
This document has been checked for information on Native American burials. No images considered to be culturally insensitive, including images and drawings of burials, Ancestors, funerary objects, and other NAGPRA material were found.



**UNIVERSITY OF
GEORGIA**

**Franklin College of
Arts and Sciences**

Department of Anthropology

Laboratory of Archaeology

UNIVERSITY OF GEORGIA
LABORATORY OF ARCHAEOLOGY SERIES
REPORT NUMBER 24

MISSISSIPPI PERIOD ARCHAEOLOGY OF THE GEORGIA PIEDMONT

DAVID J. HALLY AND JAMES L. RUDOLPH

UNIVERSITY OF GEORGIA

Laboratory of Archaeology Series
Report No. 24

Georgia Archaeological Research Design Paper, No. 2

MISSISSIPPI PERIOD ARCHAEOLOGY
OF THE GEORGIA PIEDMONT

By

David J. Hally and James L. Rudolph
Department of Anthropology
University of Georgia

1986

Reprinted, 1995

ACKNOWLEDGEMENTS

The authors wish to acknowledge the assistance of various individuals who helped us complete this report. First, Ray Crook of the Office of the State Archaeologist gave us a considerable amount of advice on organization and content, particularly with respect to Chapter 5. Chip Morgan of the Georgia Department of Natural Resources reviewed an early version of this document, as did Mark Williams of the Lamar Institute. Betty and Don Smith generously let us use information from their investigations of the Hobgood site in Cherokee County. Jackie Anderson and Teresa Wells typed the manuscript despite the distractions of final exams and Christmas shopping. Gisela Weiss-Gresham drafted the figures. To all those persons, we extend our thanks.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	i
CHAPTER 1. INTRODUCTION.....	1
CHAPTER 2. THE PIEDMONT.....	2
CHAPTER 3. PREVIOUS ARCHAEOLOGICAL RESEARCH IN THE PIEDMONT.....	6
CHAPTER 4. PREHISTORIC OVERVIEW.....	19
EARLY MISSISSIPPI PERIOD (A.D. 900-1200).....	19
MIDDLE MISSISSIPPI PERIOD (A.D. 1200-1350).....	51
LATE MISSISSIPPI PERIOD (A.D. 1350-1540).....	63
CHAPTER 5. RESOURCE MANAGEMENT CONSIDERATIONS.....	81
THE RESOURCE BASE.....	81
RESEARCH PROBLEMS IN PIEDMONT	
MISSISSIPPIAN ARCHAEOLOGY.....	85
RESOURCE SIGNIFICANCE.....	90
RESOURCE MANAGEMENT.....	92
CHAPTER 6. REVIEW COMMENTS AND REPLY.....	94
REFERENCES CITED.....	113

CHAPTER 1

INTRODUCTION

Georgia has exceedingly rich and varied archaeological resources. In order to increase the effectiveness of research and preservation efforts directed at these resources, the Office of the State Archaeologist has embarked upon a program to develop a comprehensive plan for the management and protection of the state's archaeological resources. The present report has been prepared as part of this program and is designed to serve as a guide for identifying, evaluating, and protecting Mississippi period sites in the Piedmont section of the state. The report has been prepared according to guidelines presented in A Strategy for Cultural Resource Planning in Georgia (Crook 1985).

This report evaluates existing information on the Mississippi period occupation in the Georgia Piedmont, proposes appropriate topics for future research, recommends which types of site should be investigated or preserved, and determines those land-use activities in the Piedmont which are either compatible or incompatible with the preservation and investigation of Mississippian sites. The Mississippi period is defined as the prehistoric period extending from ca. A.D. 900 to A.D. 1540, the year when the first Spanish explorers entered the Piedmont of Georgia. Later aboriginal activities will be reported in a separate document concerning the historic Indian occupation in the Piedmont.

Of all the major physiographic provinces in Georgia, the Piedmont has been visited by archaeologists more often than any other region in the state, and Mississippi period sites have attracted their interest more often than sites of any other period. As a consequence, in preparing this report we have found ourselves wading through countless unpublished manuscripts, survey reports, site reports, site forms, and maps to provide a long needed synthesis of the Mississippi period in the Georgia Piedmont. Errors are undoubtedly present, but we hope that this document will prove to be a valuable planning tool.

Our discussion of the Mississippi period has been broken down into subsections entitled "Early Mississippi Period", "Middle Mississippi Period", and "Late Mississippi Period". Under each subsection we describe one or more cultures that were present in the Piedmont at that time. Cultures are further subdivided into regional or temporal phases. In certain cases, our nomenclature differs from that used by other authors. For example, we call "Wilbanks" a phase of the Savannah culture, although others have considered Savannah and Wilbanks to be two separate entities. Whenever we use new terminology, it has been done for the sake of clarity and organization or to simplify a cumbersome culture historical sequence. We realize that other archaeologists will disagree with our approach, but some consistency was needed to make this document intelligible.

CHAPTER 2

THE PIEDMONT

The Piedmont is a physiographic province that stretches across the state of Georgia, separating the Ridge and Valley and Blue Ridge Provinces to the north from the Atlantic and Gulf Coastal Plains to the south (Figure 1). It covers approximately 46,500 km² and is roughly 180 km wide from north to south.

The boundaries between the Piedmont and adjacent provinces are often indistinct topographically and environmentally, so various authors (LaForge 1925; Clark and Zisa 1976; Wharton 1978) have drawn the boundary lines differently. To the north, residual ridges and isolated hills extend into the Upper Piedmont, obscuring its boundary with the more mountainous regions. To the south, the boundary is usually considered to be the Fall Line, an imaginary line connecting major shoals along rivers that enter the Coastal Plain from the Piedmont. However, this line does not always correspond to the northern edge of Coastal Plain soils (LaForge 1925), and the low Fall Line Hills sometimes hide distinctive topographic breaks. Wharton (1978) has discussed the problems of defining the Piedmont environmentally as well; there are very few plant or animal species found in the Piedmont that are not found also in either the mountains or the Coastal Plain. In this report we are defining the boundaries of the Piedmont according to Clark and Zisa's (1976) Physiographic Map of Georgia.

Various physiographic subdivisions of the Piedmont have been proposed. We will limit our discussion to the two major subdivisions, the Upper Piedmont and the Lower Piedmont.

The Upper Piedmont lies closer to the mountains and has somewhat hillier terrain than the Lower Piedmont. In the Upper Piedmont there are many residual hills and ridges, interfluves are narrow, and streams are often deeply dissected. The major rivers draining this portion of the state are the Chattahoochee River, which originates in the northern Blue Ridge Province and then follows a relatively straight southwesterly path across the Piedmont until it turns abruptly southward at the Alabama border; the Savannah River, which flows from the Blue Ridge Mountains to the Atlantic; and the Coosawatee and Etowah Rivers, which arise in the northwestern Blue Ridge Province, flow through a small portion of the Piedmont, and enter the Ridge and Valley Province.

The Lower Piedmont has a much more gentle terrain--occasionally almost level, usually rolling, and sometimes relatively steep along major river valleys. Isolated hills are rare and interfluves are broad. Major rivers include part of the Chattahoochee where it crosses the Lower Piedmont; the Savannah, which also originates in the Blue Ridge Mountains; the Flint, Ocmulgee, and Oconee, which all arise near the southern border of the Upper Piedmont; and the much smaller Ogeechee, which forms in the Lower Piedmont and has only a small drainage basin above the Fall Line.

The river valleys of the Piedmont contain many environmental habitats that were of utmost importance to the Mississippi period residents of the

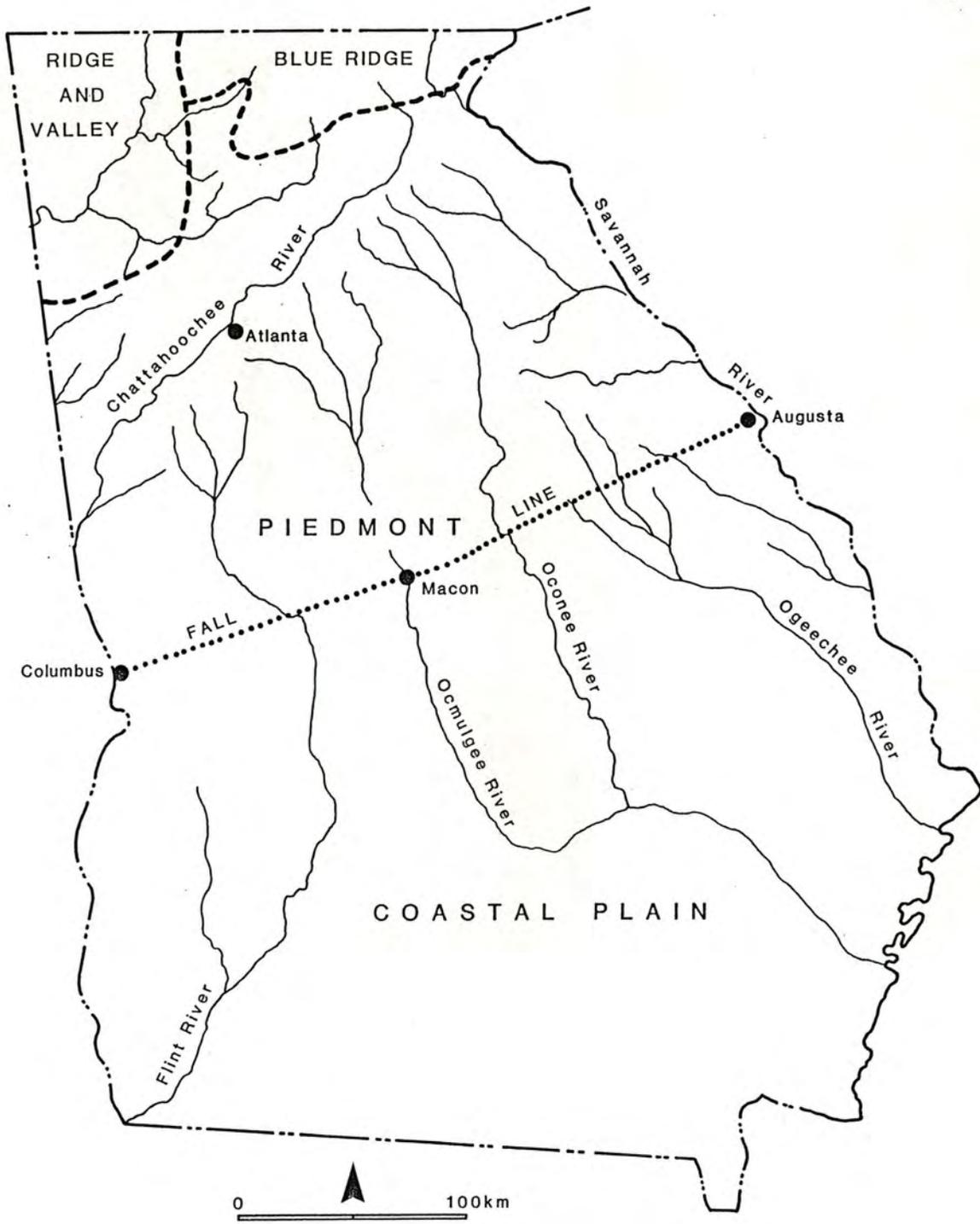


Figure 1. Physiographic Provinces of Georgia.

region. Most significant among these habitats were the alluvial bottomlands which provided fertile easily tilled soil for the cultivation of maize, beans, squash, gourds, sunflower, tobacco, and possibly sumpweed. The alluvial bottoms and nearby terraces also provided a variety of wild plants and animals consumed by Mississippian Indians, including grapes, persimmons, maypops, nuts, raccoons, squirrels, rabbits, and turkeys. Also important were the rocky shoals found at intervals along all the major Piedmont streams. The turbulent waters of these shoals supported fish, shellfish, turtles, and aquatic mammals, which in turn often contributed a substantial portion of the protein in the aboriginal diet (Shapiro 1981). However, the distribution of shoals and bottomland varied in the different river valleys. Along the Oconee River near Lake Oconee, the areas with the most extensive shoals happened also to be the areas of the most restricted bottomland; likewise, the broadest alluvial bottoms were rarely near shoals (Shapiro 1983). River valleys with this pattern of alternating bottomland and shoals are called boudin valleys. In contrast, in the upper Savannah River valley in the vicinity of the Russell Reservoir, the area of most extensive floodplain was also the area where the largest and most frequent shoals could be found (Rudolph and Hally 1985; Rudolph 1985). The nature of Mississippian settlement in the Piedmont was clearly related to access both to areas suitable for farming and to areas most productive in animal protein. We can expect, therefore, that how these areas were distributed in the various river valleys of the Piedmont will be important in our understanding of the distribution of Mississippian populations and politics.

The value of the uplands surrounding the river valleys probably varied depending on the needs of a particular population. Deer, hickory nuts, and acorns were especially abundant in uplands, but they could be found in the valleys also. The need to exploit the uplands probably depended on population density, the productivity of the river and the bottomlands, and the specific characteristics of upland forests, the latter variable being related to the proportion of pine trees to oaks and hickories in different areas of the Piedmont. We can also assume that ridgetops and ridgeslopes overlooking the rivers were probably exploited more intensively than the interfluvial uplands many kilometers away. Furthermore, even though it is usually assumed by archaeologists that Mississippi period farming was restricted to the bottomlands, there is certainly no reason why plots could not have been cleared and planted in the uplands if it was necessary to do so to bring in enough food.

Piedmont summers are long and hot; winters are short and mild. Rainfall is abundant and more or less evenly distributed throughout the year. Taken together, these variables indicate that aboriginal horticulture would have been productive. In fact, two or perhaps even three crops might have been grown during a single season.

There were risks, however. Flooding could destroy both crops and villages. Also, summer thunderstorms could be spatially irregular, so that localized droughts may have occurred with some frequency (Carter 1978).

There is not much evidence that the Piedmont climate during the Mississippi period was substantially different from that of today. Pollen from the Savannah River valley suggests that the climate might have been cooler and drier in the thirteenth century than today (Sheehan et al., 1982),

but the vast majority of plant and animal species exploited by the inhabitants of Piedmont Mississippian sites can still be found in the region.

For tools, the Piedmont provided adequate lithic resources, but certainly not ideal resources. Chert occurs in the Piedmont, but it is rare. On the other hand, quartz can be found almost everywhere in the Piedmont, and this stone was, in fact, the most frequent material used in tool production. For ground stone artifacts, gneiss, amphibolite, steatite and other locally available materials were sometimes used. Of course, the Mississippi period inhabitants of the Piedmont had extensive trade networks, so chert and other materials were sometimes brought in from the Ridge and Valley Province or from the Coastal Plain.

CHAPTER 3

PREVIOUS ARCHAEOLOGICAL RESEARCH IN THE PIEDMONT

INTRODUCTION

Professional archaeological research in or near the Georgia Piedmont goes back to the 1880's when representatives of the Smithsonian Institution excavated several sites and recovered Southeastern Ceremonial Complex artifacts from burials in the Etowah and Hollywood mounds. The most important development in Piedmont archaeology came in the 1930's with the massive excavations at Macon (Kelly 1938) and the survey of northern Georgia funded by the federal government relief program (Wauchope 1966). These projects resulted in the first cultural sequences and the first detailed view of the region's aboriginal cultures.

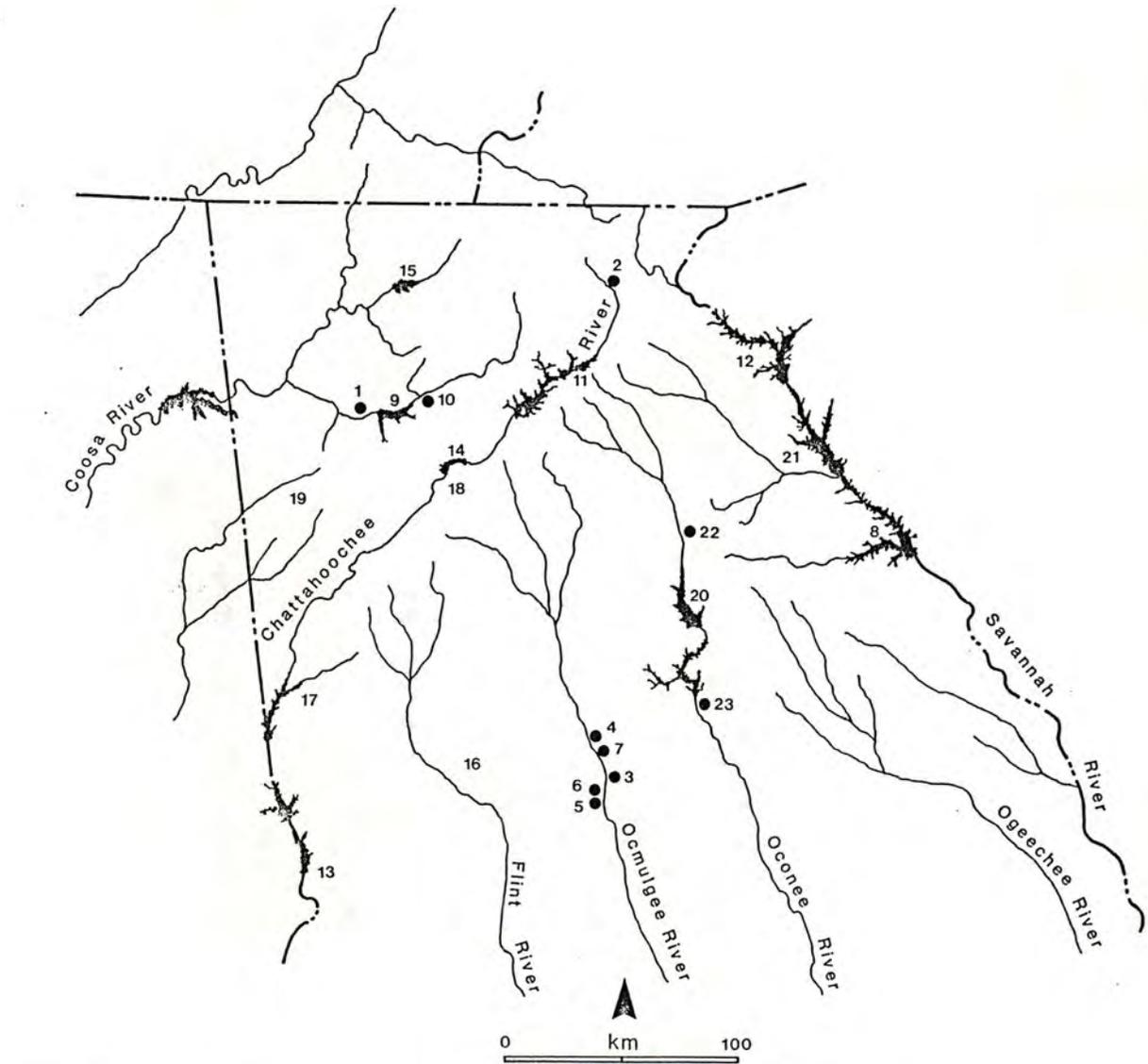
From the late 1940's until the present, the direction and intensity of archaeology in the Piedmont has been largely determined by the construction of reservoirs along the region's major rivers. These reservoir salvage projects have been important in expanding research across the entire Piedmont and in providing information on site frequency and distribution. Reservoir archaeological projects are fairly evenly distributed across the Piedmont. All major rivers, with the exception of the Ocmulgee and the Flint, had at least one reservoir constructed on them at this time. Unfortunately, only minimal archaeological research has been conducted in many of these reservoirs. Very little survey or excavation occurred in the Lake Sinclair basin on the middle Oconee River, and Lake Hartwell was surveyed by one person for a period of four months. The Wallace Reservoir (Lake Oconee) is the only reservoir in which systematic and nearly complete surface and subsurface survey coverage has occurred.

Until recently, archaeological research in the Piedmont has been conducted almost exclusively in the floodplains and adjacent uplands of the major river valleys. With the passage of new historic preservation legislation beginning in the mid-1960's, research coverage has been extended into the small stream valleys and interfluvial uplands.

The more important archaeological projects yielding information on Mississippi period cultures in the Piedmont conducted over the past 100 years are summarized in the following pages. The locations of these projects are depicted in Figure 2.

ARCHAEOLOGICAL PROJECTS IN THE GEORGIA PIEDMONT

PROJECT NAME: Etowah Site, Mound C Excavation
PROJECT LOCATION: Etowah River; Bartow County
PROJECT DURATION: 1883
PROJECT INVESTIGATOR: John Rogan
PROJECT SPONSOR: Smithsonian Institution



- | | |
|------------------------------------|--|
| 1. Etowah site | 14. Morgan Falls Reservoir |
| 2. Nacoochee site | 15. Carters Reservoir |
| 3. Brown's Mount site | 16. Sprewell Bluff, Lazer Creek, and Auchumpkee Reservoirs |
| 4. Ocmulgee National Monument | 17. West Point Reservoir |
| 5. Cowart's Landing site | 18. Tri-county Survey area |
| 6. Stubbs Mound site | 19. Carroll, Haralson, and Paulding County Survey area |
| 7. Lamar site | 20. Wallace Reservoir (Lake Oconee) |
| 8. Clark Hill Reservoir | 21. Russell Reservoir |
| 9. Allatoona Reservoir | 22. Scull Shoals site |
| 10. Wilbanks site | 23. Shinholser site |
| 11. Buford Reservoir (Lake Lanier) | |
| 12. Hartwell Reservoir | |
| 13. Oliver Reservoir | |

Figure 2. Location of archaeological projects in the Georgia Piedmont.

NATURE AND SCOPE OF PROJECT: Casual and uncontrolled excavations in
Mound C
PROJECT RESULTS: Encountered burials with elaborate grave furnishings
PROJECT BIASES: Excavator was primarily interested in burials and did
not use stratigraphic controls

PROJECT NAME: Etowah Site, Mound C Excavation
PROJECT LOCATION: Etowah River; Bartow County
PROJECT DURATION: 1925-1927
PROJECT INVESTIGATOR: Warren K. Moorehead
PROJECT SPONSOR: Phillips Academy, Andover, Mass.
NATURE AND SCOPE OF PROJECT: Uncontrolled excavations in Mound C and
test pitting in village
PROJECT RESULTS: Encountered burials with elaborate grave furnishings
PROJECT BIASES: Excavator was primarily interested in burials and did
not use stratigraphic controls

PROJECT NAME: Nacoochee Mound Excavation
PROJECT LOCATION: Chattahoochee River; White County
PROJECT DURATION: 1915
PROJECT INVESTIGATOR: George Heye, F.W. Hodge and G.H. Pepper
PROJECT SPONSOR: Heye Foundation
NATURE AND SCOPE OF PROJECT: Excavated approximately half of the mound,
with some effort to record stratigraphy
PROJECT RESULTS: Suggested that several different ceramic-using
cultures had used and built the mound, all of which
were ancestral Cherokee
PROJECT BIASES: Mound architecture and strata and cultural strati-
graphy were not worked out in any detail

PROJECT NAME: Brown's Mount Excavation
PROJECT LOCATION: Ocmulgee River; Bibb County
PROJECT DURATION: 1935-1936
PROJECT INVESTIGATOR: A.R. Kelly, Smithsonian Institution and National
Park Service
PROJECT SPONSOR: WPA, Society for Georgia Archaeology, City of Macon
NATURE AND SCOPE OF PROJECT: Surface collection; excavation of an
earthlodge and at least one other structure
PROJECT RESULTS: Excavation of an earthlodge dating to Macon Plateau
culture
PROJECT BIASES: Not determined

PROJECT NAME: Macon Plateau Excavation
PROJECT LOCATION: Ocmulgee River; Bibb County
PROJECT DURATION: 1933-1940

PROJECT INVESTIGATOR: A.R. Kelly, Smithsonian Institution and National
Park Service
PROJECT SPONSOR: WPA, CCC, WPAC, Society for Georgia Archaeology, City
of Macon
NATURE AND SCOPE OF PROJECT: Exploratory trenches, large area
excavations in North and Middle Plateaus, and
excavation of two mounds
PROJECT RESULTS: Definition of Macon Plateau culture and descriptions
of Macon Plateau domestic structures, earthlodges and
platform mounds
PROJECT BIASES: Poor field records and inadequately published results

PROJECT NAME: Cowart's Landing Excavation
PROJECT LOCATION: Ocmulgee River; Bibb County
PROJECT DURATION: Seven months beginning in August, 1936
PROJECT INVESTIGATOR: Gordon R. Willey, Smithsonian Institution
PROJECT SPONSOR: CCC, WPA, Society for Georgia Archaeology, City of
Macon
NATURE AND SCOPE OF PROJECT: Controlled surface collection; 34 test
pits and 12 strata block pits
PROJECT RESULTS: Recovery of artifacts from Lamar occupation; type
site for Cowarts phase of Lamar
PROJECT BIASES: Excavations aimed at construction of archaeological
sequence only

PROJECT NAME: Stubbs Mound Excavation
PROJECT LOCATION: Ocmulgee River; Bibb County
PROJECT DURATION: Seven months beginning in August, 1936
PROJECT INVESTIGATOR: Gordon R. Willey, Smithsonian Institution
PROJECT SPONSOR: WPA
NATURE AND SCOPE OF PROJECT: Excavation of almost entire mound to
subsoil; limited excavation in village
PROJECT RESULTS: Accretional mound with at least four buildings
erected on its summit; type site for Stubbs phase of
Lamar
PROJECT BIASES: No attempt to investigate non-mound deposits
associated with mound

PROJECT NAME: Lamar Site Excavations
PROJECT LOCATION: Ocmulgee River; Bibb County
PROJECT DURATION: 1938 and 1939
PROJECT INVESTIGATOR: J.A. Ford, A.R. Kelly, G.R. Willey, C.H.
Fairbanks
and J. Jennings, Smithsonian Institution, National
Park Service
PROJECT SPONSOR: CWA, WPA, CCC, Society for Georgia Archaeology, City
of Macon

NATURE AND SCOPE OF PROJECT: Excavation of 28 10 x 10 ft squares, one 100 x 100 ft square, portion of mound, and portion of palisade

PROJECT RESULTS: Ditch and palisade enclosed 21 acre site with two platform mounds and village. Mound A was circular in shape and had a summit structure. Single post structure in 100 x 100 ft square in village. Type site for Lamar culture

PROJECT BIASES: Field records poor; many lost

PROJECT NAME: North Georgia Survey

PROJECT LOCATION: 40 counties in north Georgia; Coosa, Chattahoochee, Savannah, and Little Tennessee drainages

PROJECT DURATION: 1938-1940

PROJECT INVESTIGATOR: Robert Wauchope, University of Georgia

PROJECT SPONSOR: WPA, University of Georgia, Society for Georgia Archaeology

NATURE AND SCOPE OF PROJECT: Site reconnaissance, surface collecting, test excavations and extensive excavations in numerous sites

PROJECT RESULTS: Established cultural sequence for north Georgia, with emphasis on Woodland and Mississippi periods

PROJECT BIASES: Unsystematic survey, with heavy emphasis on local informants. Field records and collection no longer available

PROJECT NAME: Clark Hill Reservoir Survey

PROJECT LOCATION: Savannah River; Columbia, Elbert, Lincoln, McDuffie and Wilkes Counties, GA and Edgefield and McCormick Counties, SC.

PROJECT DURATION: Five months beginning in January, 1948

PROJECT INVESTIGATOR: Joseph R. Caldwell and Carl F. Miller, Smithsonian Institution

PROJECT SPONSOR: Corps of Engineers

NATURE AND SCOPE OF PROJECT: Survey of 78,000 acres; test pits placed in Rembert site

PROJECT RESULTS: 125 sites recorded, of which 24 are identified as Mississippian or possible Mississippian, 3 are identified as Etowah, and 13 are identified as Lamar

PROJECT BIASES: Inadequate survey coverage. No identification of survey methods. No subsurface survey.

PROJECT NAME: Allatoona Reservoir Survey

PROJECT LOCATION: Etowah River; Bartow, Cherokee and Cobb counties

PROJECT DURATION: Six months beginning in November, 1946 (survey); six months beginning in July, 1949 (excavation)
 PROJECT INVESTIGATOR: Joseph R. Caldwell and Carl F. Miller, Smithsonian Institution and National Park Service
 PROJECT SPONSOR: Corps of Engineers

NATURE AND SCOPE OF PROJECT: Survey of 20,000 acre reservoir by walking fields; testing of 12 sites and extensive excavation of 10 sites

PROJECT RESULTS: Approximately 180 sites located; sequence of 14 phases defined; features identified at several sites

PROJECT BIASES: Inadequate survey coverage. No indication of survey methods. No subsurface survey.

PROJECT NAME: Wilbanks Site Excavation
 PROJECT LOCATION: Etowah River; Cherokee County
 PROJECT DURATION: Fall, 1948 - Spring, 1949
 PROJECT INVESTIGATOR: William H. Sears, University of Georgia
 PROJECT SPONSOR: Private and University of Georgia
 NATURE AND SCOPE OF PROJECT: Near total excavation of mound
 PROJECT RESULTS: Mound represents remains of an earthlodge erected in Etowah III phase; definition of Wilbanks phase
 PROJECT BIASES: Restriction of excavations to mound; emphasis on ceramic analysis and phase definition

PROJECT NAME: Buford Reservoir Survey
 PROJECT LOCATION: Chattahoochee River; Hall, Forsyth and Gwinnett Counties
 PROJECT DURATION: Five months beginning in November, 1950
 PROJECT INVESTIGATOR: Joseph R. Caldwell, Smithsonian Institution
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Walk-over site survey in reservoir flood pool
 PROJECT RESULTS: 60 sites recorded, of which 10 were Woodstock, 3 were Etowah and 1 was Lamar
 PROJECT BIASES: Inadequate survey coverage. No indication of survey methods. No subsurface survey.

PROJECT NAME: Hartwell Reservoir Survey
 PROJECT LOCATION: Savannah River; Hart, Franklin and Stephens Counties, GA and Anderson and Oconee Counties, SC
 PROJECT DURATION: Four months beginning in November, 1952
 PROJECT INVESTIGATOR: Joseph R. Caldwell, National Park Service
 PROJECT SPONSOR: Corps of Engineers
 NATURE AND SCOPE OF PROJECT: Walk-over survey of 56,000 acre reservoir by one person

PROJECT RESULTS: 70 sites recorded; no Mississippian sites identified, but some of the 21 sites identified as Cherokee are probably Tugalo phase of Lamar

PROJECT BIASES: Inadequate survey coverage. No indication of survey methods. No subsurface survey.

PROJECT NAME: Etowah Village and Mounds Excavation

PROJECT LOCATION: Etowah River; Bartow County

PROJECT DURATION: June through August, 1953

PROJECT INVESTIGATOR: William H. Sears, Georgia Historical Commission and University of Georgia

PROJECT SPONSOR: Georgia Historical Commission

NATURE AND SCOPE OF PROJECT: Mapping and testing of village deposits and Mound C; one large area excavation in village

PROJECT RESULTS: Confirmation of Etowah-Wilbanks-Lamar sequence at site; excavation of Lamar domestic structure; identification of Lamar component as Cherokee

PROJECT BIASES: Emphasis on ceramics

PROJECT NAME: Etowah Mounds B and C Excavations

PROJECT LOCATION: Etowah River; Bartow County

PROJECT DURATION: 1954-56

PROJECT INVESTIGATION: Lewis H. Larson, A.R. Kelly, Georgia Historical Commission and University of Georgia

PROJECT SPONSOR: Georgia Historical Commission

NATURE AND SCOPE OF PROJECT: Excavation of west side of Mound B, adjacent village deposits and remaining portion of Mound C

PROJECT RESULTS: Determined Mound B and C chronology; recovery of elaborate Southern Cult burials in Mound C; and reconstruction of Mound C architectural history

PROJECT BIASES: Not determined

PROJECT NAME: Oliver Reservoir Survey and Excavation

PROJECT LOCATION: Chattahoochee River; Muscogee County, GA and Lee County, AL

PROJECT DURATION: Approximately 5 months in 1958 and 1959

PROJECT INVESTIGATOR: Edward V. McMichael and James H. Kellar, University of Georgia

PROJECT SPONSOR: Georgia Power Company

NATURE AND SCOPE OF PROJECT: Walk-over survey of small reservoir basin extending 10 miles along river; excavation of 13 sites

PROJECT RESULTS: 51 sites recorded, of which 10 are Etowah/Averett, 1 is Roods, and 12 are Lamar

PROJECT BIASES: Inadequate survey coverage. No indication of survey methods. No subsurface survey.

