92 percent of the total fiber-tempered sub-sample — were recovered from 9CB15).

The projectile point sample from the survey area includes some 523 specimens; 408 of these (78 percent) were sufficiently complete for typological purposes (i.e., they included basal portions). The site distribution of projectile points was also skewed; 338 specimens (65 percent) alone were recovered from 9Wsl9. Of this sub-sample, 249 (74 percent of the total from this site) were eventually typed.

I offer these statistics at the outset of the analysis merely to give the reader some grasp of the relative scale of the artifacts recovered in this research project as compared to others.

At Stalling's Island, for example, Claflin's descriptions were based on a sample which included: "over thirty-five hundred sherds", "nearly five hundred articles of bone", "eighteen [grooved] axes", and "over five thousand chipped implements [many of which represent projectile points]" (1931:13,21,29,33). More artifacts were recovered from this one site than the entire sample of fifty sites reported here!

On the other hand, the enigmatic Sandia points (N. Mexico) were
originally described on the basis of a sample of nineteen specimens (Hibben 1941); and Coe was able to define some nine different projectile point types at least partially on the basis of a sample size of only 348 specimens recovered from the unusually clear stratigraphy recorded at the Doerschuk site, in Montgomery Co., N. Carolina (1964:34).

My point here, of course, is simply that quantity is not the entire basis for artifact description and type definitions — though I would have desired more of at least some of the artifact classes to be described on the following pages.

Following the analysis of artifacts, I propose descriptions for three previously undefined projectile point types. All three --- Martin Corner-notched, Burks Mountain, and Kiokee Creek Stemmed --- are, I suggest, variations within the Archaic period (early, middle, and late respectively).

A summary of the site distribution of ceramic and projectile point types is found in Table IX (pp. 215-217); frequency distributions for the five excavated sites are given with the analyses of cultural materials from each one. The page references beside the site designations are to the initial discussions in Chapter III, while the numerical entries to the right represent the amounts recovered. The most frequently encountered source material for lithic specimens was quartz; departures from this "norm" are indicated simply by C (= chert, or flint), M (= metamorphic), S (= sandstone and/or slate), and T (= steatite, or "talc"); these are in parentheses adjacent to the quantities. (For the reasons given in Chapter III, 9Tf2, 9Mcd4, and 9Bur6 are not included in the following pages.)
Piedmont Sites

Site Designation: 9Ws12 (pp. 55, 60)
Accession No.: 22
Ceramics: none recovered
Lithics:

- **Projectile Points**
  - Morrow Mountain I
  - Morrow Mountain II
  - Kiokee Creek Stemmed
  - Yadkin Large Triangular
    
  total 5

- **Scrapers**
  - Multiple
  - Side
    
  total 3

- **Chipped Stone Blanks** 3

Other Materials: Approximately one (10 lb. nail) bag of lithic materials, including less than fifty worked quartz chips.

Site Designation: 9Ws13 (pp. 60-61)
Accession No.: 21
Ceramics: none recovered in 1970, but present
Lithics:

- **Projectile Points**
  - Kiokee Creek Stemmed 1

- **Groundstone**
  - atlatl weight fragment 1 (M)

- **Chipped Stone Blanks** 1
- **Abradors** 1

Other Materials: Approximately one-half bag of lithic materials, including less than twenty worked quartz chips.
Site Designation: 9Ws14 (p. 61)
Accession No.: 45
Ceramics: none recovered
Lithics:
  Projectile Points
    "Mississippian" 1

Other Materials: Approximately one-fourth bag of lithic materials, including less than five worked quartz chips.

Site Designation: 9Ws15 (pp. 61-62)
Accession No.: 23
Ceramics:
  Dunlap Fabric Marked 1
  Irene Incised 1
  Residual Sand-tempered Plain total 3

Lithics:
  Projectile Points
    Savannah River Stemmed 1
  Scrapers
    end 2
    multiple 1 (C)
    total 3
  Chipped Stone Blanks 3
  Chipped Stone Cores 6

Other Materials: Approximately one-half bag of lithic materials, including less than thirty worked chert and quartz chips.

Site Designation: 9Tf3 (p. 63)
Accession No.: 25
Ceramics: none recovered
Lithics:

Scraper end 1

Chipped Stone Blanks 3

Other Materials: Approximately one-half bag of lithic materials, including less than 25 worked quartz chips.

Site Designation: 9Tf4 (pp. 64-65)
Accession No.: 26
Ceramics: none recovered

Lithics:

Projectile Points
- Morrow Mountain I 2
- Yadkin Large Triangular 1
  total 3

Scraper end 1
side 1
  total 2

Chipped Stone Blanks 2

Other Materials: Approximately one-fourth bag of lithic materials, including less than ten worked quartz chips.

Site Designation: 9Tf5 (p. 65)
Accession No.: 27
Ceramics: none recovered

Lithics:

Projectile Points
- Martin Corner-notched 1
- Morrow Mountain I 5
- Morrow Mountain II 3
- Burks Mountain 1
- Guilford Lanceolate 1
  total 11
Scrapers
- end (hafted)
- side

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td>total</td>
<td>4</td>
</tr>
</tbody>
</table>

Chipped Stone Blanks

8

Chipped Stone Cores

7

Other Materials: Approximately 1 1/2 bags of lithic materials, including less than 100 worked chert and quartz chips.

Site Designation: 9Tf6 (pp. 65-66)

Accession No.: 66

Ceramics: none recovered

Lithics:

- Projectile Points
  - Martin Corner-notched
  - Morrow Mountain I

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>2</td>
</tr>
</tbody>
</table>

Scrapers
- side

1

Other Materials: Less than ten other lithic specimens were recovered here, including two worked quartz chips.

Site Designation: 9Tf7 (pp. 66-67)

Accession No.: 69

Ceramics: none recovered

Lithics:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 (C)</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>2</td>
</tr>
</tbody>
</table>

Chipped Stone Blanks

4

Chipped Stone Cores

2
Other Materials: Approximately one bag of lithic materials, including less than fifty worked quartz and chert chips.

Site Designation: 9Ge5 (p. 67)
Accession No.: 34

Ceramics:
Deptford Simple-Stamped 1

Lithics:

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectile Points</td>
<td>1</td>
</tr>
<tr>
<td>Morrow Mountain I</td>
<td></td>
</tr>
<tr>
<td>Scrapers</td>
<td>1</td>
</tr>
<tr>
<td>end</td>
<td></td>
</tr>
<tr>
<td>side</td>
<td>3</td>
</tr>
<tr>
<td>total</td>
<td>4</td>
</tr>
<tr>
<td>Chipped Stone Blanks</td>
<td>1</td>
</tr>
<tr>
<td>Chipped Stone Cores</td>
<td>1</td>
</tr>
</tbody>
</table>

Other Materials: Approximately one-half bag of lithic materials, including less than fifteen worked quartz chips.

Site Designation: 9Ge6 (pp. 67-68)
Accession No.: 35

Ceramics: none recovered

Lithics:

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectile Points</td>
<td>1</td>
</tr>
<tr>
<td>Morrow Mountain I</td>
<td></td>
</tr>
<tr>
<td>Kiokee Creek Stemmed</td>
<td>1</td>
</tr>
<tr>
<td>Yadkin Large Triangular</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>3</td>
</tr>
<tr>
<td>Chipped Stone Blanks</td>
<td>2</td>
</tr>
<tr>
<td>Chipped Stone Cores</td>
<td>1</td>
</tr>
</tbody>
</table>

Other Materials: Approximately one-half bag of Lithic materials, including less than ten worked chert and quartz chips.
### Site Designation: 9Ge7

**Accession No.:** 36  
**Ceramics:** none recovered  
**Lithics:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projectile Points</strong></td>
<td>Morrow Mountain I</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Kiokee Creek Stemmed</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Unclassified Distal Fragment</td>
<td>1</td>
</tr>
<tr>
<td><strong>Scrapers</strong></td>
<td>end</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>side</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>multiple</td>
<td>1</td>
</tr>
<tr>
<td><strong>Chipped Stone Blanks</strong></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td><strong>Chipped Stone Cores</strong></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

**Total:** 3 end, 3 side, 3 multiple  

**Other Materials:** Approximately one bag of lithic materials, including less than 100 worked chert and quartz chips.

### Site Designation: 9Ge8

**Accession No.:** 37  
**Ceramics:** none recovered  
**Lithics:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Projectile Points</strong></td>
<td>Morrow Mountain II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Unclassified Distal Fragment</td>
<td>1</td>
</tr>
<tr>
<td><strong>Scrapers</strong></td>
<td>multiple</td>
<td>1</td>
</tr>
<tr>
<td><strong>Abradors</strong></td>
<td></td>
<td>1 (M)</td>
</tr>
</tbody>
</table>

**Total:** 3  

**Other Materials:** Approximately one-half bag of lithic materials, including less than 25 worked chert and quartz chips.
Site Designation: 9Ge9 (p. 69)
Accession No.: 38
Ceramics: none recovered
Lithics:

Chipped Stone Blanks 1

Other Materials: Approximately one-half bag of lithic materials, including less than ten worked quartz chips.

Site Designation: 9Ge10 (pp. 69-70)
Accession No.: 39
Ceramics: none recovered
Lithics:

Projectile Points
- Kiokee Creek Stemmed "Mississippian" 1
- total 2 (C)

Scrapers
- end
- side
- total 3

Chipped Stone Blanks 1

Other Materials: Approximately one bag of lithic materials, including less than fifteen worked chert and quartz chips.