PROJECT NAME: Morgan Falls Reservoir Survey and Excavation
 PROJECT LOCATION: Chattahoochee River; Cobb and Fulton Counties
 PROJECT DURATION: March through July, 1959
 PROJECT INVESTIGATOR: Clemens de Baillou, University of Georgia
 PROJECT SPONSOR: Georgia Power Company

NATURE AND SCOPE OF PROJECT: Walk-over survey of portion of basin innundated by increasing height of dam by six feet; excavation of 10 rock shelters

PROJECT RESULTS: Located 10 rockshelters and two stone mounds. Six rockshelters contained Archaic and Woodland components

PROJECT BIASES: No indication that subsurface survey techniques were used; all located sites on surface

PROJECT NAME: Ocmulgee Bottoms Excavations
 PROJECT LOCATION: Ocmulgee River; Bibb County
 PROJECT DURATION: Six months beginning in December, 1961
 PROJECT INVESTIGATOR: C.A. Burroughs, J. Walker, J.W. Moore, C. Bohannon, C. Voil and J.E. Ingmanson
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Excavation of 75 20 x 20 ft squares and two larger area units along one mile stretch of Ocmulgee floodplain
 PROJECT RESULTS: Material from Early Archaic through Mississippian recovered, but poor stratigraphic separation
 PROJECT BIASES: Deposits appear to have been extensively disturbed

PROJECT NAME: Etowah Site Village and Plaza Excavations
 PROJECT LOCATION: Etowah River; Bartow County
 PROJECT DURATION: Summers of 1962, 1964, 1965, 1972 and 1973
 PROJECT INVESTIGATOR: Lewis Larson
 PROJECT SPONSOR: West Georgia College, Georgia State University, Georgia Historical Commission
 NATURE AND SCOPE OF PROJECT: Excavation of house floors, features, and burials
 PROJECT RESULTS: Information gathered on house form and configuration of plaza, palisade and ditch
 PROJECT BIASES: Not determined

PROJECT NAME: Sixtoe Field Excavations

PROJECT LOCATION: Carters Reservoir; Coosawattee River; Murray County
 PROJECT DURATION: Summer months of 1962-65
 PROJECT INVESTIGATOR: A.R. Kelly, University of Georgia
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Test pits and large area excavations in seven different locations in Sixtoe Field portion of floodplain below Carters Dam
 PROJECT RESULTS: Partial excavation of an Etowah mound and excavation of several Etowah and Lamar domestic structures
 PROJECT BIASES: Poorly reported

PROJECT NAME: Sprewell Bluff, Lazer Creek, and Auchumpkee Reservoirs Survey
 PROJECT LOCATION: Flint River; Upson, Pike, Talbot, Taylor and Meriwether Counties
 PROJECT DURATION: 12 weeks in 1965 and 1966
 PROJECT INVESTIGATOR: Don Gordy, University of Georgia
 PROJECT SPONSOR: Corps of Engineers
 NATURE AND SCOPE OF PROJECT: Walk-over and informant survey of reservoir basin
 PROJECT RESULTS: Identification of 80 sites, of which 24 are Mississippian or possible Mississippian, three are Etowah, and 13 are Lamar
 PROJECT BIASES: Inadequate survey coverage. No indication of survey methods. No subsurface survey

PROJECT NAME: Bell Field Site Excavations
 PROJECT LOCATION: Carters Reservoir; Coosawattee River; Murray County
 PROJECT DURATION: Summer months, 1965-1968, 1970-1971
 PROJECT INVESTIGATOR: A.R. Kelly, University of Georgia
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Partial (50%) excavation of mound
 PROJECT RESULTS: Mound found to consist of eight building stages with at least three having multiple summit structures connected by passageways; Savannah culture
 PROJECT BIASES: Only central portion of mound excavated; poor stratigraphic control; poorly reported

PROJECT NAME: West Point Reservoir Excavations
 PROJECT LOCATION: Chattahoochee River; Heard and Troup Counties
 PROJECT DURATION: 1966-1970
 PROJECT INVESTIGATOR: Harold Husher, University of Georgia
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Excavation at 15 sites
 PROJECT RESULTS: Delineation of site plan for 19th Century Creek town of Okfuskenena; partial excavation of Lamar culture Park and Avery mounds

PROJECT BIASES: Poorly reported results

PROJECT NAME: Potts' Tract Site Excavation
 PROJECT LOCATION: Carters Reservoir; Coosawattee River; Murray County
 PROJECT DURATION: 10 weeks beginning in June, 1968
 PROJECT INVESTIGATOR: David J. Hally, University of Georgia
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Excavation of midden and three Lamar structures
 PROJECT RESULTS: Description of three Lamar structures; site has two components (Woodstock culture and Barnett phase of Lamar culture)
 PROJECT BIASES: Excavations not extensive enough to determine limits and configuration of site

PROJECT NAME: Little Egypt Site Excavation
 PROJECT LOCATION: Carters Reservoir; Coosawatter River; Murray County
 PROJECT DURATION: Summer months, 1969-1972
 PROJECT INVESTIGATOR: David J. Hally, University of Georgia
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Extensive test pitting and test trenching; six large area excavations; partial mound excavation
 PROJECT RESULTS: Definition of Little Egypt and Barnett phases of Lamar; detailed study of Barnett phase domestic structures
 PROJECT BIASES: Mounds not sufficiently excavated; site limits and site configuration not determined sufficiently

PROJECT NAME: Tri-County Survey
 PROJECT LOCATION: Chattahoochee River; Cobb, Fulton, and Gwinnett Counties
 PROJECT DURATION: 1973-1975
 PROJECT INVESTIGATOR: Roy S. Dickens, Jr., Georgia State University
 PROJECT SPONSOR: Georgia Historical Commission
 NATURE AND SCOPE OF PROJECT: Walk-over survey of three county area
 PROJECT RESULTS: Unknown number of sites recorded
 PROJECT BIASES: Not determined

PROJECT NAME: Carroll, Haralson, and Paulding Counties Survey
 PROJECT LOCATION: Chattahoochee and Little Tallapoosa Rivers; Carroll, Haralson, and Paulding Counties
 PROJECT DURATION: August through November, 1974
 PROJECT INVESTIGATOR: Daniel L. Simpkins, West Georgia College
 PROJECT SPONSOR: Georgia Historical Commission
 NATURE AND SCOPE OF PROJECT: Walk-over survey of as much of the three counties as time permitted, with focus on stream and river basins

PROJECT RESULTS: Recorded 98 sites of which 5 are identified as
Mississippian
PROJECT BIASES: Non-intensive survey; no subsurface testing

PROJECT NAME: Wallace Reservoir Survey
PROJECT LOCATION: Oconee River; Greene, Morgan, Putnam and Hancock
Counties
PROJECT DURATION: 10 months beginning in October, 1974
PROJECT INVESTIGATOR: Chester DePratter, University of Georgia
PROJECT SPONSOR: Georgia Power Company
NATURE AND SCOPE OF PROJECT: Walk-over site survey, subsurface site
survey, and site testing in 18,000 acre reservoir
PROJECT RESULTS: Recorded 140 sites, many of which had buried
occupation deposits in floodplain of Oconee River;
identification of site stratigraphy at Dyar and Cold
Springs sites
PROJECT BIASES: Inadequate survey coverage

PROJECT NAME: Wallace Reservoir Mitigation Survey and Excavations
PROJECT LOCATION: Oconee River; Greene, Morgan, Putnam and Hancock
Counties
PROJECT DURATION: July 1977 - October, 1978
PROJECT INVESTIGATOR: Paul Fish and David J. Hally, University of
Georgia
PROJECT SPONSOR: Georgia Power Company
NATURE AND SCOPE OF PROJECT: Systematic and intensive walk-over survey
of 14,000 acres of cleared land in Wallace Reservoir
basin; backhoe transects of basin; excavation of 24
sites
PROJECT RESULTS: Recorded over 3000 sites on surface and beneath
surface in Wallace Reservoir basin; outline of phase
sequence; excavation of variety of Lamar site types
PROJECT BIASES: Inadequate sample of several site categories;
inadequately reported

PROJECT NAME: Russell Reservoir Survey
PROJECT LOCATION: Savannah River; Elbert and Hart Counties, GA and
Anderson and Abbeville Counties, SC
PROJECT DURATION: 1977
PROJECT INVESTIGATOR: Glen T. Hanson, Richard L. Taylor, Marion F.
Smith; Institute of Archaeology and Anthropology,
University of South Carolina
PROJECT SPONSOR: National Park Service; Corps of Engineers
NATURE AND SCOPE OF PROJECT: Walk-over survey of exposed ground in
26,000 acre reservoir
PROJECT RESULTS: Recorded 490 archaeological sites, of which
approximately 25 were Mississippian

PROJECT BIASES: Relied on exposed ground surfaces for site detection;
no subsurface testing for sites

PROJECT NAME: Russell Reservoir Floodplain Survey
 PROJECT LOCATION: Savannah River; Elbert and Hart Counties, GA and
 Anderson and Abbeville Counties, SC
 PROJECT DURATION: 1979-1980
 PROJECT INVESTIGATOR: William M. Gardner, Thunderbird Research Corp.
 PROJECT SPONSOR: National Park Service; Corps of Engineers
 NATURE AND SCOPE OF PROJECT: Walk-over site survey and subsurface
 testing in floodplain of Russell Reservoir basin
 PROJECT RESULTS: Unpublished
 PROJECT BIASES: Not determined

PROJECT NAME: Beaverdam Creek Site Excavations
 PROJECT LOCATION: Russell Reservoir; Savannah River; Elbert County
 PROJECT DURATION: 10 months beginning July, 1980
 PROJECT INVESTIGATOR: James L. Rudolph and David J. Hally, University
 of Georgia
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Complete excavation of remaining portions
 of Beaverdam Creek mound; excavation of test pits,
 test trenches and four large areas in village
 PROJECT RESULTS: Reconstruction of mound architectural history;
 interpretation of subsistence; definition of
 Beaverdam phase of Savannah culture
 PROJECT BIASES: Mound was heavily disturbed prior to excavation in
 1980; village area was heavily eroded prior to
 excavation in 1980

PROJECT NAME: Rucker's Bottom Site Excavation
 PROJECT LOCATION: Russell Reservoir; Savannah River; Elbert County
 PROJECT DURATION: Six months during 1980, 1981 and 1982
 PROJECT INVESTIGATOR: David G. Anderson and Joseph Schuldenrein,
 Gilbert/Commonwealth Inc.
 PROJECT SPONSOR: National Park Service
 NATURE AND SCOPE OF PROJECT: Controlled surface collection; stripping,
 mapping and excavation of approximately 10,000 m² of
 site area
 PROJECT RESULTS: Excavation of extensive village with Beaverdam and
 Rembert phase components
 PROJECT BIASES: Mississippian deposits were heavily eroded; postmold
 maps record only deeper features

PROJECT NAME: Scull Shoals Site Excavation
PROJECT LOCATION: Oconee River; Greene County
PROJECT DURATION: Six weeks in 1983 and three weeks in 1985
PROJECT INVESTIGATOR: J. Mark Williams, University of Georgia, Lamar
Institute
PROJECT SPONSOR: U.S. Forest Service, University of Georgia, and
Lamar Institute
NATURE AND SCOPE OF PROJECT: Site mapped and test excavations in village
and mounds
PROJECT RESULTS: Site occupied during Savannah and Lamar periods.
Village area extensively damaged by erosion
PROJECT BIASES: None

PROJECT NAME: Shinholser Site Excavation
PROJECT LOCATION: Oconee River; Baldwin County
PROJECT DURATION: Five weeks in 1985
PROJECT INVESTIGATOR: J. Mark Williams, University of Georgia, Lamar
Institute
PROJECT SPONSOR: University of Georgia and Lamar Institute
NATURE AND SCOPE OF PROJECT: Site mapped and test excavations in
village and mounds
PROJECT RESULTS: Site occupied during Savannah and Lamar periods
PROJECT BIASES: None

CHAPTER 4

PREHISTORIC OVERVIEW

INTRODUCTION

To describe various aspects of Mississippian period cultures in Georgia, we must use some terms which may be unfamiliar to archaeologists who usually work elsewhere. In particular, we have found that descriptions of complicated stamped pottery motifs often vary from one observer to another, a situation made even more confusing when representative examples are not illustrated. For this reason, we have illustrated (Figure 3) all complicated stamped motifs that we refer to in this report.

Table 1 and Figures 4 and 5 summarize the radiocarbon dates available from Mississippian sites in the Piedmont. Table 1 lists only dates that can be reliably associated with Mississippian components identifiable to phase or culture. These dates are graphed by phase/culture and period in their uncorrected form in Figure 4 and in their MASCA (Ralph et al. 1973) corrected form in Figure 5. A line, representing what we consider to be the central tendency of these dates by phase or culture, is superimposed on each figure.

Table 2 summarizes the regional phase sequences for Mississippian occupations in various Piedmont river valleys. The dates assigned to the phases are derived from Table 1 and Figures 4 and 5. Descriptions of the phases are presented below.

EARLY MISSISSIPPI PERIOD

The distinction between the Mississippian period and Mississippian culture (cf. Wauchope 1966) is especially useful in the Georgia Piedmont, because the extent to which particular late prehistoric cultures were "Mississippianized" ranges from minimal to complete. This is most noticeable during the Early Mississippian period, which dates from A.D. 900 to A.D. 1200. (Table 2). The Averett and Woodstock cultures are both contemporary with early Mississippian cultures in Tennessee, Alabama and southwestern Georgia, yet they show relatively few features that would be considered typical Mississippian characteristics. On the other hand, the Macon Plateau culture is a full-fledged Mississippian phenomenon whose distinctiveness in the Piedmont and similarity to the Hiwassee Island culture in Tennessee have raised important issues about the development and spread of Mississippian culture into the region.

Woodstock Culture

Most archaeologists in Georgia consider the Woodstock culture the earliest Mississippian expression in the Upper Piedmont (Figure 6). Several radiocarbon dates in the A.D. 900-1000 range (MASCA corrected) (Table 1; Figure 5) attest to this culture's role as the successor to the Late Woodland occupations in the area. However, given its transitional characteristics,

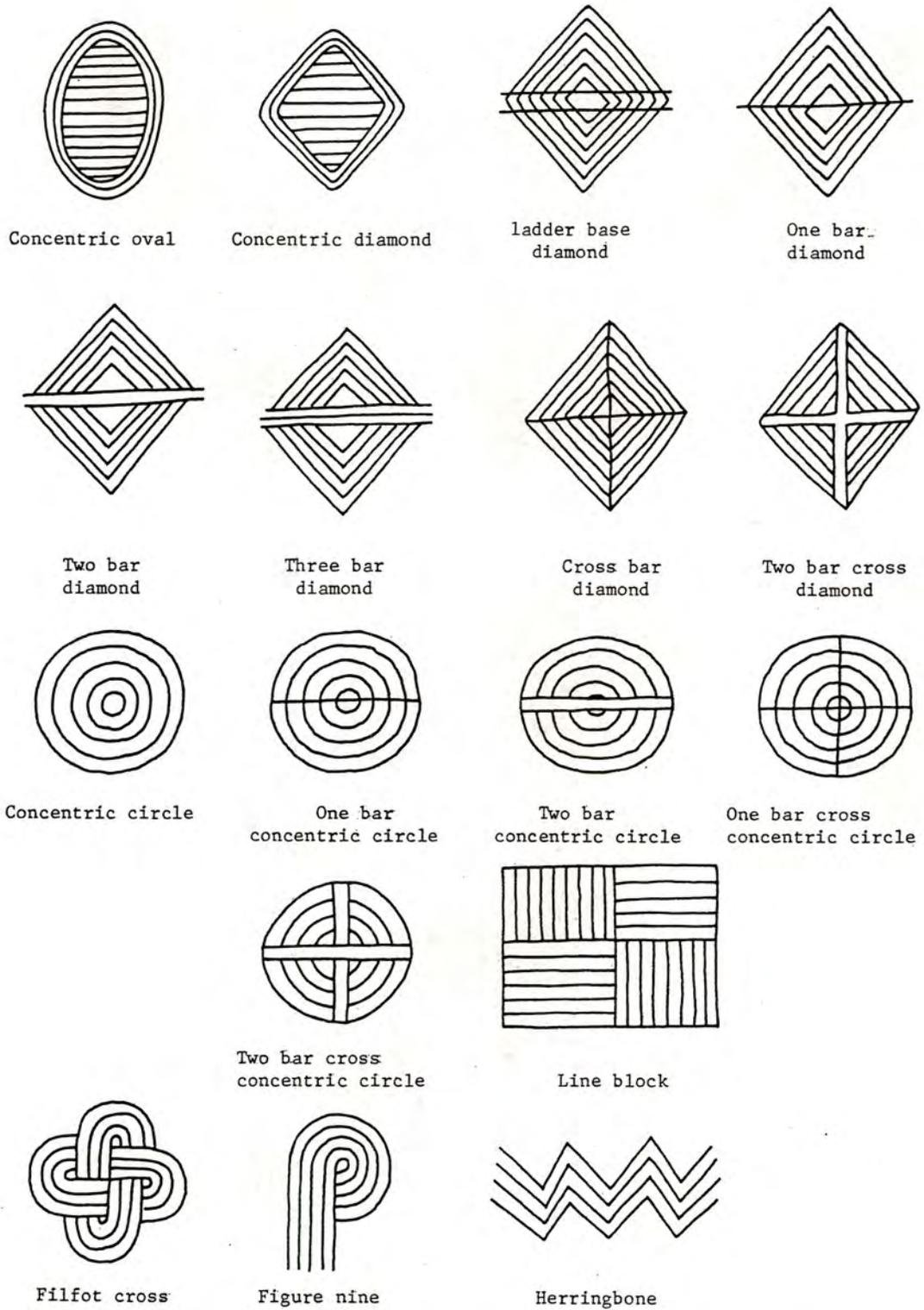


Figure 3. Complicated stamped motifs referred to in text.

TABLE 1
Radiocarbon Dates for Mississippian Sites in North Georgia
and Surrounding Areas

Date Number	Laboratory Identification	Site	Phase/Culture	Uncorrected Date	Corrected Date	Reference
1	UCA5375	9Ck131 (Hobgood)	Woodstock	A.D. 790±60	A.D. 850	B. Smith 1985
2	Beta 4354	9Ck123 (Cagle)	Woodstock?	A.D. 880±50	A.D. 940	Crook 1984
3	UCA55	9Mu103	Woodstock	928±40	980-1000	Hally 1970
4	UM1675	9Lu(Dot)1 (Chestatee)	Woodstock	A.D. 970±105	A.D. 1020	Crook 1982
5	1981	9B11 (Macon Plateau)	Macon Plateau	A.D. 1015±110	A.D. 1055	Wilson 1964
6	M940	9B15 (Brown's Mount)	Macon Plateau	A.D. 980±150	A.D. 1030	Wilson 1964
7	Beta 8961	9Me21 (Carmouche)	Averett	A.D. 900±80	A.D. 960	Gresham et al 1985
8	Beta 8962	9Me21 (Carmouche)	Averett	A.D. 1520±50	A.D. 1430	Gresham et al 1985
9	Beta 8963	9Me21 (Carmouche)	Averett	A.D. 1170±60	A.D. 1220-1200	Gresham et al 1985
10	Beta 8964	9Me21 (Carmouche)	Averett	A.D. 1020±50	A.D. 1060	Gresham et al 1985
11	Beta 9551	9Me21 (Carmouche)	Averett	A.D. 1430±70	A.D. 1400	Gresham et al 1985
12	Beta 9554	9Me21 (Carmouche)	Averett	A.D. 830±60	A.D. 910-890	Gresham et al 1985
13	UGA1978	9Ge10	Armor	A.D. 905±95	A.D. 965	Smith 1981b
14	M1064	9Br1 ¹	Etowah II/III	A.D. 1100±200	A.D. 1150-1180	Crane and Griffin 1959
15	M1062	9Br1 ¹	Etowah II/III	A.D. 1500±200	A.D. 1430	Crane and Griffin 1962
16	UGA 70	9Mu100	Etowah III	A.D. 1045±50	A.D. 1085	Kelly et al 1965

TABLE 1 (Continued)

Date Number	Laboratory Identification	Site	Phase/Culture	Uncorrected Date	Corrected Date	Reference
17	UGA 2374a	9Ge5	Stillhouse	A.D. 1015±60	A.D. 1055	Smith 1981a
18	UGA 2366	9Ge5	Stillhouse	A.D. 1615±60	A.D. 1475-1525	Smith 1981a
19	UGA 2842	9Ge5	Stillhouse	A.D. 1685±85	A.D. 1535-1615	Smith 1981a
20	UGA 1348	9St1	Jarrett	A.D. 1355±65	A.D. 1350	Williams & Branch 1978
21	M933	380c47	Jarrett	A.D. 830±150	A.D. 890-910	Kelly and Neitzel 1961
22	M934	380c47	Jarrett	A.D. 880±150	A.D. 940	Kelly and Neitzel 1961
23	M935	380c47	Jarrett	A.D. 1180±150	A.D. 1220	Kelly and Neitzel 1961
24	M1061	9Br1 ¹	Etowah III/IV	A.D. 1280±200	A.D. 1300	Crane and Griffin 1962
25	M542	9Br1 ¹	Wilbanks	A.D. 1040±200	A.D. 1080	Crane and Griffin 1959
26	M543	9Br1 ¹	Wilbanks	A.D. 1450±250	A.D. 1410	Crane and Griffin 1959
27	M1060	9Br1 ¹	Wilbanks	A.D. 1725±130	A.D. 1645	Crane and Griffin 1962
28	M402	9Br1 ¹	Wilbanks	A.D. 1225±200	A.D. 1245	Crane and Griffin 1959
29	Beta 1792	9Eb85	Beaverdam	A.D. 1150±80	A.D. 1210	Rudolph and Hally 1985
30	Beta 1791	9Eb85	Beaverdam	A.D. 1190±200	A.D. 1230	Rudolph and Hally 1985
31	DIC 2119	9Eb85	Beaverdam	A.D. 1210±55	A.D. 1240	Rudolph and Hally 1985
32	DIC 2117	9Eb85	Beaverdam	A.D. 1570±50	A.D. 1460-1500	Rudolph and Hally 1985
33	DIC 2118	9Eb85	Beaverdam	A.D. 330±100	A.D. 400	Rudolph and Hally 1985
34	DIC 2120	9Eb85	Beaverdam	A.D. 1720±80	A.D. 1640	Rudolph and Hally 1985

TABLE 1 (Continued)

Date Number	Laboratory Identification	Site	Phase/Culture	Uncorrected Date	Corrected Date	Reference
35	FSU 174	Town Creek	Pee Dee	A.D. 1205±140	A.D. 1235	Dickens 1976
36	FSU 176	Town Creek	Pee Dee	A.D. 1280±140	A.D. 1300	Dickens 1976
37	FSU 145	Town Creek	Pee Dee	A.D. 1350±140	A.D. 1350	Dickens 1976
38	FSU 175	Town Creek	Pee Dee	A.D. 1355±50	A.D. 1355	Dickens 1976
39	GXO 595	Garden Creek	Pisgah	A.D. 1435±70	A.D. 1405	Dickens 1976
40	Beta 2803	38An8	Rembert	A.D. 1320±40	A.D. 1330	Wood 1981
41	DIC 2304	9Eb91	Rembert	A.D. 1360±60	A.D. 1360	Anderson and Schuldenrein 1983
42	DIC 2305	9Eb91	Rembert	A.D. 1410±60	A.D. 1390	Anderson and Schuldenrein 1983
43	DIC 2303	9Eb91	Rembert	A.D. 1450±70	A.D. 1410	Anderson and Schuldenrein 1983
44	UGA 403	9Mu102	Little Egypt	A.D. 1415±65	A.D. 1395	Hally 1979
45	UGA 2376	9Ge5	Duwall	A.D. 1075±65	A.D. 1100-1130	Smith 1981a
46	UGA 1906	9Ge5	Duwall	A.D. 1690±90	A.D. 1530-1630	Smith 1981a
47	UGA 2843	9Ge5	Duwall	A.D. 1825±50	A.D. 1680-1800	Smith 1981a
48	UGA 2367	9Ge5	Duwall	A.D. 1570±60	A.D. 1460-1500	Smith 1981a
49	UGA 545	9St1	Tugalo	A.D. 1480±65	A.D. 1420	Williams and Branch 1978
50	UGA 205	9Mu102	Barnett	A.D. 1450±70	A.D. 1410	Hally 1979

TABLE I (Continued)

Date Number	Laboratory Identification	Site	Phase/Culture	Uncorrected Date	Corrected Date	Reference
51	UCA 208	9Mu102	Barnett	A.D. 1525±55	A.D. 1435	Hally 1979
52	UCA 210	9Mu102	Barnett	A.D. 1555±65	A.D. 1455	Hally 1979
53	UCA 56	9Mu103	Barnett	A.D. 1664±45	A.D. 1520-1610	Hally 1970
54	UCA 2375a	9Ge5	Dyar	A.D. 1555±60	A.D. 1455	Smith 1981a
55	UCA 2372	9Ge5	Dyar	A.D. 1650±80	A.D. 1520-1610	Smith 1981a
56	UCA 2368a	9Ge5	Dyar	A.D. 1725±65	A.D. 1645	Smith 1981a
57	UCA 2368	9Ge5	Dyar	A.D. 1765±145	A.D. 1655	Smith 1981a
58	UCA 2375a	9Ge5	Dyar	A.D. 1555±60	A.D. 1450	Smith 1981a
59	UCA 1907	9Ge5	Dyar	A.D. 1105±145	A.D. 1180	Smith 1981a

¹Phase associations for Etowah site dates have been provided by Lewis H. Larson, Jr. (personal communication, November 28, 1983).

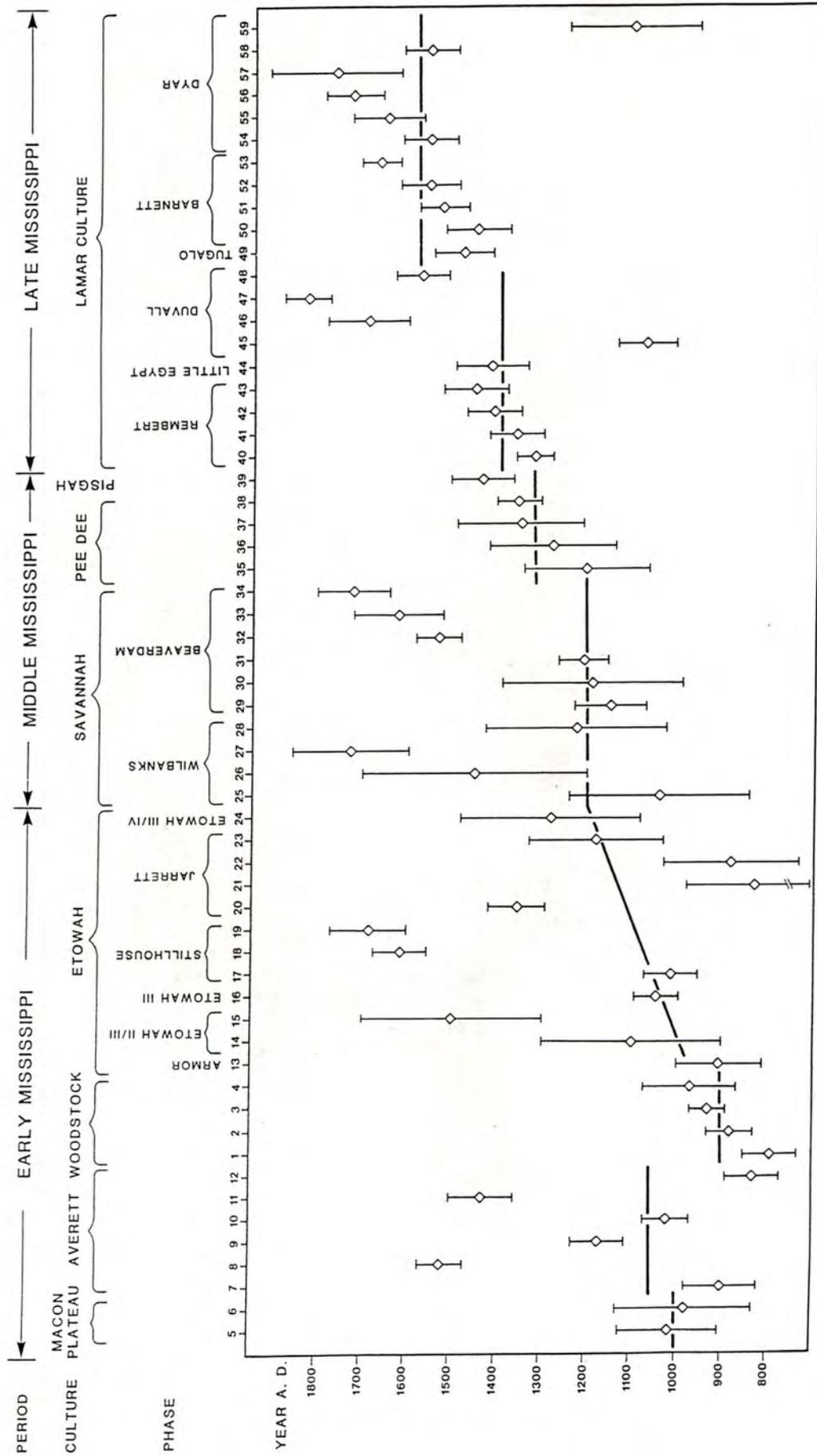


Figure 4. Radiocarbon dates for Mississippian sites in the Georgia Piedmont and surrounding areas, uncorrected.

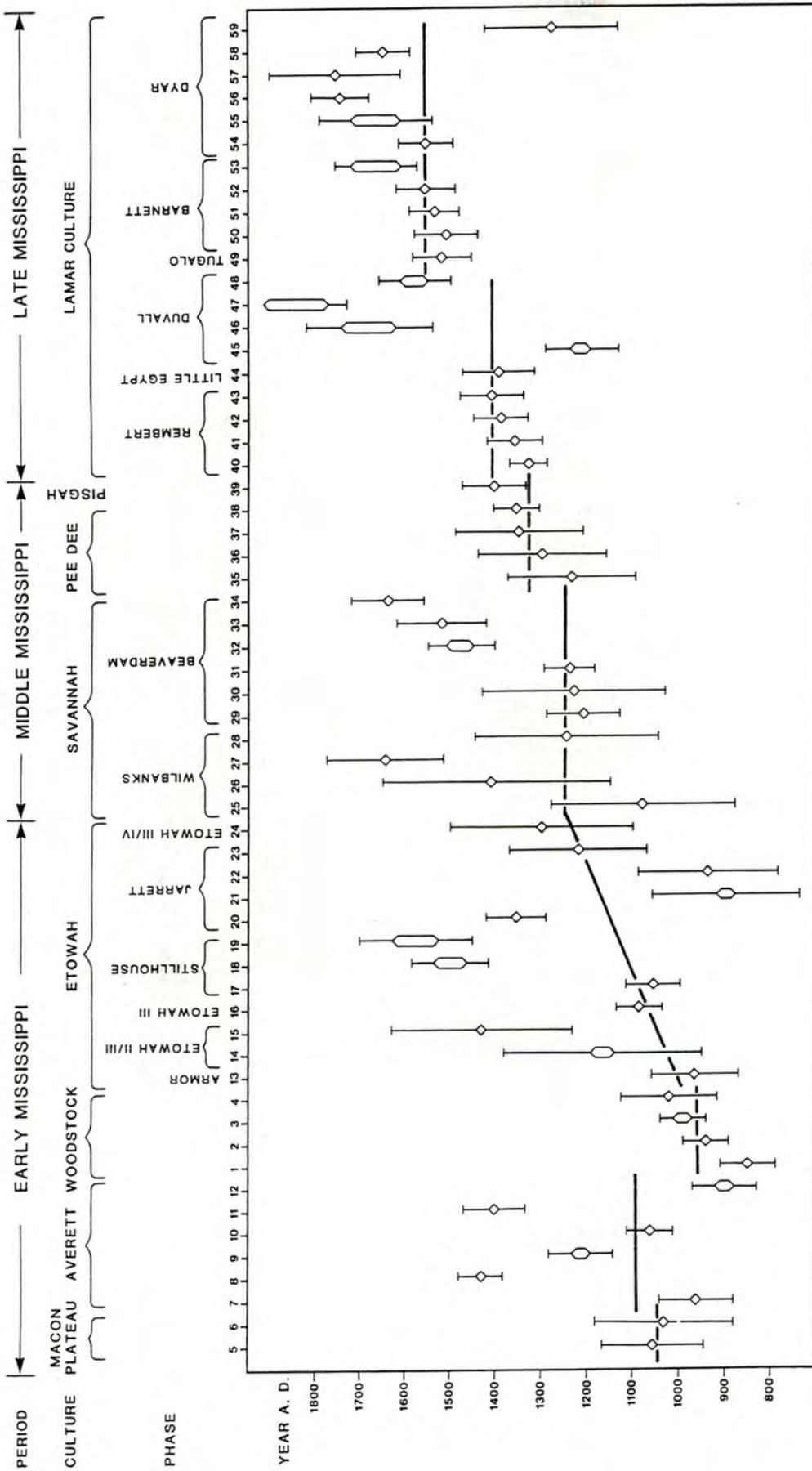
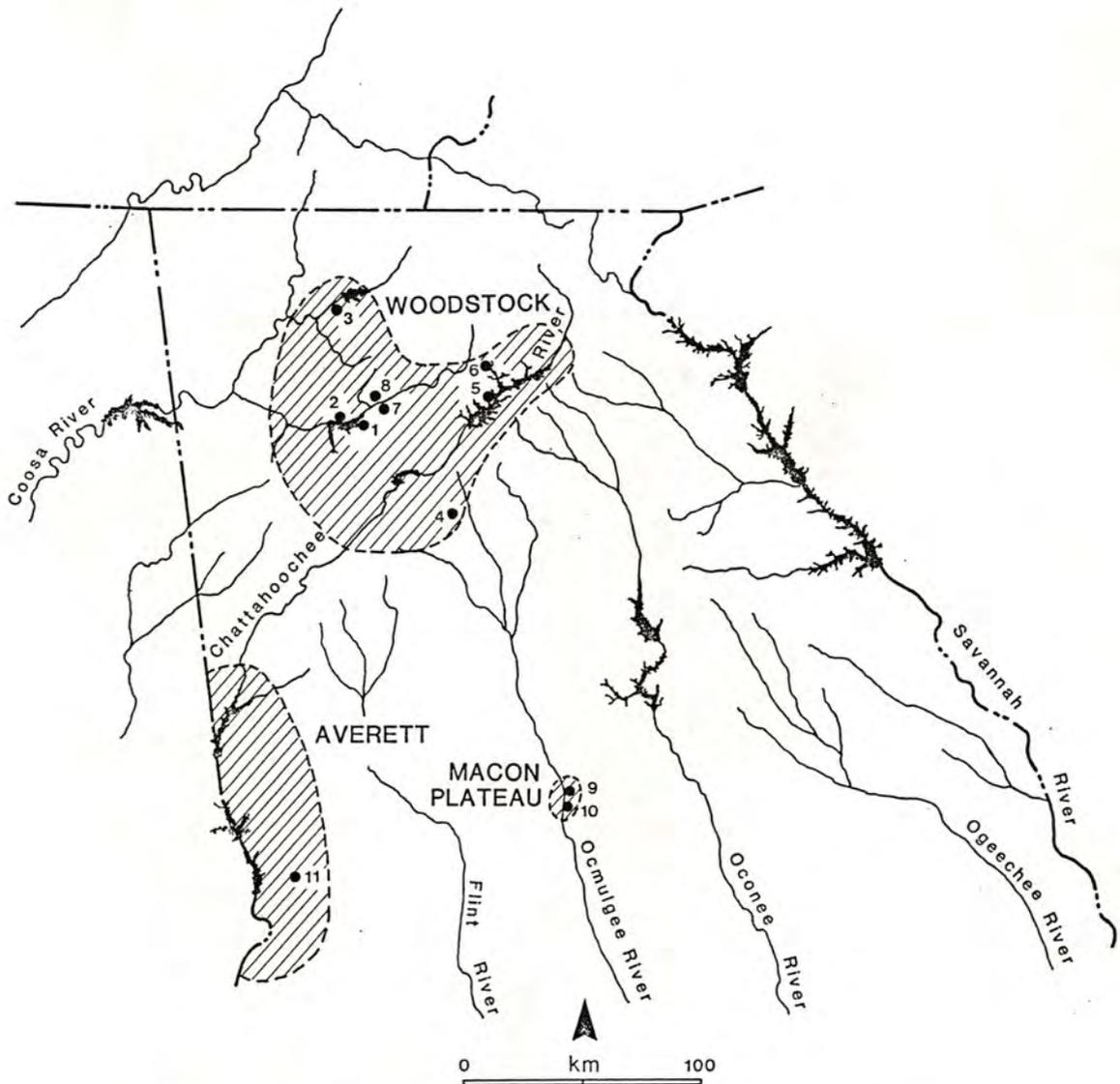


Figure 5. Radiocarbon dates for Mississippian sites in the Georgia Piedmont and surrounding areas, MASCA corrected.

Table 2
Mississippian Cultural Sequences

Time	Periods	Cultures	Regional Phase Sequences						
			Coosawattee drainage	Upper Savannah /Tugalo drainage	Middle Savannah drainage	Middle Oconee drainage	Middle Chattahoochee drainage		
A.D. 1600									
A.D. 1500	Late Mississippi	Lamar	Barnett	Brewster	Tugalo	Dyar	Cowarts	Bull Creek	
A.D. 1400			Little Egypt	Stamp Creek	Rembert	Rembert	Duvall	Stubbs	
A.D. 1300	Middle Mississippi	Savannah		Wilbanks	Beaverdam	Hollywood	Scull Shoals		
A.D. 1200									
A.D. 1100	Early Mississippi	Etowah/ Averett	Etowah III	Etowah IV Etowah III Etowah II	Jarrett	Stillhouse Armor		Averett	
A.D. 1000		Woodstock Macon Plateau Averett	Wood- stock	Woodstock	Wood- stock			Macon Plateau	
A.D. 900									



- | | |
|--------------------------------|--------------------------|
| 1. Woodstock (9Ck2) | 7. Hobgood (9Ck131) |
| 2. Woodstock Fort (9Ck85) | 8. Cagle (9Ck113) |
| 3. Pott's Tract (9Mu103) | 9. Macon Plateau (9Bi1) |
| 4. Stone Mountain Creek (9Da2) | 10. Brown's Mount (9Bi5) |
| 5. Summerour (9Fo16) | 11. Carmouche (9Me21) |
| 6. Chestatee (9Lu[DOT]1) | |

Figure 6. Distribution of Woodstock, Averett, and Macon Plateau sites and phases.

classifying the Woodstock culture as early Mississippian rather than terminal Late Woodland may be somewhat arbitrary, a problem recognized by Wauchope (1966) and others.

Woodstock pottery occurs in small quantities over much of the Piedmont, but the greatest number of sites and the largest sites are found toward the north closer to the Appalachians than to the Fall Line. Recent surveys in the Lower Piedmont along the Oconee River (DePratter 1976; Fish and Hally 1985) and along the Savannah River (Taylor and Smith 1978) recovered very little Woodstock material. In contrast, earlier surveys on the upper Chattahoochee River (Caldwell 1953a) and on the Etowah River (Caldwell 1957) found a relatively large number of Woodstock sites. Also, the major excavated sites--Woodstock (9Ck2), Woodstock Fort (9Ck85), Hobgood (9Ck131), Stone Mountain Creek (9Da2), Potts' Tract (9M103), Summerour (9Fol6 [previously 9Fo44,44a]), and Chestatee (9Lu[DOT]1)--are all located in the Upper Piedmont.

Woodstock pottery is typified by sand tempered, wide-mouthed conoidal jars. Tall beaker-like vessels occur much less frequently (Wauchope 1966). Complicated stamping is the most common decoration, with oval, diamond, line block, herringbone, and concentric circle motifs being observed. Check stamping, simple stamping, incising, and punctating also occur on vessels, but are much less common than complicated stamping (Wauchope 1966; Hally 1970).

Pottery recovered from Woodstock sites shows regional and temporal variation, but this variation is poorly understood. Caldwell (1957) distinguishes two foci on the Etowah River--the Woodstock focus, which has incising but not check stamping, and the Proctor focus, which has check stamping but lacks incising. In both cases, incising and check stamping are much less common than complicated stamping. Caldwell (1957) assumes that all Woodstock sites in the Allatoona Reservoir are roughly contemporary, but he also recognizes that archaeologists eventually might make temporal subdivisions within Woodstock. For example, Hally (1970) concludes that the Woodstock component at the Potts' Tract site near the Coosawattee River was later than the two foci in the Allatoona Reservoir because it contained Etowah Complicated Stamped sherds. And on the Chattahoochee River in northeast Georgia, Caldwell (1953a) distinguishes early Woodstock sites, which had Woodstock, Swift Creek, and Napier pottery, from late Woodstock sites, which had Woodstock and Etowah pottery. Finally, at the Tugalo site (9St1), Caldwell identified an early variety of Woodstock pottery that he called "Weird-and-Wonderful Woodstock" (Williams and Branch 1978).

It is difficult to describe a typical Woodstock site; only a few sites have been excavated and there are considerable differences among them. The type site (9Ck2) (Wauchope 1966) covered several acres on the banks of a tributary of the Etowah River. In 1939 Caldwell excavated two trenches and five test pits there and made preliminary descriptions of Woodstock Complicated Stamped pottery. Later, Wauchope (1950; 1966) also analyzed the pottery from this site and separated the 3900 Woodstock sherds into stamped, incised, zone punctate and incised, and plain categories.

The best known site of the Woodstock culture is 9Ck85, Woodstock Fort. This site lay next to the Etowah River and is described by Caldwell (1957) as a "full scale fortified village." Facing the imminent flooding of the site by the Allatoona Reservoir, Caldwell dug there hurriedly during a two week period

in 1950. In that short time his crew discovered an elaborate palisade that had a double row of posts with two square towers and one round tower. The palisade was surrounded by a shallow ditch, 1.6 m wide and from 75 cm to 90 cm deep. Only a small portion of the palisade and ditch were dug, but the entire construction seemed to Caldwell to have been prepared at one time. Caldwell concludes that the complete palisade would have been circular with a diameter of 90 m to 95 m. The ditch was filled with midden soil. The sherds from this feature were mostly Woodstock and none of the sherds dated to post-Woodstock times.

Very little of the site within the palisade was excavated. Caldwell (1957) examined only three partial or complete structures, and none of these was definitely associated with Woodstock pottery. In fact, two of the buildings contained Etowah sherds. Thus one could argue that the village within the palisade and the ditch outside the palisade may not have been contemporaneous.

The Summerour Mound (Caldwell 1953a; 1958) was located on the upper Chattahoochee River and was flooded by the Buford Reservoir (now Lake Lanier). Caldwell reports the presence of a habitation area at this site, but only the mound was excavated. This mound was built in a single stage 2.1 m high. A rectangular wall trench structure, 5.6 m by 4.9 m, stood on its summit. Pottery from the mound fill and from features in the summit structure included Napier, Swift Creek, and Woodstock sherds, which led Caldwell (1953a) to assign the mound to an early Woodstock occupation. No sherds later than Woodstock were found in the mound, but Caldwell confesses to some uncertainty on the dating of the summit structure:

The majority of sherds found with the building features were of an Early Woodstock association, but other earthenware fragments appearing for the first time consisted of an unrecognized plain variety suspected to belong to a yet undefined period somewhat later than Early Woodstock, possibly the interval when the mound was in use (Caldwell 1953a: 17).

However, five years later he was quite confident that there was indeed an "Early Woodstock temple" at Summerour (1958:48).

On the Chestatee River not far from the Summerour Mound, Crook (1982) excavated the Chestatee site. This site contained a midden stratum 20 cm to 65 cm thick and about 5 ha in area. The upper level of the midden contained both Middle Woodland Cartersville and Woodstock ceramics. Crook (1982) interprets one feature there to be a remnant of a Woodstock structure. The feature contained a slightly depressed, oval hearth surrounded by a concentration of charred wood. Four charred postmolds were found nearby. A short distance from the hearth, Crook found a portion of a broken Woodstock complicated stamped vessel. Also, a radiocarbon date of A.D. 1020±105, (MASCA corrected) (Table 1; Figure 5), was obtained from the feature.

At Potts' Tract near the Coosawattee River, Hally (1970) found a Woodstock midden and several Woodstock pits. Because he also found Etowah sherds in some of the pits, he concludes that this component represents a late

Woodstock occupation. Potts' Tract yielded some of the best data found so far on Woodstock subsistence. Various features at the site contained the remains of acorns, walnuts, hickory nuts, charred seeds, fish, turtle, bird, deer, terrestrial gastropods, aquatic gastropods, and bivalves.

Dickens (1965) excavated the Stone Mountain Creek site near Atlanta in 1962. This site, which covered approximately 0.8 ha, had been badly disturbed by grading. Woodstock Complicated Stamped sherds comprised 77% of the pottery from the six test pits excavated by Dickens. Six small, triangular chert projectile points were also recovered. Dickens notes that Woodstock sites in the surrounding area were always located on or near the more spacious creek bottomlands.

The Hobgood site on the Etowah River was a Woodstock site excavated by Betty Smith (1985). She found that the site contained several small, insubstantial single post structures, hickory and walnut shells, and 49 small triangular projectile points in addition to Woodstock pottery. She concludes that the site was probably a seasonally occupied hunting camp. A radiocarbon date from the site was A.D. 850±60 (MASCA corrected) (Table 1; Figure 5).

Nearby lay the Cagle site (Crook 1984). Woodstock pottery was found at the site and one feature containing two Woodstock Incised sherds was dated to A.D. 940±50 (MASCA corrected) (Table 1; Figure 5). Unfortunately, the feature from which the radiocarbon sample was obtained had been vandalized, and Crook (1984) questions the reliability of the date.

In reviewing the literature on the Woodstock culture, one is struck by the scarcity of strong Mississippian affiliations. Wauchope (1948; 1950) originally considered Woodstock to be a Woodland culture because of the stratigraphic association of Woodstock pottery with Woodland sherds at the Two Run Creek site (9Br3) in north Georgia. However, both Caldwell and Sears argued strenuously against this position, claiming instead that Woodstock was an Early Mississippi period culture, and Wauchope (1966) later concurred.

Dickens (1975:32) states that Sears' (1958) reasons for moving the Woodstock culture into the Early Mississippi period may have been the discovery by Caldwell of Woodstock Fort in the Allatoona Reservoir and of the platform mound at the Summerour site in the Buford Reservoir.

Wauchope (1966) notes repeatedly that ceramically the Woodstock culture does not appear to be fully Mississippianized. He includes it within the Early Mississippi period because of its probable contemporaneity with Mississippian cultures in Tennessee and Alabama, not because Woodstock was itself a Mississippian culture.

In a discussion of the transition between the Late Woodland and Mississippi period in eastern Tennessee, Faulkner (1975) notes that shallow ditches similar to those at Woodstock Fort were found at the Martin Farm and Mason sites and that a ditch and palisade were found at the Early Mississippi period Hampton Farm site. The Martin Farm site was occupied around A.D. 900 to A.D. 1000 and contained limestone tempered plain and cordmarked pottery in addition to shell tempered Hiwassee Island pottery (Schroedl and Boyd 1985). Woodstock Complicated Stamped sherds occurred as a minority type at the site

(Faulkner 1975). Buildings at Martin Farm were constructed from single posts or wall trenches.

The ditch at Woodstock Fort is clearly associated with the Woodstock culture, but the cultural context of the stockade there is not so easily determined. Structures within the stockade contain Etowah pottery, which suggests that the fortification might have been raised sometime after the ditch was dug. Unfortunately, published data are insufficient to clarify this matter. We feel that reanalysis is called for and that the mere presence of a fortification does not necessarily imply a Mississippian cultural affiliation for the Woodstock culture.

The so-called temple mound at the Summerour site is also of questionable use in this matter, since it has been demonstrated that platform mounds were constructed during the Woodland period in the South Appalachian regions (Dickens 1975). The wall trench structure on the mound summit suggests that it is Mississippian, however. Again, the published data are so scanty, that reanalysis is necessary before a conclusion can be reached.

One additional observation we wish to make is that the assumption that the Woodstock population practiced maize horticulture is not based on the best of evidence. Of all the Woodstock sites excavated, only one, Stamp Creek (9Br139), has produced any maize, and there were only two kernels of maize at the site (Caldwell 1957). The Lum Moss site (9Go59) in Gordon County (Baker 1970) contained a feature with corn dated to 990±85 B.P., but Woodstock pottery, present at the site, was not found in the same feature from which the radiocarbon sample had come.

For these reasons, we are suggesting here that the Woodstock culture may be viewed either as a terminal Late Woodland culture or as an emergent Mississippian culture. Our understanding of the evolution of Mississippian cultures in the Georgia Piedmont requires that we understand the changes that took place in economic, ceremonial, and political aspects of the cultures. By treating the Woodstock culture as if it were anything more than only slightly Mississippianized, we may be making unwarranted assumptions about the manner in which later cultures evolved.

The Woodstock culture is so poorly known that various fundamental questions remain to be answered before we can understand the role it played in the development of Mississippian adaptations in the Piedmont. For example, why are Woodstock sites seemingly concentrated in the Upper Piedmont? What was the nature of Woodstock subsistence, and what role did horticulture play in the subsistence economy? Were platform mounds and palisaded villages used by Woodstock populations? If so, what do their presence tell us about Early Mississippian period social and political organization?

Macon Plateau Culture

The site of Macon Plateau (9Bil) is perhaps the most thoroughly excavated yet most poorly understood prehistoric site in the Southeast. The excavations were extensive and usually well documented, but all too often archaeologists have attempted to describe the results of the excavations in the 1930's (Kelly 1938) only to discover that notes, maps, drawings, photographs, and artifacts

from crucial proveniences have disappeared during the intervening half century.

Despite the minimal amount of published data, the Macon Plateau site has taken on major significance, or perhaps notoriety, as an archtypal example of site-unit intrusion, that is, the major site occupied by an invading population (Fairbanks 1956; 1980; Sears 1964; Willey 1953; 1956).

Only two radiocarbon dates are available for the Macon Plateau culture (Table 1)--A.D. 1055±110 (MASCA corrected) for the famous earthlodge at Macon Plateau and A.D. 1030±150 (MASCA corrected) for a rectangular house at Brown's Mount (9Bi5) (Table 1; Figure 5).

The Macon Plateau culture is represented by two centers and a few smaller sites located where the Ocmulgee River crosses the Fall Line near Macon, Georgia (Figure 6). Both of the centers have excellent settings on high ground overlooking the broad floodplain, Macon Plateau sitting 30 m above the bottomlands and Brown's Mount, the smaller of the centers, sitting 75 m above the bottomlands. Macon Plateau and Brown's Mount are only 9.5 km apart. Both sites are close to the the main channel of the Ocmulgee, and prehistorically their inhabitants probably had access to swamps, oxbow lakes, levee ridges, small streams, and upland forests. Wild foods recovered from Macon Plateau include deer, bear, turkey, and fish. Shoals were apparently not of major interest, despite the presence of mussel shells at Macon Plateau, because the nearest shoals of any size whatsoever lie 6.5 km upriver from that site (Hall and Hall 1908). Maize was also present at the site and a pumpkin effigy vessel was reported by Fairbanks (1956), but the relative importance of horticulture in the subsistence economy is unknown. Of some interest is the discovery of a cultivated field beneath Mound D at Macon Plateau (Kelly 1938; Nelson et al.. 1974). Given the broad expanse of floodplain within a very short distance of the site, the presence of a field on the plateau itself, which would never have been flooded, deserves explanation.

Macon Plateau is the largest of the two centers, covering nearly 1.8 km². It supported six platform mounds and several earthlodges, at least one of which may have been a council chamber. All the major public architecture at the site appears to date to the Macon Plateau culture, but the presence of sub-mound midden suggests that the site was occupied by Mississippian groups for at least a brief period before mound construction began. The mounds at Macon Plateau include Mound A, a 15 m high pyramidal mound with ramps; Mound B, a smaller pyramidal mound 3 m high; Mound C, the Funeral Mound, which stood nearly 8 m high; Mound D, which was about 2.5 m high; the McDougal mound, 4.5 m high, which was a house mound covered by a clay mantle; and the Dunlap mound, 0.6 m high, which was also a house mound covered by a clay mantle.

The main circular earthlodge at Macon Plateau was very well preserved. Its most distinctive features include benches circling the interior wall and a bird effigy alter (Fairbanks 1946). The other earthlodges at the site were not as elaborate.

The site also contained two long, wide trenches, called dugouts, that were probably fortifications (Kelly 1938; Williams and Henderson 1974).

Brown's Mount was a much smaller site, having only one known earthlodge. The population of the two sites is unknown, although residential structures were found at both. One such structure was found within the agricultural field preserved under Mound D. This structure was rectangular and at least 7.2 m long. Other structures at the site indicate that both wall trench and single post construction techniques were used.

Macon Plateau pottery types--Bibb Plain, Bibb Plain Variant, Halstead Plain, Macon Thick, and two types of salt plan, McDougal Plain and Hawkins Fabric Marked--are unlike anything else found in the Lower Piedmont then or later. Vessel shapes more closely resemble typical Mississippian vessels in the Tennessee River valley than they do Late Woodland or later Mississippi period vessels in the Piedmont. Shell tempering is extremely rare in the Lower Piedmont, and does not occur until at least a century later in the Upper Piedmont. In the Funeral Mound at Macon Plateau, Bibb Plain, which comprises the vast majority of sherds from the excavations, is 40 % shell tempered, 55 % grit tempered, and 5 % mixed shell and grit tempered (Fairbanks 1956). Shell tempered pottery occurs in similar proportions in most undisturbed Early Mississippian contexts on the site. Finally, Macon Plateau pottery, like Mississippian pottery throughout the Eastern Woodlands, is predominantly plain, in stark contrast to the elaborately decorated Swift Creek, Napier, Woodstock, Etowah, Savannah, and Lamar complicated stamped pottery endemic to the region.

Recently Bruce Smith (1984) has asked just how different Macon Plateau is from contemporary and earlier groups in the immediate vicinity of the site and if there is justification for assuming that the culture was introduced by an invading population (B. Smith 1984). In reviewing the arguments and the evidence presented by various authors (Fairbanks 1946; 1956; Kelly 1938; Nelson et al.. 1974; Sears 1964; B. Smith 1984; H. Smith 1973; Willey 1953; Willey et al. 1956; Williams and Henderson 1974) we find ourselves, on the one hand, agreeing with the detractors of the site-unit intrusion model that sufficient evidence supporting the model has not been presented. On the other hand, we disagree with the detractors' (see B. Smith 1984) position that local development is the most suitable explanation.

Some of the discussions of the Mississippian invasion into central Georgia leave one with an image of a virtual blitzkrieg overwhelming the nasty and brutish Late Woodland savages. In fact, the Indians dwelling in the Piedmont at the end of the Late Woodland period were probably not strikingly different from those at Macon Plateau. A simple form of horticulture was practiced (Wood et al.. 1984), some status differentiation may have been present, and platform mounds were built (Dickens 1975). The most important differences seem to have been either one of scale--more intensive horticulture, greater status differentiation, larger mounds--or of style--plain, shell tempered vessels verses complicated stamped, grit tempered vessels.

Bruce Smith (1984) has argued that one reason so few Macon Plateau sites are recognized in the Lower Piedmont might be the heavy sedimentation of bottomlands that has buried many sites. While one can not minimize the problems this sedimentation has caused for archaeological survey, this is probably not sufficient reason to dismiss the scarcity of Macon Plateau sites as merely an artifact of survey coverage. In the Wallace Reservoir (Lake

Oconee), 75 km northeast of Macon, surface and subsurface surveys have produced collections from thousands of sites, including a few late Swift Creek sites, many Napier sites, and hundreds of Etowah and Lamar sites. Yet very few shell tempered sherds has been found there, none in contexts attributable to the Macon Plateau culture (M. Smith, 1985, personal communication).

There is no denying that survey in the vicinity of Macon is so spotty that many heretofore unknown Macon Plateau culture sites might exist. Only five Macon Plateau components other than those at the two centers are listed in the Georgia Archaeological Site Files. Hale Smith (1973) reports that several other sites were found in the floodplain of the Ocmulgee River during a survey for the Interstate 16 right-of-way, but these sites are not recorded in the site files. We feel, however, that this lack of data means that evidence for either invasion or local development is inadequate. What evidence we have strongly suggests that a hypothesis attributing the culture to site-unit intrusion is reasonable if nothing else.

A final point that has not been made often enough is that the Macon Plateau culture failed. Whether it was an indigenous development or an invading population, it appears to have had little interaction with surrounding groups and seems to have contributed few if any lasting elements to succeeding cultures. Perhaps as our knowledge of Mississippi period economic and political organization improves, we will recognize certain lasting contributions. With respect to existing stylistic and architectural data, the few Mississippian attributes that appear during the Middle and Late Mississippi periods probably were introduced from Tennessee or Alabama rather than from Macon.

Questions that remain to be answered about this enigmatic phenomenon include: Was Macon Plateau a result of population movement or in situ development? What were the social, political, and economic relationships of the Macon Plateau population to neighboring Woodland or Mississippian groups? How was the Macon Plateau subsistence economy organized? What were the lasting effects of the Macon Plateau culture on subsequent developments in the Georgia Piedmont?

Averett Culture

The Averett culture, or complex as it is often called, has been described as a ". . . quasi-Mississippian phenomenon, centered in the Chattahoochee Valley near the Fall Line. . ." (Knight and Mistovich 1984:223). This complex, as far as we know, occurs mainly in the Fall Line Hills along the Chattahoochee and a few small tributaries. It extends no more than 40 km south of the Fall Line (Ledbetter et al. 1985) and may extend an equal distance northward into the Lower Piedmont (McMichael and Kellar 1960; Chase 1963; Huscher et al. 1972), although Piedmont sites are relatively uncommon (Figure 6). Because the highest density of Averett sites can be found in the Fall Line Hills, it is generally considered a Coastal Plain entity.

The Averett Culture is identified by incised, brushed and undecorated sand or grit tempered vessels, some of which have applique nodes on the shoulder or rim. Averett pottery is sometimes found in association with Etowah Complicated Stamped pottery and even resembles Etowah pottery in paste,

temper, vessel shape, and vessel size (Chase 1959; Hally 1975; F. Schnell 1975; Gresham et al.. 1985).

At the Carmouche site (9Me21) (Gresham et al.. 1985), located in the Fall Line Hills on Upatoi Creek, the minimum number of vessels represented by sherds included seven Averett Incised, two Averett Brushed, possibly three Averett Plain, 10 Etowah Complicated Stamped, and nine Lake Jackson Decorated vessels. Gresham et al.. (1985) suggest that the Averett and Etowah vessels were manufactured by the site's inhabitants, while the Lake Jackson vessels were obtained from Rood focus groups down river.

The co-occurrence of these types indicates both contemporaneity and interaction between Averett villages and communities to the north and south. G. Schnell (1981) has even suggested that the Averett culture was a buffer between the Etowah culture to the north and the Rood culture of the Coastal Plain. In this case, the term "buffer" seemingly refers to nothing more than the location of Averett between the two better known cultures, a reflection of our ignorance. There are no known Averett mound centers, so if the Averett culture represents a discrete polity, it was certainly a minor one.

The only radiocarbon dates for the Averett culture come from the Carmouche site (Gresham et al.. 1985) (Table 1). Given its association with Etowah and Rood focus pottery, a range of A.D. 950 to A.D. 1200 for the Averett culture seems reasonable.

Subsistence data from Averett sites are extremely scarce. At Carmouche maize, hickory nuts, acorns, persimmon seeds, and the bones of deer, opossum, turkey, turtle, snake, and fish were identified. Unfortunately, preservation of organic remains at that site was poor, and the low frequency or absence of some species probably has no cultural significance.

Sites are found mainly along streams in the Fall Line Hills. Along the Chattahoochee within the Piedmont, Averett sites are noted on first and second terraces, at the mouths of creeks, and near shoals (McMichael and Keller 1960). McMichael and Keller (1960) also suggest that Averett sites in the Oliver Basin above Columbus tend to be farther from the Chattahoochee River than Lamar sites.

No Averett buildings have been found or excavated, so nothing can be said about the nature of their habitation sites.

Additional survey in western Georgia will undoubtedly produce more Averett sites, but it seems unlikely that major Averett sites exist in the Piedmont. However, even minor Averett sites may prove invaluable if they contain reasonably well preserved plant and animal remains or large collections of pottery. If such sites are found, the questions archaeologists should address include: What is the nature of Averett subsistence in west central Georgia? What was the level of sociopolitical complexity during the Averett occupation in the region? What were the social, political, and economic relationships of the Averett culture to the Rood and Etowah cultures?

Etowah Culture

Stratigraphically, Etowah ceramics in north Georgia are known to follow Woodstock ceramics, but they also sometimes co-occur. Etowah pottery is also found in association with Averett pottery in west central Georgia and with Macon Plateau ceramics at the site of that name in central Georgia. The relationships among these various Early Mississippi period cultures are not understood, nor is the dating of the subdivisions of the Etowah culture. Geographical, temporal, and stylistic differences among components from the Piedmont have led archaeologists to propose at least three phases for the earliest portion of the Etowah culture: Etowah I and Etowah II in the Upper Piedmont and Armor in the Oconee River valley. Later phases of the Etowah culture include Etowah III in the Etowah and Coosawattee River valleys, Etowah IV in the Etowah valley, Stillhouse in the Oconee River valley, and Jarrett in the upper Savannah River valley.

The later Etowah occupation in the Georgia Piedmont witnessed the formation of major political and ceremonial centers in the Coosawattee, Etowah, upper Chattahoochee, upper Savannah and Oconee River valleys. This suggests that the level of sociopolitical complexity increased substantially over what had existed previously everywhere in the Piedmont except at Macon Plateau.

Etowah I Phase: Etowah I may best be described as a phase in search of a site, for information about the Etowah I phase is so sparse that one can rightfully question whether the phase exists at all. Caldwell (1957) reports that no pure Etowah I sites existed in the Allatoona Reservoir and that only eight Etowah I sites occurred in the Buford Reservoir (Lake Lanier) (Caldwell 1953a) (Figure 7). The criteria for deciding whether or not a site could be assigned to the Etowah I phase are never described adequately. In fact, the Conn Creek site in the Allatoona Reservoir is described by Caldwell (1957) as Etowah II, although one might argue that it could more appropriately be classified as Etowah I.

In the Buford Reservoir, surface collections containing both Woodstock and Etowah pottery were classified as Late Woodstock; those containing only Etowah pottery were called Etowah I. Caldwell (1953a) mentions only the ladder based diamond, often with background filling of horizontal lines, as an Etowah I complicated stamped motif. Presumably, other motifs might also have been present in the surface collections from along the Chattahoochee, but he does not describe these.

Caldwell (1953a) is unsure how to interpret the co-occurrence of Woodstock and Etowah pottery. On the one hand, the collections might represent the transition from Woodstock culture to Etowah culture, during which both types were made by one group of people. On the other hand, he speculates that the co-occurrence might represent intentional reoccupation of Woodstock sites by Etowah groups.

Hally (1970) found Woodstock and Etowah sherds together in a pit feature at Potts' Tract near the Coosawattee River in Murray County. He assigns this feature to the late Woodstock culture.

In the Allatoona Reservoir, Caldwell (1957) notes that the distinctive complicated stamped motifs of the Etowah I phase are the line block and the

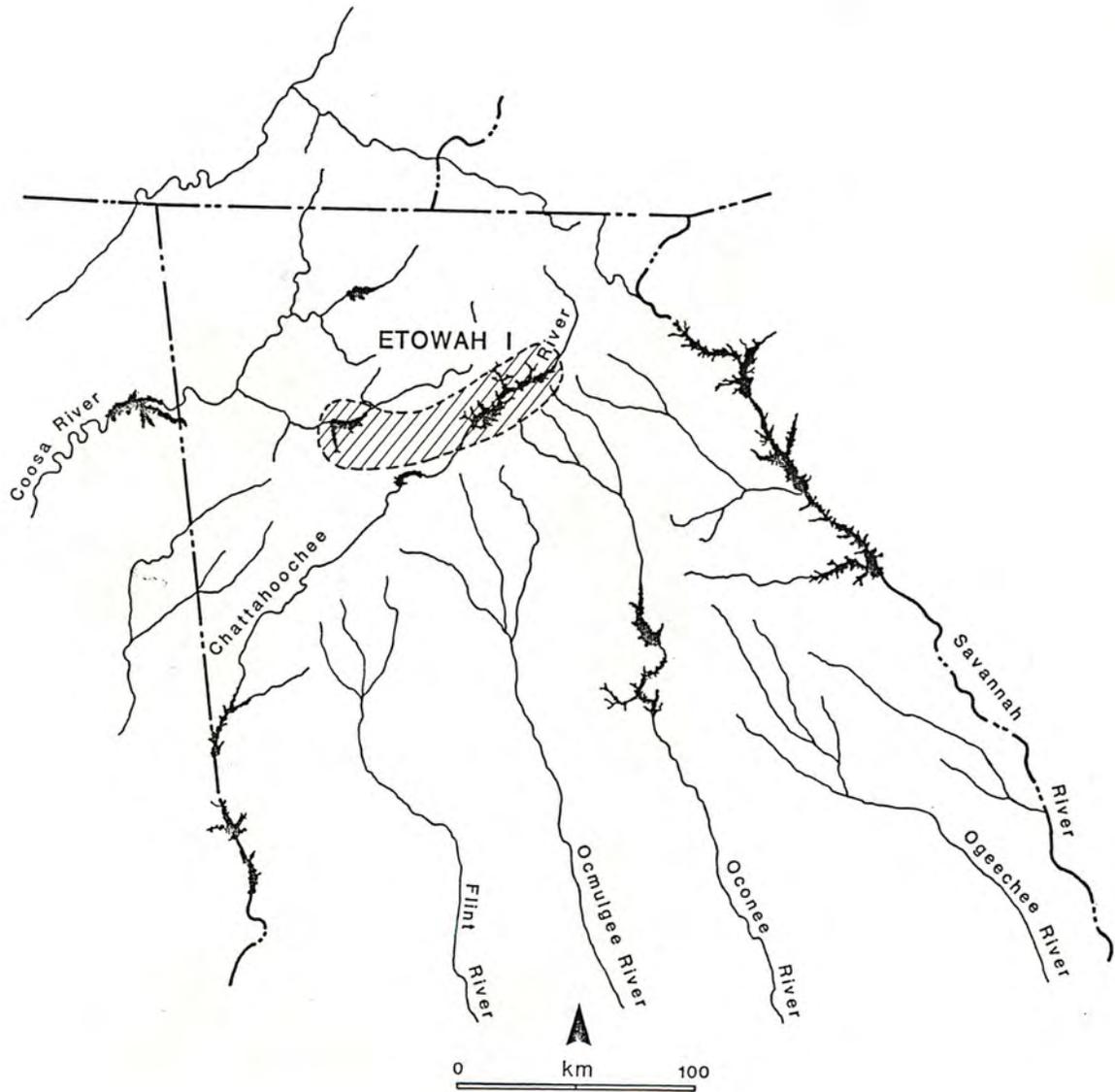


Figure 7. Distribution of Etowah I phase.

ladder based diamond. However, he also argues that because Sears and Wauchope excavated sites containing both ladder based diamonds and bar diamonds, and because the bar diamond motif is more common in subsequent phases, then sites containing ladder based diamonds without bar diamonds must be early. The temporal importance of the line block motif is unclear since it occurs in both the Woodstock culture and in later Etowah phases.

Caldwell (1957) also mentions that Etowah I sherds tend to be thinner than Etowah II sherds and that plain sherds are more common in the earlier phase in Allatoona. Interestingly, in the Buford Reservoir Etowah Plain sherds are reportedly very rare (Caldwell 1953a). In the Etowah River valley, Caldwell reports no Mississippian ceramic features other than an occasional strap or loop handle and an effigy adorno.

Sears (1953; 1958) adds little to the discussion of Etowah I other than to say that it is not present at the Wilbanks site nor in his excavation units at the Etowah site downriver.

In terms of its distribution, the Etowah I phase, if it exists, seems to be restricted to the extreme Upper Piedmont. In terms of dating, it may be slightly later than the latest Woodstock occupation, that is, around A.D. 1000 to 1050.

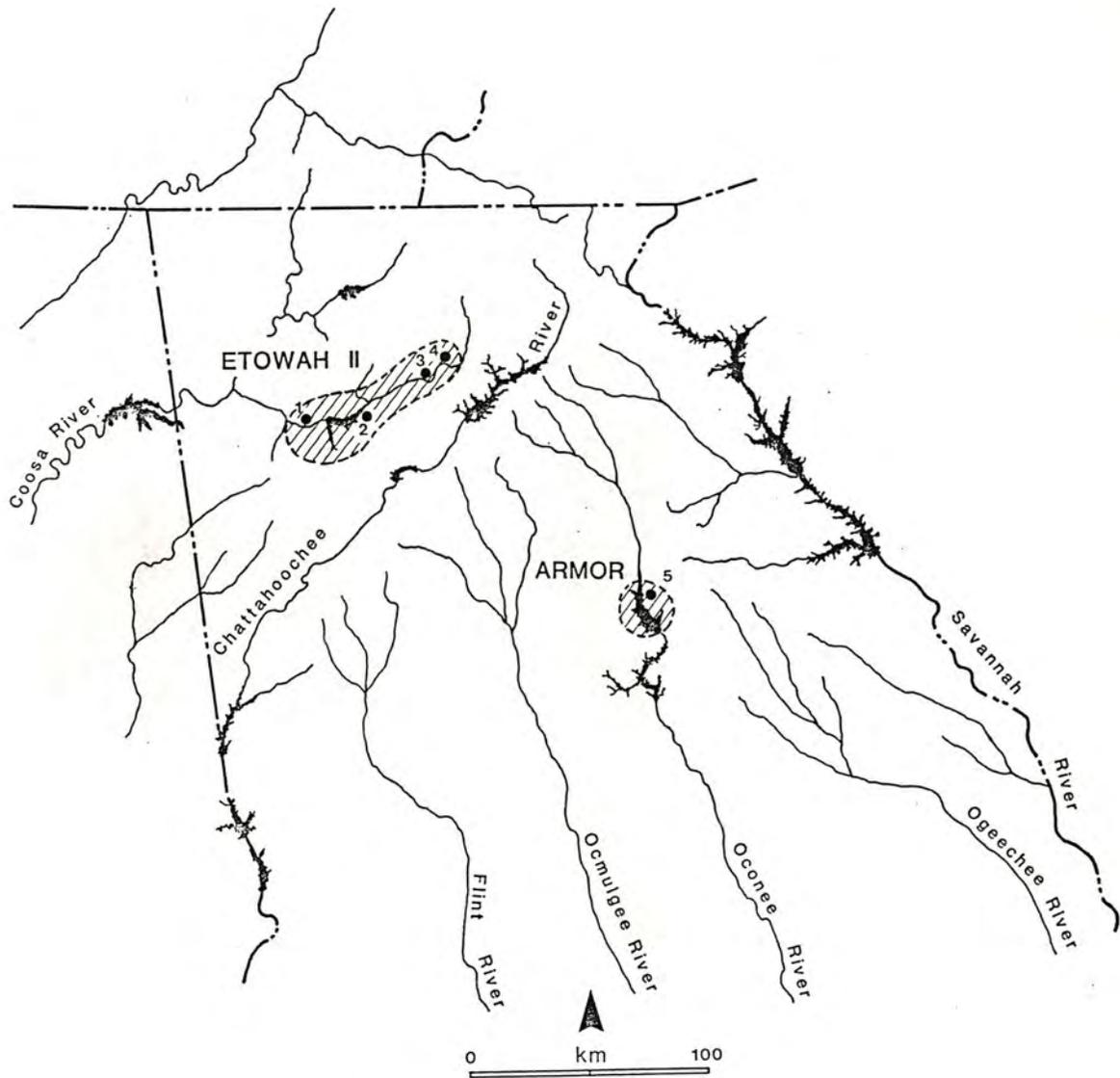
We feel that it may be time for archaeologists to discard the notion of an Etowah I phase. Instead, we should realize that the incredible temporal and spatial diversity of pottery styles found in north Georgia during the Early Mississippi period will often make certain "transitional" or mixed assemblages difficult to classify. Assigning phase names before we have anything concrete to assign them to will only confuse an already blurry picture.

Etowah II Phase: The Etowah II phase is much better understood than the Etowah I phase. At this time the Buford Reservoir appears to have been abandoned (Caldwell 1953a), but occupation continued in the Etowah River valley (Sears 1953; 1958; Caldwell 1957) (Figure 8).

Most of our information about Etowah II comes from the Wilbanks site, where the midden stratum called Phase A (Sears 1958) was the earliest deposit. Pottery types from the Phase A midden and from other Etowah II components in the Allatoona area include Etowah Complicated Stamped, Etowah Plain, Etowah Red Filmed, Etowah Polished Plain, Etowah Polished Black, Sixes Plain, Hiwassee Red Filmed, and Hiwassee Complicated Stamped (Table 3). The Hiwassee and Etowah types differ only in temper, the Hiwassee types consisting of shell tempered sherds and the Etowah types consisting of sand tempered sherds.