Site Designation: 9Gell (p. 70)
Accession No.: 40
Ceramics:
- Savannah Stamped (?) 1

Lithics:

Projectile Points
- Kirk Corner-notched
- Morrow Mountain I 1
- total 1
<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morrow Mountain II</td>
<td>1</td>
</tr>
<tr>
<td>Burks Mountain</td>
<td>1</td>
</tr>
<tr>
<td>Kiokee Creek Stemmed</td>
<td>1</td>
</tr>
<tr>
<td>Badin Crude Triangular</td>
<td>1</td>
</tr>
<tr>
<td>Caraway Triangular</td>
<td>1</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrapers</td>
<td></td>
</tr>
<tr>
<td>side</td>
<td>4</td>
</tr>
<tr>
<td>multiple</td>
<td>2</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipped Stone Blanks</td>
<td>5</td>
</tr>
<tr>
<td>Chipped Stone Cores</td>
<td>5</td>
</tr>
<tr>
<td>Bi-concave &quot;nuttingstone-like&quot; artifact</td>
<td>1 (M)</td>
</tr>
</tbody>
</table>

**Other Materials:** Approximately one bag of lithic materials including less than fifty worked quartz chips.

---

**Site Designation:** 9Ge12

**Accession No.:** 41

**Ceramics:**

- Dunlap Fabric Marked: 2

**Lithics:**

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectile Points</td>
<td></td>
</tr>
<tr>
<td>Palmer Corner-notched</td>
<td>1</td>
</tr>
<tr>
<td>Morrow Mountain I</td>
<td>5</td>
</tr>
<tr>
<td>Morrow Mountain II</td>
<td>6</td>
</tr>
<tr>
<td>Unclassified Distal Fragments</td>
<td>5 (C)</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrapers</td>
<td></td>
</tr>
<tr>
<td>end</td>
<td>7</td>
</tr>
<tr>
<td>side</td>
<td>4</td>
</tr>
<tr>
<td>multiple</td>
<td>4</td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipped Stone Blanks</td>
<td>14</td>
</tr>
<tr>
<td>Chipped Stone Cores</td>
<td>5</td>
</tr>
</tbody>
</table>

**Other Materials:** Approximately one bag of lithic materials, including less than 100 worked chert and quartz chips.
Site Designation: 9Ge13

Accession No.: 42

Ceramics: none recovered

Lithics:

**Projectile Points**
- Morrow Mountain I
- Guilford Lanceolate
- Kiokee Creek Stemmed

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morrow Mountain I</td>
<td>2</td>
</tr>
<tr>
<td>Guilford Lanceolate</td>
<td>1</td>
</tr>
<tr>
<td>Kiokee Creek Stemmed</td>
<td>1 (C)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>

**Scrapers**
- end
- side

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>end</td>
<td>3</td>
</tr>
<tr>
<td>side</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

**Chipped Stone Blanks**
- 4

**Chipped Stone Cores**
- 2

**Abradors**
- 1 (M)

Other Materials: Approximately one-half bag of lithic materials, including less than twenty-five worked chert and quartz chips.

Site Designation: 9Ge14

Accession No.: 43

Ceramics: none recovered.

Lithics:

**Scrapers**
- side
- multiple

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>side</td>
<td>4</td>
</tr>
<tr>
<td>multiple</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

**Chipped Stone Blanks**
- 7

**Chipped Stone Cores**
- 5

Other Materials: Approximately one-half bag of lithic materials, including less than 25 worked quartz chips.
Site Designation: 9Ge15  (p. 72)
Accession No.: 44
Ceramics: none recovered
Lithics:
Scrapers side 1
Chipped Stone Blanks 1
Other Materials: Approximately one-fourth bag of lithic material, including less than ten worked quartz chips.

Site Designation: 9Wr2  (pp. 72-73)
Accession No.: 24
Ceramics: none recovered
Lithics:
Projectile Points
Morrow Mountain I 1
Unclassified Distal Fragment 1
total 2
Scrapers side 1
Chipped Stone Blanks 1
Other Materials: Approximately one-half bag of lithic materials, including less than fifteen worked quartz chips.

Site Designation: 9Mcd2  (pp. 73-74)
Accession No.: 29
Ceramics:
Deptford Simple-stamped 1
Lithics:
Projectile Points
Badin Crude Triangular 1
Chipped Stone Blanks

Other Materials: Approximately one-half bag of lithic materials, including less than ten worked quartz chips.

Site Designation: 9Mcd3
Accession No.: 30
Ceramics: none recovered
Lithics:

- Projectile Points
  - Morrow Mountain I
  - Morrow Mountain II
  - total 3

- Chipped Stone Blanks
- Chipped Stone Cores

Other Materials: Approximately 3/4 bag of lithic materials, including less than fifteen worked chert and quartz chips.

Site Designation: 9Mcd5
Accession No.: 32
Ceramics: none recovered
Lithics:

- Scrapers
  - side
  - Chipped Stone Blanks
  - total 1

Other Materials: Approximately one-fourth bag of lithic materials, including less than twenty worked quartz chips.

Site Designation: 9Mcd6
Accession No.: 33
Ceramics: none recovered

Lithics:

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectile Points</td>
<td></td>
</tr>
<tr>
<td>Morrow Mountain I</td>
<td>1</td>
</tr>
<tr>
<td>Kiokee Creek Stemmed</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>2</td>
</tr>
<tr>
<td>Scrapers</td>
<td></td>
</tr>
<tr>
<td>end</td>
<td>2</td>
</tr>
<tr>
<td>side</td>
<td>1</td>
</tr>
<tr>
<td>total</td>
<td>3</td>
</tr>
<tr>
<td>Chipped Stone Blanks</td>
<td>1</td>
</tr>
<tr>
<td>Chipped Stone Cores</td>
<td>2</td>
</tr>
</tbody>
</table>

Other Materials: Approximately one bag of lithic materials, including less than thirty worked chert and quartz chips.

Site Designation: 9Cb8 (pp. 76-77)
Accession No.: 50
Ceramics:
Irene Plain 4

Lithics:

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectile Points</td>
<td></td>
</tr>
<tr>
<td>Kiokee Creek Stemmed</td>
<td>1</td>
</tr>
<tr>
<td>Unclassified Distal Fragment</td>
<td>1 (C)</td>
</tr>
<tr>
<td>total</td>
<td>2</td>
</tr>
<tr>
<td>Scrapers</td>
<td></td>
</tr>
<tr>
<td>multiple (hafted?)</td>
<td>1</td>
</tr>
<tr>
<td>Chipped Stone Blanks</td>
<td>4</td>
</tr>
</tbody>
</table>

Other Materials: Approximately 3/4 bag of lithic materials, including less than ten worked chert and quartz chips.

Site Designation: 9Cb17 (p. 77)
Accession No.: 57
Ceramics: none recovered
Lithics:

**Projectile Points**
- Morrow Mountain I: 1
- Savannah River Stemmed: 1
- Unclassified Distal Fragments: 3 (C)

**Scrapers**
- end: 2
- side: 1
- side (with graver-like spur): 1
- multiple: 2

**Chipped Stone Blanks**: 5 (S)

**Chipped Stone Cones**: 2 (S)

Other Materials: Approximately 3/4 bag of lithic materials were retained from this site, including less than thirty worked quartz chips.

----------

Site Designation: 9Cb19 (pp. 78-79)

Accession No.: 62

Ceramics: None recovered (seven daub-like lumps)

Lithics:

**Projectile Points**
- Morrow Mountain I: 2
- Unclassified Distal Fragments: 7

**Scrapers**
- end: 1
- end ("snub-nosed" appearance): 1

**Chipped Stone Blanks**: 9

**Chipped Stone Cores**: 5

**Hammerstones**: 1

Other Materials: Approximately one bag of lithic materials, including less than 35 worked chert, "slate" and quartz chips.
Site Designation: 9Cb20  (p. 79)
Accession No.: 65

Ceramics:
- Dunlap Fabric Marked  
- Residual Sand-tempered Plain  
  total  6

Lithics:
- Projectile Points
  - Morrow Mountain I
  - Kiocese Creek Stemmed  
  total  4
- Chipped Stone Blanks  
  4  (S)
- Steatite Netsinker Fragments  
  1  (T)

Other Materials: Approximately one bag of lithic materials, including less than thirty worked chert, "slate", and quartz chips.

Coastal Plain Sites

Site Designation: 9Cb3  (pp. 79, 81)
Accession No.: 46

Ceramics:
- Dunlap Fabric Marked (?)  
  1

Lithics:
- Projectile Points
  - Savannah River Stemmed  
  1  (S)

Scrapers
- side  
  1

Chipped Stone Blanks  
  1

Other Materials: Approximately one-half bag of lithic materials, including less than fifteen worked quartz (and one chert) chips.
Site Designation: 9Cb4  
Accession No.: 47

Ceramics:
- Stalling's Island Plain
- Stalling's Island Drag-and-Jab Punctate
- Deptford Linear Check-stamped
- Deptford Simple-stamped
- Dunlap Fabric Marked
- Residual Sand-tempered Plain

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stalling's Island Plain</td>
<td>27</td>
</tr>
<tr>
<td>Stalling's Island Drag-and-Jab Punctate</td>
<td>8</td>
</tr>
<tr>
<td>Deptford Linear Check-stamped</td>
<td>1</td>
</tr>
<tr>
<td>Deptford Simple-stamped</td>
<td>4</td>
</tr>
<tr>
<td>Dunlap Fabric Marked</td>
<td>5</td>
</tr>
<tr>
<td>Residual Sand-tempered Plain</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

Lithics:
- Projectile Points
  - Morrow Mountain I
  - Morrow Mountain II
  - Savannah River Stemmed
  - Kiokee Creek Stemmed
  - Unclassified Distal Fragments

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morrow Mountain I</td>
<td>3</td>
</tr>
<tr>
<td>Morrow Mountain II</td>
<td>2</td>
</tr>
<tr>
<td>Savannah River Stemmed</td>
<td>3</td>
</tr>
<tr>
<td>Kiokee Creek Stemmed</td>
<td>3</td>
</tr>
<tr>
<td>Unclassified Distal Fragments</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

- Scrapers
  - end
  - end (hafted-reworked CSPP)
  - side

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>end</td>
<td>1</td>
</tr>
<tr>
<td>end (hafted-reworked CSPP)</td>
<td>1</td>
</tr>
<tr>
<td>side</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4</strong></td>
</tr>
</tbody>
</table>

- Chipped Stone Blanks
  - 15 (C)

- Chipped Stone Cores
  - 6 (C)

- Hammerstones
  - 2

- Steatite Vessel Fragments ("Sherds")
  - 1

Other Materials: Approximately 2 1/2 bags of lithic materials, including less than 100 worked chert and quartz chips.