The proportions of different identifiable complicated stamped motifs for the Etowah II assemblage at Wilbanks are presented in Table 4. Sears (1958) notes that the appearance of the two bar diamond and a decrease in the frequency of the ladder based diamond distinguish the Etowah I and Etowah II phases. Since there are no published motif frequencies for any Etowah I sites, we must assume that his statement is correct.

Sears (1958) was able to say little about the non-ceramic characteristics of the Etowah II occupation at Wilbanks.



1. Etowah (9Br1)
2. Wilbanks (9Ck5)
3. Long Swamp (9Ck1)
4. Conn Creek (9Ck16)
5. Cold Springs (9Ge10)

Figure 8. Distribution of Etowah II and Armor sites and phases.

Table 3

Relative Frequencies of Pottery Types in Etowah Phases

	<u>Etowah II</u> ¹	<u>Armor</u> ²	<u>Etowah III</u> ³	<u>Stillhouse</u> ⁴	<u>Jarrett</u> ⁵
Etowah Complicated Stamped	56	44	69	58	47
Hiwassee Island Complicated Stamped	2		<1		
Wilbanks Complicated Stamped			1		
Savannah Check Stamped				2	4
Etowah Incised			<1		
Etowah Red Filmed	1		1	<1	2
Hiwassee Island Red Filmed	<1		<1		
Hiwassee Island Red on Buff			<1		
Etowah Polished Black	1		2		
Corn cob impressed					<1
Etowah Plain	21	52	21	27	43
Sixes Plain	11		2		
Etowah Burnished Plain	8	4	3	12	3
Collared rims					< 1
Sample size	3958	259	8367	369	667

¹Sears 1958: 150-153²M. Smith 1981b: Table 4³Sears 1958: 154-158⁴M. Smith 1981b: Table 4⁵Stl. Counts by author

TABLE 4

Relative Frequencies of Identifiable Complicated Stamped Motifs, Etowah II and Armor Phases

	<u>Etowah II Phase</u>		<u>Armor Phase</u>
	<u>Wilbanks¹ Site</u>	<u>Etowah² Site</u>	<u>Cold Springs³ Site</u>
One bar diamond	4	1	5
Two bar diamond	53	12	26
Ladder base diamond	35	78	42
Three bar diamond	5	0	3
Cross diamond ⁴	0	0	24
Line block	4	9	0
Filfot cross	0	0	0
Sample size	454	104	114

¹Sears 1958: 151

²Sears 1953. Counts include motifs for both Etowah Complicated Stamped and Hiwassee Complicated Stamped

³Smith 1981b: Table 5

⁴Several separate cross diamond motifs combined into one category

Caldwell (1957) suggests that two other sites along the Etowah River in Cherokee County--Conn Creek (9Ck16) and Long Swamp (9Ck1)--might also be assigned to the Etowah II phase. Conn Creek was not excavated, but in the surface collection Wauchope (1966) found 65 Woodstock Complicated Stamped sherds and 40 "Proto-Etowah Stamped" sherds, with line block, ladder based diamond, and other undescribed concentric diamond motifs. It is unclear why Caldwell calls this site Etowah II rather than Etowah I or even late Woodstock. Long Swamp (Wauchope 1966) contained a village and mound on the floodplain of the Etowah River. The sub-mound and lower mound levels contained Etowah pottery, but there was such a wide range of complicated stamped motifs in these levels that it is difficult to see which Etowah phase the site should be assigned to.

Some of the village area buildings at Long Swamp may date to the Etowah II phase. They were wattle-and-daub, single post structures with circular clay hearths (Wauchope 1966).

The Etowah site technically lies on the border of the Piedmont and Ridge and Valley provinces, but developments there during the Etowah II phase are of some interest. Etowah II features at the site include extremely broad and deep refuse pits (Sears 1953), but no definite structures were recorded except for several thought by Sears (1953) to be late Etowah II or early Etowah III. Judging from Sears' (1953) excavations, mound construction at the site appears to have postdated the Etowah II phase, so its role as a political center is unclear.

Table 4 shows the frequency of complicated stamped motifs represented in Etowah II contexts at the Etowah site. These figures include the percentage for both Etowah Complicated Stamped and Hiwassee Complicated Stamped. Of some interest, also, is the relatively high proportion of shell tempered pottery in the Etowah II assemblage at the Etowah site, considerably higher than at the Wilbanks site. Out of 1575 sherds at Etowah (9Br1), nearly 70 % are shell tempered. Of the 1128 plain sherds, 88 % are shell tempered. At Wilbanks, Etowah II sherds were 13% shell tempered.

Given the published data, we must conclude that the Etowah II phase is found only in the Etowah River valley. No radiocarbon dates have been obtained from strictly Etowah II contexts. Two dates--A.D. 1150-1180±200 and A.D. 1430±200 (MASCA corrected) (Table 1; Figure 5)--have been obtained from Etowah II or III contexts (Larson, personal communication 1983).

Armor Phase: Armor is the name assigned to the early Etowah phase in the Oconee River valley (M. Smith 1981b) (Figure 8). Despite extensive surveys in the Wallace Reservoir (Lake Oconee), relatively few Etowah sites were found there, and of these, most are represented by only one or two sherds and are unassignable to a phase. Excavated Armor phase material comes exclusively from the Cold Springs site (9Ge10) (M. Smith 1981b). A radiocarbon date of A.D. 965±95 (MASCA corrected) came from the site (Table 1; Figure 5).

The Cold Springs site had two small mounds; the larger was 2.8 m high and the smaller was 1.6 m high. Both mounds were built and used during the Woodland period, but they may have been used subsequently, though not intensively, by the Armor phase inhabitants of the site. There is some

question, therefore, whether we should refer to the site as an early Etowah center. The total site area was 43,700 m².

The domestic structures excavated at Cold Springs have not been described in detail. One Etowah structure had wall trenches, a wall trench entranceway, and a central hearth. Its dimensions were 5 m by 6 m. Other Armor phase buildings reportedly were of single post construction. Basing their estimates on the extent of high density artifact concentrations on the ground surface, Fish and Jefferies (1985) argue that the Cold Springs site might have once contained as many as 13 Etowah buildings.

The Armor phase ceramic assemblage consists of 56 % plain wares and 44 % Etowah Complicated Stamped pottery. It differs from Etowah II phase primarily in not having shell tempered pottery (Table 3). The frequency of complicated stamped motifs are shown in Table 4. The number of sherds with the ladder based diamond motif justifies our calling the Armor phase an early Etowah entity. However, the high frequency of cross diamonds, usually considered a late Etowah motif, is unexpected and may reflect an unrecognized late Etowah or early Savannah component at Cold Springs. The line block motif is unknown from Etowah sites in the Wallace Reservoir, so its absence at Cold Springs probably does not have chronological significance.

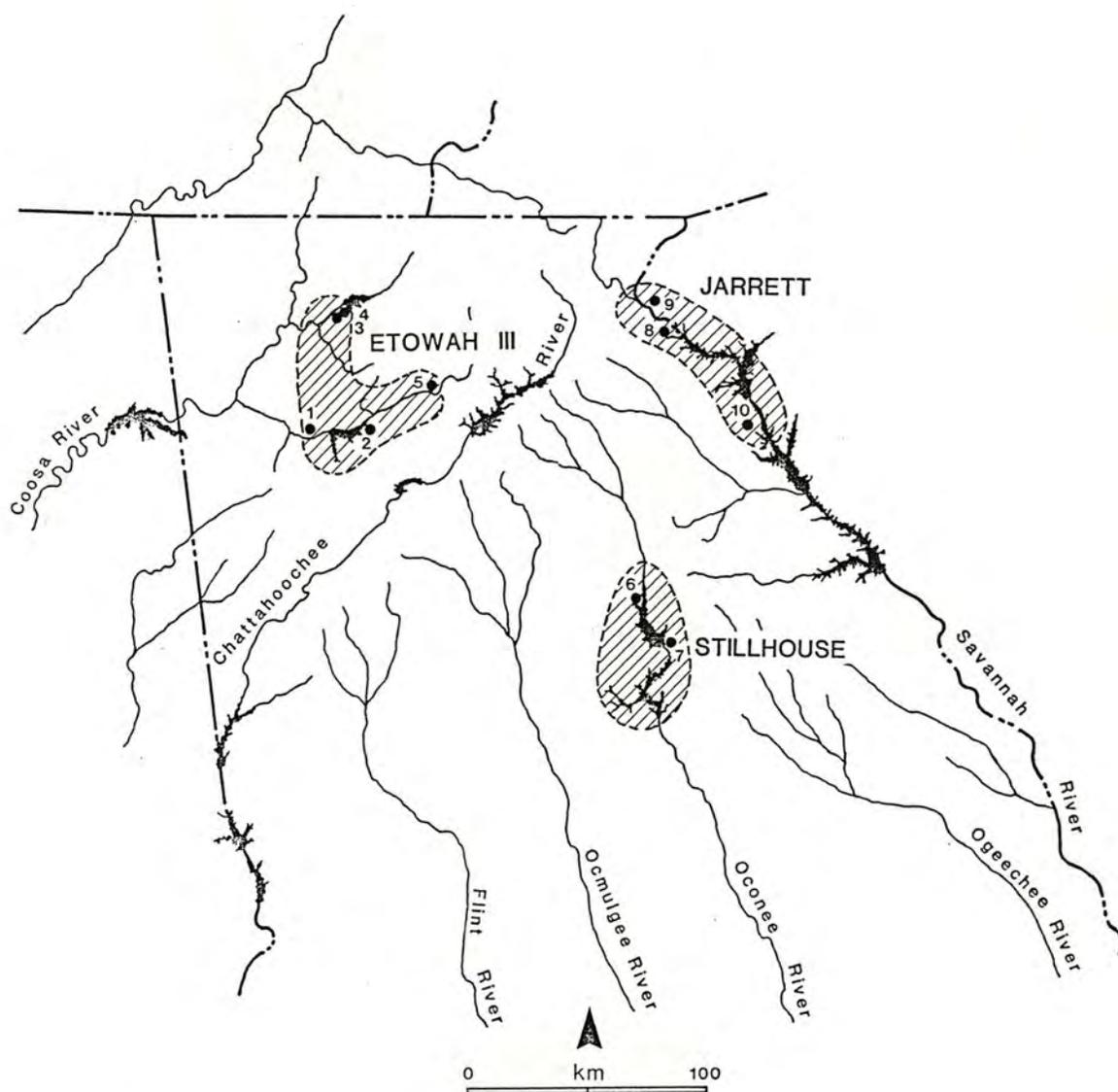
Faunal remains were recovered from Armor phase contexts at Cold Springs but a report of the analysis results has not been completed.

Etowah III Phase: The Etowah III phase was first defined in the Allatoona Reservoir, and the best sources of data for this phase are two sites in the Etowah valley--Wilbanks and Etowah (Figure 9). Kelly (1970,1972) and Kelly et al. (1965) have extended the Etowah III phase into the Coosawattee valley about 55 km to the north. However, it is possible that a more rigorous ceramic analysis might eventually lead to the creation of another late Etowah phase for that area.

The Etowah III phase witnessed the initial construction of platform mounds at Etowah (Sears 1953) and Sixtoe (9Mul00) (Kelly et al. n.d.) and of earthlodges at Wilbanks (Sears 1958), possibly Horseshoe Bend (9Ck4) (Wauchope 1966) and possibly Bell Field (9Mul01) (Kelly 1972,n.d.). In both the Etowah and Coosawattee river valleys, these structures seem to be the earliest signs of major public architecture during the Mississippi period.

Very little is known about Etowah III sites that do not have mounds or earthlodges. Caldwell (1957) identified relatively few Etowah III sites in the Allatoona Reservoir, but suggests that a higher density might be found near the Etowah site itself or downriver from this site well within the Ridge and Valley Province.

Also, little is known about the domestic architecture of this phase. At the Stamp Creek site (9Br139) in the Allatoona Reservoir, there are two rectangular wall trench structures, neither of which had a hearth. At Woodstock Fort, a semi-subterranean Etowah III building was excavated. This structure was also rectangular, but unlike those at Stamp Creek, it did contain a hearth. Sears (1953) located structures at the Etowah site that he assumes had ceremonial or political functions. He suggests that these



- | | |
|--------------------------|---------------------------|
| 1. Etowah (9Br1) | 6. Dyar (9Ge5) |
| 2. Wilbanks (9Ck5) | 7. 9Ge162 |
| 3. Bell Field (9Mul01) | 8. Tugalo (9St1) |
| 4. Sixtoe (9Mul00) | 9. Chauga (380c47) |
| 5. Horseshoe Bend (9Ck4) | 10. Clyde Gulley (9Eb387) |

Figure 9. Distribution of Etowah III, Stillhouse, and Jarrett sites and phases.

structures were affiliated with either the late Etowah II phase or the early Etowah III phase.

The relative frequencies of pottery types in the Etowah III component at Wilbanks are listed in Table 3. Other than a slight decrease in the use of shell tempering, the assemblage differs little from that of the Etowah II component. The frequencies of various complicated stamped motifs in the Etowah III ceramic assemblages from the Etowah site and the Wilbanks site are illustrated in Table 5. In comparing this table to Table 4, one sees a dramatically decreased frequency of the ladder based diamond motif after the Etowah II phase, especially at Wilbanks; an increased frequency of the line block motif; and the appearance of the filfot cross motif.

The Etowah III phase is represented in the Coosawattee River valley by a platform mound at Sixtoe (Kelly et al., 1965) and possibly by an earthlodge level at Bell Field (Kelly 1970, 1972). The excavation reports for both sites contain little useful data, and many notes and drawings from the excavations are now missing.

Kelly finds very strong similarities between the pottery assemblage from the mound at Sixtoe and the pottery from Etowah III contexts at the Etowah site. However, motif descriptions are not presented (Kelly et al., 1965). Later, Kelly (1970, 1972) reports that at Bell Field, a short distance downriver, only 39 sherds came from all the earthlodges combined. The types represented could be from either a late Etowah phase or from an early Savannah phase, so we are uncertain about dating these structures.

Interpretations of subsistence at Sixtoe are based on field observations of water screened material. Kelly et al., (1965) report the presence of deer, small animal, fish, turtle, freshwater mollusc, acorn, hickory nut, and maize. Kelly (n.d.c) also observes that there was a much lower frequency of maize at Sixtoe than at Etowah and hypothesizes that the role of agriculture was less important at the former site than at the later. Given the informal nature of his analysis, we cannot trust Kelly's observations, but his hypothesis should be kept in mind in any future study of Etowah subsistence practices.

Etowah IV Phase: The Etowah IV phase is poorly known and has been defined only in the Etowah River valley (Figure 10). One of the reasons for our ignorance about the phase is that, like the Etowah I phase, Etowah IV is transitional and its most distinguishing features are shared by earlier and later phases.

Caldwell (1957) notes that a major criterion for defining the Etowah IV phase is the integral role in the ceramic assemblage played by Savannah Complicated Stamped pottery. Sears (1958) argues that major differences between Etowah III and Etowah IV include the rougher stamping and the over stamping that occur in the later phase. It is now evident that the distinction between Etowah IV and Savannah culture is arbitrary and that where one chooses to draw the line between the two may be based on preconceived notions about the development of the Savannah culture in the Piedmont.

Few Etowah IV sites are known from the Etowah Valley. Caldwell (1957) describes only one excavated Etowah IV feature, a pit found at Woodstock Fort

TABLE 5

Relative Frequencies of Identifiable Complicated Stamped Motifs, Etowah III, Stillhouse, and Jarrett Phases

	<u>Etowah III Phase</u>		<u>Stillhouse Phase</u>	<u>Jarrett Phase</u>	
	<u>Wilbanks Site¹</u> <u>(Phase B)</u>	<u>Wilbanks Site²</u> <u>(Earthlodge)</u>	<u>Etowah Site³</u>	<u>Dyar Site⁴</u> <u>Tugalo Site⁵</u>	
One bar diamond	4	6	5	5	36
Two bar diamond	46	24	45	86	29
Ladder base diamond	0	0	15	2	10
Three bar diamond	7	4	5	5	0
Cross diamond ⁶	2	2	0	2	10
Line block	25	27	5	0	16
Filfot cross	16	36	25	0	0
Sample size	554	713	20	86	31

¹Sears 1958: 156

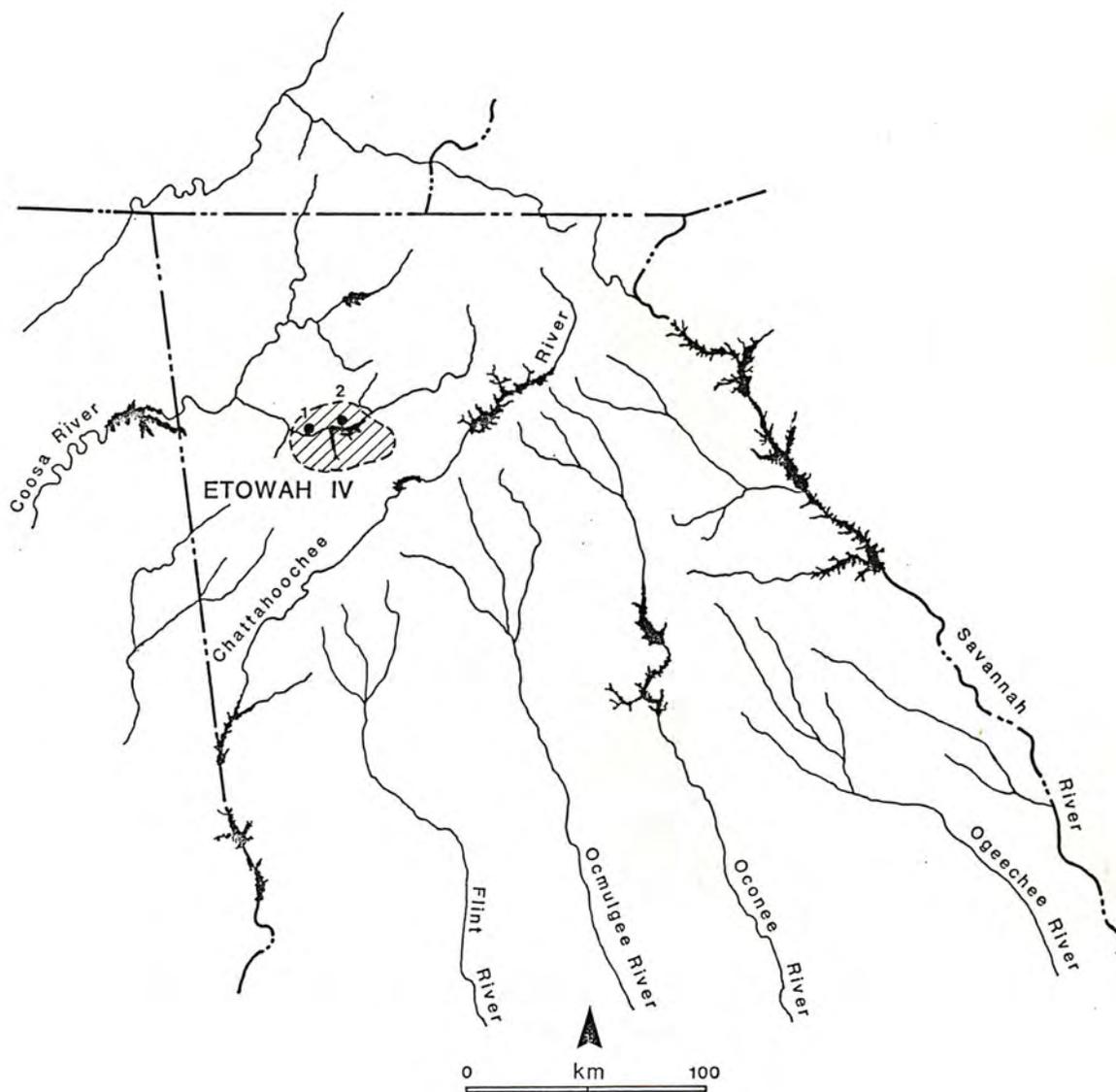
²Sears 1959: 160

³Sears 1953. Counts include motifs for both Etowah Complicated Stamped and Hiwassee Complicated Stamped

⁴Smith 1981b: Table 5

⁵Counts by author

⁶Several separate cross diamond motifs combined into one category



1. Etowah (9Br1)
2. Woodstock Fort (9Ck85)

Figure 10. Distribution of Etowah IV sites and phase.

that contained Savannah Complicated Stamped sherds as well as Etowah Complicated Stamped pottery most often decorated with the filfot cross motif.

At the Etowah site, Sears (1953) reports that no pure Etowah IV midden deposits were found, although the phase was represented at the site. In the collections he identifies as Etowah IV, the complicated stamped pottery was classified at 41 % Hiwassee Complicated Stamped, 40 % Etowah Complicated Stamped, and 29 % Savannah Complicated Stamped. Motifs represented in the Hiwassee and Etowah types are predominantly the filfot cross (44 %) and the two bar diamond (29 %).

Virtually nothing has been published about subsistence remains or about any non-ceramic artifacts from Etowah IV contexts.

Stillhouse Phase: The Stillhouse phase is the manifestation of late Etowah culture in the Oconee River valley (Figure 9) (M. Smith 1981a, 1981b). It possibly extends from the Scull Shoals site (9Ge4) north of Lake Oconee to the Shinholser site (9BL1) south of Milledgeville and below the Fall Line. However, analysis of pottery recently excavated from these two sites has indicated that the earliest mound and pre-mound levels contain assemblages more closely resembling those of Savannah culture than the assemblage from the Dyar site (9Ge5) with which Smith (1981a) defined the Stillhouse phase (Williams 1985).

The largest collection of Stillhouse phase material comes from the Dyar site at the northern end of the Wallace Reservoir (Lake Oconee) (M. Smith 1981a); the second largest collection comes from 9Ge162, a heavily disturbed site on a large island in the Oconee River just above Wallace Dam. Taken together, these two collections are still relatively small.

There are about 40 known Etowah sites in the Wallace Reservoir area. Most lie along the main channel of the Oconee River with one cluster in the broad floodplain around the Dyar site and another cluster near the shoals around 9Ge162. Unfortunately, the collections from these survey sites are too small to assign them to the Stillhouse phase rather than the Armor phase. The distribution of sites within the reservoir suggests that the Etowah culture subsistence strategy required the exploitation of both bottomland and shoal resources.

At Dyar the lowest levels within the large mound excavation are assigned by Marvin Smith (1981a) to the Stillhouse phase. These levels include a possible public building predating the mound and several small substructure platforms. A radiocarbon date of A.D. 1055±60 (MASCA corrected) was obtained (Table 1; Figure 5), but it seems somewhat early.

Botanical remains from a Stillhouse phase feature include maize, hickory nut, walnut, acorn, and maypop seeds.

The relative frequencies of pottery types in the Stillhouse phase assemblage are listed in Table 3. The assemblage differs from Etowah III phase primarily in the absence of shell tempering and the presence of Savannah Check Stamped.

The proportions of various complicated stamped motifs are shown in Table 5. In comparing the Stillhouse phase ceramic assemblage to that of the Armor phase, one will notice that the two bar diamond increased in importance during the later phase, the frequency of the ladder based diamond declined substantially, and the frequency of the cross diamond declined. The declining frequency of cross diamonds is surprising since it seems to increase in frequency in the Etowah River valley. The major difference between the Stillhouse phase and the roughly contemporary Etowah III phase is the absence of line block and filfot cross motifs in the Oconee River valley.

Jarrett Phase: At the Tugalo site (9St1), several mound stages with earthlodges yielded pottery identified by Caldwell as Etowah III or Etowah IV (Williams and Branch 1978). Kelly and Neitzel (1961) attribute the earliest mound construction stages at Chauga (380c47) to a late Etowah horizon with a high proportion of Savannah Complicated Stamped pottery. Their description reminds one of an Etowah IV phase assemblage; and Rudolph and Hally (1985) argue on the basis of the published description that the assemblage might be related to the Beaverdam phase of Savannah culture. However, a recent analysis of pottery from both Tugalo and Chauga leads Hally to conclude that the assemblages are earlier than Savannah culture and probably contemporary with Etowah III in the Etowah River valley.

We propose that the Etowah culture variant represented at Tugalo and Chauga be given separate phase status and that it be designated the Jarrett phase. Sherd counts for the collection from Tugalo are listed in Table 5. The Jarrett phase is distinct from other late Etowah phases in having Savannah Check Stamped, corn cob impressed decoration on jar necks, and collared jar rims. These features are also characteristic of the succeeding Savannah culture Beaverdam phase.

MASCA corrected radiocarbon dates from Jarrett phase contexts at Tugalo and Chauga range between A.D. 890 and A.D. 1350 (Table 1; Figure 5).

Farther downriver at the Clyde Gulley site (9Eb387) in the Russell Reservoir, Tippitt and Marquardt (1984) illustrate sherds that might also be associated with the Jarrett phase. At the Rembert site, pottery excavated by Caldwell and Miller (Caldwell 1953b) has been reanalysed by Hally (Rudolph and Hally 1985). The collection from the site is mixed, but contains 24 Etowah sherds which might also represent an Etowah component.

It is possible that the Jarrett phase extends into the far reaches of the upper Chattahoochee valley, although artifact analysis has not been conducted to verify this. Surface collections from the Nacoochee site (9Wh3) in White County contained at least 100 Etowah Complicated Stamped sherds. Sherds with identifiable motifs (35) showed two bar diamonds (48.5 %), one bar diamonds (17.1 %), ladder based diamonds (17.1 %), line blocks (8.6 %), cross diamonds (5.7 %) and three bar diamonds (2.9 %) (Wauchope 1966:355-356). At the Eastwood site (9Wh2), about 3 km downriver from the Nacoochee mound, a low mound contained 1763 Etowah Complicated Stamped sherds in addition to many Lamar sherds. Over 70 % of the Etowah Complicated Stamped sherds had concentric diamond motifs. Identifiable motifs included two bar diamonds (89.7 %), three bar diamonds (5.8 %), and one bar diamonds (4.7 %) (Wauchope 1966).

The distribution of all Early Mississippi period mound sites in the Piedmont is shown in Figure 11.

Future research into the early Etowah phases will not progress very far until we have a better understanding of regional and temporal variation in the ceramic complex, most notably in complicated stamped motifs. Other research questions include: What is the relationship of early Etowah phases in the Upper Piedmont to Mississippian cultures in the Tennessee River valley? Why was the Buford Reservoir portion of the Chattahoochee River valley apparently abandoned following an early Etowah occupation? What was the level of sociopolitical complexity at early Etowah sites? How were the various early Etowah phases related socially, politically, and economically? What were the subsistence practices of the early Etowah culture and how did they vary across the Piedmont?

Questions about the late Etowah culture that need to be addressed in future research include: What is the regional and temporal variation in late Etowah ceramic complexes? What is the stylistic relationship of late Etowah pottery to Savannah pottery? How and why did the complexity of sociopolitical organization increase with the late Etowah culture? What was the relation among various late Etowah political units? How did the role of horticulture in the late Etowah economy vary with population density and political complexity? What were the antecedents to the development of the Southeastern Ceremonial Complex?

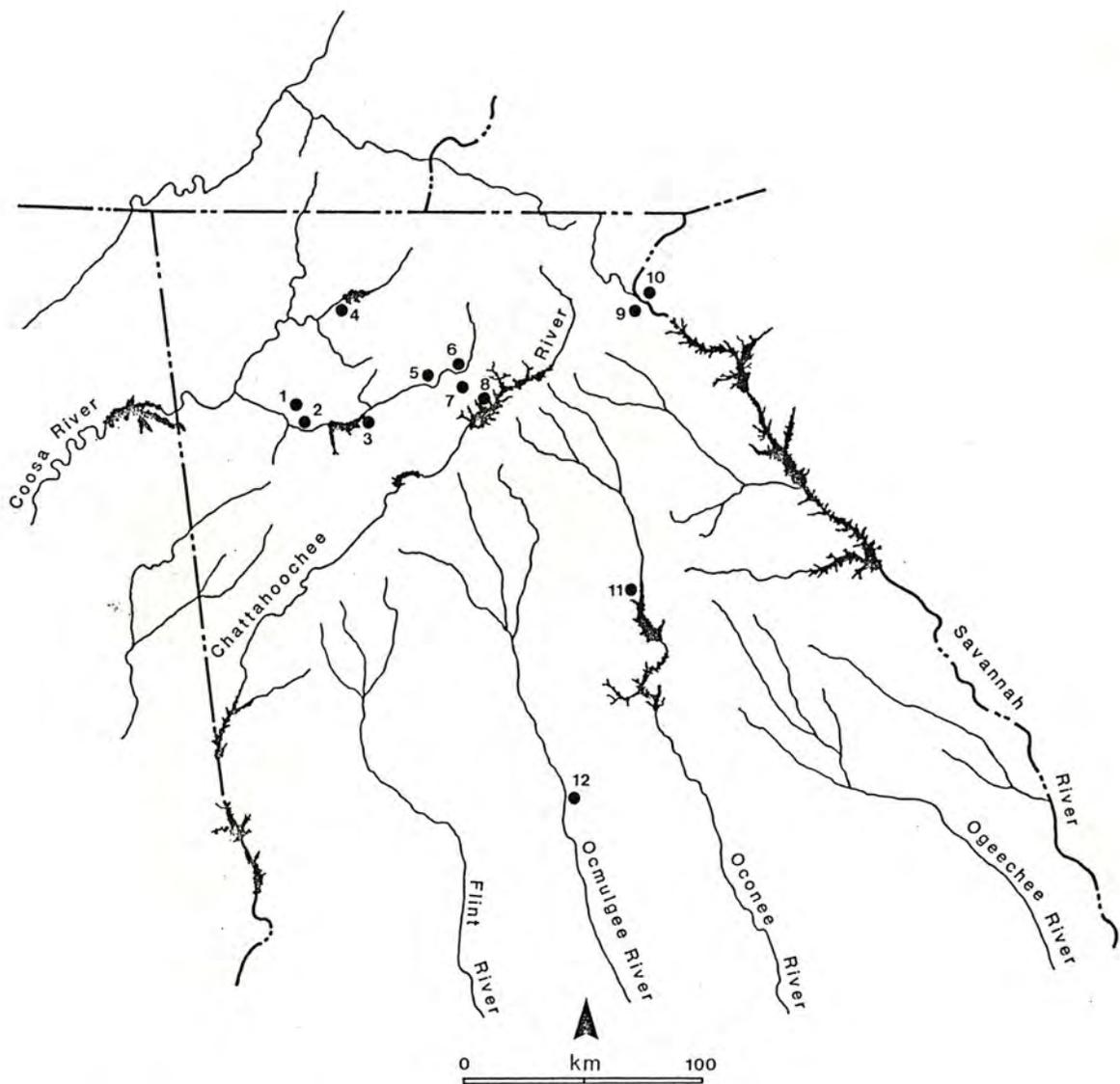
MIDDLE MISSISSIPPI PERIOD

The Middle Mississippi period in the Georgia Piedmont lasts from A.D. 1200 to A.D. 1350. Only one culture, Savannah culture, is currently recognized in the Piedmont during this period. It is possible that Rood culture, centered in the Coastal Plain of southwest Georgia, extends at this time into the Lower Piedmont along the Chattahoochee River (McMichael and Kellar 1960). However, the dating of Rood culture sites in the area is not certain, and we suspect that they are associated with the Early Mississippi period Averett culture rather than the Middle Mississippi period.

Savannah Culture

The Savannah culture is represented by numerous sites throughout the northern and eastern portion of the Georgia Piedmont. It is not known for the middle Chattahoochee or upper Flint drainages (McMichael and Kellar 1960; Huscher et al.. 1972).

Savannah culture is defined primarily on the basis of pottery. The ceramic complex typically consists of four pottery types: Savannah Complicated Stamped, Etowah Complicated Stamped, Savannah Check Stamped, and Savannah Plain. The two complicated stamped types, as defined here, differ from each other primarily in stamping execution and stamp motifs. Etowah Complicated Stamped is characterized by concentric diamond motifs like the one bar and two bar diamond and by the herringbone motif; Savannah Complicated Stamped is characterized by the concentric circle, two bar concentric circle, and two bar cross concentric circle.



- | | |
|--------------------------|--------------------------|
| 1. Two Run Creek (9Br3) | 7. 9Fo3 |
| 2. Etowah (9Br1) | 8. Summerour (9Fo16) |
| 3. Wilbanks (9Ck5) | 9. Tugalo (9St1) |
| 4. Sixtoe (9Mu100) | 10. Chauga (380c47) |
| 5. Long Swamp (9Ck1) | 11. Dyar (9Ge5) |
| 6. Horseshoe Bend (9Ck4) | 12. Macon Plateau (9Bil) |

Figure 11. Distribution of Early Mississippi period mound and earthlodge centers.

A number of regional variants or phases of the culture can be recognized. These phases and their most thoroughly investigated components are listed in Table 6 and mapped in Figure 12. The most thoroughly researched and best known phases are Beaverdam and Wilbanks. Sites with major Savannah components have recently been investigated by Mark Williams in the middle Oconee River drainage. The pottery recovered from these sites has been assigned to a new Scull Shoals phase (Williams 1985a). Pottery recovered by DeBaillou from the Hollywood site is distinctive in several respects and has been assigned to a new Hollywood phase. The Savannah component at the Bell Field site on the Coosawattee (Kelly 1970, 1972) has yielded so little pottery that it can not be characterized with any reliability (see discussion of Etowah III phase).

Table 7 lists the relative frequencies of pottery types characteristic of the various Savannah phases recognized here. Some of the percentages in the table are probably inaccurate because pottery from the various sites was analyzed by several different researchers using somewhat different typological categories and sorting criteria. Sears (1958), for example, identifies sherds in the Wilbanks site collection with two bar diamond, filfot cross, and line block motifs as Etowah Complicated Stamped. All other sherds in the collection he identifies as Wilbanks Complicated Stamped despite the fact the vast majority do not have distinguishable motifs. In contrast, stamped sherds in the Beaverdam Creek and Scull Shoals collections that do not have recognizable Etowah or Savannah Complicated Stamped motifs or are not clearly Savannah Check Stamped are classified as unidentified stamped by Hally (Rudolph and Hally 1985) and Williams (J.M. William 1985a).

Despite the difficulty involved in comparing the collections listed in Table 7, certain important differences do stand out. Savannah Check Stamped is far and away the most common type at the Hollywood site. In collections from sites located north and west of Hollywood, the frequency of the type decreases markedly and ultimately all but disappears in the Etowah River valley. Mississippian ceramic features such as shell tempering and the jar with handles occur only in the northwestern part of the state with the exception of special mortuary vessels at Hollywood. Finally, the two phases located on the Savannah River--Beaverdam and Hollywood--seem to have considerably more plain pottery than do phases located to the west, although this variation may reflect different criteria in sherd sorting. The ceramic complexes also differ in the occurrence of corn cob impressed decoration on jar necks, cordmarking, and in the occurrence of specific vessel shape modes and complicated stamped motifs.

There is some disagreement among archaeologists concerning the origin of Savannah culture and its relationship to Etowah culture. Fairbanks (1950) and Sears (1958) have argued that Savannah culture represents a break in the in situ development of complicated stamping in northern Georgia. New stamp motifs appear in Savannah culture, and, more importantly, they see a major stylistic shift from rectilinear stamp motifs supposedly characteristic of Etowah to curvilinear motifs supposedly characteristic of Savannah. Sears (1958) attributes this shift to the arrival of new people in northwest Georgia from the Atlantic coastal region.

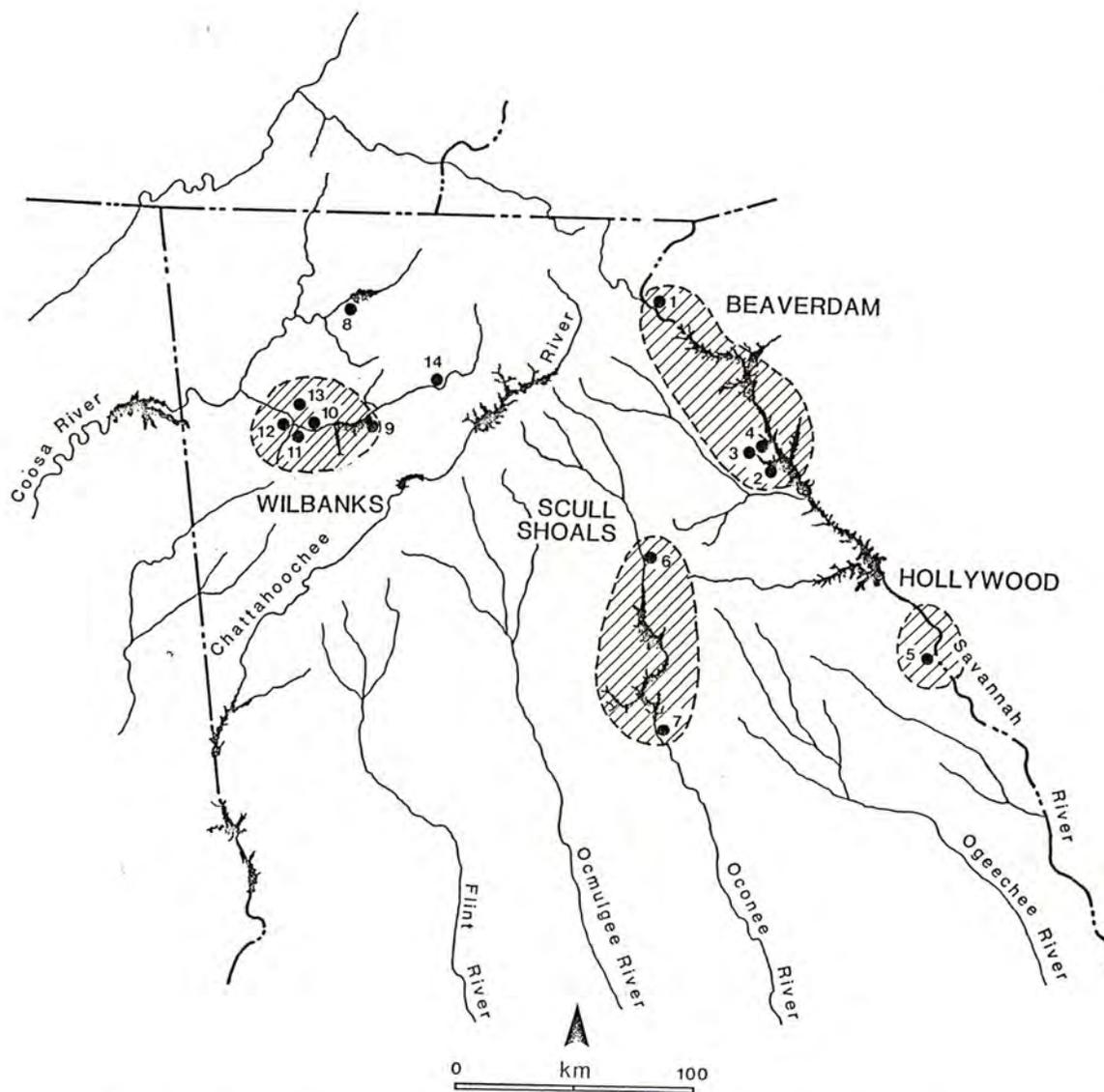
The position taken here is that the Savannah pottery complex is a direct development out of the preceding late Etowah complex. The evidence for this is:

TABLE 6

Savannah Culture Phases And Representative Sites

<u>Phase</u>	<u>Sites</u>	<u>Number of Mounds</u>	<u>Height of Tallest Mound</u>
Beaverdam Phase	Beaverdam Creek (9Eb85)	1	1.5 m
	Tate (9Eb86)	1	4.5 m
	Rucker's Bottom (9Eb91)	0	
Hollywood Phase	Hollywood (9R11)	2	3.0 m
Scull Shoals Phase	Scull Shoals (9Ge4)	2	11.0 m ¹
	Shinholser (9B11)	2	12.0 m ¹
Wilbanks Phase	Etowah (9Br1)	3	18.0 m
	Two Run Creek (9Br3)	1	2.5 m
	Free Bridge (9Br6)	1	2.0 m
	Raccoon Creek (9Br26)	1	?
	Wilbanks (9Ck5)	1	2.0m
Unknown Phase	Bell field (9Mu101)	1	3.0 m
Affiliation	Horseshoe Bend (9Ck4)	1	1.0 m

¹Mound has later construction stages



- | | |
|----------------------------|---------------------------|
| 1. Chauga (380c47) | 8. Bell Field (9Mu101) |
| 2. Beaverdam Creek (9Eb85) | 9. Wilbanks (9Ck5) |
| 3. Tate (9Eb86) | 10. Etowah (9Br1) |
| 4. Rucker's Bottom (9Eb91) | 11. Free Bridge (9Br6) |
| 5. Hollywood (9Ri1) | 12. Raccoon Creek (9Br26) |
| 6. Scull Shoals (9Ge4) | 13. Two Run Creek (9Br3) |
| 7. Shinholser (9B11) | 14. Horseshoe Bend (9Ck4) |

Figure 12. Distribution of Savannah culture sites and phases.

TABLE 7

Relative Frequency of Pottery Types In Savannah
Culture Phases

	<u>Hollywood</u> ¹	<u>Beaverdam</u> ²	<u>Wilbanks</u> ³	<u>Scull Shoals</u> ⁴
Etowah Complicated Stamped	1	1	11	2
Savannah Complicated Stamped	15	1	58	4
Savannah Check Stamped	44	8	1	6
Unidentified Stamped		9		48
Cordmarked	<1			<1
Corn cob impressed	<1	3		<1
Red filmed			2	<1
Savannah Plain	40	67	28	28
Savannah Burnished Plain		11		13
Shell tempered plain			1	
Collared rims		1		
Unthickened rims with cane punctations and rosettes	1			
Sample size	5080	15009	2212	291

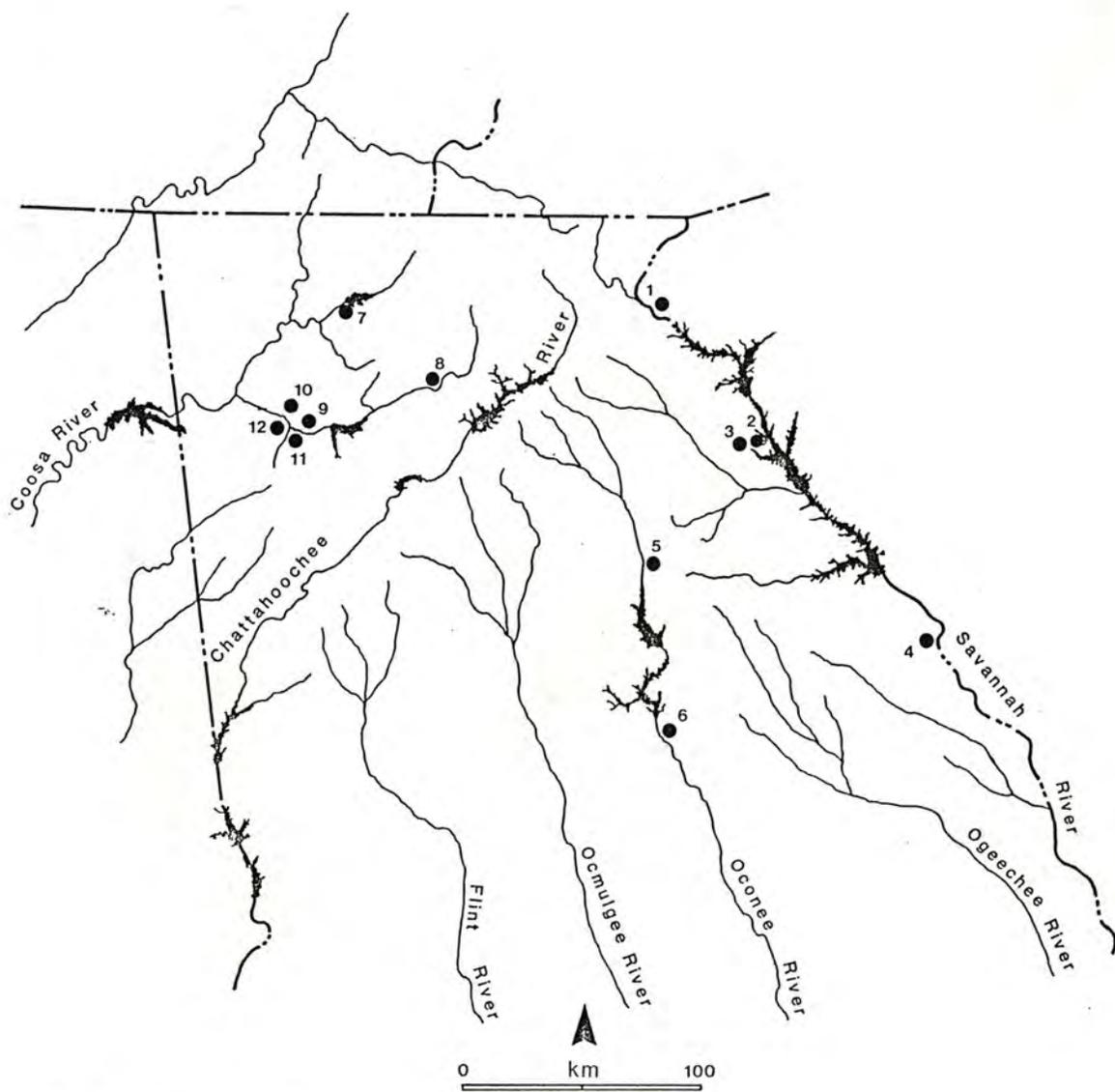
1. DeBaillou 1965: Table 1
2. Rudolph and Hally 1985: Table 54
3. Sears 1958:173-175
4. Counts by author from partial analysis of pottery from Scull Shoals site (9Ge4) midden.

1. The filfot cross, which appears in northwest Georgia as early as the Etowah III phase, is one of the most important Savannah Complicated Stamped motifs.
2. Caldwell (1957) notes a tendency for diamond motifs to become less angular and more rounded beginning in the Etowah III phase in the Allatoona Reservoir.
3. Most Savannah Complicated Stamped motifs can be derived from Etowah Complicated Stamped antecedents. For example, the figure nine may derive from the filfot cross; and the concentric circle, bar concentric circle, and cross concentric circle may derive from earlier concentric diamond motifs.
4. Caldwell's (1957) description of the Etowah IV phase in northwest Georgia demonstrates his awareness that both curvilinear "Savannah" motifs and rectilinear "Etowah" motifs could occur with high frequencies in a single ceramic complex.
5. The Beaverdam and Scull Shoals phases illustrate a situation similar to that of the Etowah IV phase in which the late Etowah cross diamond motif occurs in both ceramic complexes with sherds bearing standard Savannah stamp motifs.

The interpretation of Wilbanks phase ceramics presented here is also at odds with that offered by Sears (1958) for the occupational history of the Wilbanks site. Based on his assumption that Etowah pottery and Savannah pottery are products of two distinct ceramic traditions, Sears concludes that the sherds identified as Etowah Complicated Stamped in the Wilbanks phase midden at 9Ck5 are mixed from earlier Etowah III levels. This allows him to exclude them from his tabulations of Wilbanks phase pottery types. If his assumption about mixing is wrong, there is no reason to exclude those sherds from the Wilbanks phase ceramic complex. The ceramic evidence from the Beaverdam Creek (9Eb85) and Scull Shoals (9Ge4) sites indicates that Etowah and Savannah pottery may indeed co-occur in the same complex, and conceivably within the Wilbanks pottery complex as well.

Evidence is rapidly accumulating that the ceramic transition from Etowah culture to Savannah culture is a gradual one. The Beaverdam phase of the Savannah culture has several Etowah ceramic markers. The Stillhouse phase of late Etowah culture on the middle Oconee River has several Savannah ceramic markers. The dividing line between the two cultures, as represented by the distinction between these two phases, is clearly an arbitrary one. There is, however, no evidence at this time to suggest that a better dividing line exists.

Figure 13 illustrates the distribution of known Savannah mound sites in north Georgia. There are four mound sites strung out along the Savannah River between the Fall Line and the Blue Ridge Province. One of these, Tate (9Eb86), is dated solely on the presence of Beaverdam phase pottery in surface collections from the mound area. The site's location near the head of Beaverdam Creek some distance from extensive alluvial soils suggests that it may be pre-Mississippi in age. One of the mound sites on the Etowah River, Raccoon Creek (9Br26), has been identified as Wilbanks phase solely on the



- | | |
|----------------------------|---------------------------|
| 1. Chauga (380c47) | 7. Bell Field (9Mu101) |
| 2. Tate (9Eb86) | 8. Horseshoe Bend (9Ck4) |
| 3. Beaverdam Creek (9Eb85) | 9. Etowah (9Br1) |
| 4. Hollywood (9Bi1) | 10. Two Run Creek (9Br3) |
| 5. Scull Shoals (9Ge4) | 11. Free Bridge (9Br6) |
| 6. Shinholser (9B11) | 12. Raccoon Creek (9Br26) |

Figure 13. Distribution of Middle Mississippi period mound and earthlodge centers.

basis of a surface pottery collection. There is no stratigraphic evidence that the mound was constructed during the Wilbanks phase.

Four of the 12 Savannah mound sites have multiple mounds: Etowah has three; Hollywood (9Ril), Scull Shoals, and Shinholser (9Hnl) have two each. In two cases, Etowah and Hollywood, one mound is considerably larger than the other. The same relation may exist at the other two sites as well, but the evidence is obscured by later mound construction. Excavations in the smaller mound at Etowah (Mound C), Hollywood, and Shinholser have yielded evidence of human burials and Southeastern Ceremonial Complex artifacts. Mound C at Etowah is famous for its rich Wilbanks phase burials that encircle the last mound stage (Larson 1971). Mound B at Hollywood yielded an embossed copper plate and three "cult" pottery vessels to Henry Reynolds, an assistant of Cyrus Thomas, who dug the mound in the 1890's (Thomas 1984). A copper plate embossed with an eagle figure was recovered from burials pothunted from Mound B at Shinholser. These three sites suggest a pattern for multi-mound Savannah sites in which the smaller mound served at least in part as a mortuary structure.

Table 8 lists the Savannah mound sites that have yielded Southeastern Ceremonial Complex artifacts. Stratigraphic evidence from the Etowah (Larson 1971) and Wilbanks (Sears 1958) sites indicates that the peak in "cult" development, as measured by variety and elaborateness of artifacts, occurred in the Piedmont in Savannah culture contexts. This view is supported by the nature of "cult" artifacts recovered from Chauga, Bell Field, and Hollywood. Furthermore, the quantity of artifacts recovered from the Beaverdam Creek site is remarkable, considering the fact that the mound had been extensively vandalized prior to its professional excavation (Rudolph and Hally 1985).

Another development that occurred at about this time at political centers in the Piedmont and elsewhere in Georgia, the Carolinas, and eastern Tennessee was a change in public architecture at many sites from earthlodges to platform mounds. In the Piedmont this change seems to have occurred at Bell Field (Kelly 1970, 1972), possibly Tugalo (Williams and Branch 1978), Beaverdam Creek (Rudolph and Hally 1985), possibly Wilbanks (Sears 1958; Wauchope 1966), and possibly Horseshoe Bend (Wauchope 1966). Each of these sites had only one mound. Dating the architectural transition is difficult, but it appears to be associated with late Etowah or Savannah cultures. Rudolph (1984) has argued that this modification in public architecture was associated with a change in sociopolitical organization, but the exact nature of the change is unknown.

Wilbanks Phase: The heaviest concentration of Savannah mound sites occurs on the Etowah River just outside of the Piedmont. This cluster of sites--Etowah, Two Run Creek (9Br3), Free Bridge (9Br6), and Raccoon Creek (Wauchope 1966)--also contains the site with the largest mound (Mound A at Etowah, 18 m high), with the largest number of mounds (three at Etowah), and with the most impressive array of Southeastern Ceremonial Complex artifacts. Analysis of the burials and grave furnishings suggests that Wilbanks phase society at the Etowah site was stratified and that social position was inherited (Larson 1971).

Given its physical size and probable level of social complexity, it is possible that the Etowah site was politically dominant within the Etowah River

Savannah Sites That Have Yielded Southeastern Ceremonial
Complex Artifacts¹

Bell Field (9Mu101)

- ceremonial flint blade
- negative painted effigy head bottle
- negative painted dog effigy pot

Wilbanks (9Ck5)

- earspool with weeping eye motif

Chauga (380c47)

- copper plate with human figure
- conch shell cup
- 4 shell gorgets

Shinholser (9B11)

- copper plate with eagle figure

Hollywood (9R11)

- repousse copper plate
- negative painted bottle with sunburst design
- beaker shaped vessel with horned serpent motif
- effigy head tripod bottle

Beaverdam Creek (9Eb85)

- 2 conch shell cups
- conch columella pendant
- 2 circular gorgets with cut-out designs
- square cross gorget
- embossed copper ornaments with concentric circle motifs
- copper covered perforated celt

Etowah (9Br1)

- copper plates embossed with eagle warrior and ogee motifs
- oblong copper gorgets
- monolithic axes
- ceremonial flint blades
- negative painted bottles with sunburst
- conch columella pendants
- shell gorgets with human figure
- copper bilobed arrow
- stone statues

¹List not complete for all sites

valley and that it was the apex of a two level administrative center hierarchy (Steponaitis 1978). Etowah almost certainly had political and economic influence over people living in other river valleys, but the extent and nature of this influence is not known. Larson (1971) has suggested that the rise of Etowah as a major center may have been related to its location near the edge of several distinct physiographic provinces--the Ridge and Valley, the Blue Ridge, and the Piedmont. This location was undoubtedly advantageous for obtaining a variety of resources, but it is interesting that the importance of Etowah and other centers in the Etowah valley seems to have decreased markedly subsequent to the Wilbanks phase.

Scull Shoals Phase: The Wallace Reservoir has produced evidence of very few Savannah sites, surprisingly so given the presence of Savannah components at Scull Shoals above Lake Oconee and at Shinholser downriver. The scarcity of sites might be explained in part as a consequence of our inability to distinguish very small Savannah surface collections from those associated with the Stillhouse phase of the late Etowah culture or with the early Duvall phase of the Lamar culture. A few sites containing curvilinear complicated stamped, corncob impressed, and check stamped sherds have been found in the area, but it is evident that the Middle Mississippi period population in the Wallace Reservoir area was not large.

The Savannah component at the Scull Shoals site contained a collection of pottery that was quite similar to collections from other Savannah phases. The most common types include Savannah Plain, Savannah Burnished Plain, Savannah Check Stamped, Savannah Complicated Stamped, Etowah Complicated Stamped, and cordmarked. Stamping motifs were primarily the two bar diamond, the two bar cross diamond, and the filfot cross. Corncob impressions occurred on several sherds (Williams 1985a).

Beaverdam Phase: Six different surveys (Hutto 1970; Hemmings 1970; Hanson n.d.a; n.d.b; Taylor and Smith 1978; Gardner and Rappleye 1980) have been conducted in the Russell Reservoir on the Savannah River. A total of 66 Mississippian components were identified by various survey teams. Of these, 34 predate the Lamar culture. Unfortunately, it is not clear how many sites are associated specifically with the Savannah culture.

Analysis of the Russell Reservoir survey data (Rudolph and Hally 1985) shows that Early and Middle Mississippi period sites could be found in a wide range of habitats--on streams and rivers of all sizes; on floodplains ranging from narrow to broad; on terraces, ridgetops, and ridgetops; and both near shoals and far from shoals.

Savannah subsistence data come primarily from two sites in the Russell Reservoir--Beaverdam Creek (Rudolph and Hally 1985) and Rucker's Bottom (9Eb91) (Anderson and Schuldenrein 1985). Like Mississippian economic practices elsewhere in the Southeast, the subsistence economy of the Beaverdam phase emphasized deer and maize, but other species were also exploited. The overall strategy may have been more generalized than the strategy practiced in the same river valley during the Late Mississippi period (Rudolph 1985; Moore 1985). Plants and animals exploited during the Beaverdam phase include small mammals, terrestrial and aquatic turtles, turkeys, fish, acorns, hickory nuts,

maypops, and many other species in addition to deer and maize. Deer provided the vast majority of animal protein; while nuts and maize together contributed much of the plant component of the diet.

Domestic architecture of the Savannah culture is not well known, but evidence from the Beaverdam phase components in the Russell Reservoir suggest that buildings could be round or square and could have wall trenches or individual postmolds. Most of the seven possible Beaverdam phase buildings at Rucker's Bottom (Anderson and Schuldenrein 1985) were represented only by postmold patterns. At Beaverdam Creek, despite extensive excavation in the area around the mound, only one possible postmold pattern was located. This suggests that there may have been a very low residential population at the site. One small, circular, wall trench building found beneath the Beaverdam Creek mound may have had a residential function, but its location suggests that it was not a typical dwelling.

The predominant complicated stamp motifs at the Beaverdam Creek site (Rudolph and Hally 1985) are the concentric circle, the two bar cross diamond, the filfot cross, the herringbone, the one bar cross diamond, and the two bar cross concentric circle.

Hollywood Phase: Excavations in the Hollywood site, located on the Savannah River below Augusta (Thomas 1894; de Baillou 1965), have yielded evidence of a pottery complex that is quite distinct from that of other Savannah culture phases in the Piedmont (Rudolph and Hally 1985). Savannah Check Stamped and the filfot cross complicated stamped motif are very common in collections from Hollywood site; while diamond motifs are infrequent. Unthickened rims with cane punctations and cane punctated nodes are common in Hollywood phase collections, but are absent or very uncommon in other Savannah phases.

These differences probably reflect both regional and temporal factors. Comparisons with Rembert phase in the Russell Reservoir (Rudolph and Hally 1985; Anderson and Schuldenrein 1985), Irene phase (Caldwell and McCann 1941) at the mouth of the Savannah River, and Pee Dee phase (Reid 1965) in North Carolina indicate that the ceramic features distinctive of Hollywood are characteristic of sites located east and south of the Georgia Piedmont and dating early in the Late Mississippi period. Radiocarbon dates from the Pee Dee phase Town Creek site in North Carolina indicate that Hollywood phase dates to approximately A.D. 1300 (Table 1).

Questions to be addressed concerning the Savannah culture are not greatly different from those that should be answered for earlier cultures, although the body of information about the Savannah culture is now substantially greater than it used to be. For example, what is the temporal and regional variation in the Savannah ceramic complex? What was the relationship of the Savannah culture in the Piedmont to contemporary groups on the Atlantic coast, in the Ridge and Valley province and along the middle Chattahoochee River? What evidence is there for an abrupt transition from late Etowah culture to Savannah culture? What is the significance of the replacement of earthlodges by platform mounds at some centers? How did subsistence practices during the Middle Mississippi period vary through space and time? What were the social, political, and economic relationships among various centers associated with the Savannah culture? What was the role of the Southeastern Ceremonial Complex

in the Savannah culture? What is the relationship of the Wilbanks phase occupation at the Etowah site to contemporary occupations outside the Georgia Piedmont? How and why did the complexity of political organization at the Etowah site appear to decline following the Wilbanks phase? What was the role of warfare in the development of Savannah polities? What is the relationship of population density to the level of sociopolitical organization in various Savannah polities?

LATE MISSISSIPPI PERIOD

The Late Mississippi period extends from approximately A.D. 1350 to A.D. 1550. The period begins with the ceramic transition from Savannah culture to Lamar culture and ends with the DeSoto and DeLuna expeditions. Lamar is the only recognized culture in the Piedmont during the period. It is defined primarily on the basis of pottery, although several other cultural features such as house form and burial form are probably also diagnostic.

The Lamar ceramic complex is characterized by three pottery types--Lamar Complicated Stamped, Lamar Incised, and Lamar Plain--and a vessel shape mode--the thickened jar rim. Archaeologists have defined a number of regional and temporal variants or phases of this complex. These phases and their best known or most thoroughly investigated components are listed in Table 9. Also listed in this table are sites with Lamar components that can not be assigned to a phase due to a lack of information concerning their ceramics. It is highly likely that additional phases of Lamar culture will be defined in the future as archaeological research in the Piedmont continues.

Much of the ceramic change that occurred during the Late Mississippi period is geographically localized. A number of general chronological trends, however, appear to have taken place contemporaneously throughout the Piedmont and in neighboring areas. The earliest Lamar ceramic assemblages lack Lamar Incised; have relatively narrow, thickened jar rims which are decorated with large punctations or pinches; and utilize fine grit temper. Through time, tempering becomes coarser, thickened jar rims becomes wider and decoration becomes increasingly confined to the lower edge of the rim. Lamar incised appeared by approximately A.D. 1450. Through time, the width of incised lines decreases, the number of incised lines used to carry out a design increases, and designs become more complex.

Table 2 illustrates the chronological relationships existing between the various recognized Lamar phases. Lamar Incised is either absent or represented by an early variety in the ceramic complexes of the Little Egypt, Stamp Creek, Duvall, Rembert, and Stubbs phases. These phases are often referred to as early Lamar in contrast to the remaining late Lamar phases, a practice that will be followed in the present study. Early Lamar phases such as Little Egypt and Rembert almost certainly developed directly out of the Savannah phases that preceded them, although this relationship has yet to be documented in detail. Figures 14 and 15 illustrate the known geographical distribution of early and late Lamar phases.

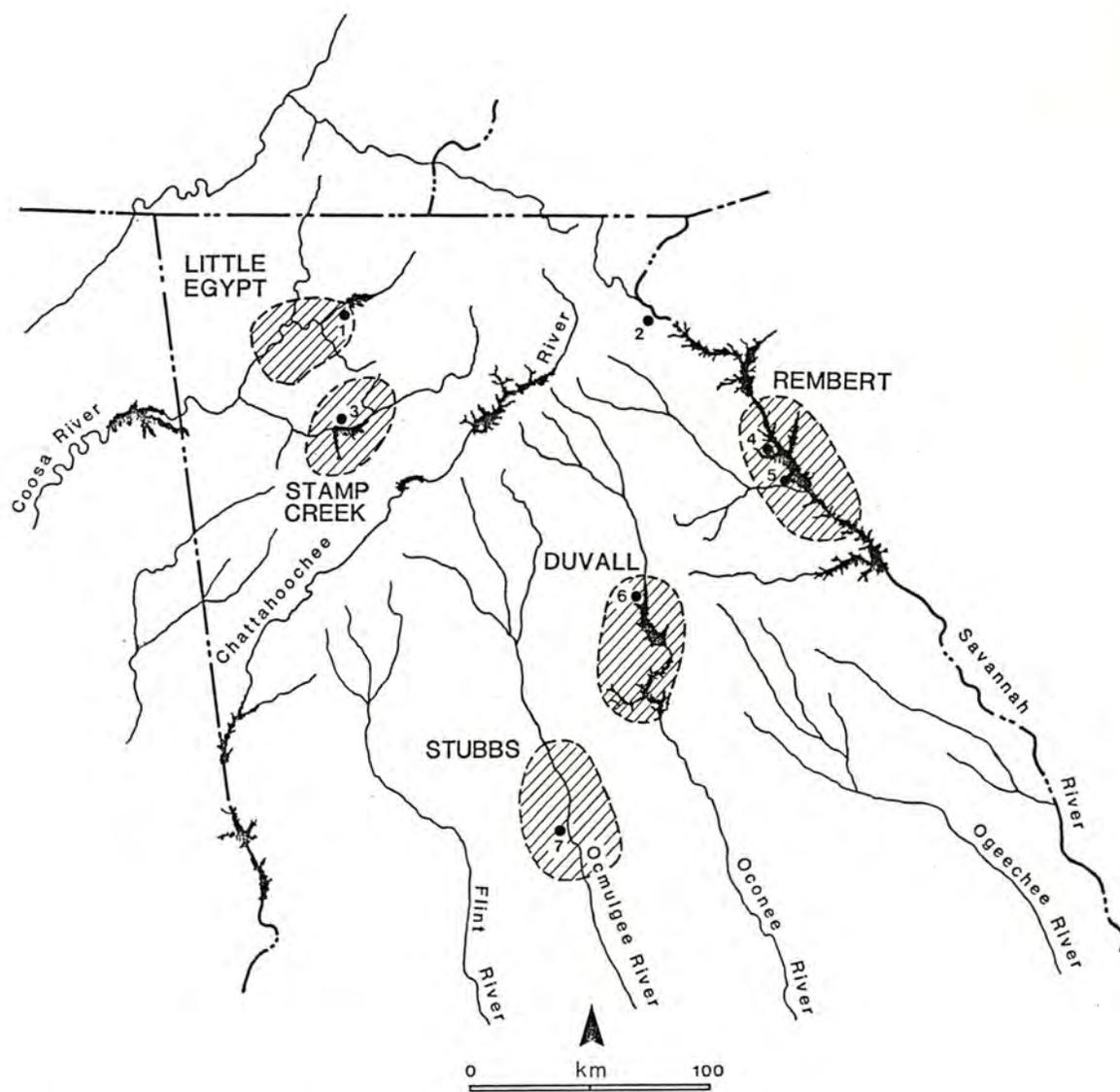
Tables 10 and 11 list the relative frequencies of pottery types characteristic of the various recognized early and late Lamar phases. The phases are also distinguishable by variation in vessel shape modes and by

TABLE 9

Lamar Phases and Representative Sites

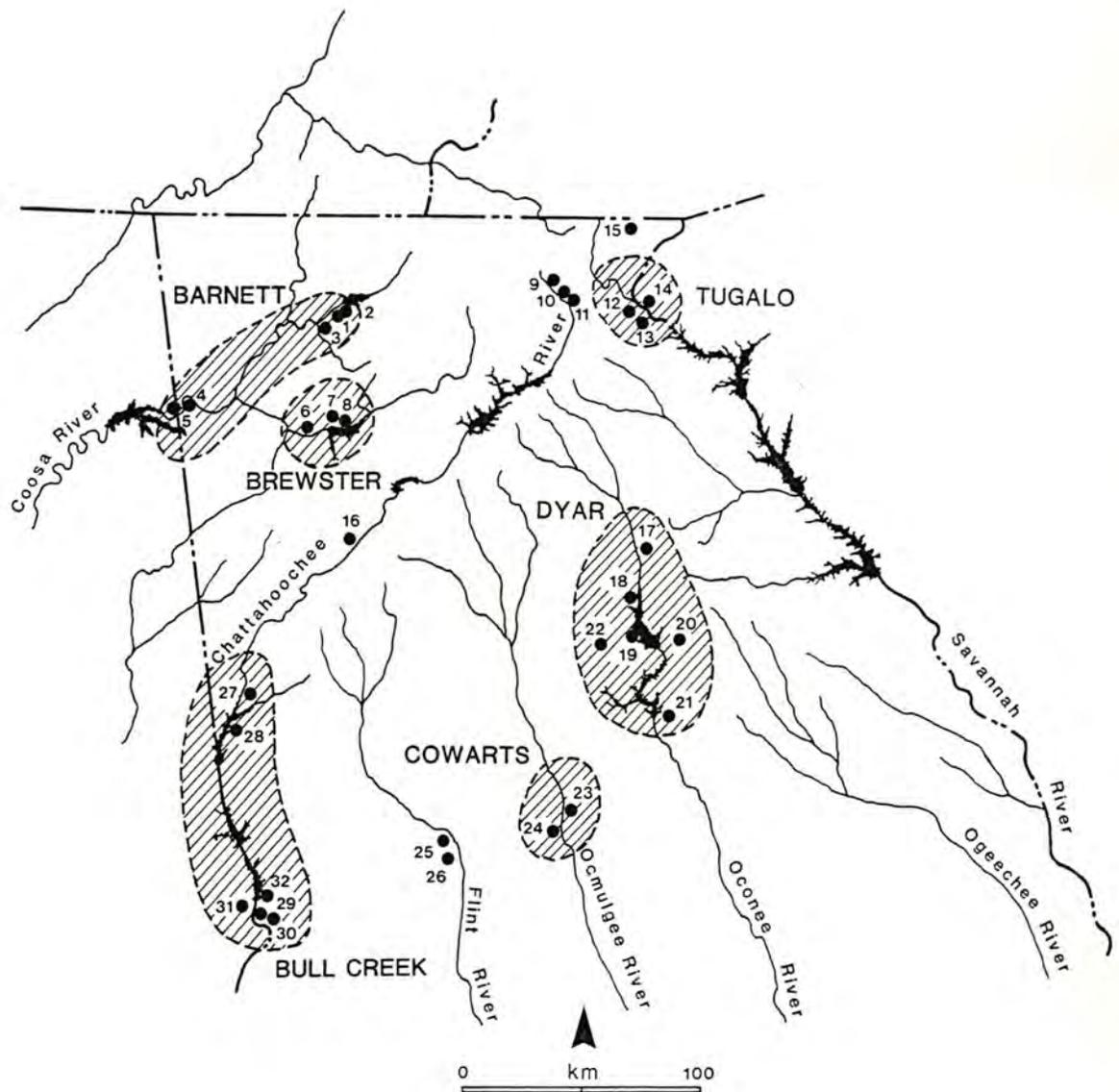
<u>Phase</u>	<u>Sites</u>	<u>Number of Lamar Mounds</u>	<u>Height of tallest mound</u>
Little Egypt	Little Egypt (9Mu102)	2	3.3 m ²
Stamp Creek	Stamp Creek (9Br139)	0	
Rembert	Remberet (9Eb1)	5	10.0 m
	Rucker's Bottom (9Eb91)	0	
Duvall	Dyar (9Ge5)	1	10.0 m ²
Stubbs	Stubbs (9Bi12)	1	1.0 m
Barnett	Little Egypt (9Mu102)	2	3.3 m
	Potts Tract (9Mu103)		
	Thompson 9Go4 ¹	1	?
	Mohman (9F1155) ¹	2 (?)	?
	King (9F15) ¹	0	
Brewster	Etowah (9Br1)	0	
	Stamp Creek (9Br139)	0	
	9Ck23	0	
Tugalo	Tugalo (9St1)	1	4.5 m
	Estatoe (9St3)	1	1.0 m
	Chauga (380c47)	1	?
Dyar	Dyar (9Ge5)	1	10.0 m
	Scull Shoals (9Ge4)	2	11.0 m
	9Ge35	1	1.0 m
	Shoulderbone (9Hk1)	6	13.0 m
	Little River (9Mg46)	1 (?)	1.0 m
Cowarts	Lamar (9Bi2)	2	8.0 m
	Cowart's Landing (9Bi20)	0	
Bull Creek	Bull Creek (9Me1)	0	
	Park (9Tp41)	1	4.0
	Avery (9Tp64)	2	?
	Cooper (9Me3)	1	?
	Engineer's Landing (9Ce5)	1	?
	Abercrombie (IRa1)	1	?
Unknown phase affiliation	Eastwood (9Wh2)	1	2.0 m
	Nacoochee (9Wh3)	1	?
	Neisler (9Tr1)	1	10.0 m
	9Tr2	1	4.0 m
	Dillard (9Ra3)		?