Site Designation: 9Cb5  
Accession No.: 48

Ceramics: none recovered

Lithics:
- Projectile Points
  - Martin Corner-notched

<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Martin Corner-notched</td>
<td>1</td>
</tr>
<tr>
<td>Lithic Type</td>
<td>Count</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Morrow Mountain II</td>
<td>1</td>
</tr>
<tr>
<td>Unclassified Basal Fragment (M. Mtn.?)</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3</strong></td>
</tr>
</tbody>
</table>

| Chipped Stone Drill Fragments     | 2     |
| Scrapers                          |       |
| end                               | 2     |
| end ("snub-nosed" type)          | 1     |
| side                              | 2     |
| side (with graver spur)          | 1 (C) |
| multiple ("Keeled" type)         | 1     |
| **Total**                         | **7** |

| Chipped Stone Blanks              | 13    |
| Chipped Stone Cores               | 5 (C) |
| Hammerstones                      | 1     |

**Other Materials:** Approximately one bag of lithic materials, including less than 75 worked chert and quartz chips.

---

**Site Designation:** 9Cb6  
**Accession No.:** 70  
**Lithics:** One bag of amorphous steatite nodules, some with tool marks.

---

**Site Designation:** 9Cb7  
**Accession No.:** 49  
**Ceramics:** none recovered  
**Lithics:**  
  **Projectile Points**  
  Morrow Mountain II 1  

**Other Materials:** Approximately 3/4 bag of lithic materials, including less than ten worked chert and quartz chips. Some amorphous steatite fragments were also recovered at this site.
Site Designation: 9Cb9

Accession No.: 51

Ceramics: none recovered

Lithics:

Chipped Stone Cores 1

Steatite Netsinker Fragments 2

Other Materials: Approximately one-half bag of lithic materials, including less than ten worked quartz chips.

Site Designation: 9Cb10

Accession No.: 52

Ceramics: none recovered

Lithics:

Projectile Points
Kiokee Creek Stemmed 1 (S)

Chipped Stone Drills
expanded base 1 (S)

Scrapers
side 1 (C)

Other Materials: Approximately one-half bag of lithic materials, including less than ten worked chert and quartz chips.

Site Designation: 9Cb11

Accession No.: 53

Ceramics:

Stalling's Island Plain 1
Deptford Simple-stamped 1
Residual Sand-tempered Plain 4

total 6
Lithics:

**Projectile Points**
- Morrow Mountain I: 3
- Morrow Mountain II: 5
- Guilford Lanceolate: 1
- Kiokee Creek Stemmed: 2
- "Mississippian": 1
- Unclassified Distal Fragments: 2
  total: 14

**Scrapers**
- end: 5
- side: 4
- multiple (with graver spur): 1
  total: 10

**Chipped Stone Blanks**: 26 (S)

**Chipped Stone Cores**: 3 (C)

**Steatite Netsinker Fragments**: 9

**Groundstone Atatl Weight Fragment**: 1

Other Materials: Approximately one bag of lithic materials, including less than forty worked chert and quartz chips. Ten amorphous steatite fragments with tool-marks were recovered as well (these would have been classed with the netsinker fragments, except for lack of drill-hole evidence).

---

**Site Designation**: 9Cbl3

**Accession No.**: 54

**Ceramics**: none recovered

**Lithics**:

- Steatite "Blanks" (with tool-marks): 6 (T)

**Other Materials**: none

---

**Site Designation**: 9Cbl4

**Accession No.**: 55

**Ceramics**: none recovered
Lithics:

**Projectile Points**
- Savannah River Stemmed 1 (C)

**Scrapers**
- end 1
- side 3
  total 4

**Chipped Stone Blanks** 3

**Chipped Stone Cores** 1

**Hammerstones** 1

**Steatite Netsinker Fragments** 2

**Groundstone Atlatl Weight Fragment** 1

**Other Materials:** Approximately 3/4 bag of lithic materials, including less than thirty worked chert and quartz chips. Several steatite specimens were recovered as well, though none were diagnostic enough for classification.

---

**Site Designation:** 9Hk2 (p. 88)

**Accession No.:** 28

**Ceramics:**
- Dunlap Fabric Marked 2

**Lithics:**

**Projectile Points**
- Morrow Mountain I 6 (S)
- Morrow Mountain II 2
- Badin Crude Triangular 1
  total 9

**Scrapers**
- end 5
- end (reworked CSPP) 1 (C)
- side 6
- multiple 3
- multiple (plano-convex) 1
  total 16
Other Materials: Approximately one bag of lithic materials, including less than 35 worked chert and quartz chips.

Site Designation: 9Bur7
Accession No.: 67
Lithics:

- Scarpers end
  1 (C)
- Chipped Stone Blanks
  6 (C)
- Chipped Stone Cores
  1 (C)

Other Materials: Approximately three bags of various-sized chert spalls were recovered at this site. No quartz was evident.

Site Designation: 9Bur8
Accession No.: 68
Lithics:

- Scarpers side multiple (plano-convex)
  1 (C) total 2
- Chipped Stone Blanks
  6 (C)
- Chipped Stone Cores
  4 (C)

Other Materials: Approximately three bags of various-sized chert spalls were recovered here. As with 9Bur7 (and 9Bur9), no quartz was evident.

Site Designation: 9Bur9
Accession No.: 71
Ceramics:

- Deptford Check-stamped
  1
Lithics:

Chipped Stone Blanks 2 (C)
Chipped Stone Cores 5 (C)

Other Materials: Approximately 3/4 bag of various-sized chert spalls.

At this point, the reader is no doubt aware of the reason for my earlier statement (p. 151) concerning the differences between the sites surveyed in this project. Although all --- with the possible exception of 9Mcd4 --- represent areas of prehistoric activity, some are much more useful for analytical purposes than others. For example, most of the sites I have designated as "quarry" and/or "chipping stations" --- e.g., 9Tf3, 9Tf7, 9Mcd5, 9Cb6, and 9Bur8 --- possessed low frequencies of diagnostic artifacts, and are not at all useful in chronological determinations. Hence my assignment of these kinds of sites to a Middle-Late Archaic temporal category is merely an assumption based upon artifact associations recovered elsewhere.

Other sites yielded greater frequencies of more diagnostic artifacts (in a sense, too many!), but previous archaeological research had already established that these often represented not just one but a number of different phases: for example, 9Cb4 (p. 168) and 9Cb11 (pp. 170-171), fall into this category.

However, there were some sites located in this survey which seemingly fall into that happy conjunction between sufficiently diagnostic materials and relative cultural isolation. I say seemingly with an eye to surface survey experience such as reported by Phillips at the Fort Place site in Humphreys Co., Mississippi (1970:268-270). Three separate surveys
of this rather extensive platform mound-and-village site --- one in 1936 by Ford and Chambers, a second in 1941 under the auspices of the Lower Mississippi survey (Phillips, Ford, and Griffin 1951), and a third in 1951 by Phillips --- yielded such different runs of ceramic materials as to induce Phillips to observe that: "Comparison of these samples is not likely to increase one's faith in the randomness of surface collections" (1970:269).

The implications of statements like this were constantly brought home to me during the course of this (brief) one-half year project in which it was often the case that a given site was sampled but once --- and even at that only for a few hours.

The vicissitudes of surface surveying aside, however; certain of the surveyed sites seemed to possess a serendipitous combination of attributes which gave them special analytical value. Among those surveyed (only) are: the Greene Co. sites (pp. 158-163), 9Cbl4 (pp. 171-172), 9Cbl9 (p. 166), and 9Hk2 (pp. 172-173).

These sites, coupled with excavated data (and of course, previous research), are the basis for the outline of certain Archaic cultural developments which appears later in this study.

Cultural materials from the five sites tested by this survey are presented in the order of their final archaeological significance, rather than following the sequence established in Chapter III. This interpretive ranking is admittedly subjective to some extent, but it has the advantage of giving the reader an explicit guide to my thinking on these sites in terms of the purposes of this study. The order --- 9Cb12, 9Cb18, 9Wsl6, 9Wsl9, and 9Cb15 --- is incidentally, roughly in chronological sequence with respect to the field tests carried out during 1970.
Of the first site tested, 9Cb12, I cannot say much by way of artifact interpretation or cultural context (see pp. 101-103 for field testing procedures). The analysis of cultural materials in Table III (p. 177) is based on typological comparisons, since the natural stratigraphy could not be correlated with any single cultural component.

This data is presented simply in terms of total cultural materials by excavation unit, since cultural materials were infrequently encountered below 0.7 feet and no differential artifact frequencies were observed with respect to vertical distribution in the arbitrary levels.

The ceramics from 9Cb12 are small-sized, probably due in part to past plowing (as was the case at 9Cb18 directly north). No fiber-tempered pottery was recovered here, which is somewhat at variance with the assertion I will later make concerning the association of this ware and Kiokee Creek Stemmed points (pp. 211-213).

However, if the projectile point analysis accurately reflects prehistoric utilization, it suggests only brief occupations at the site during several Archaic and Woodland phases, with the most extensive utilizations occurring from Morrow Mountain I through Late Archaic (13 CSPP's, or 56 percent of the total typed, pertain to these two phases). (It is interesting that comparisons between the projectile points recovered here and those at 9Cb18 immediately north on a knoll-top suggest predominately earlier Archaic occupations at 9Cb18 and later Archaic at 9Cb12.)