¹ sites located outside Piedmont
² mound has later construction stages



- | | |
|----------------------------|-------------------|
| 1. Little Egypt (9Mu102) | 5. Rembert (9Eb1) |
| 2. Tugalo (9St1) | 6. Dyar (9Ge5) |
| 3. Stamp Creek (9Br139) | 7. Stubbs (9B112) |
| 4. Rucker's Bottom (9Eb91) | |

Figure 14. Distribution of early Lamar sites and phases.



- | | |
|--------------------------|-------------------------------|
| 1. Little Egypt (9Mul02) | 17. Scull Shoals (9Ge4) |
| 2. Potts Tract (9Mul03) | 18. Dyar (9Ge5) |
| 3. Thompson (9Go4) | 19. 9Ge35 |
| 4. Mohman (9Fl155) | 20. Shoulderbone (9Hk1) |
| 5. King (9F15) | 21. Shinholser (9B11) |
| 6. Etowah (9Br1) | 22. Little River (9Mg46) |
| 7. Stamp Creek (9Br139) | 23. Lamar (9Bi2) |
| 8. 9Ck23 | 24. Cowart's Landing (9Bi20) |
| 9. Nacoochee (9Wh3) | 25. Neisler (9Tr1) |
| 10. Eastwood (9Wh2) | 26. 9Tr2 |
| 11. Stephenson (9Wh28) | 27. Park (9Tp49) |
| 12. Estatoe (9St3) | 28. Avery (9Tp64) |
| 13. Tugaloo (9St1) | 29. Cooper (9Me3) |
| 14. Chauga (380c47) | 30. Engineer's Landing (9Ce5) |
| 15. Dillard (9Ra3) | 31. Abercrombie (1Ra1) |
| 16. Vandiver (9Do1) | 32. Bull Creek (9Me1) |

Figure 15. Distribution of late Lamar sites and phases.

Table 10

Relative Frequency of Pottery Types in
Early Lamar Phases

	<u>Little¹</u> <u>Egypt</u>	<u>Stamp²</u> <u>Creek</u>	<u>Rembert³</u>	<u>Duvall⁴</u>	<u>Stubbs⁵</u>
Lamar Incised			1	1	1 ⁶
Lamar Complicated Stamped	10	36	50	8	49
Lamar Plain	18	64	50	90	50
Morgan Incised				1	1
Dallas Incised	2				
McKee Island Cordmarked	7				
Dallas Plain	63				
Sample size	3177	113	610	4046	6069

1. Hally 1979: Table 26
2. Caldwell 1957
3. Rudolph and Hally 1985: Table 108
4. M. Smith 1981a: Tables 3, 7, and 8
5. Williams 1975: Table 7
6. Williams lists 51 Lamar Bold Incised sherds in Table 7. Plate 12 illustrates both Lamar Incised and Morgan Incised. In the absence of separate counts for the two types, we have split the 51 sherds between the types, Lamar Incised and Morgan Incised.

Table 11

Relative Frequencies of Pottery Types in
Late Lamar Phases

	<u>Tugalo</u> ¹	<u>Dyar</u> ²	<u>Cowarts</u> ³	<u>Bull Creek</u> ⁴	<u>Barnett</u> ⁵	<u>Brewster</u> ⁶
Lamar Incised	8	18	15	2	9	14
Dallas incised					2	
Lamar Complicated Stamped	62	8	35	26	10	70
Check stamped	1			1		
Brushed		< 1		1		
Lamar Plain	29	73	50	71	55	16
Dallas Plain					24	
Sample size	699	3100	10700	7200	1600	56

1. 9St3. Counts by author
2. M. Smith 1981a: Table 8
3. Hamilton and Swindell 1975: Table 1
4. Hally and Oertel 1977: Table 1
5. Hally 1979: Table 27
6. Caldwell 1957

variation in the decorative motifs applied to the types, Lamar Incised and Lamar Complicated Stamped.

Lamar subsistence can be outlined in general terms, but there is insufficient evidence to allow detailed reconstruction of the subsistence system of most phases or to allow meaningful comparisons between phases. Botanical and faunal samples have been systematically collected from a number of Lamar components: the Little Egypt and Barnett components at Little Egypt (9Mul02) (Hally 1980; 1981); the Duvall and the Dyar components at the Dyar site (M. Smith 1981a); the Dyar components at 9Gel53 (M. Smith et al. 1981), 9Gel75 (Shapiro 1983), 9Pm220 (Rudolph and Hally 1982), and 9Pm260 (Manning 1982); and the Rembert component at Ruckers' Bottom (Anderson and Schuldenrein 1985).

To judge by the ubiquity and frequency of maize fragments in botanical samples, maize agriculture was practiced throughout the Late Mississippi period and probably in all regions of the Piedmont. Beans and squash were also used and together with maize probably constituted the major plant elements of the Lamar diet. Numerous wild plant species were also consumed. Hickory nuts and acorns are common in several botanical samples and were probably important dietary elements. Edible seeds of herbaceous plants such as knotweed (polygonum) do not seem to have been very important to judge from their infrequency in flotation samples. Fruits such as grape, plum, and persimmon, on the other hand, are present in several botanical samples and probably constituted a fairly important seasonal addition to the aboriginal diet. Maypop seeds are also represented in several samples, suggesting that the fleshy fruit of this plant was of seasonal importance as well.

With few exceptions, deer is the predominant terrestrial species (as measured by element count and MNI) in Lamar faunal samples. The only other terrestrial species that occur with any frequency are box turtle and turkey. Aquatic turtles and fish are numerically common at most sites, although their meat yield is well below that of deer. Presumably deer was the single most important animal species in the diet, followed at many sites by fish.

Faunal samples from two sites, 9Gel75 (Shapiro 1983) and 9Pm220 (Rudolph and Hally 1982) that are located adjacent to shoals on the Oconee River, differ significantly from this pattern. Site 9Gel75, yielded almost exclusively fish, aquatic turtles and box turtle. The site was apparently occupied for only brief periods of time during the summer for the sole purpose of exploiting aquatic resources. Site 9Pm220 consisted of a thin shell midden containing abundant riverine bivalve and gastropod shells. Vertebrates were present in only small quantities. Presumably mollusc gathering was one of the main subsistence activities carried on at this site.

Domestic habitation structures are known from several Lamar sites: Dyar (Smith 1981a), Etowah (Sears 1953), Potts' Tract (Hally 1970), Little Egypt (Hally 1980), and Ruckers' Bottom (Anderson and Schuldenrein 1985). These structures were square in plan and had depressed floors and wall trench entrances. Exterior walls were constructed with vertical, individually set posts and were covered with mud plaster or possibly bark or thatch. Roofs were probably peaked and thatched.

These substantially built structures were probably occupied year round. There is evidence from contact period sites in the Ridge and Valley Province --King (9FL5) (Hally et al. 1975) on the Coosa River and Toqua (Polhemus 1983) on the Little Tennessee River--that open air sheds were utilized for domestic activities during the summer months. Such structures are difficult to detect archaeologically. The fact that they have not been recognized at extensively excavated sites like Dyar and Ruckers' Bottom does not necessarily mean they were not utilized by the Lamar inhabitants of the Georgia Piedmont.

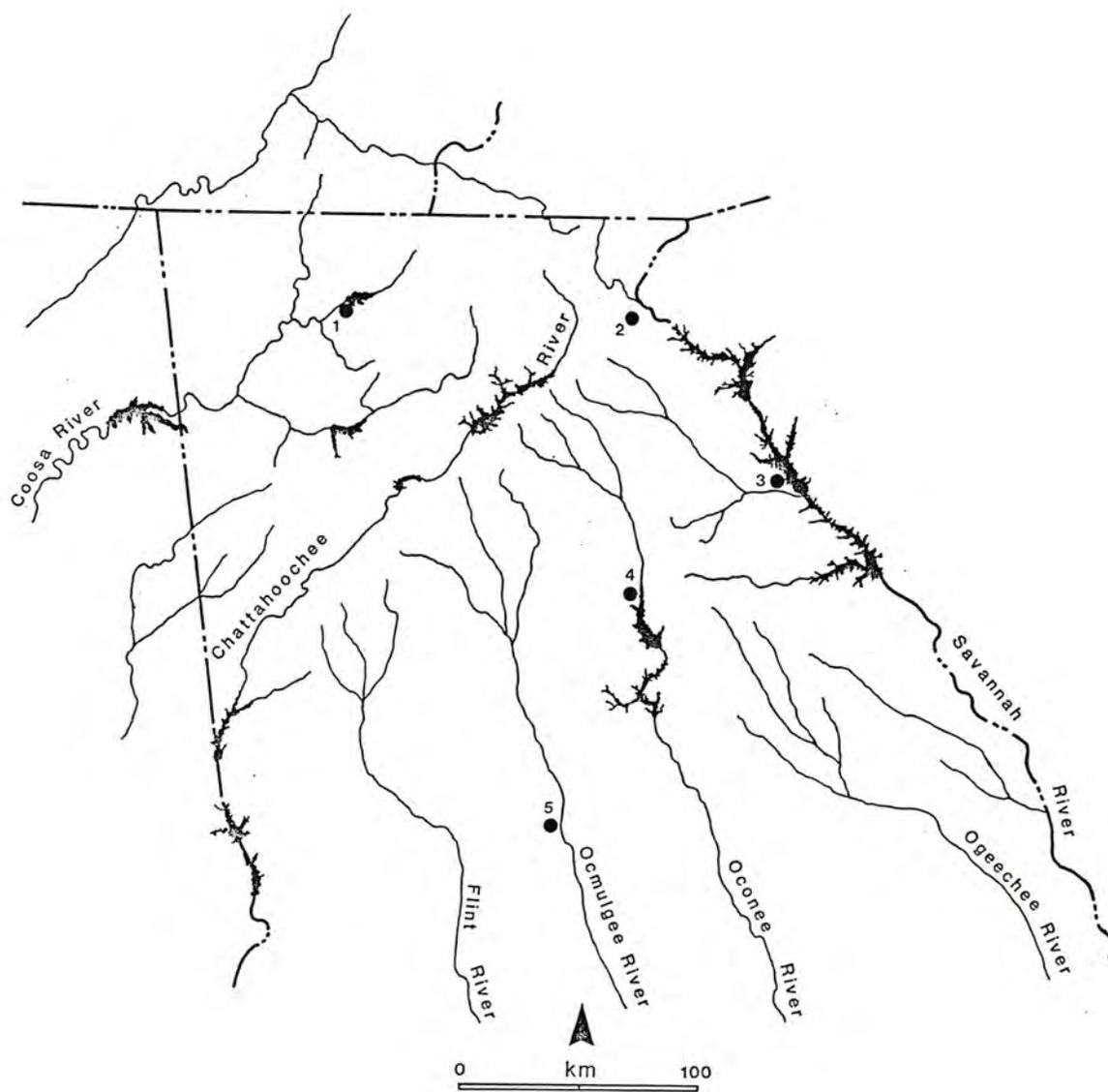
At the King (Hally et al. 1975) and Toqua (Polhemus 1983) sites, small groups of domestic habitation structures were sometimes arranged around a small open space. These groupings may represent domestic households that contained multiple nuclear families, each structure housing a separate family. Whether this arrangement occurred in the Piedmont as well is not presently known. There is no indication of it at Ruckers' Bottom, and neither Little Egypt, Potts' Tract nor Dyar were excavated in a manner that would have revealed the pattern if it were present.

A wide variety of site types can be recognized in Lamar culture on the basis of size, physical features, location and artifact yield. At least 21 sites have earthen platform mounds (Table 9, Figures 16 and 17). Mound elevations vary between one meter and 13 m. Four sites have two mounds, but only in three cases--Scull Shoals (Williams 1984), Lamar (9Bi2) (H. Smith 1973), and Little Egypt (Hally 1980)--can both mounds be demonstrated to be of Lamar construction. No site has more than two mounds of demonstrated Lamar construction.

Four Lamar mounds have been investigated extensively. Mound A at Little Egypt (Hally 1980) was constructed in multiple stages during the Little Egypt and Barnett phases and consisted of a central rectangular platform and flanking terraces of slightly lower elevation. A single structure, measuring 10 m square, surmounted the central platform. Construction was of the single post type, with large roof support posts located near the corners. Structures were also erected on the terraces. An excavated terrace structure measured 10 m square and apparently served as a domestic habitation.

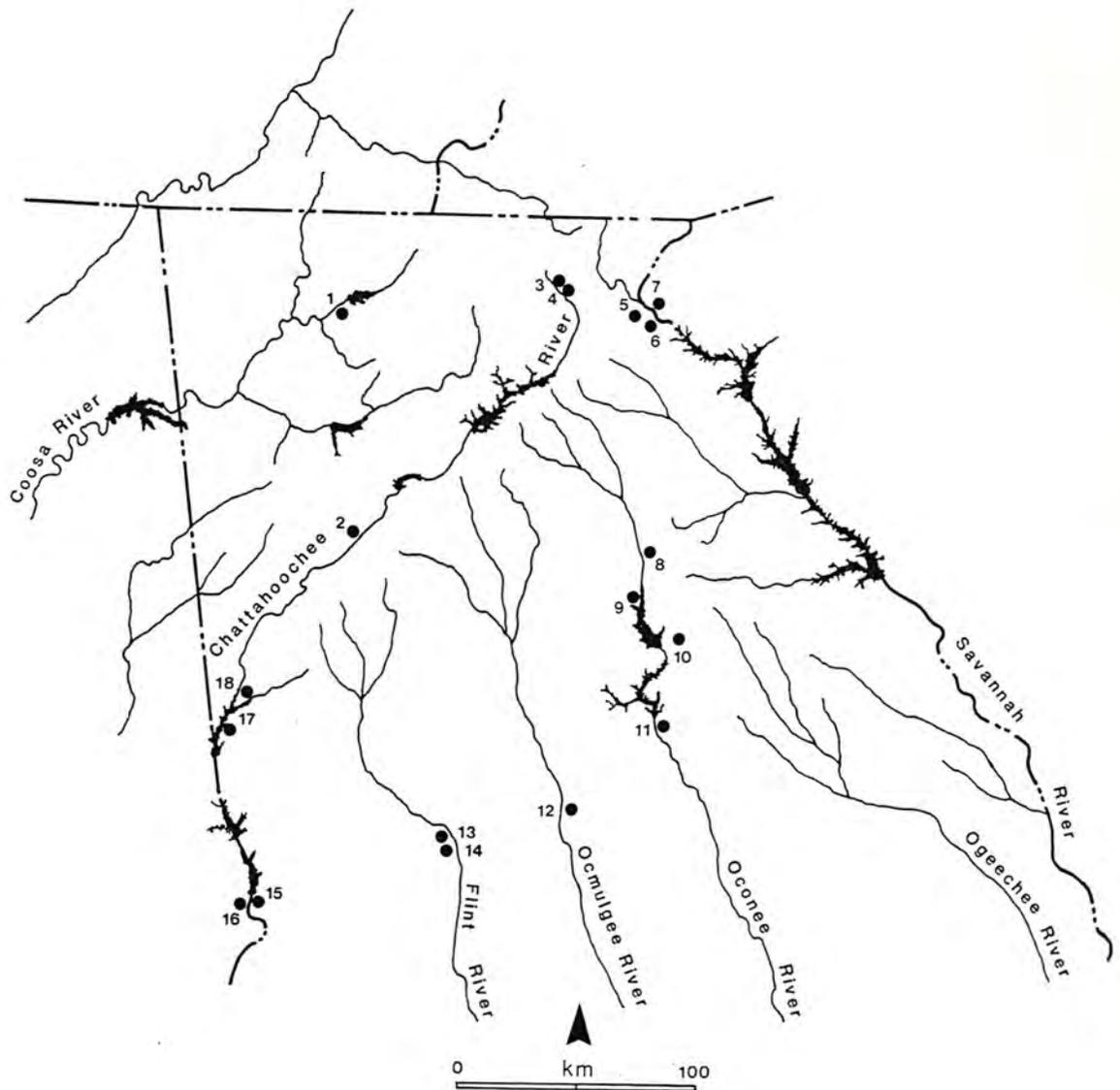
The Dyar mound (M. Smith 1981a) was erected in multiple stages during the Stillhouse, Duvall, and Dyar phases. At least in Dyar times, the mound summit was two tiered: the higher tier supporting two square structures connected by a passageway; the lower tier supporting a single long shed-like structure. The former resemble the Little Egypt mound summit structure in being square, of single post construction and having four large roof support posts near the corners. Each structure was apparently rebuilt a number of times with a thin layer of fill separating successive floors. The four roof support posts retained their exact position throughout the whole sequence, the same postholes being used by each new structure. Earth was banked against the exterior walls of these structures. If similar earth embankments accompanied the central platform structure at Little Egypt, evidence of their existence was destroyed by erosion of the mound summit.

The Estatoe mound (9ST3) (Kelly and DeBaillou 1960) began as a single square ground level structure. Exterior wall posts were individually set and six interior roof support posts were placed near the exterior walls. The structure measured approximately 12 m square and had a central hearth. It



1. Little Egypt (9Mu102)
2. Tugalo (9St1)
3. Rembert (9Eb1)
4. Dyar (9Ge5)
5. Stubbs (9Bi12)

Figure 16. Distribution of early Lamar mound centers.



- | | |
|--------------------------|-------------------------|
| 1. Little Egypt (9Mu102) | 10. Shoulderbone (9Hk1) |
| 2. Vandiver (9Do1) | 11. Shinholser (9B11) |
| 3. Nacoochee (9Wh3) | 12. Lamar (9Bi2) |
| 4. Eastwood (9Wh2) | 12. Neisler (9Tr1) |
| 5. Estatoe (9St3) | 14. 9Tr2) |
| 6. Tugalo (9St1) | 15. Cooper (9Me3) |
| 7. Chauga (380c47) | 16. Abercrombie (1Ra1) |
| 8. Scull Shoals (9Ge4) | 17. Avery (9Tp64) |
| 9. Dyar (9Ge5) | 18. Park (9Tp49) |

Figure 17. Distribution of late Lamar mound centers.

was rebuilt four times. Each floor was separated by a thin layer of fill, and each structure used the same roof support postholes. A layer of large boulders and earth fill was placed over the fifth structure, creating a mound at least one meter in height. At least one structure was erected on this summit.

Considerable architectural variability is evident among these three mounds. The summit structures, however, share a number of features: single post construction, square floor plan, floor area measuring approximately 100 m², large interior roof supports placed near corners or walls, reuse of postholes in succeeding structures, and central hearths.

There is some stratigraphic and architectural evidence for the existence of plazas at two sites. At Dyar (M. Smith 1981a), a plaza measuring 40 m by 65 m lies east of the mound. At Little Egypt (Hally 1980), the two mounds lie on adjacent sides of a probable plaza measuring approximately 65 m in one dimension and as much as 190 m in the other.

Three mound sites--Dyar, Little Egypt and Lamar--have yielded evidence of domestic structures and, by implication, evidence of a habitation or village zone. Postmolds and/or midden deposits at several other sites indicate that most, if not all, Lamar mound sites had an attached village. At Dyar and Little Egypt, this zone borders the plaza on all sides except where there are mounds. Including village zone, plaza, and mound, the Dyar site measures approximately 2.5 ha; Little Egypt covers approximately 5 ha; and Lamar covers approximately 8.7 ha.

Lamar mound sites probably functioned as political and religious centers for surrounding communities and populations. Given their estimated size, they may have been the largest population centers as well.

Only one large village without mounds--Ruckers' Bottom - is presently known through excavation in the Piedmont. The Barnett phase King site has a better preserved site plan and is therefore worth considering here even though the site lies approximately 50 km west of the Piedmont. Both villages had fortified perimeters consisting of a ditch and palisade, and both were apparently square in plan. The King site (Hally et al., 1975) measured approximately 160 m square and covered 2 ha. In the middle of the village there was a large open area measuring approximately 80 m by 50 m. A large post pit marked the center of this plaza and of the site itself. Two structures were located in the northern portion of the plaza. One resembled the domestic structures characteristic of the site; the other was 15.5 m square and may have served as a public meeting house.

The plaza at King site was surrounded by a zone of domestic habitation structures. Twenty-five could be identified in the excavated two-thirds of the site. It is estimated that the total number of habitation structures in the entire village was 47. All mapped and excavated structures were similar in architectural configuration, suggesting that they were similar in function. They were similar, furthermore, to the domestic habitation structures found in the Piedmont. As noted above, there is a tendency for these structures to be grouped around small open spaces suggesting multi-family household clusters.

It is difficult to get a clear picture of the Rucker's Bottom site plan. An unknown amount of the village has been destroyed by bank erosion along its eastern margin, and overbank flooding has destroyed midden and pre-occupation deposits to an unknown depth below the aboriginal ground surface over much of the remainder of the site. As a result, postmold patterns suggestive of structures are invariably incomplete. It is possible, furthermore, that some of the features and structures recorded by archaeologists in the Rembert phase village area date to the earlier Beaverdam phase occupation.

The Rembert phase village was apparently initially circular in plan (Anderson and Schuldenrein 1985). In its final form, however, the site was enclosed by a rectangular ditch and palisade, measuring approximately 110 m by at least 60 m. There is some evidence of a central plaza. Several different postmold configurations can be identified within the rectangular palisade line. The most interesting, Structure 2, is a 6 m square structure with depressed floor, single post wall construction, wall trench entrance passage, central hearth and four interior support posts. In all respects, this structure resembles the domestic habitation structures known from Dyar, Little Egypt and King sites. Two other incomplete postmold patterns located within the rectangular palisade may represent similar structures.

The most common postmold pattern, with as many as a dozen examples, is that of a square measuring 4-5 m on a side. This configuration may represent the typical domestic structure on the site. If so, it is considerably smaller than domestic structures known from other Lamar sites.

Both site types described so far--mound sites and non-mound villages--presumably represent large permanent settlements with populations numbering in the hundreds. Research in Mississippian cultures elsewhere in the Southeast leads us to expect that some Lamar people may have resided in small scattered farmsteads. The Potts' Tract site (Hally 1970), located 1 km from Little Egypt is the only excavated site that may be of this kind. Unfortunately site excavation was not sufficiently extensive to allow determination of site size or configuration. As known, the site consists of at least two typical Lamar habitation structures. Its proximity to the contemporary Little Egypt site suggests that Potts' Tract was occupied by a relatively small number of people. Its location in the extensive alluvial floodplain of the Coosawattee River suggests that the main subsistence activity at the site was farming.

A number of small sites excavated by the Wallace Reservoir Archaeological Project on the middle Oconee River are, by virtue of their geographical location and their configuration, identifiable as specialized resource extraction sites. Site 9Ge175 and 9Pm220 have already been described and identified with the gathering of aquatic resources. Site 9Ge153 (M. Smith et al.. 1981) was also located in the shoals portion of the Lake Oconee basin and yielded abundant bones of aquatic species. The availability of bottomland, the existence of architectural features suggestive of habitation structures, and the existence of a moderate amount of deer bone, however, indicates that site occupation may have been of longer, perhaps seasonal, duration and that a wider variety of subsistence activities were carried out.

Site 9Pm211 is a small rockshelter located on the valley floor in the shoals portion of the Lake Oconee basin. It yielded almost exclusively

pottery, including a number of whole and nearly whole vessels. Shapiro (1983) found that the variety of vessel forms represented at the site was smaller than that observed at the Dyar site. It has not been possible to determine the kinds of activities that were carried out at 9Pm211, but they must have been severely limited in variety.

Site 9Pm260 (Manning 1982) is a small rockshelter located on an upland ridge adjacent to the shoals in Lake Oconee. The shelter floor yielded a fairly wide variety of artifacts and food remains, although in small amounts. The site may have been utilized in gathering upland resources such as deer and nuts.

Specialized mortuary sites are also known to occur along the middle Oconee River. These typically consist of natural boulder outcrops with human skeletal remains and grave goods placed in crevices between boulders (Braley et al. 1985).

Because of the extensive research conducted along the middle Oconee River in conjunction with construction of Wallace Dam, it is possible to reconstruct some aspects of the Dyar phase settlement-subsistence system. In the Lake Oconee basin, the river has a typical boudin valley stream morphology. At the southern end of the basin, the valley is narrow and the river channel is filled with shoals. Upriver, the valley gradually widens and alluvial bottomland increases in extent.

The Dyar site is situated near the upper end of the basin in an area of extensive floodplain. The site is well situated for agricultural production and, as indicated by architectural features and recovered faunal and botanical material, was probably occupied year round. Because of its access to agricultural soils, Dyar probably had the largest resident population in the region. Its mound architecture certainly suggests that it was the center of political power and religious activity in the region.

Fish would have been available to Dyar site residents in the Oconee River channel adjacent to the site. The most productive source of aquatic resources in the region, however, was apparently located approximately 30 km down stream at the shoals (Shapiro 1983). Given the paucity of bottomland suitable for agriculture it is possible that occupation of the shoals area was seasonal. If fish played an important role in Dyar phase diet, as is suggested by faunal remains from several sites, it is probable that the inhabitants of agricultural settlements like Dyar visited the shoals for brief periods of time in order to gather aquatic resources. These activities were probably carried out during the warm months of the year at sites like 9Ge175 and 9Pm220.

Site 9Pm260, located on a ridge overlooking Riley Shoals, may have served as a temporary encampment for parties hunting deer and gathering nuts in the uplands. Site surveys have encountered large numbers of small upland sites in the northern portion of the reservoir as well. Presumably these sites also functioned as hunting and gathering stations.

Sites with shell middens, like 9Pm220, date primarily to late Dyar phase. Rudolph (Rudolph and Hally 1982) has argued that they may be indicative of increased exploitation of riverine resources and that the shift in subsistence

may have been in part a result of population growth and increased pressure on traditional food resources. Evidence of population growth is seen in the twenty-fold increase in sites in the Lake Oconee Basin after A.D. 1400 (Rudolph and Blanton 1982).

Although boudin valley stream morphology is characteristic of Piedmont rivers, the situation existing in the middle Oconee River valley where aquatic and agricultural resources are widely separated in space may not be that common. Rembert site (9Eb1), for example, is located in the middle of a very extensive bottomland on the Savannah River. A major shoals, however, is located only 2-3 km away upstream. The aquatic resources of these shoals could have been exploited directly from the Rembert site without the need for overnight encampments.

Early Spanish accounts indicate that many Southeastern aboriginal societies were organized as chiefdoms. Since a number of the societies encountered by the mid-sixteenth century DeSoto and DeLuna expeditions almost certainly had late Lamar cultures, it is likely that most Lamar groups were organized politically as chiefdoms.

Most Southeastern Ceremonial Complex artifact types known from the Savannah culture occupations of the Etowah and Hollywood sites have ceased being used by Lamar times. Some "Cult" motifs and items are still in use, however, including, monolithic axe pipes and conch shell masks with weeping eye motif. To the extent that "Cult" items functioned to symbolize chiefly status in the Southeast in the thirteenth and fourteenth centuries, their occurrence in the sixteenth century suggests continuation of the earlier social and political organization, albeit on a reduced scale.

The distribution of mound sites and ceramic styles across the Georgia Piedmont provides some insight into the nature of political systems during the fifteenth and sixteenth centuries. If we assume that mound sites were the political centers for surrounding territories, then their distribution in space may tell us something about the geographical distribution and extent of polities. Similarly, if ceramic styles--defined broadly to include all aspects of surface decoration from application techniques to specific design motifs--reflect intensity of communication between the people responsible for them, then their distribution in space should tell us something about the geographical extent of interacting populations and the boundaries that separate them.

Figures 16 and 17 show the locations of sites known to have had mounds constructed during early and late Lamar phases. The smaller number of early Lamar mound sites probably reflects the limited amount of archaeological investigation that has been conducted. As we shall see, however, the distribution of early Lamar sites is not totally without cultural significance.

Twenty-one late Lamar mound sites can be identified in the Georgia Piedmont. They can be assigned to a number of discrete site clusters on the basis of geographical distribution and stylistic distinctiveness (Figure 17). On the Coosawatee River, Little Egypt and 9G04 comprise one such cluster. Both sites have Barnett phase components. A third Barnett phase mound site,

Mohman (9FL155), lies approximately 50 km down river in the Ridge and Valley Province and can be included in the site cluster on ceramic stylistic grounds.

In the upper Savannah River drainage, Tugalo (Williams and Branch 1978) and Estatoe (Kelly and DeBaillou 1960), along with Chauga (Kelly and Neitzel 1961) in South Carolina, constitute a second mound site cluster. All three sites have Tugalo phase components. Three additional mound sites--Dillard, Nacoochee and Eastwood--can be added to this cluster on the basis of spatial proximity, although they lie on different drainages. Pottery from Dillard and Nacoochee resemble Tugalo phase, but there is insufficient ceramic evidence to confidently identify the two sites with that phase. Very little is known about the pottery from the third site except that it is probably late Lamar.

In the middle Oconee drainage, five mound sites with Dyar phase ceramics are strung out along a 70 km stretch of the Oconee River. Depending upon whether or not the upper Chattahoochee River mound sites prove to be stylistically related to the Tugalo River mound sites, the middle Oconee River cluster is the largest in the Piedmont with respect to number of mound sites. It also contains the site with the most mounds and the largest mound (Shoulderbone-9Hh1). In this sense, it is analogous to the mound site cluster that existed on the Etowah River during the thirteenth century. Should the mounds at Shoulderbone prove to be of Dyar phase construction, the site, like Etowah, could have functioned as the highest order center in a two level administrative center hierarchy (Smith and Kowalewski 1980).

Only a single late Lamar mound site, Lamar, is known for the Piedmont section of the Ocmulgee River. The site lies only 50 km west of the Dyar phase sites on the Oconee River, but its ceramic complex, identified as Cowarts phase, is quite different.

Neisler (9Tr1) and 9Tr2 form a fifth geographically distinct site cluster on the upper Flint River. Unfortunately ceramics are not well enough known to determine whether the sites are also ceramically distinct from their neighbors.

Two site clusters lie approximately 50 km apart on the middle Chattahoochee River. All sites have yielded Bull Creek phase pottery. Ceramic collections are not sufficiently large, however, to determine with certainty how similar the ceramics of the two site clusters are.

A single mound site (Vandiver-9Dol) exists further up the Chattahoochee River near Atlanta. The site is geographically isolated from other mound clusters and is probably ceramically distinct as well. Unfortunately, the ceramics from the site are poorly known.

Recent efforts to reconstruct the route of DeSoto through the Southeast (Hudson et al. 1984; 1985) support the view that the seven mound site clusters identified here represent aboriginal sociopolitical units. These efforts are increasingly pointing to four of the clusters as "provinces" visited by the DeSoto expedition. The equations are as follows: Neisler and 9Tr2 are Toa, Lamar is Ichisi, the Dyar phase sites are Ocute and the Barnett phase site cluster represents the core of Coosa. The proposed location of Cofitachequi at Camden, South Carolina on the Wateree River also fits the late Lamar archaeological record. DeSoto encountered a vast, uninhabited "desert"

between Ocute and Cofitachequi. The middle Savannah river, appears on archaeological evidence to have been devoid of mound sites and virtually uninhabited in late Lamar times and may well have been the "desert" referred to in the DeSoto narratives.

The distribution of mound sites across the Piedmont changes during the Mississippi period. If clusters of mound sites such as those identified in late Lamar times do represent chiefdoms, changes in mound site distributions through time may signal the rise and fall of polities. Figures 11, 13, 16, and 17 show the distributions of mound sites during the eleventh and twelfth centuries (Woodstock, Macon Plateau and Etowah cultures), during the thirteenth century (Savannah culture), and during the fourteenth-sixteenth centuries (Lamar culture). Some regions seem to maintain mound sites throughout the Mississippi period; in particular, the upper Savannah/Tugalo river (Hally 1984), the middle Ocmulgee River, and the Coosawattee River. In other regions--the Etowah River (Caldwell 1957) and the middle Savannah River (Rudolph and Hally 1985)--mound building ceases and site frequency decreases markedly during the Late Mississippi period (Table 12). Finally, in the middle Oconee and middle Chattahoochee regions, mound sites and non-mound sites increase in frequency significantly from Early Mississippi to Late Mississippi times (Table 12) (Rudolph and Blanton 1982).

It is possible that the decline in mound building and population in the middle Savannah River drainage subsequent to Rembert phase is related to the growth and expansion of chiefdoms in the middle Oconee River valley and the Wateree River valley in South Carolina. Similarly, the decline in mound building and population evident in the Etowah River valley after A.D. 1300 may in part be related to the growth and expansion of chiefdoms in the Coosawattee and middle Oconee River valleys.

More is known about Lamar culture than any other Mississippian culture in the Georgia Piedmont. Nonetheless, and in fact probably because it is so well known, there are a great many questions that need to be answered about it and its regional and temporal variants. These include:

1. What is the cause of the widespread shared ceramic characteristics that archaeologists refer to as Lamar. Why, despite the existence of regional stylistic variants, does the Lamar ceramic complex evolve in a quite uniform manner across the Piedmont?

2. Are the upper Chattahoochee, middle Chattahoochee and upper Flint River valleys lacking significant (as measured by mounded architecture) early Lamar occupations, and if so why?

3. Is the late Lamar occupation of the upper Chattahoochee River valley ceramically part of the Tugalo phase, or does it represent a distinct phase?

4. What is the historical, stylistic, and functional significance of Mississippian ceramic types in the Little Egypt and Barnett phases?

5. What is the relative importance of different botanic and faunal species in the Lamar diet?

TABLE 12

Mississippian Site Frequency in Piedmont Reservoirs

	<u>Allatoona¹</u> <u>Reservoir</u>	<u>Russell²</u> <u>Reservoir</u>	<u>Wallace³</u> <u>Reservoir</u>	<u>West Point⁴</u> <u>Reservoir</u>
Early and Middle Mississippi periods	57 (5)	23 (2)	22 (3)	2 (0)
Late Mississippi period	14 (0)	8 (1)	825 (5)	41 (2)

1. Caldwell, 1957
2. Rudolph and Hally, 1985
3. Rudolph and Blanton, 1980
4. Rudolph, 1982

number in parentheses refer to number of mound sites located in and adjacent to reservoirs

6. Is there regional variability in the Lamar subsistence pattern as it is known from Barnett and Dyar phases? If there is, how is it to be explained?

7. Are rectangular, wattle and daub domestic structures characteristic of Lamar culture throughout the Piedmont?

8. What other kinds of structures are characteristic of Lamar households, and what is their spatial configuration?

9. What kinds of permanent settlements are characteristic of Lamar culture? Is there regional and temporal variability in the nature of permanent settlements?

10. What kinds of special function sites are characteristic of the different Lamar phases?

11. What kinds of temporal and regional variability are there in mound architecture, and why does such variability occur?

12. What are the functions of Lamar mounds and mound summit buildings?

13. Did sites with mounds function as political and religious centers for surrounding communities?

14. How large (measured in terms of area and number of sites) were the polities centered on mound sites? What, if any, temporal and regional variability existed in these polities?