Yet another somewhat anomalous situation occurs with the comparison of the occurrence of steatite "netsinkers" between 9Cb12 and 9Cb18. Twenty-three fragments of these artifacts were recovered at 9Cb12, while eleven were recovered at 9Cb18. In view of the generally accepted association of these artifacts with the Late Archaic and repeated
### TABLE III

CULTURAL MATERIALS FROM 9Cb12 (Accession No. 59)

<table>
<thead>
<tr>
<th>Materials</th>
<th>Provenience</th>
<th>Surface</th>
<th>T.P. 1</th>
<th>T.P. 2</th>
<th>T.P. 3</th>
<th>T.P. 4</th>
<th>T.P. 5</th>
<th>Totals</th>
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</thead>
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<tr>
<td>Morrow Mtn. I</td>
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<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
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<td>Morrow Mtn. II</td>
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<td></td>
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<td>1</td>
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<td>Burks Mtn.</td>
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<td></td>
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<td>2</td>
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<td>Guilford Lanceolate</td>
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<tr>
<td>Kiokee Creek</td>
<td></td>
<td>1(C)</td>
<td>2</td>
<td></td>
<td></td>
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<td>7</td>
</tr>
<tr>
<td>Badin Crude Tri.</td>
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<td></td>
<td></td>
<td></td>
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<td>1</td>
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<td>Yadkin Large Tri.</td>
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<td>9</td>
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<td>C.S. Drills</td>
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<td></td>
<td></td>
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<td>Scrapers (all varieties)</td>
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<td>7</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td></td>
<td>20</td>
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<tr>
<td>CS Blanks &amp; Cores</td>
<td></td>
<td>17</td>
<td>11</td>
<td>13</td>
<td>15</td>
<td>1</td>
<td>2</td>
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TABLE III (Cont.)
CULTURAL MATERIALS FROM 9Cb12 (Accession No. 59)

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<tr>
<th>Materials</th>
<th>Provenience</th>
<th>Surface</th>
<th>T.P.1</th>
<th>T.P.2</th>
<th>T.P.3</th>
<th>T.P.4</th>
<th>T.P.5</th>
<th>Totals</th>
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<tbody>
<tr>
<td>Hammerstones</td>
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<tr>
<td>Steatite Netsinker</td>
<td></td>
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<td>7(T)</td>
<td>7(T)</td>
<td>9(T)</td>
<td></td>
<td></td>
<td>23(T)</td>
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<tr>
<td>Fragments</td>
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<td></td>
</tr>
<tr>
<td>Steatite Nodules</td>
<td></td>
<td>2(T)</td>
<td>20(T)</td>
<td>20(T)</td>
<td>1(T)</td>
<td></td>
<td>1(T)</td>
<td>45(T)</td>
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<td>Groundstone Axes</td>
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<td></td>
<td>1</td>
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<tr>
<td>Abradors</td>
<td></td>
<td>1(S)</td>
<td>2(S)</td>
<td>2(S)</td>
<td>3(S)</td>
<td></td>
<td>4(S)</td>
<td>12(S)</td>
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<tr>
<td>&quot;Nutstones&quot;</td>
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<td>1(S)</td>
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<td>1(S)</td>
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<tr>
<td>Worked Chert</td>
<td></td>
<td>12</td>
<td>37</td>
<td>11(C)</td>
<td>12(C)</td>
<td>3</td>
<td>17</td>
<td>92(C)</td>
</tr>
</tbody>
</table>

implications of their prehistoric function as "netsinkers", it seems odd to encounter them at 9Cb18, which is apparently an earlier Archaic site for the most part; furthermore, this knoll top, which rises some sixty feet above the water, is definitely a less advantageous spot for casting nets than 9Cb12.

One way around this problem (since I accept both of the notions just mentioned, in general terms) is to note that some later Archaic materials were recovered at 9Cb18; a second is to broaden the functional interpretation to include other uses; e.g., perhaps use in "hot-stoned" cooking as well as in fishing.

In any event, the overall artifact frequencies at 9Cb12 were small and seemingly pertain to several different cultural phases. For these
reasons, it seems to have been but intermittently occupied by both preceramic and ceramic-using peoples.

Even more sporadic utilization applies to 9Cb18, if the artifact frequencies recorded in Table IV (p. 180) are an accurate indication. Whereas some 242 artifacts were classified from 9Cb12, only 175 were so recorded from 9Cb18, even though the same number of Test Squares were excavated at both sites. As with 9Cb12, the materials are simply tabulated holistically by Test Pit, since most of them were recovered in the plow zone (pp. 103-105).

Analysis of the projectile points on a typological basis indicates primary utilization of 9Cb18 during the Early Archaic, though of course the sample size is limited. The Hardaway Side-notched specimen was struck from soft shale-like stone rather than quartz or chert (virtually all of the chert recovered at this site was weathered, or patinated, some quite extensively).

One quartz chipped stone drill was recovered which appeared to have been reworked from a Morrow Mountain base rather than being of the expanded base variety. This, if accurate, is somewhat unusual, although Coe reports the trait presence of drills reworked from projectile points as early as the Palmer and Kirk phases at the Hardaway site (1964:72-73).

As with 9Cb12, chipped stone scrapers were analyzed into three categories: (1) end, (2) side, and (3) multiple; and, as was the case with that site, most of the scrapers from 9Cb18 fell into the side category. One contrast between the two sites in this respect however, is that three scrapers recovered at 9Cb18 were of the "snub-nosed" variety which seemingly drop out after the Early Archaic period (Coe 1964:73,76); none of this variety were recovered at 9Cb12.
### TABLE IV

CULTURAL MATERIALS FROM 9Cb18 (Accession No. 61)

<table>
<thead>
<tr>
<th>Materials</th>
<th>Provenience</th>
<th>Surface</th>
<th>T.P.1</th>
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<th>T.P.3</th>
<th>T.P.4</th>
<th>T.P.5</th>
<th>Totals</th>
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<tr>
<td>Lithics</td>
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<tr>
<td>Hardaway Side-</td>
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<td></td>
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<td>C.S. Drills</td>
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<td>1(C)</td>
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<tr>
<td>(expanded base)</td>
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<td>(all varieties)</td>
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<td>13</td>
<td>11(S)</td>
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<td>7</td>
<td>2</td>
<td>2</td>
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<td>11(T)</td>
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<td></td>
<td></td>
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<td>1(T)</td>
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<tr>
<td>Steatite Nodules</td>
<td></td>
<td></td>
<td>11</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td></td>
<td>25(T)</td>
</tr>
</tbody>
</table>
The single mortar specimen recovered at 9Cb18 is of weathered granite-like stone; it is about nine inches on its long axis and five inches thick, and features a shallow circular depression some three inches in diameter and two inches at its deepest point.

Disregarding the single sand-tempered sherd, 9Cb18 was seemingly utilized most frequently during the Early Archaic, though the projectile point types indicate continued brief occupations to the Late Archaic. If this assignment is accurate, then the lithic materials recovered here all pertain to the broad span of the preceramic Archaic period, though further cultural isolation was not possible at 9Cb18.

The third tested site at which I tend to disregard the presence of ceramics is 9Ws16 (pp. 93-94). As noted in Table V (p. 182), three Savannah Burnished Plain sherds were recovered here, but I am inclined to view these as intrusions from nearby 9Ws19.

As with the two sites just discussed, there was essentially no cultural superposition evident in the two small Test Pits excavated at 9Ws16, and the total classified artifact inventory is less than fifty. Thus, while the homogeneity of the cultural materials recovered here is

<table>
<thead>
<tr>
<th>Materials</th>
<th>Provenience</th>
<th>Surface</th>
<th>T.P.1</th>
<th>T.P.2</th>
<th>T.P.3</th>
<th>T.P.4</th>
<th>T.P.5</th>
<th>Totals</th>
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<tbody>
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<td>Mortar Fragments</td>
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<td></td>
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<td></td>
<td>1(S)</td>
</tr>
<tr>
<td>Abradors</td>
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TABLE IV (Cont.)
CULTURAL MATERIALS FROM 9Cb18 (Accession No. 61)
TABLE V

CULTURAL MATERIALS FROM 9Wsl6 (Accession No. 64)

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no doubt partially an illusion due to the small sample (and site) size, I think there is also some reality in the two components analyzed here.

The earlier of these features Martin and Kirk Corner-notched projectile points, while the later is characterized by Morrow Mountain and Burks Mountain projectiles (descriptions of the new types are found on pp. 209-210 and pp. 210-211 respectively). The cultural association of the remaining lithic materials recovered here is of course problematical, though I tend to ascribe most of them to the later phase.

I hasten to add here that I am aware of some of the potential hazards of cultural reification inherent in archaeological typology (my own included); thus, the reader is forewarned that I am not here foisting recognition of yet two additional "cultures" upon the already
somewhat baroque totem of Southeastern prehistory.

However, if projectile point typology is to become a more precise tool for the analysis of prehistoric cultural change, then it seems necessary to recognize changes in artifact styles which are part of the much more encompassing changes in overall cultural evolution. Since I feel that the attributes associated with Martin Corner-notched and Burks Mountain are distinctive traits in the overall development of one segment of culture — i.e., that concerned with the manufacture of projectile points — I am convinced that they are warranted within the framework of the type-variety method.

Thus, while it would be unwarranted to refer to a "Burks Mountain complex" (at least until such time as stratigraphic data serves to isolate such a hypothetical component in space or time) in the same way as a "Morrow Mountain complex", it does seem meaningful to refer to the variation described as Burks Mountain within a Morrow Mountain typological framework. Subsequent field research on the Morrow Mountain phase (which is a chronological reality in Southeastern prehistory, at any rate) might disclose a stratigraphically isolated component in which what I describe as Burks Mountain may have no demonstrable significance; in that case, of course, the variety would simply become extinct by virtue of absorption. On the other hand, further research might further substantiate the (admittedly tenuous) validity of the description, in which event it can be expanded.

In sum, the two projectile point clusters typologically isolated at 9Ws16 seemingly represent small time segments — one pertaining to the Early Archaic and the other to the Middle Archaic — on the longer continuum recovered at nearby 9Ws19.
In terms of material, 9Wsl9 (pp. 94-101) was by far the largest prehistoric cultural sample recovered during the 1970 survey; over 5000 artifact specimens were recorded from this one site.

In one sense this was a "mixed blessing", since none of the eleven Test Pits exhibited anything other than the most rudimentary evidence of cultural isolation (the relatively undisturbed subsoil pits discussed on pp. 95-96). In part there was compensation for the lack of stratigraphy in the large (for this survey, anyway) artifact samples, as can be seen in Tables VI and VII (pp. 185-187); however, I am convinced --- after sampling eleven areas of the site --- that no significant natural stratigraphy is present.

Thus, as with previous sites, I relied heavily upon typological considerations in analyzing the cultural materials, and these are presented in Tables VI and VII simply by reference to horizontal provenience (i.e., without regard to arbitrary excavation levels). The only exceptions to this procedure are the materials from undisturbed subsoil pits, which are tallied separately. The fact that the artifact counts are somewhat exaggerated by virtue of having been reworked by plowing for a number of years in no way detracts from the observation that 9Wsl9 was seemingly a desirable location for prehistoric peoples from Early Archaic through Protohistoric times.