15. What evidence is there for status differentiation within Lamar societies?

16. What role, if any, did stylistically widespread "Southern Cult" items play in the social, political and religious life of Lamar societies?

17. Which Lamar phases were contacted by the mid-16th century Spanish expeditions of DeSoto and DeLuna?

18. To what extent can Lamar phases and geographically delineated mound site clusters be equated with polities of the type encountered by DeSoto and DeLuna?

19. Why do some areas of the Piedmont seem to grow in terms of number of sites and mound sites through time while other areas seem to decline? Do these cycles represent the growth and decline of chiefdoms?

20. To what extent does subsistence pattern and diet change with cycles of growth and decline in Lamar phases?

CHAPTER 5

RESOURCE MANAGEMENT CONSIDERATIONS

In this chapter we assess the archaeological resource base for the Mississippi period in the Georgia Piedmont and identify the kinds of natural processes and human activities that have a destructive impact on it. We also identify the significant research problems that need to be addressed in order to more fully understand the nature of the adaptive pattern characteristic of the area and period. Finally, we identify significance criteria for Piedmont Mississippian resources and offer recommendations for the preservation and protection of significant resources.

THE RESOURCE BASE

Site Types

The resource base for the Mississippi period in the Piedmont consists of thousands of archaeological sites. These sites can be classified into several culturally significant types: sites with earth mounds (the number and size of mounds probably being culturally significant), non-mound villages, farmsteads, upland hunting and gathering camps, fishing camps, and specialized mortuary sites. Other site types such as shrines, quarries, and hunting blinds undoubtedly exist as well, but have yet to be identified in the archaeological record.

Predicting Site Location

Investigations in and near the Lake Oconee basin, the most intensively and systematically surveyed portion of the Piedmont, have shown that Mississippi period sites occur in virtually all possible habitats--both broad and narrow floodplains, islands, levee ridges, terraces, ridgetops, ridgetops near the river, and interfluvial ridgetops several kilometers from the main river channel. Presumably Mississippian sites have equally wide distributions in other Piedmont drainages, although the density and types of sites in each habitat probably varied considerably.

The Lake Oconee investigations have also shown that the distribution of Mississippian sites varies through time. For example, Etowah sites in the Oconee River valley are found primarily along the main channel, either in the broad alluvial bottoms or near shoals. Etowah sites occur very infrequently in the uplands or along small streams. Late Lamar sites, on the other hand, are many times more common than Etowah sites and occur throughout the river valley and surrounding uplands. Presumably similar temporal variability exists in other Piedmont drainages.

In general, Mississippian sites tend to be most common in and adjacent to large areas of alluvial floodplain. This is due in large part to the fact that agriculture was one of the most important components of the Piedmont Mississippian subsistence pattern and to the fact that river floodplain soils were best suited for aboriginal cultivation techniques. Although existing

survey data are inadequate for evaluating upland site densities in the Piedmont, we suspect that in most cases interfluvial ridgetops far from rivers or large streams are the least likely areas to contain Mississippian sites. This is not to say, however, that Mississippian sites do not exist on the interfluves, for specialized extractive sites related to exploiting deer, turkey, and nuts or to obtaining stone suitable for tools undoubtedly occur in these remote areas.

Site survey data from the Lake Oconee, Russell, Allatoona, and West Point Reservoirs (Table 12) suggest that there is an apparent positive correlation between the number of mound sites of a particular culture that occur in an area and the number of non-mound sites of the same culture that occur in that area. This relationship needs to be verified and refined with additional survey data. However, we recommend that until this is done, the density of mound sites can be used as a crude estimate of Mississippian period site density.

The most reliable data available on Mississippian site density come from the Lake Oconee basin where the University of Georgia conducted intensive survey of approximately 5600 ha. Site recovery is estimated to be approximately 90% in non-floodplain portions of the basin and approximately 50% in floodplain portions. Slightly more than 1000 Mississippian sites were recorded in the 5600 ha area. According to these figures, site density in the basin was approximately one site per four hectares. Data from a single 1300 acre survey tract located five kilometers from the basin (Elliot 1984) indicate that upland site density near the Oconee River was approximately one site per ten hectares.

As Figure 18 shows, Mississippian mound sites tend to occur in clusters at several points along the major rivers and streams of the Piedmont. Data are inadequate to claim that original Mississippian site density in the vicinity of these clusters approaches that found in the Lake Oconee basin. However, it is probable that site density near the mound clusters is greater than that occurring elsewhere--for example, on the Broad River or along the headwaters of the Oconee, Ocmulgee, Ogeechee, and Flint Rivers.

Recent investigations (Rudolph and Blanton 1981; Rudolph and Hally 1985) have shown that site density varied temporally as well as regionally. Those river valleys that have had the most intensive survey show that at various times in the Mississippian period some valleys had dense populations while others had sparse populations. For example, the late Etowah culture population was relatively high in the Etowah River valley, while at the same time the Buford Reservoir area on the Chattahoochee River seems to have been virtually abandoned. In the Oconee River valley, the late Lamar population was very high, yet only 100 km away in the Russell Reservoir, there are no late Lamar sites whatsoever.

State of Preservation

In order to evaluate the state of Mississippian site preservation in the Georgia Piedmont, it is useful to consider stream bottom lands and interfluvial uplands separately. Two agents have had the greatest destructive

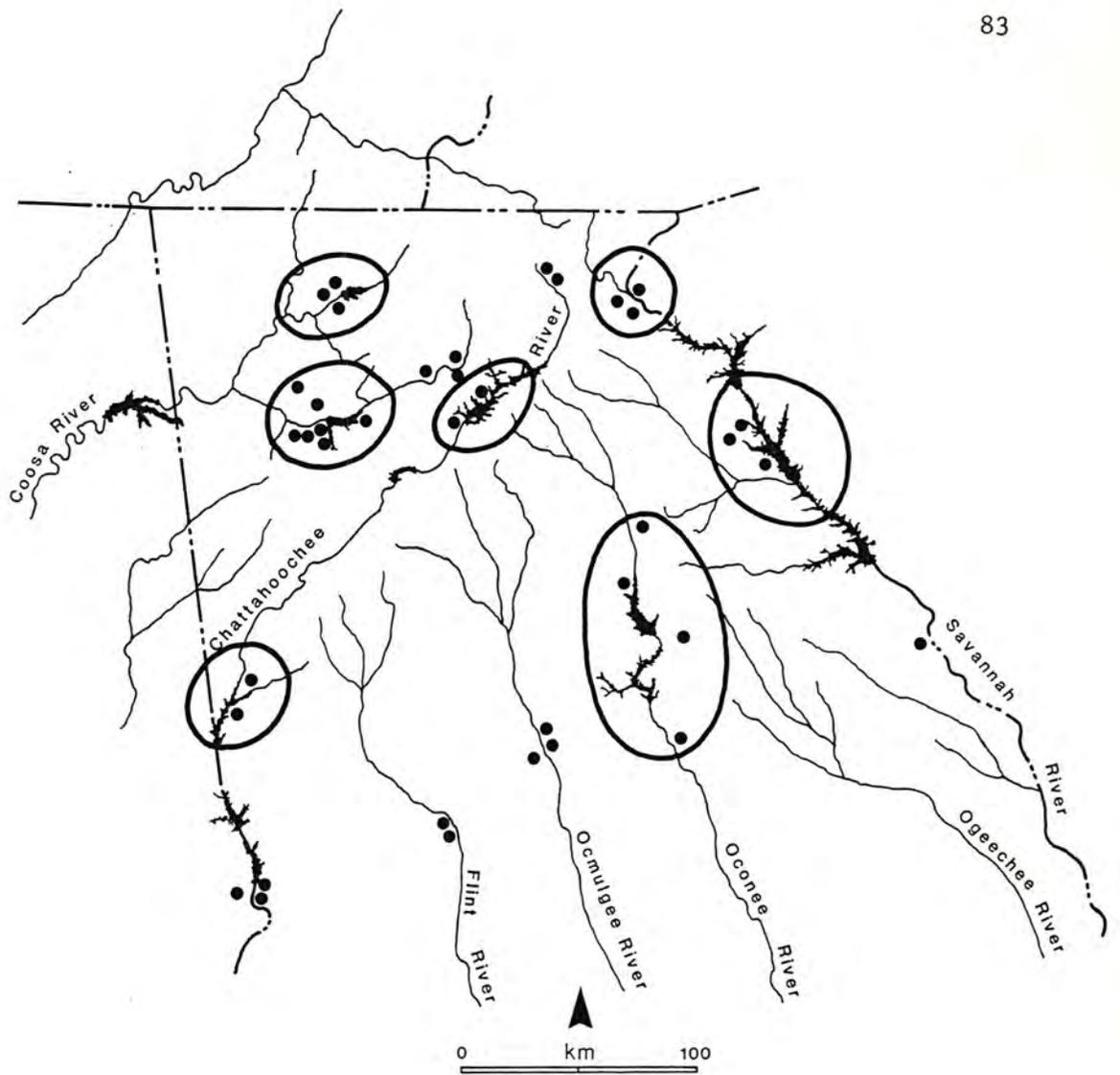


Figure 18. Distribution of Mississippian mound sites. Mound clusters effected by reservoirs are encircled.

impact on bottomland sites: reservoir construction and increased stream sediment loads.

Ten large reservoirs have been constructed on Piedmont rivers. These have inundated portions of at least seven mound clusters (Figure 18). Most severely effected in terms of area inundated and probable number of sites lost are mound clusters located on the middle Savannah River (Clark Hill and Russell Reservoirs) and middle Oconee River (Lake Sinclair and Lake Oconee). Some mound clusters--for example those located on the upper Chattahoochee and Flint Rivers--have been unaffected by reservoir construction.

Trimble (1969, 1974) has argued that forest clearing and intensive row cropping in the Georgia Piedmont during the nineteenth and early twentieth centuries resulted in increased erosion in upland areas and increased sediment loads in streams. As a result of the latter, overbank flooding increased in frequency and magnitude and this in turn resulted in increased scouring of floodplain soils and ultimately in increased alluvial deposition in bottomlands. Brook (1981) argues that a third result of heavier sediment loads was increased lateral movement of stream channels. These processes have probably had both negative and positive impacts on Mississippian site preservation. Numerous sites have doubtless been destroyed by scouring and channel meandering. Indeed, overbank flood scouring is known to have destroyed a significant portion of the village deposits at the Little Egypt (Hally 1980) and Scull Shoals (Williams 1984) sites. Two mound sites, Rembert (9EB1) and Engineers' Landing (9Ce5) located on the Savannah and Chattahoochee Rivers respectively, are known to have been destroyed by channel migration within the last 100 years. The extent to which bottomland Mississippian sites in the Georgia Piedmont have been damaged by these two processes is not known, but we estimate that at least 75% of such sites have been damaged or destroyed.

Ironically, the alluvial deposition produced by the same heavy sediment loads in Piedmont streams has served to conserve many Mississippian sites. The floodplain of aggrading sections of streams are today covered with 0.3-1.5 m or more of recently deposited alluvium (Trimble 1969). Cultural features which survived overbank and stream channel erosion are today protected by this mantle of alluvium.

Upland Mississippian sites are particularly vulnerable to disturbance because of their stratigraphic position on or just below ground surface at the time of initial American settlement. Plowing, terracing, logging and construction activities and erosion resulting from intensive row cropping during the nineteenth and twentieth centuries (Trimble 1974) have probably destroyed midden deposits and cultural features at most upland sites. Only in those few instances (probably less than 1% of all upland Mississippian sites) where cultivation never occurred (for example, at 9Mg46 [Shapiro and Williams 1984]) will upland sites be found to have intact deposits in any significant amount.

RESEARCH PROBLEMS IN PIEDMONT MISSISSIPPIAN ARCHAEOLOGY

The Mississippian Adaptive Pattern

The basic feature of Mississippian culture in the Georgia Piedmont may be summarized as follows. Subsistence focused on the cultivation of maize, beans and squash and the gathering of wild plants and animal species, the most important of which were deer, fish, and nuts. Floodplain soils were probably the most intensively cultivated; shoals were probably the most productive locations for gathering riverine resources; and uplands were probably a major source of large game and nuts.

Human settlement was most intensive along stretches of rivers having large areas of tillable floodplain soils. People typically resided in permanent settlements of various sizes located adjacent to their cultivated fields. Riverine and upland food resources were exploited from these habitation sites as well as from temporary camps located adjacent to shoals and in the uplands away from the major streams.

Ascribed social status differences seem to have existed in Mississippian societies. They were probably most important with respect to the allocation of political power. Early European accounts suggest that at least in the Late Mississippian period, leaders had considerable power and could exercise some degree of control over large numbers of communities and substantial populations. Sites with earth mounds, typically located along the same stretches of river where human settlement was heaviest, served as the political and religious centers for such polities. The mounds served as the foundation for chiefs' residences and public meeting houses as well as for temples and mortuaries.

All Mississippian cultures in the Georgia Piedmont fit this general characterization, but archaeological research over the last 30 years demonstrates there is also tremendous regional and temporal variation in Mississippian period economic, social and political behavior.

As we accumulate more and more information about subsistence practices, we can begin to see that the importance of cultigens, deer, turtles, small mammals, birds, fish, shellfish, and other foods varied greatly from one valley to the next and from one century to the next. For example, in the middle Oconee River valley we see shoals resources--bivalves, turtles, fish, and aquatic mammals--being exploited more intensively during the Late Mississippian period than at any time before. In the Savannah River valley, shoals never took on such importance. We also find that the importance of maize horticulture relative to nut harvesting varied through time (Moore 1985) and probably regionally.

To some degree, differences in subsistence are clearly related to differences in the local environment. Certain Piedmont streams have wider floodplains than others; some have larger and more frequent shoals; some drainages have narrow interfluves and some have broad interfluves. But we can also see that differences might be attributed to changes in population and sociopolitical complexity. In the Oconee River valley around Lake Oconee, we see a steady increase in site density throughout the course of the Mississippian

period, with the exception of a possible decline in site density during the Middle Mississippi period. In the Savannah River valley, we see a drastic decline in site density during the last portion of the Late Mississippi period. In the Etowah River valley there appears to be a peak in site density during the late Early Mississippi and Middle Mississippi periods followed by a decline during all of the Late Mississippi period. We can expect, therefore, that changes in subsistence practices and settlement patterns in one river valley would not be paralleled by similar trends in other river valleys.

Similarly, the number and size of mounds in various river valleys fluctuated through time. We see the Ocmulgee River valley being the apex of sociopolitical complexity during the Early Mississippi period; the Etowah and Coosawattee Rivers, the middle Savannah River, and parts of the Oconee River valley containing the main concentration of mound centers during the Middle Mississippi period; and the Coosawattee, middle Chattahoochee, middle Ocmulgee, middle Oconee, extreme upper Chattahoochee, and extreme upper Savannah river valleys containing centers during the Late Mississippi period. Again, we can expect that with this variation in sociopolitical organization through time, the nature of settlement hierarchies and adaptive strategies would vary.

If we wish to characterize the Mississippian adaptive pattern in the Piedmont in any detail, we must be certain that generalizations refer to specific river valleys at specific times, for there is not one pattern but many.

Research Problems and Investigation

The Mississippi period has been the subject of more archaeological research than any other period in the Piedmont. Unfortunately, this research has been of rather uneven quality. At best, it has been opportunistic and narrowly focused; at worst, it has been haphazard, poorly executed, and unreported. In order to gain some appreciation for the current state of Mississippian archaeology in the Piedmont, we have attempted to evaluate the quality of information that is available for five general problem areas. The results of this admittedly subjective evaluation are presented in Table 13. It is clear from the table that the Piedmont Mississippian adaptive pattern is very poorly documented at present.

Specific questions pertaining to individual Mississippian phases and cultures that need to be addressed in future archaeological research have been listed in Chapter 4. In addition to supplying answers to these questions, we believe that archaeological investigations of the Mississippian adaptive pattern should be directed to a number of more general problem areas and that these must be addressed for each phase or culture in each major river drainage.

We believe that detailed and systematic ceramic classification must be performed in each major drainage within the Piedmont. The great diversity seen in piedmont Mississippian ceramics has tremendous potential as a research tool if we can obtain greater understanding of regional, temporal, and functional variation. The resulting information will permit definition of

TABLE 13

Quality of Available Archaeological Information

	<u>Ceramic classification</u>	<u>Phase definition</u>	<u>Subsistence economy</u>	<u>Settlement pattern</u>	<u>Socio-political Organization</u>
<u>EARLY MISSISSIPPI</u>					
Coosawattee River	poor	poor	poor	poor	poor
Etowah River	excellent	good	poor	fair	fair
Upper Savannah/ Tugalo River	poor	poor	non-existent	poor	fair
Middle Savannah River	poor	poor	non-existent	fair	non-existent
middle Oconee River	good	good	poor	good	poor
Middle Ocmulgee River	good	good	poor	poor	fair
Upper Flint River	non-existent	non-existent	non-existent	non-existent	non-existent
Upper Chattahoochee River	poor	poor	non-existent	poor	non-existent
Middle Chattahoochee River	poor	poor	non-existent	poor	non-existent
Broad River	non-existent	non-existent	non-existent	non-existent	non-existent
Upper Ogeechee River	non-existent	non-existent	non-existent	non-existent	non-existent
Headwaters of Oconee, Ocmulgee and Flint Rivers	non-existent	non-existent	non-existent	non-existent	non-existent

TABLE 13 (Continued)

	<u>Ceramic classification</u>	<u>Phase definition</u>	<u>Subsistence economy</u>	<u>Settlement pattern</u>	<u>Socio-political Organization</u>
<u>MIDDLE MISSISSIPPI</u>					
Coosawatee River	poor	poor	poor	poor	fair
Etowah River	fair	fair	poor	poor	good
Upper Savannah/ Tugalo River	fair	fair	poor	poor	poor
Middle Savannah River	excellent	excellent	good	fair	fair
middle Oconee River	fair	fair	non-existent	good	poor
Middle Ocmulgee River	non-existent	non-existent	non-existent	non-existent	non-existent
Upper Flint River	non-existent	non-existent	non-existent	non-existent	non-existent
Upper Chattahoochee River	poor	poor	non-existent	poor	non-existent
Middle Chattahoochee River	non-existent	non-existent	non-existent	poor	non-existent
Broad River	non-existent	non-existent	non-existent	non-existent	non-existent
Upper Ogeechee River	non-existent	non-existent	non-existent	non-existent	non-existent
Headwaters of Oconee, Ocmulgee and Flint Rivers	non-existent	non-existent	non-existent	non-existent	non-existent

TABLE 13 (Continued)

	<u>Ceramic classification</u>	<u>Phase definition</u>	<u>Subsistence economy</u>	<u>Settlement pattern</u>	<u>Socio-political Organization</u>
<u>LATE MISSISSIPPI</u>					
Coosawattee River	excellent	excellent	good	poor	fair
Etowah River	poor	poor	non-existent	poor	non-existent
Upper Savannah/ Tugalo River	fair	fair	non-existent	poor	poor
Middle Savannah River	good	good	fair	fair	non-existent
middle Oconee River	excellent	excellent	good	excellent	good
Middle Ocmulgee River	fair	good	non-existent	poor	poor
Upper Flint River	non-existent	non-existent	non-existent	non-existent	non-existent
Upper Chattahoochee River	poor	poor	non-existent	poor	poor
Middle Chattahoochee River	poor	poor	non-existent	poor	poor
Broad River	non-existent	non-existent	non-existent	non-existent	non-existent
Headwaters of Oconee, Ocmulgee and Flint Rivers	non-existent	non-existent	non-existent	non-existent	non-existent

phases or other analytically useful units that will facilitate refinement of Mississippian chronology as well as investigation of social, political, and economic relationships within and between regions.

Ceramic studies of this sort can be carried out with pottery recovered by surface collection, test excavation, and intensive site excavation. Samples of pottery, however, must be large and should be derived from contexts appropriate for the particular research problem. For example, pottery samples used for identifying phases should come from several locations at a number of different sites to insure that the phase reflects the ceramic assemblage of the society as a whole rather than one particular activity. In order to develop phase sequences, archaeologists should obtain at least some of their samples from stratified contexts.

Subsistence economies are most easily and accurately reconstructed from faunal and botanical remains, although tools and utensils may also yield important evidence. Like ceramic samples, faunal and botanical samples must be large enough to answer the particular research question being posed. They must also be derived from suitable contexts. Many research questions require very large samples of bones and plant remains that can come only through the extensive excavation of sites with good organic preservation. However, even small poorly preserved samples can prove useful. For example, the knowledge that bivalve shells have been found on the surface of several upland Lamar sites in the middle Oconee basin suggests that these sites may have been used for activities other than deer hunting and nut gathering.

Settlement pattern reconstruction requires identification of functionally distinct site types and determination of their relative frequency and spatial distribution. These kinds of data are best obtained through intensive site excavation and intensive, systematic site survey.

Several kinds of information can be used in the investigation of socio-political organization. These include spatial distribution of sites, mound and plaza architecture, mortuary patterns, health and nutritional status of individuals represented in skeletal samples, and inter-site and intra-site distribution of ceramic styles, faunal remains and exotic goods. Intensive and systematic site survey, site testing and intensive site excavation each provide some of these kinds of information.

Finally we emphasize again that to fully understand the Mississippian adaptive pattern in the Piedmont, it is necessary to conduct these kinds of investigation for each phase in each river drainage.

RESOURCE SIGNIFICANCE

Three general criteria can be use to assign historical significance to Mississippi period sites in the Piedmont: site type; frequency of sites by type and phase; and preservation state.

Some site types can provide more information on a greater variety of research problems than others, but all types of sites have the potential to provide useful information not available from others. For example, mound sites can provide information on most aspects of the Mississippian adaptive

pattern because a wide variety of activities generally took place at such sites. Mound sites are also among the best sources of information on the nature of political organization, religion and social ranking. A small shell midden, on the other hand, may yield information on little more than aquatic resource gathering, but it may be one of the few sources of such information.

Since the Mississippian adaptive pattern appears to vary significantly from river drainage to river drainage and through time, it is clear that no one site can be considered representative of a particular type for the entire Mississippian occupation of the Georgia Piedmont. A site may be judged to have national or state significance for a variety of reasons, but this should not blind us to the fact that its scientific importance must be evaluated in the context of particular geographically or temporally bounded phases or socio-political systems. A mound site in the Etowah River valley, for example, may be very useful for investigating broad questions of importance to our understanding Mississippian political organization throughout the Eastern Woodlands, but it may tell us relatively little about the precise nature of political organization or social status differentiation in the middle Oconee River valley two centuries later.

Some site types occur with low frequency and in terms of information yield represent a scarce but very important resource. Approximately 35 sites with platform mounds are known to exist in the Piedmont. Each probably represents an administrative center within a Mississippian polity. Each therefore represents the sole source of much of the information necessary to understand the socio-political organization of a particular society. Other sites, such as upland hunting and gathering camps, are probably quite common--perhaps numbering in the thousands--and are probably represented by multiple examples in each Mississippian phase. The loss of one such site potentially causes less of a problem for archaeological research because other examples of the type can yield the same kind and quality of information. However, such small sites, despite their apparent frequency, were ignored by archaeologists in the past, and very little is known about them. Thus, some information in the form of site distribution pattern is lost even when the more common types of sites are destroyed.

Significance is also determined by the preservation state of the site. Sites with intact cultural features and preserved faunal and botanic material can yield considerably more information about past lifeways than can sites consisting only of plowed and eroded surface scatter of non-diagnostic stone artifacts. Nevertheless, if all examples of a particular site type, for example, upland hunting camps, in a region are surface scatters of this sort, their information yield, low as it may be, may be quite significant in the context of a larger settlement and subsistence system.

All Mississippi period sites in the Piedmont are potentially historically significant because all may yield information useful to the understanding of the Mississippian adaptive pattern and its temporal and regional variants. Some sites, however, are more likely to yield scientifically valuable information than others. Generally speaking, sites that were the scene of a variety of human activities and have a good preservation state have the greatest likelihood of yielding such information. Mound sites and large villages are the site types that typically manifest these characteristics.

The potential significance of these kinds of sites is increased by their rarity.

At the other end of the significance spectrum, upland artifact scatters, that may represent upland hunting and gathering camps, are much less likely to yield scientifically valuable information. These sites types are generally poorly preserved and were probably the scene of only a limited variety of activities. They seem, furthermore, to be a common site type. Nevertheless, they do represent an aspect of prehistoric culture that is very poorly understood, and until a number of well preserved examples of them have been thoroughly investigated in each drainage and time period, they must be considered historically significant.

RESOURCE MANAGEMENT

Several types of land use activity have the potential to damage Mississippian sites. Reservoirs are especially destructive because they cover large areas and because they are located where Mississippian occupations were most intense--the valleys of major streams and rivers. Most site destruction results from inundation, but dam and power line construction activities also take their toll, primarily as a result of land clearing and leveling and earth borrowing. Reservoirs stimulate residential and, to a lesser extent, commercial development in their vicinity, and therefore can be said to also have a major secondary impact on archaeological resources located outside the floodpool.

Agricultural activities can have a severe impact on archaeological sites located on or just below ground surface. In terms of number of sites damaged and extent of area effected, agriculture is by far the single greatest destructive agent in the Piedmont. Mounds may be obliterated during land leveling or over time through continued plowing. Midden deposits and architectural features located within 30 cm or so of ground surface can be obliterated by plowing and by land clearing, leveling, and terracing. Surface erosion and gulleying, accelerated by poor agricultural practices, may also impact surface and near surface sites.

Timbering may also have a major destructive impact on surface and near surface sites. Mechanical equipment used to harvest and transport timber may disturb the soil to a depth of a foot or more. Surface erosion and gulleying, initiated by clear cutting, may also damage surface and near surface sites. Timbering, like agriculture, effects large areas of the Piedmont, but, because it is generally limited to upland areas and to more rugged terrain, its impact is limited primarily to smaller and more functionally specialized upland sites.

Construction activities--highway, residential and commercial--are also responsible for the destruction of large numbers of archaeological sites. Because they may involve land leveling, fill borrowing and foundation excavation, construction activities may impact deeply buried as well as surface sites. As the population and economy of north Georgia expands, the impact of this destructive agent will grow with increasing speed. In some counties, commercial and residential construction are rapidly replacing agriculture as the major agent of site destruction.

Mississippian sites occur in a great variety of topographic situations. From the standpoint of present day land use impact on site preservation, however, we need distinguish only two broad topographic categories, upland sites and bottomland sites. As noted in an earlier section, sites located in stream bottom lands are usually overlain by modern alluvium ranging in thickness up to 1.5 m or more. These sites are generally safe from the impact of agriculture, timbering and even construction, although the latter may make sites inaccessible for future investigation by sealing them beneath land fill and buildings. Upland sites tend to be surface and near surface sites. They are potentially vulnerable to agriculture, timbering and construction. There are probably few upland sites that have not been damaged to some degree by these kinds of activities.

Some modern land-use activities are compatible with the preservation of Mississippian sites, others are not. Construction activities that involve land leveling and excavation or that result in covering the ground surface with permanent building materials such as asphalt are destructive of upland sites. Most upland sites have already been damaged by agriculture and timbering activities. With the exception of mound sites, these two activities should have little further impact on upland sites as long as soil erosion is controlled and as long as land leveling, terracing and deep plowing (chisel plowing) are not undertaken. Upland areas that have not been previously plowed, a rare phenomenon in the Piedmont, should not be brought into cultivation or clear cut.

Land use-activities such as farming that effect only the surface and near surface zone will have little negative impact on most bottomland sites. Reservoirs, channel straightening and construction activities that require deep excavation (bridge construction for example) or covering with permanent construction materials are not compatible with site preservation in bottomland locations.

Archaeological sites are a finite resource that, like endangered species of plants and animals, must be carefully managed and conserved. Archaeology has made major methodological and theoretical advances in the last 30 years and will no doubt continue to do so in the future. With each such advance, new and more sophisticated ways of investigating and understanding the archaeological record become possible. For this reason, it is imperative that some proportion of the State's archaeological resources be set aside and preserved for future research efforts. It is also necessary that some sites with physical characteristics that can be appreciated by the public be preserved for recreational and educational use.

How should archaeological sites be selected for protection and preservation? At least three criteria should be considered in site selection: low frequency of occurrence, research potential, and public educational potential. All mound sites meet these three criteria and should be preserved. Quarry sites and rockshelters also meet these criteria and should be preserved. Upland sites with intact midden deposits and features meet the first two criteria and should be preserved. All other site types probably exist in large numbers throughout the Piedmont today. Ideally, several examples of these other site types from each phase in each drainage should be preserved.

CHAPTER 6

REVIEW COMMENTS AND REPLY

COMMENTS

By David G. Anderson

Department of Anthropology, University of Michigan, Ann Arbor, Michigan
48109.

Hally and Rudolph, and the Office of the State Archaeologist, are to be commended for producing this outstanding, much needed synthesis. As someone who began archaeological work in Georgia in 1980, after previous Mississippian research in Arkansas and South Carolina, I can only wish that this document had existed six years ago, when I was struggling to make sense of the bewildering array of evidence about Mississippian occupations in the Georgia Piedmont. Like many states, Georgia has a long tradition of archaeological fieldwork, dating well back into the last century (Waring 1968). Unfortunately, and as is also common in far too many areas, much of this work has never been adequately reported. With the exception of a few memorable publications, the way a new researcher acquired detailed knowledge about the Mississippian in Georgia was through oral history (i.e., tapping the memories of surviving senior practitioners); the examination of old field notes, site files, and artifact collections (if these existed); and the inspection of unpublished manuscripts (if one could find them). Hally and Rudolph have markedly altered this picture by providing, in one place, comprehensive listings of Piedmont Mississippian research projects; radiocarbon dates; phase descriptions, maps, and identification criteria; and period-by-period evaluations of the state of current knowledge. Their "Operating Plan" should be carefully read by every researcher working on late prehistoric adaptations in the Georgia area. Given the careful documentation, and the many innovative suggestions for future research, I would additionally recommend it to Mississippian researchers throughout the southeast as a model of reporting, and worthy of emulation.

While strongly enthusiastic about Hally and Rudolph's synthesis, a number of comments are in order. While the inventory of previous major Mississippian research projects is a welcome and useful introduction to the extant data and research base, more information would be desirable. The terse descriptive summaries, lacking reference to collections or manuscripts (either published or unpublished) are difficult to evaluate. Little or no justification is provided, for example, for the pronouncements about the extent, adequacy, and results of the research. If survey coverage or excavation strategy was inadequate, why was it? What would be adequate coverage, and why? With this in mind, I find it difficult to accept some of the reported statements, such as that the Wallace Reservoir project area, where few deeply buried Archaic period sites were found, had "nearly complete surface and subsurface coverage" or that the recent Scull Shoals and Shinholser testing projects (Williams 1984, 1985b) had no biases. While these projects reflect solid, well conceived and executed research - some of the best undertaken in this part of the Southeast - they can hardly be said to be completely free of bias, or to reflect "nearly complete" subsurface survey coverage.

Although obvious constraints on the author's time precluded a review of all relevant archaeological activity in the Piedmont, this does not mean that smaller-scale survey and testing projects should be ignored in future research, or that they cannot (individually or cumulatively) provide valuable information. Literally hundreds of small, localized survey and testing CRM projects have been conducted in the Georgia Piedmont; the results of these projects can help fill in gaps in our present understanding of Mississippian settlement systems.

Use of data collected in small scale survey projects can be used to help evaluate the nature of the apparent vacant areas on Hally and Rudolph's Mississippian phase distribution maps. Are such areas actually deserted, or do they reflect an absence of data? If buffer zones did exist between Mississippian polities in the Georgia Piedmont, as has been suggested, the presence or absence of small projectile points would resolve whether these areas were completely deserted, or used for hunting, as possible prey reservoirs (see Mech 1977; Anderson 1983).

What Hally and Rudolph's historical review highlights is the need for a comprehensive, well-referenced history and/or inventory of archaeological research projects conducted to date in the Georgia area. Waring's (1968, written ca. 1940) pioneering effort, unfortunately, remains but little improved upon. Standardized descriptions, perhaps in table format, would be useful, covering the fieldwork (i.e. person-days in field, volume or area examined, number of sites or features found, use of sampling techniques, use of flotation, screen mesh size employed, existence and location of field notes, etc), analyses (i.e., location of collections, artifact categories recovered, etc), and reporting (i.e., references for all relevant publications). Such a review, perhaps managed by the Office of the State Archaeologist, should minimally document where research has been conducted, and (briefly) what was found. For Georgia Mississippian research, fortunately, a detailed historical summary exists (Ferguson 1971:24-104), although it is in need of updating. Hally and Rudolph's "Operating Plan" provides a basic outline from which such an effort could proceed.

The nature of Georgia Piedmont environmental structure in relation to Mississippian land-use patterning is a topic covered in some detail by Hally and Rudolph. Importantly, while accepting traditional arguments about the close correlation between major Mississippian settlements and favorable floodplain settings (e.g., Ward 1965; Murphy and Hudson 1968; Ferguson 1971; Smith 1978; Ferguson and Green 1984), the authors point to other settings - particularly the interriverine uplands - as areas warranting research. Both hunting and farming, they suggest, may have occurred in such areas. In their review of the excavations at Macon, for example, they recount Kelly's (1938:10) discovery of a large aboriginal cornfield on the plateau overlooking the floodplain, and comment that its seemingly anomalous location deserves explanation.

Dispersing fields and specific crop types over a number of microenvironmental zones is an effective risk-minimization strategy known to have been used by some American Indian groups (Ford 1980). In the Southeast, where rainfall and flooding patterns are somewhat erratic, the dispersal of fields would reduce the possibility of total crop loss due to offseason flooding or localized draught (e.g., Chmurny 1973; Anderson 1983). The

purported unique or particularly advantageous characteristics of floodplain soils may also be questioned. Although floodplain soils are often fertile and easily worked, these same attributes also characterize many upland Piedmont soils (Frost 1978). Some upland soils, lacking the fine silts and clay commonly deposited in floodplain areas, may actually be easier to work, once cleared. Early historic sources, furthermore, indicate that Indian fields in the Southeast were sometimes widely dispersed (Swanton 1946:305, 309, 629-641; Waddell 1980:48); careful study of the reported settings indicates that not all fields were in close proximity to major drainages. The view that Mississippian populations only cultivated floodplain settings, therefore, is probably something of a myth. What is needed when conducting archaeological settlement/subsistence analyses, as Hally and Rudolph suggest, is the careful evaluation of all land surfaces, and not merely those our preconceptions dictate.

Although arguing that evidence for intensive maize agriculture is minimal until after the initial Mississippian Woodstock culture, Hally and Rudolph (p. 34, citing Wood 1984) suggest that "a simple form of horticulture" was practiced during the Late Woodland in the Georgia Piedmont. While this may ultimately prove correct, I do not believe that the ethnobotanical evidence currently at hand supports such an inference. Only traces of domesticates, most in questionable context, have been found in pre-Mississippian settings in the Georgia Piedmont, or indeed from anywhere on the lower South Atlantic Slope (e.g., Ford 1981; Harris 1982; Yarnell and Black 1985). While there is little doubt that horticultural food production has considerable antiquity in parts of eastern North America (e.g., Ford 1981, 1985; Ash and Asch 1985; Yarnell and Black 1985), the verdict, in my opinion, is still out as to its presence and importance over much of the Southern Appalachian area prior to the Mississippi period. Given increasing use of flotation procedures, this question should not remain open long.