The seven fiber-tempered sherds recovered at 9Wsl9 were all from the eastern portion of the knoll crown in Test Pits 3, 4, and 10. These Pits also yielded somewhat higher frequencies of Savannah River and Kiokee Creek Stemmed points, which was one factor considered in the type description of the latter. Of the five decorated sherds, two are the Stalling's Punctate, and three fall into the Drag-and-jab Punctate variety (Sears and Griffin 1950).
### TABLE VI

CERAMICS FROM 9Ws19 (Accession No. 63)

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**TABLE VII**

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<td>Worked Chert</td>
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<td>76</td>
<td>34</td>
<td>46</td>
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<td>2(C)</td>
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Perhaps the most interesting observation concerning the occurrence of fiber-tempered pottery at 9Wsl9 is the fact that this series represents less than one percent of the entire recovered ceramic sample, whereas Savannah R. and Kiokee Creek Stemmed points (which are associated with this component elsewhere) account for about 25 percent of the total projectile point sample. There is little doubt that we are dealing with a phase which spans the transition from preceramic to ceramic in this area; however, I would even so expect to have recovered more fiber-tempered pottery in view of the strong representation of Late Archaic points at 9Wsl9. I think that --- in addition to temporal variation --- the "low" frequency of fiber-tempered pottery here is due to spatial variability.

It has long been observed that the greatest frequencies of fiber-tempered pottery occur in midden sites located within valley floodplains and along the Southeastern Seaboard Coastline. 9Wsl9, on the other hand, is a "classic" Piedmont hilltop site which is not only over one hundred miles from the Coastal Sea Islands but also over thirty miles upstream from the Savannah River valley. Wauchope notes a representative sample from Price's Island (Lc-1), on the Savannah River, but north and westward of this site fiber-tempered pottery was extremely rare (1966:45-46;434). The situation at 9Wsl9 seems to strengthen the primary association of this pottery series with those larger river valley floodplains which cross the Coastal Plains from the Savannah southward into Florida. I will have more to say on this later.

Typing the sand-tempered pottery from 9Wsl9 was one of the most difficult and unsatisfactory operations in the entire course of laboratory analysis. First off, much of this ceramic sample is small-sized and weathered; thus, those decorative techniques which were employed were often
only faintly discernible. Second, despite a number of rather thoroughly paged monographs before me which cover some of the major known ceramics from the general region — e.g., Caldwell and Waring (1968 [1939]); Caldwell (1952); Caldwell and McCann (1941); Phelps (1968); Sears (1952, 1958); and Wauchope (1966) — I found that as the analysis proceeded, all I was doing was to remove sherds from one tentative grouping to another as one or another attribute became apparent. In the end, my decision was to simply place all those faintly decorated body sherds (about one hundred) with the Residual Plain in the statistical hope that I had only maligned the classification of each type equally.

The result is evident in Table VI, a rather bleak outcome all-in-all, but one which I hope conveys the overall situation at 9Ws19; namely, that there were sand-tempered ceramics here representing each major phase of Southeastern prehistory from the Early Woodland through Protohistoric periods. (As far as I can tell on a typological basis, the only "under-represented" period at 9Ws19 is the Early Woodland. No Deptford ceramics were evident in the entire collection — unless one so equates the fine-line Simple-stamping which I have designated as Mossy Oak — and only a few Dunlap Fabric Marked and Mossy Oak Simple-stamped sherds are evident.)

The 9Ws19 lithic sample was seemingly large enough to justify the assumption of a fairly representative sampling of some of the area's prehistoric occupants, and it was largely by analysis of this sample that the initial steps toward isolation of the new projectile point types described later (pp. 209-213) were taken.

The recovery of a Hardaway Side-notched fragment in Test Pit 1 was a keen incentive to obtain more excavated information from this site. However, only one further fragment was recovered (in Test Pit 3). This, along
with the low frequencies of other Early Archaic types and the absence of other lithic artifacts suggestive of this period elsewhere (e.g., "snub-nosed" end scrapers) leads to the evaluation that the Early Archaic occupations at 9Wsl9 were very brief affairs, and that the knoll crown seems to have been favored above other areas during this period.

The analysis of projectile point types and their distribution here suggest that the most intensive and extensive occupations were during the Middle and Late Archaic --- again of course if the assumption of projectile point types as an index to site utilization is accurate. Following the Archaic period, the marked decrease in subsequent point type frequencies suggest a shift in utilization of the site --- perhaps one from seasonal reuse to more temporary and sporadic utilization.

Considering the number of lithic specimens, there were surprisingly few chipped stone drills recovered at 9Wsl9 --- only eight in all. Four of these were apparently reworked from projectile points and may be assigned to the Late Archaic on the basis of their resemblance to Savannah R. and Kiokee Creek Stemmed points; the remaining four are straight drills. Five of these artifacts are from non-local chert.

The chipped stone scrapers from 9Wsl9 were analyzed into three classes; in order of decreasing frequency, there were: (1) side-scrapers, (2) end-scrapers, and (3) multiple scrapers. Extending Coe's suggestion (1964:51) to this area (since data from the Late Archaic component at 9Cb15 support it), the use of chipped stone scrapers can be classed as a cultural trait which generally disappeared with the end of the Archaic period.

The large number of chipped stone blanks (307) and cores (96) recovered at 9Wsl9 is not surprising, in view of the occurrence of quartz outcrops on the knoll crown (see Fig. 1, p. 100). The manufacture of these artifacts
is also, I think, a trait which is largely associated with the Archaic period, although the primary data in this survey supporting this idea is the fact that the preceramic Greene Co. sites all feature these artifacts in association with Archaic projectile points.

The steatite artifacts — i.e., netsinker fragments and (2) vessel "sherds" — recovered at 9Ws19 can be likewise assigned a Late Archaic provenience by comparison with similar objects in the Late Archaic component isolated at 9Cb15 (among other sites already in the literature).

The rather infrequent occurrence of groundstone artifacts at 9Ws19 (only four grooved-axe fragments and three atlatl weight fragments) is somewhat anomalous, considering the emphasis I have given to it as a Middle to Late Archaic site. This may simply be a result of sampling error, but it also seems evident to me from the literature that groundstone artifacts pertaining to the Archaic become less frequent as one traverses an imaginary line drawn from the South Appalachians to Northeast Florida. This is certainly valid for the Coastal Plains, where the parent materials for these are absent. Whether or not it is valid for this area will require further testing, but Wauchope cites only five grooved axes for the N. Georgia survey report (1966:177-179), and Phelps has suggested that groundstone axes penetrate the Southeastern Seaboard from more central areas such as Modoc and Graham Cave (1964:77). I think this is a valid hypothesis, although my own thoughts are based on different considerations.

The worked chert tabulations in Table VII, as well as the notations to chert artifacts, are of course one measure of Archaic exchange systems, since no chert occurs locally.

In sum, the analysis of materials from 9Ws19 on a typological basis leads to the supposition that it was occupied from Early Archaic through
Protohistoric times. For much of this long span, it seems to have been utilized intermittently, and its most intensive occupations seem to be those pertaining to the Middle-to-Late Archaic periods.

The four brief tests conducted at 9Cb15 (pp. 105-114) were in a sense the most rewarding of the entire 1970 research project. For, although artifacts were not as numerous here as at 9Ws19, they were much more clearly superimposed in the deep alluvial sands near the Savannah River (see Fig. 3, p. 106). This situation made it possible to correlate the arbitrary excavation levels with the natural stratigraphy, resulting in the definition of some six separate zones (Fig. 4, p. 109) and the recognition of four archaeological components — three of which gave evidence of being isolated cultural components.

In addition, this clear stratigraphic superposition made it worthwhile to attempt to obtain materials suitable for absolute dating. Three such samples were collected, two from the Zone 2 midden and one from a Zone 2A pit which originated within Zone 2. The results are analyzed and discussed in Chapter VI, but it can be noted here that they support the idea that the entire Zone 2 midden represents a brief occupation span on the threshold of the Late Archaic period.

This apparent support from the radiocarbon determinations was especially rewarding, since typological analysis of the Zone 2 cultural materials had already led me to suspect — on the basis of their internal homogeneity — that this component represented a narrow time span. On the basis of the radiocarbon determinations, it now seems probable that Zone 2 represents a 200 year span from approximately 2000-1800 B.C.

The cultural materials from 9Cb15 are summarized by Zone in Table VIII (p. 193). For convenience, and because essentially the same stratigraphic
<table>
<thead>
<tr>
<th>Zone 6</th>
<th>Zone 5</th>
<th>Zone 4</th>
<th>Zone 3</th>
<th>Zone 2</th>
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**TABLE VIII**

CULTURAL MATERIALS FROM 90B15 (Accession No. 56) - Provenience
picture was evident throughout the four adjacent tests, the discussion follows these Zones downward, and the horizontal distributions by Test Pit are largely ignored (the differences are small at any rate).

It may be recalled here that Zone 6 (p. 108), the lowest unit sampled, simply represents the lower limit of our testing capacity, due to water seepage and available time. There can now be little doubt that other floodplain sites in the area possess even deeper natural stratigraphy, and no doubt as to the validity of the research strategy recently proposed by Coe (1964:9-13).

The Zone 1 materials are culturally a mixed bag not unlike many of the sites surface surveyed elsewhere during this project. The large frequencies of Stalling's Plain included in the tabulation of this Zone reflect my initial ignorance of the natural stratigraphy and the inevitable consequence of field techniques; i.e., by insisting upon a smoothly planed base to the arbitrary levels, I trowelled through some of the more irregular midden surface below. As my perception of the stratigraphic situation improved, the arbitrary levels were more finely adjusted, and demonstrated that few (if any) of the Stalling's materials are in fact associated with Zone 1. The same is true of the Zone 1 lithics, all of which pertain to the Archaic typologically.

In sum, the Zone 1 levels pertain to the Early Woodland period, marked by the presence of Dunlap Fabric-marked and Deptford Simple-stamped --- even though these account for only nine percent of the total ceramic sample of the Zone.

Zone 2 delimits the midden proper, and the fact that ninety-one percent of the ceramics were Stalling's Plain and sixty-two percent of the projectile points are Savannah River and Ki okee Creek Stemmed clearly...
align this Zone with the Late Archaic Savannah River phase. The few ceramic and lithic exceptions to this are predominantly from adjacent temporal phases and can be ignored.

One interesting aspect of the fiber-tempered ceramics from this Zone (and all Zones at 9Cbl5) is the fact that this sample consists entirely of Stalling’s Island Plain sherds. In all of the Stalling’s Island sample from 9Cbl5, there is not the first jab, punctuation, or cord-mark (as, for example reported by Claflin [1931], Fairbanks [1942] and Wauchope [1960]), though some of the specimens do reveal interior tool marks. The vessel lips (thirty-seven rim sherds are included in the sample) are usually flattened (with either slightly thickened or decidedly T-shaped lips) but sometimes rounded. In no instance is there evidence of any lip punctuation or cord-marking in this small sample.

In a historical sense these observations support the notion advanced by Waring (1968 [1940]:180) from the Bilbo site stratigraphy (as well as others) that undecorated fiber-tempered pottery precedes later varieties. Since no decorative techniques on this ware were recovered at 9Cbl5, this temporal priority is of course indicated by the absolute dates rather than the more relative stratigraphy.

The fiber-tempered sample is also significant in a cultural sense. There is little variation within the technological attributes (described on pp. 208-209) recorded in the sample from 9Cbl5. If this reflects a portion of prehistoric cultural (ceramic) values, it surely must indicate we are dealing here with a small-sized social group over a relatively short span of time.

The small-sized lithic sample pertaining to Zone 2 is also interesting. Although one Guilford Lanceolate point was recovered in this Zone, the
typical points are Savannah R. and Kiokee Creek Stemmed. The latter have attributes (mainly size — see pp. 211-213 for a description of the type) which are shared with those from the lower levels at Bilbo (Waring 1968 [1940] Fig. 67, a-i, p. 173) i.e., those which yielded only undecorated fiber-tempered pottery.

The seven chipped stone drills recovered within this Zone are predominantly the straight variety (6), although one is an expanded-base drill. Five are made of chert, while one each are of quartz and shale-like stone.

Six quartz chipped-stone scrapers were recovered in Zone 2; of these, four were side-scrapers and two were multiple scrapers. If the assumption that these implements functioned primarily in conjunction with hunting activities is correct, then the rather low frequencies of both scrapers and projectile points at 9Cbl5 might be taken as an indication of a shift in subsistence emphases. To carry this further, the relatively higher frequencies of chipped stone drills (there were almost as many drills in this one Zone as the entire sample recovered at 9Wsl9 [p. 187]) and steatite netsinkers here might be obviously interpreted as indicating a shift from hunting to riverine exploitation. I present this line of reasoning merely as a plausible hypothesis; unfortunately, I cannot demonstrate it with any data tests from 9Cbl5 except very general ones. (I should also mention here that examination so far of the scrapers from 9Chl5, which are all of quartz, reveals numerous microscopic wear marks. This does not invalidate the idea that they may have functioned primarily as skinning and scraping tools in hunting activities, but it does indicate they were also abraded against harder materials, since quartz itself is one of the hardest stones.)

The high frequencies of steatite netsinkers in Zone 2, along with the freshwater mussel shell lenses, can be taken as an indication of an
increased subsistence orientation toward riverine exploitation. All of the netsinkers are of the perforated-slab variety; none were the notched-pebble type mentioned by Claflin (1931:31-32) for Stalling's Island.

In sum, the Zone 2 materials, to me, represent a single, rather homogeneous, Late Archaic Savannah R. component — one which has seemingly just crossed that imaginary threshold from preceramic to pottery utilization which is so widely heralded in Southeastern prehistoric research. I will have more to say on this later, but I think it is worth mentioning here that all of the lithic materials (with the possible exception of the Guilford point) seem to me to be part of a single cultural complex. I regard them all as inter-related within a single cultural phase both on the basis of their stratigraphic position and the seemingly short time-span represented by the Zone 2 midden.

The demarcation between Zones 2 and 3 is not quite as abrupt as Fig. 4 (p. 109) suggests. Instead, the dark brown midden sand grades downward into tan, non-organic stained, micaceous sand which forms the bulk of Zone 3.

This factor may account for the presence of the three sherds in this Zone, although they all came from the area of Zone 3A. In any event, Zone 3 is essentially preceramic.

Of the five projectile points recovered in this Zone, four are classified as Savannah R. Stemmed and one as Morrow Mtn. I. These, along with the few other lithic materials — three chipped-stone scrapers, two steatite netsinker fragments, one groundstone atlatl weight fragment, and five worked chert chips — comprise the rather sparse preceramic Savannah R. phase at 9Cb15. Most of these artifacts were recovered in the upper portion of this two-foot thick Zone, but no particular associations were
evident. It may be that further research at 9Cb15 would reveal more definite evidence — such as hearth areas or artifact concentrations — indicating more intensive use, but the evidence recovered in 1970 suggests no more than a brief occupation, from which I would infer little direct inter-generational continuity between the preceramic and fiber-tempered Savannah River phases.

Although no diagnostic artifacts were recovered in Zone 4, a total of five worked quartz chips were recovered from this Zone. I interpret these as intrusions.

The tan micaceous sand of Zone 5 is much like that of Zone 3, but the few cultural materials recovered here all pertain to the Morrow Mountain phase. These include two Morrow Mountain I projectile points, one straight chert drill, three chipped-stone scrapers, ten blanks and cores, and one sandstone abradora.

All of these materials — plus one fired-cracked steatite nodule and one-half bag of worked quartz chips — were recovered within one-half foot beneath the old surface of Zone 5 and within a horizontal space no more than five feet in diameter. With the exception of this area, no other artifacts were recovered in Zone 5. The materials of course suggest a single brief occupancy, during which someone probably struck some kind of implements from the assortment of quartz blanks they were carrying (however, probably not the projectile points recovered here, since one of them is a distinctive banded quartz).

In summary, 9Cb15 yielded the clearest stratigraphic evidence of cultural superposition recovered during the 1970 project. I have previously (p. 113) alluded to other sites in the more immediate region which have disclosed essentially the same sequence of stratigraphic superposition going from
Morrow Mountain (or "Old Quartz") to Savannah R. (preceramic phase) to Savannah R. (Stalling's Island phase). These include the Lake Spring Site (9Cb61) (Miller 1949; Caldwell 1954) and Stalling's Island (9Cb1) (Claflin 1931; Fairbanks 1942; Bullen and Greene (1970), to which may be added, perhaps, White's Mound (9R14) (Phelps, 1968) and Price's Island (Lc-1) (Wauchope, 1966). The 1970 project also recovered surface materials pertaining to this sequence at two sites --- 9Cb4 (p. 168) and 9Cb11 (pp. 170-171) --- which yield further information.

9Cb15 shares overall features with each of these sites, but it differs in certain respects which become important in the interpretation to be developed later in this study. First, the fiber-tempered sample is relatively homogeneous, consisting entirely of Stalling's Island Plain. Second, the midden Zone is not extensive, and the site itself is not large. (To some, of course, these may seem like "making a virtue of necessity"; to me, however, these two related points are important because they permit the working assumption of a small social group over a brief span of time.) Third, of course, there are a series of radiocarbon determinations which apparently support the above and also place the Zone 2 occupation at approximately 2000-1800 B.C.

I now turn briefly to the procedures and results of analysis of the cultural materials recovered during this 1970 research project. There are two primary purposes for focusing more exclusively upon these cultural materials.

The first of these is to make explicit those attributes I considered pertinent in discriminating between such lithic terms as "chipped-stone end-scaper" vs. "chipped-stone side-scaper" and "chipped-stone blank" vs. "chipped-stone core". Terms like these are often widely used in an implicit
sense, since there are only roughly standardized boundaries to their application. (I do not here maintain that prehistoric research would benefit by adopting a rigidly standardized terminology, but only that more explicit definitions of the applications of given terms for a given study would be beneficial.)

The second purpose is to make explicit my use of certain artifact type designations — especially those pertaining to projectile points. The bulk of the cultural materials recovered during this field research were simply picked up from the ground surface at various places in the Central Savannah River area, yet I have applied terms such as Hardaway Side-notched and Morrow Mountain I which have space, time and cultural implications which are (in many instances) rather specific. Since many of the cultural materials recorded in this study have different spatial proveniences from the area they were defined (and most have no demonstrable stratigraphic contexts), it is necessary to give the reader the explicit attribute basis upon which I have assigned a given type designation.

It goes without saying that virtually every artifact type assignment I have made in this study on the basis of surface material alone is tentative, since I cannot demonstrate its cultural affinities stratigraphically. I could have chosen one logical course with these surface materials and simply arranged them by strictly morphological attributes into such classes as pentagonal, trapezoidal, rhomboidal and so on, and then reified them into "types" by dint of their differential distribution among the fifty some sites included in this study.

This, of course would have resulted in no information at all, since it would simply be a regression to the (now discarded) idea of the Archaic period as "... a great heterogeneous morass of traits that spread from the
mountains to the sea" (Coe 1964:120).

Since this course is methodologically untenable (and indeed, even if it were, it would not be my choice), in light of recent research it seems obvious that the only course for a prehistorian is to accept the responsibility for evaluating the space, time and cultural implications of artifacts.

In short, between the Scylla of geometric "types" and the Charybdis of imputing unwarranted (misplaced) cultural status to named types, there seems no choice but the currents if one's aim is some grasp of cultural events.

The descriptions that follow are, however, narrowed to those cultural materials of primary concern to this study; i.e., the lithic materials and fiber-tempered pottery. Furthermore, the emphasis is upon the artifact classes and types as a whole rather than their differential distribution from site to site (some of this latter data is tabulated in Table IX, pp. 215-217). Following this, the proposed types — Martin Corner-notched, Burks Mountain, and Kiokee Creek Stemmed — are delineated. The projectile point types and fiber-tempered ceramics recovered in this research are of course illustrated in the Plates at the end of the text.

Hardaway Side-notched (Coe 1964:Fig. 58, p.67).

Only two specimens of this type were recovered in 1970, and these were from surface or disturbed proveniences. One is small, the other (if complete) large, and in both the basal concavity is less than Coe illustrates. In other respects, however (e.g., thinned basal area, grinding, and overall shallow flaking), these conform to the type definition. If this is accurate, it extends the verified distribution of these little-known transitional "Paleo-Indian" points to the Central Savannah River area, although Wauchope (1966) seemingly figures specimens of this type as well (e.g., Figs. 235-j;243-gg,ii) from N. Georgia.

Palmer Corner-notched (Coe 1964:Fig. 59, pp. 67,69).

Five small, straight-based, corner-notched points were assigned to this type. All showed evidence of basal grinding, but only one
exhibited serrations. The lengths of the CSRA specimens averages a bit longer (42 mm) than the type description, but is within the range of variation. In cross-section, these have a flattened bi-convex appearance. The materials are the same, but those chert specimens here are deeply weathered (patinated).

**Martin Corner-notched** This study (pp. 209-210).

**Kirk Corner-notched** (Coe 1964:Fig. 60, pp. 69-70).

Only four specimens recovered in 1970 seemed within the range of this type; two featured serrations, and all were beveled. Three of these are of chert and one was made from quartz (this use of material is the only departure from Coe's description; hence it did not seem justified to warrant a new type description).

**Stanly Stemmed** (Coe 1964:Fig. 31, p. 35).

Fourteen of these triangular points with short, narrow, parallel stems were recovered in 1970. They possess either straight or slightly sloping shoulders. Three specimens bear small serrations, but none are beveled; all were carefully made. Five of these points were made from quartz and three from chert (again these material departures were not thought to be sufficient to warrant a separate designation).

**Morrow Mountain I** (Coe 1964:Fig.33, p.37).

One hundred and thirteen specimens were assigned to this now well-known triangular point. None of CSRA sample possessed serrations, and in many of these specimens the basal area hardly warranted description as a stem at all. The major departure from Coe's description of this ("Old Quartz") type is of course material; 109 (97 percent) of the specimens in this sample are of quartz, while the remaining four are of chert and igneous rocks. Again, the departure in this single attribute was not judged sufficient to warrant a separate designation, even though the utilization of quartz made many of these specimens look rather crude and amorphous (there were also some very carefully chipped symmetrical specimens in the sample).

**Morrow Mountain II** (Coe 1964:Fig.34, pp.37,43).

Sixty-eight specimens (or, 16 percent of the total typed in the present sample) were assigned to this type. Together with Morrow Mtn. I, these accounted for 44 percent of the total typed sample. The primary distinguishing feature between these and Morrow Mtn. I is the longer, more pronounced and well-defined base (usually pointed on these, but often rounded). The basal area was from 1/5 - 1/3 the total length of the point, and the shoulders were characteristically (though not always) more sharply defined than in Morrow Mtn. I. Again, the major
departure from the type description in this sample is material: 64 (94 percent) were of quartz, the remainder were of chert and igneous rocks. Again, this was not considered sufficient to designate a separate type.

Perhaps more important than the question of material is the issue of specifying the overall range of variation to be included in both Morrow Mountain I and II. Phelps (1964), for example, seems to favor the idea that Morrow Mountain II is in part an eastern extension of the Gary point type when he states that: "The Gary type includes Morrow Mountain II specimens which appear to be transitional to the Gary round based points" (1964:71). While it's true that the contracting stems and overall proportions of the Gary type seem to overlap with those of Morrow Mountain II, I have no present data which would warrant extension of the term (with its other implications) to the CSRA. Hence, except for the few specimens discussed below, I have retained the Morrow Mountain II type designation, because there is clear overlap with Morrow Mtn. I.

Burks Mountain. This study (pp. 210-211).

Guilford Lanceolate (Coe, 1964:Figs. 35-36, p.43-44).

Only twelve points were assigned to this type from the present sample. Seven of these exhibit round bases, five are slightly concave, and two are straight. Slightly over half the sample possess the distinctive bi-convex ("almond") cross-section, and all are carefully executed. Eight were made of quartz, three of slate-like rock, and one was made from chert.


Five rather thin contracting-stem points were recovered which seemed closer overall to Gary than to Morrow Mountain II. These feature percussion chipping with marginal retouch which effectively smooths the blade outline. Despite the fact that some are asymmetrical, they are all carefully executed, with straight to slightly excurvate blades. Two are of chert, and three of quartz.

Savannah River Stemmed (Coe 1964:Figs. 37,39,106, pp.44-45).

Forty-two specimens from the 1970 sample were classified within this type. On 53 percent of these the bases were straight, while the remainder were about equally divided between slightly concave or convex. The stems were usually parallel and thinned, and the shoulders were either at right angles to the stem or slightly sloping. Blades were typically straight or slightly excurvate; less than 10% featured a recurvate blade outline. In cross-section, these points are almost always flattened; less than 4% featured a plano-convex
cross-section. The size dimensions are as given by Coe. Over one-half (27) of these points were made from quartz; six were of chert, and the remainder were from igneous rocks.

**Kiokee Creek Stemmed**  This study (pp. 211-213).

**Badin Crude Triangular** (Coe 1964:Fig.41, p.45).

Nine specimens in the 1970 survey were assigned to this type. All are non-stemmed triangular points which exhibit direct percussion chipping with very little retouch. The bases are usually straight and the cross-sections are usually biconvex (6) or plano-convex (3). Most of the specimens are made of quartz.

**Yadkin Large Triangular** (Coe 1964:Fig.42, pp.45,49).

Seven carefully executed, symmetrical, triangular points were classified in this type. Five possessed concave bases and two were straight based. These points feature straight (6) or slightly excursive blades (1) and are well executed; two exhibit fine serrations. All seven were of quartz.

**Caraway Triangular** (Coe 1964:Fig.43B, p.49).

Thirteen small triangular points were classified in this type. In over half the specimens, the bases were straight, the remainder featured slightly concave bases. Ten of these are of quartz and three are of chert. (These points would otherwise have been classified with the following group, and in light of Coe's identification of this type with the historic Kayanwee and Saponi Indians [1964:49] it might have been less confusing; however, I have included them here since they conform to the archaeologically derived type description.)

"Mississippian" points.

Four small triangular points were classified in this category.

The number of chipped-stone drills recovered during the 1970 project was not great. These were generally elongated cylindrical objects with blunt ends. Examination of most of these with the aid of a microscope has revealed rotary wear patterns on some of the tips and sides. These were classified into three groups: (1) straight, or unmodified, (2) expanded...
base, and (3) reworked projectile points (in order of frequency). Most were made of chert, which indicates some preference for that material for drills, but the sample was not large enough to warrant statistical treatment.

Approximately two hundred chipped-stone scrapers were classified from various sites in the CSRA, but since the provenience of the vast majority was from the surface, no associations could be documented. Any flake or chip which had definite evidence of secondary retouch and/or use-polish was classified into this category under one of three headings: (1) end-scrapers, on which the retouched area was generally perpendicular to the long axis of the flake, (2) side-scrapers, on which the retouched area was generally parallel to the long axis of the flake, and (3) multiple scrapers, on which the retouched area was a combination of the above or extended completely around the flake (i.e., a discoidal). A sub-category of end-scrapers was further recognized which could be generally defined as small plano-convex artifacts which were usually round or ovate and which usually exhibited evidence of steep retouch only in one area. These are, of course, the "snub-nosed" scrapers; they were generally less than 4 cm. on their longest axis and usually not more than 1 cm. at their thickest point. Most of these are of quartz, some are of chert (often weathered), but none were of igneous rocks. The remaining categories were much more variable in shape and size. Generally they were not more than 8 cm. on their longest axis and not more than 3 cm. thick, but a few were larger plano-convex ("turtle-backed" or "keeled") scrapers over 15 cm. long and 8 cm. thick. The materials were also more inclusive. Although most scrapers were still of quartz, more chert is represented, and a few are of igneous rocks. In addition to these, less than six hafted scrapers were recovered.
Over 700 chipped-stone blanks (quarry blades or preforms) were recovered during this research, leaving little doubt that they were an important part of the day-to-day lithic complex of Archaic peoples. These prosaic artifacts were distinguished from some of the cruder examples of projectile points like Morrow Mountain I and Badin Crude Triangular by a complete absence of retouch or other secondary chipping and the lack of a definite point. They are characterized by direct percussion of the sort which generally seems to result in broad, shallow flake scars. In general, the blanks recovered in 1970 are longer than they are wide, and wider than they are thick (in contrast, cores were distinguished from blanks by an overall lack of these qualities --- i.e., cores are more globular or spheroidal). The blanks were quite varied in outline and size. The most common blank forms were ovate, followed by triangular, oval, and discoidal. Some of the ovate forms required but little further chipping in order to produce a Morrow Mountain projectile point, and I would guess these were associated with that phase. The overwhelming majority of these are of quartz, but some are of chert and igneous rocks as well.

Over 200 chipped stone cores were isolated in the total lithic sample. However, about all that can be stated about them is the negative observation that none show use as hammerstones. Perhaps these functioned as blanks for some class of artifacts.

Considering the sample size, surprisingly few hammerstones were recovered --- less than thirty in all. These were typically quartz, spheroidal, and usually not more than 8 cm. in diameter. All of course were pitted.

Some 153 steatite netsinker fragments (and whole specimens) are included in the sample. Of these, 95 (63 percent) were recovered at 9Cb15,
23 (15 percent) were surface collected from 9Cb12, and 11 (7 percent) from 9Cb18. Clearly, the primary association of these is with the Savannah River Valley, and also with the Late Archaic period. All of the netsinker fragments and whole specimens were of the perforated tabular (or doughnut) class.

The same general observations seem to hold for the five steatite vessel fragments recovered. Three of these were from sites in or near the Valley, and two were recovered at 9Ws19.

Only five groundstone axe fragments are represented in the 1970 sample. Four of these are from 9Ws19 and one is from 9Cb12. All are made of granitic rock and all bear evidence of grooves, but whether they are from 3/4 or full-grooved axes cannot be determined. One complete 3/4 grooved specimen from 9Ws19 was made available for examination by Mr. Byrum, the owner. This measured 220 cm. long, 9 cm. wide, and 6 cm. at its thickest point. Mr. MacFie, of Taliaferro Co., also permitted us to examine some five specimens he had collected from the Little River area, and the two nearly complete specimens were both 3/4 grooved axes. As earlier stated (p. 191), I would suggest that the periphery of the Georgia Piedmont is also the general distribution boundary for these artifacts; they seem much more commonly encountered to the north and west of the Central Savannah River Area.

Eight groundstone atlatl weight fragments were recovered in 1970. Three were recovered at 9Ws19; the remainder were about equally distributed between valley and upland sites. All of these are made of igneous or metamorphic rocks; and all appear to be of the prismatic (rather than winged) variety. Unfortunately, all of these interesting artifacts were recovered from the surface.
Although fiber-tempered ceramics were recovered at four sites —— 9Ws19, 9Cb4, 9Cb11 and 9Cb15 —— the majority came from the last, and it is this sample of 516 Stalling's Plain sherds which receives the emphasis here.

In broad outline, the sample from 9Cb15 conforms to the description given by Sears and Griffin (1950).

The paste in this sample consists of a clay with varying amounts of micaceous sand and vegetal matter as temper. Generally, the proportions of sand to vegetal matter are inversely related, and the sand itself varies from fine to medium coarse grain size. However, even those sherds with greater quantities of sand particles exhibit fiberous material on the surfaces and throughout.

The texture of this sample is contorted to laminated; there is no suggestion of coil fractures, and, in cross-section, the core is uniformly dark.

The interior and exterior surfaces are smoothed and sometimes compacted. The surfaces are always lighter than the core, though some show darker areas of oxidation. The surface colors are yellow to brown, with a suggestion of a reddish wash applied on a minority. Thickness varies from 4-11 mm.

No decorative techniques are evident, of course, but some interiors show evidence of shallow impressions which seem to be tool marks. Vessel shape cannot be determined from this sample; however, the few fitting sherds suggest the bowl shape outlined by Sears and Griffin (1950).

Those rim sherds which are large enough for determination reveal a slightly outslanting wall; however, one specimen is markedly inslanting.

The lips on this sample are usually flattened and slightly thickened, with some flattened direct lips and some markedly flattened T-shaped lips.
Three specimens of thirty-three have rounded lips (see Fig. 5, p. 215).

Although I have highlighted some of the variability in this sample, the overall impression is of marked uniformity among the 516 sherds from this site. None bear any trace of decorative techniques, and no evidence of appendages or crack-lacing holes is exhibited in this sample.

Finally, as a result of the typological analysis and site distribution of projectile points recovered in 1970, the following three types are proposed.

**Martin Corner-notched**

**Overall Description:** A small, triangular, corner/side-notched point, with beveled blade margins.

**Basal Features:** Usually straight, but sometimes concave. Typically the base width does not exceed that of the body, and the base is thinned and ground.

**Notches:** Small notches, usually clearly defined on each corner, but sometimes side-notched as well.

**Blade:** Blades are typically straight, always beveled, and often serrated. Less often the blades are slightly excrurate.

**Body:** The form is usually that of an isosceles triangle, less often an equilateral triangle.

**Cross-section:** Beveled and rhomboidal.

**Size:**
- Length: 27-41 mm., average: 32 mm.
- Width: 19-27 mm., average: 21 mm.
- Thickness: 7-9 mm.

**Material:** The sample from this area is composed mainly of quartz and, infrequently, chert.

**Manufacturing Technique:** Seemingly roughly out with percussion chipping and then flaked to final form; a combination of fine percussion and pressure flaking. The flake scars are always small and shallow. Serrations, when present, seem to have been chipped last.

**Comment:** Only twelve specimens were recovered in the 1970 survey, and these were all from surface contexts. This point is obviously closely related to Palmer Corner-notched and Kirk Corner-notched and is distinguished from the former by the beveling trait and from the latter...
Overall Description: A small, triangular contracting stemmed point with a straight base.

Basal Features: The stem contracts directly from the shoulder, usually in a simple straight outline, less often slightly incurvate. The base is usually straight (sometimes "snapped"), but may be rounded on some specimens. Bases are sometimes thinned, but there is no evidence of grinding or smoothing over the basal area. The combination of straight contracting stem and a straight base give these points a rather pentagonal outline overall in many instances. The shoulders vary from well-defined to rounded; in most instances the shoulder simply marks the widest breadth of the point. Shoulders never give a barbed appearance.

Blade: The blade is usually straight or only very slightly excurvate. No serrations or beveling is evident, and secondary chipping along the blade margins is minimal or entirely absent.

Body: The overall body form is usually that of an isosceles triangle, but there is a tendency toward asymmetry in many of these points. They never approach an equilateral triangle. The ratio of stem to body length varies from 1:1.5 to 1:3; most frequently it is 1:2.2.
(Those specimens in the 1:3 ratio range often feature "snapped" bases which thus may be somewhat shorter than initial stem length.)

**Cross-section:** Typically biconvex to flattened. None in this sample were plano-convex, and none showed a tendency toward a medial ridge.

**Size:**
- Length: 35-60 mm.; average: 42 mm.
- Width: 20-34 mm.; average: 27 mm.
- Thickness: 7-11 mm.

**Material:** In this sample most are of quartz, with chert and slate included in respectively less frequencies. The chert specimens are often colored and bear a waxy luster, which may suggest heat treatment.

**Manufacturing Technique:** These points are seemingly roughed out by direct percussion and then secondarily percussion chipped to their final form. The flaking is random, small and shallow, with a number of hinge fractures evident. Although the initial overall appearance of these points is often crude, the chipping in most instances seems well-controlled.

**Discussion:** Only fifteen specimens are available from this research project, and all lack definite stratigraphic contexts. Indications that these might form an isolable type were derived mainly from 9Wsl6 (pp. 181-183) and 9Wsl9 (pp. 184-192). A preliminary search of the literature was not very rewarding, although points with resemblances to these are illustrated from the Theriault site, 9Bk2 (Brockington, 1971:Fig. 12 a,b,e) and from Wauchope's N. Georgia survey data (1966:Figs. 238 jj, kk;239,b,n;250,f-g,i,m,ff,mm). (These all refer to sites in Bartow and Cherokee Cos.; only one, Br-33, is identified in an Archaic context.) Claflin illustrates what might perhaps be a Burks Mountain in the Stalling's Island report (1931:Pl.60,e), and Bullen and Greene's recent report from stratigraphic tests there illustrate points with similar outlines from the preceramic zone (1970:Fig.4, P. and Fig. 5,U).

These points, however, are not exactly the kind which lend themselves to neat segregation, as I demonstrated by figuring two in a rather vague category in an earlier report (Smith:1968, Pl.23 e-f). I would suspect that, if included at all, examples of these would be placed in the miscellaneous category of many site reports.

The typological resemblances of these to Morrow Mountain II are obvious, but there is more emphasis upon the stem-shoulder area in Burks Mountain. Furthermore, they seem to be typologically transitional from Morrow Mountain to the more emphatically stemmed Savannah River points.

**Chronological Assignment:** This transitional quality, as much as any stratigraphic data so far known, leads me to estimate a later Morrow Mountain or Middle Archaic, phase date for these of between 3000 - 2000 B.C.
Kiokee Creek Stemmed

Overall Description: A medium sized, slant-shouldered, stemmed point.

Basal Features: In most instances, the stem is short and parallel, and the base is straight. Departures from this, however, include both slightly excruvate and incurvate bases, and stems approach description as contracting. The stem is usually thinned, and sometimes "snapped". In most instances, the shoulder is straight, but shoulders which slope toward the base occur. The shoulder is always clearly delineated but not barbed or otherwise exaggerated.

Blade: In most instances either straight or slightly excruvate. A few points have a slightly recurved blade margin, but none in this sample are incurvate. No serrations are evident, although in a few instances the blade margin seems to have been retouched, which produces a slightly serrated effect.

Body: The outline is usually that of an isosceles triangle, but a few are equilateral, and even fewer are somewhat asymmetrical (these last are also slightly recurvate).

Cross-section: Flattened biconvex; less than two percent of this sample exhibited some tendency toward a plano-convex cross-section, and in these it was not marked.

Size: Length: 32-70 mm.; average: 51 mm.
Width: 20-37 mm.; average: 26 mm.
Thickness: 5-10 mm.; average 8 mm.

Material: Approximately 66 percent of this sample was of quartz, followed by chert, slate and metamorphic rocks.

Manufacturing Technique: These points were apparently roughed out by direct percussion, and then flaked into final form by secondary percussion. Sometimes long, rather deep flake scars in the initial chipping process are left unretouched, though in most specimens deep scars are absent. Hinge fractures are common, but there is little indication of attempts to finish off the blade margins in detail. The emphasis seems to have been on overall shape; it appears that, once that goal was achieved, further chipping was regarded as unnecessary.

Discussion: The sample from this research numbers almost 80 specimens. Two of these were recovered in Zone 2 at 9Cb15, along with Savannah River Stemmed points.

These points are obviously related to Savannah River Stemmed --- in a sense they are smaller varieties of Savannah River Stemmed. However, they also exhibit more variability; for example, in the base and stem treatment.

Points of this type are common in the Savannah River drainage and
beyond. Claflin illustrates a number of these (1931:Pl.57-58) and they are broadly similar to the "Types" 3 and 4 of Bullen and Greene, which are primarily associated with the fiber-tempered horizon at Stalling's Island (1970:14-15;Fig. 4). I would also include most of Waring's "Type A" from the lower (plain fiber-tempered) levels of the Bilbo site (1968[1940]:Fig. 67,a-i, p.173). I suspect they do not extend much further northward along the Eastern Seaboard than the distribution of fiber-tempered pottery. Southward they seemingly extend into Florida, and may be related to Clauson's Newnan's Lake point (Clauson, 1964).

Chronological Assignment: Although present stratigraphic data and cultural affiliations are not precise, it seems certain this is a typological descendent of the larger Savannah R. Stemmed, one which is more closely associated with the Late Archaic fiber-tempered horizon.

In order to more fully delineate the type-variety method framework I have previously discussed, the following list (and Fig. 6, p. 214) is presented in conclusion as a representation of how the method has been applied to the Archaic projectile point types in this study:

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<th>Period</th>
<th>Type</th>
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<td>var. Martin Corner-notched</td>
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<td>Kirk Corner-notched</td>
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<td>Guilford Lanceolate</td>
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<td>Late</td>
<td>Savannah River Stemmed</td>
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<td></td>
<td>var. Kiokee Creek Stemmed</td>
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</tbody>
</table>
Diagram 1. A Chronological Projectile-point Type Sequence.
Mode 1. Flat, slightly thickened, lips.

Mode 2. Flat, T-shaped, lips.

Mode 3. Rounded lip.

Insllanting bowl form. (Rare).

Fig. 5. Stallings Plain Rim Sherds from 9Cb15. (Natural Size).
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<th>9 Ws</th>
<th>9 Ge</th>
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<th>9 Mcd</th>
<th>9 Cb</th>
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