Prehistoric subsistence economy, notably the appearance of intensive agriculture, it should be noted, may be monitored a number of ways archaeologically. Stable carbon isotope analysis has been used in several areas of eastern North America to identify when maize became an important constituent of the diet (e.g., Van der Merwe and Vogel 1976; Bender et al. 1981; Lynott et al. 1986). Likewise, trace element analyses have been used to monitor changing sex and status-related differences in plant and animal food consumption during the Woodland-to-Mississippian transition (Lambert et al. 1979; Cohen and Armelagos 1984). Somewhat more general indicators of diet and the relative effectiveness of prehistoric subsistence strategies may be obtained from skeletal remains (e.g., Hess-Ashmore et al. 1982; Goodman et al. 1984). Larsen (1982, 1983), using Woodland and Mississippi period human skeletal remains from the Georgia coast, was able to show that the transition to a high carbohydrate diet associated with the adoption of maize agriculture resulted in a marked increase in dental caries.

Evidence for extensive land clearing, associated with the development of major field systems, may be resolved using pollen coring, or by monitoring the relative proportions of climax as opposed to successional vegetational community remains (Minnis 1978, 1985). Changes from climax forest plant and animal species to field or successional community species have been documented over the Late Woodland to Mississippian transition in northern Alabama (Woodruff 1981; Caddell 1981, 1983; summarized in Welch nd). Comparable

changes have been monitored at the Rucker's Bottom site in northeast Georgia, using wood charcoal found in archaeological features (Moore 1985:690-693). A shift from mature to immature successional communities over the interval from roughly A.D. 1200-1500 was indicated, suggesting the increasing intensive use of maize agriculture. Research strategies and analytical procedures such as these warrant routine consideration in analyses of Georgia Piedmont Mississippian assemblages.

Hally and Rudolph's phase by phase description of Early, Middle, and Late prehistoric period Mississippian cultures in the Georgia Piedmont is a tremendous help to local researchers. Their descriptions, coupled with the phase distribution maps, and the period-by-period survey of the state of current knowledge, will help guide research for some time to come. Adopting a standardized terminology for ceramic design elements is particularly useful, as is their compilation of radiocarbon dates documenting the local sequence. What their synthesis also illustrates in unfortunate detail, however, is how wretchedly documented are many of the classic Georgia Mississippian sites, phases, or cultures. Classic site assemblages (e.g., Macon Plateau, Woodstock Fort) or cultural constructs (e.g., "Woodstock" or "Lamar"), their work shows, remain to this date poorly or incompletely documented. Although not specifically called for, I would argue that extensive work with existing Mississippian collections, and the publication of currently unpublished manuscripts, is a critical area for future research.

Detailed analysis and publication of feature and artifact assemblages at Macon Plateau, Woodstock Fort, and other unreported sites is important, if only to inform the archaeological profession about the kind of information that is actually available from these sites and what will need to be found elsewhere. Publication of existing site information is especially critical to understanding Mississippian emergence in the Georgia area. Are the early fortifications at Woodstock Fort, for example, actually associated with the Woodstock, or a later Etowah component? The answer to such a question may shed light on the importance of warfare in the emergence of complex polities locally (c.f., Carneiro 1981). What precisely is the temporal range of Macon Plateau, and where are its closest cultural affinities? If it is an example of a site unit intrusion, could its appearance (if early enough) have triggered a wave of secondary chiefdom formation over the surrounding area? The appearance of fortifications at other Early Mississippian centers such as Woodstock Fort, in such a scenario, might reflect a defensive reaction and social reorganization by local groups, as a result of the appearance of powerful neighbors (Sanders and Price 1968:132; Webster 1975:46; Carneiro 1981:66). If the emergence and spread of Mississippian culture over the Georgia Piedmont reflects a combination of primary and secondary chiefdom formation, the differing attributes and evolutionary trajectories of these kinds of socio-political entities will need to be resolved, to permit their recognition archaeologically (Anderson 1986).

The utility of ethnohistoric sources for understanding the location, organization, and operation of prehistoric Mississippian societies in the Georgia area, as Hally and Rudolph note, while only beginning to be recognized, should prove to be an important and exciting area of research in the years to come. Critical to such research will be convincing demonstrations that protohistoric (early-mid sixteenth century) archaeological phases can be equated with ethnohistorically documented aboriginal polities.

If this can be done, similar parallels may be drawn over the earlier, prehistoric Mississippian sequence. In this regard, Hally and Rudolph's phase distribution maps are particularly exciting, since they may document the boundaries of prehistoric Mississippian societies. At least some of their early sixteenth century archaeological phases, they note, conform quite closely to provinces documented by earlier Spanish explorers (c.f. Figure 15, Hudson et al. 1984, 1985). The use of a direct historical approach, to extrapolate into the past, thus appears warranted. Work along these lines has been initiated by several authors working in the Georgia-South Carolina area (DePratter 1983; DePratter et al. 1983; Hudson et al. 1984, 1985; Hally 1982, 1984, Hally et al. 1985; Shapiro 1983; Anderson 1983, 1985, 1986; Anderson et al. 1985; Williams 1985b, 1986).

As Hally and Rudolph superbly document, the evolutionary trajectories of Mississippian polities in some portions of the South Appalachian area are becoming increasingly well known. Cycling behavior - the emergence, expansion, collapse, and (sometimes) reconstitution of local Mississippian chiefdoms - has been noted by several authors (Hally 1982; Hally et al. 1985; Shapiro 1983; Anderson 1983, 1985). Why such cycling behavior occurred, or how it occurred, in contrast, is much less well understood at the present (Anderson 1986; Williams 1986).

Competition between chiefdoms - for agricultural land, hunting territories, or other factors - appears to have played a part in at least some of the chiefly collapses observed locally. This is most evident along the middle Savannah River, which was largely depopulated after about A.D. 1450. As Hally and Rudolph and others have noted, at the time of the DeSoto entrada the area of the middle Savannah was uninhabited, and formed part of an extensive buffer zone separating the rival provinces of Ocute and Cofitachequi. Possible evidence for the emergence of this buffer was observed at the Rucker's Bottom site, where increasingly complex fortifications appear in the last century prior to site abandonment, which occurred about the same time that the entire lower drainage was depopulated (Anderson and Schuldenrein 1983, 1985). Increasing tensions and possible hostilities between local chiefly polities (i.e., presumably between those along the Savannah, the Oconee, and in central South Carolina) is inferred by this appearance and elaboration of fortifications.

Since no obvious evidence for warfare has been found at Rucker's Bottom or elsewhere along the middle Savannah, an immediate question that arises is what became of the people? Where did they go, and why? Were they relocated (forcible or voluntarily?) closer to the centers of Ocute or Cofitachequi, or did they merge with groups along the upper Savannah, where occupation continued well into the historic era? Rudolph and Blanton (1981) have documented an apparent major increase in population in the central Oconee Drainage during later Mississippian time; some of this increase may be due to population relocation from other areas, including possibly from along the Savannah. Comparable questions can be asked about the decline of Macon Plateau, Etowah, and other Georgia Piedmont (presumed) prehistoric polities that Hally and Rudolph have so aptly documented.

That local Mississippian polities appeared, expanded, and then collapsed is thus becoming increasingly recognized in the South Appalachian area, as is the existence of probable buffer zones between most if not all of these

societies. Learning how these buffers functioned might help us to understand why regional population fluctuations, tied to chiefly cycling and organizational restructuring, occurred. Some thoughts along these lines are offered here.

Ethnohistoric evidence suggests that Mississippian buffer zones in the Georgia-South Carolina area were aggressively maintained; individuals from other polities found hunting in these areas were typically subject to attack (Vega 1951:284). Areas close to permanent settlements were thus the safest for hunting and other resource procurement activity, while increasing danger obtained the further one went into the buffer. One obvious result of this was that the central portions of these buffers were only infrequently visited. As such, they served as prey reservoirs (Mech 1977), from which game animal populations depleted closer to settlements might replenish themselves. The maintenance of buffer zones, whether intended or not, thus appears to have helped local Mississippian populations avoid severe resource shortages.

Buffer zones, particularly those portions closest to permanent settlements, also served as hunting territories, probably for both animal hide and protein resources (Hickerson 1965; Gramly 1977; Turner and Santley 1979). It would be important to learn if the extent of these resource procurement (buffer) zones was directly related to user group population size or density. If such a relationship could be shown to exist - between a Mississippian polity's population base and the size of its buffer zone (controlling, of course, for variation in gross environmental resource structure) - it would further suggest that the successful functioning of these buffers was essential to the maintenance of organizational stability. The collapse of chiefly polities, given this perspective, might be as likely to ensue from gradually increasing resource pressure as from attacks on or threats to actual settlements.

The depopulation of the middle Savannah River after ca. A.D. 1450, to use the example cited above, may have thus been at least partially caused by an increasing encroachment on the Savannah polities' traditional hunting preserves by the rapidly growing Mississippian populations of central South Carolina and Georgia. The populations of Ocute and Cofitachequi observed in the early contact era appear to have been particularly high (e.g., Rudolph and Blanton 1981; Ranjel 1904:89-102, 140; Elvas 1904:55-69). This may be due, in part, to the size of the buffers surrounding these polities, which appear to have been much larger than those in place previously, particularly in the vicinity of the Savannah River basin. These possible relationships, between Mississippian polity size and stability, and the size and stability of its surrounding buffer, warrant further investigation and testing.

Turning from these somewhat abstract theoretical matters, there are a number of minor points in Hally and Rudolph's "Operating Plan" that I am in disagreement with that deserve specific commentary. Statements about the importance of mound sites are common in Hally and Rudolph's discussion. While recognizing the importance of such sites, I believe their emphasis is a little overdrawn, particularly when they make statements like "mound sites can provide information on most aspects of the Mississippian adaptive pattern" (p. 90). Such a sweeping statement is simply not warranted; their own work at Beaverdam Creek indicates that some mound groups were apparently more-or-less vacant ceremonial centers, where ceremonial behavior focusing on elites,

particularly their burial, occurred (Rudolph and Hally 1985; Anderson et al. 1985). It can be argued, I believe, that the reason we know comparatively little about Mississippian settlement and subsistence locally is because most researchers, until quite recently, have focused on mound, rather than on village, hamlet, or special activity sites. While I agree that all mound sites should be extensively excavated if they are in danger, and should be preserved wherever possible, I would argue that at this late date, when almost every mound group in Georgia has seen at least some work, that we can learn more about local Mississippian adaptations by focusing on less elaborate site categories. Hally and Rudolph, it should be said in their defense, also strongly champion work on these site types.

Care should be taken when making an explicit linkage of mound sites with political centers, as is done in several areas of the manuscript. Some of these sites may have been predominantly ceremonial/mortuary loci, with the seat of political authority located elsewhere. Major political centers, furthermore, examined early in their ascendancy, may have only had comparatively small mounds, or no mounds at all. The central town of the geographically extensive early sixteenth century province of Coosa, if correctly identified to the Little Egypt site (Hudson et al. 1985:732), provides a classic case in point. As Hally and Rudolph document (Tables 6, 9), only two mounds were present at Little Egypt (Coosa), the largest of which was only 3.3 meters high. One of Coosa's apparent tributary towns, at Etowah, however, had mounds up to 18.0 meters high present (although it is quite evident that they were no longer the focus of much ceremonial activity)! The fact that ascendant Mississippian polities tend to remain in their apparent place of origin, rather than relocate to centers with elaborate ceremonial facilities already in place, warrants explanation. Ties to the ancestral graves, rather than the mortuary facilities themselves (i.e., the mounds), it is suggested, may have been central to Mississippian legitimizing ideologies (see also Wright 1984; Brown 1985:104).

While agreeing with the need for a Hollywood phase, and that Hally and Rudolph are the appropriate individuals to formulate it, several reservations are in order. First, I cannot agree with their statement that the phase is well known (p. 53). At the present it remains little more than a pottery/mortuary complex known only from a single, rather poorly documented site (Thomas 1894; DeBaillou 1965; Reid 1965). The relationship of Hollywood to the much larger (and now largely destroyed) Silver Bluff mound group located on the other side of the Savannah, in South Carolina, furthermore, remains to be documented. While I agree that these inner Coastal Plain sites were probably central places in a major Middle Mississippi period polity, I also believe that considerably more work will be necessary to adequately characterize this phase. Since preparation of the draft manuscript Hally has, I understand, undertaken a re-analysis of DeBaillou's materials; such work, coupled with the examination of other middle Savannah River collections, will be essential to adequately define the late prehistoric cultural sequence in this portion of the drainage.

Not unexpectedly, as the excavator I have some corrections and comments on the descriptions of the Rucker's Bottom village excavations. The Beaverdam phase village found at the site was somewhat more than the "seven structures" implied in Hally and Rudolph's description (p. 62). Although only partially (ca. 50%) examined, and badly truncated by plowing, evidence for a small,

unfortified village was found, characterized by domestic buildings and one apparent rotunda or council house fronting on a probable plaza. Burials were found beneath house floors and in the plaza, which also yielded a series of major post supports, from probable trophy/gaming posts. The later, fortified Rembert phase village at the site exhibited a similar layout, with apparent domestic structures and a large rotunda fronting on a probable plaza that also yielded evidence for major post supports.

The presence of a rotunda, or council house at Rucker's Bottom, if accurately identified as such, offers an important clue about the nature of village-level decision-making in local Mississippian chiefdoms. DePratter (1983:207-210) has argued that the presence of such communal decision-making structures occurred only in weakly integrated chiefdoms; as chiefly authority increased, councils would have grown weaker and disappeared. While this may be the case at some mound centers, few non-mound Mississippian village areas have been excavated in the South Appalachian area, making this a difficult argument to generalize to all settlements in a site hierarchy. At one local mound site, Irene, in fact, a large rotunda was found to be clearly associated with the middle Mississippian occupation (Caldwell and McCann 1941:30); council houses have also been reported at nonmound contact era coastal sites (Crook 1978:39-40). What this suggests is that village level organization locally, even in complex Mississippian chiefdoms, may have had to incorporate the rank and file in decision-making in some fashion, possibly to help alleviate tensions and jealousies arising from social inequalities. The communal buildings so well documented in the later historic era may thus have been an aspect of ordinary Mississippian village life all along, rather than evidence of a degeneration from a more complex organizational framework.

The Mississippian deposits at Rucker's Bottom, as noted previously, were badly damaged by historic plowing, which intruded and truncated the midden and upper feature horizons. Little geoarchaeological evidence for damage due to overbank flooding was found, however, at least over the Mississippian components (Anderson and Schuldenrein 1981:579-581). Given the extensive plow damage encountered at Rucker's Bottom, which is located in a classic Georgia Piedmont bottomland setting, I cannot accept Hally and Rudolph's (p. 93) conclusions that "farming... will have little negative impact on most bottomland sites." What we found at Rucker's Bottom was exactly the opposite. Our geoarchaeological investigations documented considerable variation in the thickness of alluvial deposits over the terrace area, that was related to overbank depositional patterns (Anderson and Schuldenrein 1985:276; Figures 10.53, 10.91). Archaeological features in areas where these deposits were thickest were in much better condition than those in areas where little deposition occurred. What is indicated by the work at Rucker's Bottom is that floodplain/bottomland settings cannot be viewed as uniform, archaeologically benign environments; levee morphology and microtopographic variation can have a profound effect on the degree of preservation encountered.

While I agree that most upland sites in the Georgia Piedmont have been disturbed by historic farming and timber management practices, I would argue that even badly damaged sites in this environmental setting have the potential to contribute important information about local Mississippian adaptive systems. As Hally and Rudolph note, such sites are of critical importance when found with intact feature and midden deposits. Even when these upland sites have been plowed or deflated, however, their artifact assemblages may

still be close to their original place of deposition, particularly if the terrain is fairly level (c.f., Rick 1976). Controlled surface collection and/or dispersed test pitting operations might reveal information about intrasite structure that would otherwise be lost (Goodyear et al. 1979:77-87); Canouts and Goodyear 1985). Upland sites, even if disturbed, may additionally have subplowzone or subsurface features present. Field strategies capable of detecting such features need to be adopted, particularly when the sites in question are fairly large and/or low density scatters. Dispersed test pits, or even the hand excavation of small block units, however, appears to be fairly useless as a feature discovery technique on such sites (although it may provide a valid sample of assemblage content and spatial occurrence). Greater use of machine stripping in Phase II (evaluative) operations on such sites, particularly once representative surface/plowzone samples have been collected, would probably ensure, or at least maximize, the possibility of finding features. Such field procedures, however, should be used only if the sites are to be destroyed, and after other, less destructive procedures have been completed.

Other natural and cultural processes detrimental to the archaeological record, beyond those mentioned by Hally and Rudolph, also warrant consideration. Pothunting needs to be controlled, for example, particularly at major Mississippian mound, village, and burial sites. One determined pothunter with a shovel can, in a weekend, totally destroy the information in one or more mound stages, or in any number of burials. Since shooting such people is illegal, public education - both of pothunters and of citizens who could help protect sites, such as landowners, tenants, and politicians - needs to be stressed. Many former pothunters have proven to be valuable sources of information, once they came to realize the importance, and fragility, of the archaeological record. Archaeologists in South Carolina have for the past five years been systematically recording information in the hands of collectors; the amount of important information recovered has been literally tremendous (Charles 1981, 1983). A similar program could be profitably established in Georgia.

Natural erosive processes, such as riverbank erosion (like that which destroyed the Silver Bluff, Rembert, and Engineer's Landing mound sites) should also be monitored, with protective embankments set in place if at all possible. When archaeological sites are endangered by land-leveling, construction, or other cultural agencies, and protective legislation does not exist or apply, attempts should be made to dissuade the landowners from their course of action, or at least permit salvage operations. Regular monitoring of key sites by local avocational archaeologists could greatly reduce the number of 'surprises' or tragedies. Provisions for the purchase of important archaeological sites, by the State of Georgia or by private interest groups such as the Archaeological Conservancy, should also be seriously considered. Finally, political action by concerned citizens, properly channelled, could greatly increase public commitment to cultural resources in Georgia.

Hally and Rudolph have produced a landmark synthesis of Georgia Piedmont Mississippian that will form a primary reference for researchers for years to come. They, and the Office of the State Archaeologist, which sponsored this project, are to be congratulated. I eagerly await additional volumes in this series.

By Vernon James Knight, Jr.

Office of Archaeological Research, University of Alabama, 1 Mound State Monument, Moundville, Alabama 35474.

Hally and Rudolph have to be congratulated for producing an impressive synthesis on the Mississippi period of the Georgia Piedmont. Theirs has been a difficult task. The literature they have had to consult is burdened in various cases by inadequacy of reporting, inconsistency, and inaccessibility. Yet much of the unpublished work contains important and interesting data--data that have to be factored out with a sympathy for the circumstances, history, and personalities of Georgia archaeology. In light of this, I find the synthesis remarkably thorough in its coverage. I suspect that it will be cited frequently in the years ahead.

One of the most helpful contributions is the compilation and analysis of the Mississippi period radiocarbon chronology for the area. Despite the well-known erratic tendencies of some of the published dates, perhaps especially those for Etowah and Wilbanks phases, taken together they make a certain amount of sense. The dendrochronological corrections help. One gets a strong sense that finally we can begin to speak with some confidence about the correct placement of these phenomena in absolute time, and further, that Hally and Rudolph have charted them at least roughly where they ought to remain.

This comes with a few surprises. Macon Plateau, which now appears to be mainly an eleventh century phenomenon, may not be quite as early as had been previously reported. The whole Etowah ceramic style sequence seems to be compressed into no more than about a century and a half, between about A.D. 1050 and 1200. Wilbanks and Savannah, which together represent the pinnacle of prehistoric sociopolitical complexity in northern Georgia, both have come and gone prior to A.D. 1350, replaced by various kinds of early Lamar. These and other alignments are subject, certainly, to future adjustment and many more radiocarbon dates are warranted, but in the interim we should have much to think about concerning the comparative development of Mississippi culture here, and elsewhere in the Southeast.

Something only hinted at here, perhaps because it involves to a large degree the Late Woodland data, is that almost nothing is known of the immediate background to Mississippi development in the Georgia Piedmont. This does not only involve the Macon Plateau problem. The transition between Napier/Late Swift Creek and Woodstock also seems anything but clear, not only in the domain of ceramic style, but also in spatial distribution of sites and in chronology.

The broader question might be more than just one of archaeological recognition. It appears that sites of the critical period ca. A.D. 750-900 in the Georgia Piedmont, and, for that matter, in the Alabama Piedmont as well, are simply very infrequent and therefore have not attracted notice. The implication seems to me to be important. Demographic pressures and environmental stresses that elsewhere in the Southeast underlie and precondition the development of Mississippian culture were probably absent in northern Georgia, despite the fact that this area eventually witnessed one of the most vigorous, and most complex, Mississippian cultural phenomena in the

eastern United States. There is far more to Mississippian culture than can be explained by uniform demo-techno-environmental causes and effects.

It is encouraging to see an assessment of the Macon Plateau culture that does not succumb to the dogma which seems to surround both sides of the question of local development versus population movement. The fact is that we cannot yet identify the culture of the Ocmulgee Valley in the vicinity of Macon during the period ca. A.D. 700-900. Until we can do so, no one will be able to give satisfactory support to a claim of sequence discontinuity or disjunctiveness. The idea of population movement should not be prematurely discarded either. If the notion of Mississippian radiation was based on a myth, the current notion that population movement cannot be important in prehistory is based on another one.

More survey and better local sequences alone will not resolve these questions. The harder trick will be to formulate a truly sophisticated theoretical basis for distinguishing among potential causes of sequence discontinuity in the archaeological record--population movements included.

Georgia's Office of the State Archaeologist has recognized the wisdom of promoting preservation through encouraging systematic reviews such as this one. By telling us where we have been, they bring into sharper focus the many directions we have yet to pursue.

By Marvin T. Smith

Garrow & Associates, Inc. DeKalb Technology Center, Bldg. 300, Suite 375,
4000 DeKalb Technology Parkway, Atlanta, Georgia 30340

Hally and Rudolph have presented an excellent report detailing the extent of current knowledge concerning Mississippian societies in Piedmont Georgia. This is truly a masterful synthesis of research that has taken place over the past century. It is difficult to find fault with their well-balanced presentation; however, a few points can be discussed further.

Chapter 3 presents an excellent review and evaluation of past Piedmont Mississippian research. Clearly much thought went into their presentation. The focus is on specific research projects, so more synthetic work such as the dissertations by Chung Ho Lee (1977) and Chester B. DePratter (1983) are not included. This section could have been made even stronger with the inclusion of references to published results of these projects, especially since most of the reports can be found in the extensive bibliography anyway.

The prehistoric overview chapter is likewise a valuable contribution. The presentation of a synthesis of recently established phases is much appreciated. The table of Piedmont radiocarbon dates is a useful source, but it should be noted that it is a selected list, apparently of dates that the authors feel are reasonably accurate. Other researchers might disagree with the accuracy of some of the dates presented (cf. M. Smith 1981a). We are presented with a sample of dates reflecting the authors' biases; perhaps a table of all dates would have been more useful. Some additional dates are listed by Seckinger (1979) and M. Smith (1981a).

Other specific questions might be raised about some of the points the authors make. Should Woodstock really be considered a culture, or considering its limited geographical range (pg. 32), should it be considered a regional phase of early Etowah culture? As the authors note, Woodstock needs to be researched much further. Does Woodstock represent a ranked society? What forms of burial did this group practice? It is curious that the nearly contemporaneous early Mississippian cultures in eastern Tennessee also lack burial data (Faulkner 1975:25). The role of maize agriculture in Woodstock "culture" is questioned, but Hally and Rudolph might have suggested that physical anthropologists be called in to test skeletal series for trace elements, if such human remains can be found. There is a general lack of consideration for the use of physical anthropological data throughout the report.

What is the place of the Savannah Cord Marked ceramic type (Caldwell and McCann 1941) in the Savannah phases discussed by Hally and Rudolph? This type is not listed in the overview of Savannah types in Table 7 (pg. 56), but it is discussed as being present at the interior Scull Shoals site (pg. 61), so it is not strictly a coastal type. The revision of Wilbanks as a phase of Savannah seems entirely appropriate now that the larger picture is in sharper focus (pg. 59).

Hally and Rudolph attribute only three mounds to the Etowah site (pg. 59), but other authors mention many more. For example, Thomas (1894:299) illustrates six mounds. If Hally and Rudolph are only considering mounds with documented construction stages during the Wilbanks phase, it is still hard to know how they arrive at a figure of three. The scale of the Etowah site clearly surpasses any other site in the Georgia Piedmont at this time period. Explanations for this phenomenon should be sought.

Despite several mentions of the rise and fall of chiefdoms (pg. 78 and 80 for example), no mention is made of the research on this subject by Chester DePratter (1983).

But these are minor points of disagreement. Perhaps a few more general comments can be made about this report. These are not criticisms of the content of this excellent report so much, but are discussions of areas which were not considered.

The first point is the general lack of broadly based research questions on any of the periods or phases discussed by Hally and Rudolph. The authors have provided important research questions for the specific cultures discussed, but perhaps because of the very nature of this document (being limited to the Georgia Piedmont), their research questions seem to be somewhat provincial in outlook. We should also be considering research questions of general anthropological interest. Some of these questions are hinted at in the present report, but are never developed. For example, how did ranked societies or chiefdoms appear in the study area? Did they evolve from a indigenous Woodland base, or were they introduced from elsewhere? How did these societies decline and why? What are the factors that limited political growth. Why don't we have an Oconee State? The Georgia Piedmont provides an excellent laboratory for the study of political evolution of chiefly societies. It is not necessary to go to Mesoamerica or Peru to study these

problems. We can make a valuable contribution to anthropological theory using data available here.

Similarly, how did these Piedmont societies interact with other groups? Why are Moundville and Southeastern Missouri pottery vessels found in the Hollywood Mound (Thomas 1894; Williams 1979) and what does this mean? Other examples could be given. The central Savannah River drainage seems to have been abandoned during the fifteenth century, and the explanation has been advanced that this abandonment was due to the rise of two strong political units, Ocuta and Cofitachiqui, to the west and east (Hudson et al., 1984). We cannot afford to look at the Georgia Piedmont as an isolated area, particularly when studying these relatively complex Mississippian societies.

Finally, one other point can be made. In their discussion of agents of site destruction, Hally and Rudolph overlook one major factor: the effects of archaeological vandals or pothunters. This group far outnumbers the dedicated amateur archaeologist and the professional, and their effects on the archaeological record can no longer be overlooked. Students from University of Georgia field schools reported carloads of vandals from numerous states after archaeological salvage was completed at the Little Egypt site, and I have heard rumors of collectors from Tennessee journeying down to the middle Oconee drainage in search of burial urns. Vandals destroyed a major portion of the Dyar site in the Wallace Reservoir before scientific investigations could be completed (M. Smith 1981a), and vandals continue to assault major sites such as shoulderbone (Mark Williams, personal communication). Destruction by pothunters is far worse than that done by farm equipment, and in some cases just as extensive. Hally and Rudolph point out that many Piedmont sites are protected from plowing by blankets of alluvium, but such soils do not act as a deterrent to pothunters. Their excavations can be quite deep. Burials and their contents are rifled, but such actions also destroy house floors and other archaeological contexts. We can no longer afford to ignore this menace. As a professional group, we should promote adequate antiquities legislation and burial disturbance laws.

Hally and Rudolph have presented a valuable overview of Piedmont Mississippian cultures. Their insights should provide us with research questions for years to come. As more data are collected, our research questions will become more sophisticated. In spite of the previous advances documented by Hally and Rudolph, we have only begun to learn about these groups.

By Karl T. Steinen

Department of Sociology and Anthropology, West Georgia College, Carrollton,
Georgia 30118

Hally and Rudolph have presented an exhaustive review of our current understanding in the Mississippi Period in the Piedmont of Georgia. This review rightfully stresses the known ceramic sequence for this large and diverse geographic area. Noticably missing, however, is a similar presentation of models of Mississippian social and political organization.

Hally and Rudolph make a significant contribution by recognizing the existence of specific mound/site constellations in the different drainage

basins. In at least one instance these have been identified as a "province". I only wish that they had made the next and most obvious step and attempted to identify the historically known cultural identification of these constellations. In the past (see specifically Sears 1955, ms.; and Dickens 1976) archaeologists have demonstrated the historical link between the Lamar materials that Hally and Rudolph use in their discussion and Cherokee culture. However, in a recent publication in which Hally was a co-author, these same Lamar materials, at one site, are linked with the province of Coosa. Coosa is historically linked to the Creek, not the Cherokee (Hudson et al.. 1985). This difference needs to be dealt with.

When discussing the well known ceramic sequence for the piedmont, Hally and Rudolph use the term Savannah for the period and ceramic complex that follows Etowah. While Savannah has been widely used to describe these materials, William H. Sears proposed the term Wilbanks to replace it. Sears presented a set of clearly defined characteristics that allowed Wilbanks to be differentiated from Savannah (Sears 1958). Hally and Rudolph have relegated Wilbanks to a phase status instead of being a period. I'm not certain that I agree with this new use of the Wilbanks material. By calling Wilbanks a phase of Savannah, we are able to avoid the problems of identification that are inherent when using complicated stamped ceramics. On the other hand, Hally and Rudolph do not really present an overwhelming argument for this new classification. Perhaps we should not treat Wilbanks as a phase until there has been more work conducted that will demonstrate that Wilbanks ceramics have a limited temporal and geographical distribution.

Another aspect of the presentation of the Savannah period that I thought needed expansion was the discussion of its relationships (either technological or cultural) with the coastal Savannah. Are they the same? Do we have a single large cultural phenomena that covers a diverse range of environments? Do we have a series of similar phases? Some insight into these problems may be found in differential distributions of Savannah Check Stamped and Shell tempering within Savannah and Wilbanks collections, as well as shell tempering in the earlier Etowah and Lamar materials.

My final comments concerning the discussion of the archaeological cultures that are presented concerns the geographic distribution of the Etowah materials. Hally and Rudolph have done an excellent job summarizing the generally known distribution of Etowah ceramics. The fact that these predominantly North Georgia ceramics are found along the Fall Line is of great interest in itself. What is even more interesting is the fact that there is a rather large midden area located on the bluff over the east side of the Ocmulgee River in Pulaski County that can be assigned to the Etowah II or III period. This can be determined because the majority of the decorated pottery recovered by an amateur archaeologist from the site (numbering several hundred sherds) are the classic Etowah Ladder Based Diamond motif. These materials are currently housed at West Georgia College and have yet to be described in print. This site demonstrates that the Etowah Culture was "expansionistic" and made at least one attempt to expand onto the Coastal Plain. Since this is the only true midden area that can be attributed to the Etowah Culture that has been found below the Fall Line, I think that we can safely say that this expansion was a failure.

Chapter 5, "Resource Management Considerations" is a well formulated statement concerning the resource base and research problems that need to be investigated. I would like to make a few suggestions concerning these research problems.

First, as I have outlined above, I think that a fruitful approach to Etowah, Savannah/Wilbanks and Lamar research would be to look at regional differences in the presence and absence of shell tempering. The use of shell tempering is cultural selection and should be usable by the archaeologist to define temporal and regional differences (phases) in these three ceramic series. Ultimately, this line of research could lead to a more specific identification of the historical identity of the phases that are defined.

Second, I would like to suggest that Hally and Rudolph expand their discussion of the economic/adaptive aspects of Mississippian societies. This should be along two lines. One has been suggested by Bruce Smith. This is that there has been a significant amount of evidence developed that indicates that there is a remarkable amount of similarity between Woodland and Mississippian adaptive systems in the Southeast (Smith 1975:139). Why is this? What allowed Mississippian groups to develop larger populations and denser population concentrations with essentially the same resource base and adaptive technique as those used by Woodland cultures? Was it an increased use of maize and other cultigens in the diet or perhaps structural changes in the social and political organizations that allowed it? The other is a broadening of the ideas presented on p. 90 where they state "Some site types can provide more information... For example, mound sites can provide information on most aspects of the Mississippian adaptive pattern because a wide variety of activities generally took place at such sites. I would suggest that while mound sites do provide more information, it may not be representative information. Research that has been conducted in other areas indicates that the people who lived at mound sites may have had significantly different economic patterns than those who lived in non-mound associated villages and farmsteads. This difference would probably reflect status difference within the society.

In summary, I feel that Hally and Rudolph have presented an excellent contribution to the developing RP3 plan for Georgia. The comments that I have presented do not detract from this document at all but simply reflect my own views of Mississippian and the direction that future research should take.

REPLY TO REVIEWERS' COMMENTS

By David J. Hally and James L. Rudolph

When we began preparing this report, we hoped to generate some debate. Syntheses cannot please everyone. Data that we believe are irrelevant to a particular problem might be considered essential by someone else; personal biases in interpretation invariably surface; and factual errors appear as we get lost in an impenetrable thicket of sites, types, dates, phases, cultures, periods, hypotheses, and explanations. For these reasons, we are very pleased (and a little suprised) by the unusually positive response to the Operating Plan.

The following discussion will emphasize disagreements and misunderstandings between the reviewers and ourselves over interpretations of the

archaeological record. If a reviewer pointed out a factual error or omission, we have frequently incorporated the correct information into our report and noted the change in the present section.

Both Smith and Anderson feel that we should have included more information in our summaries of archaeological projects in Chapter 3. The chapter would certainly have been improved had we expanded the descriptions in the ways they suggest. Our "terse descriptive summaries" do however reflect the realities of limited time available for report preparation.

Anderson is concerned that we did not justify our evaluations of archaeological projects. They are based on several criteria: the amount of time devoted to field work, type of survey coverage, proportion of site investigated, and adequacy of final report. The evaluations are not based on an absolute set of standards, but rather are comparative in nature. Two examples may serve to illustrate our approach. The Hartwell Reservoir survey, which was evaluated as having "inadequate survey coverage," involved a four month walk-over survey of 56,000 acre area by one person, and yielded only 70 sites. In contrast, the Wallace Reservoir Mitigation Survey involved three survey crews for 16 months, covered 14,000 acres (out of a total of 18,000 acres) of cleared ground, employed two different systematic subsurface survey techniques, and yielded over 3,000 sites. Compared to the Hartwell survey, surface and subsurface coverage was "nearly complete." As an attempt to fully investigate a site before reservoir inundation, Kelly's excavation in the center of the Bell Field Mound is clearly inadequate and biased. In contrast, Mark Williams' test excavations at Scull Shoals and Shinholser sites had limited objectives which were met. Neither site is in danger of destruction, and Williams' research can be regarded as preliminary in nature, laying the groundwork for future more intensive and extensive investigations. From this perspective, the Scull Shoals and Shinholser projects have no important biases.

All of the reviewers suggest additional topics for future research. These include questions concerning comparisons with cultures in other regions, questions requiring the chemical analysis of human bone, and many others. Each reader can probably think of still more questions.

Smith refers to radiocarbon dates that should be included in Table 1 and Figures 4 and 5. We did not exclude dates simply because we did not like them. Our criteria for including a date are 1) that the date must fall somewhere within the Mississippi period; 2) that the associated artifacts indicate a Mississippi period occupation; and 3) that the date's stratigraphic context is clear enough to indicate what it is that is being dated. Five dates published by Smith (1981a) were, however, inadvertently omitted from Table 1 and Figures 4 and 5 in the manuscript draft reviewed by Smith. We have corrected this error in the published report.

Anderson, Steinen, and Knight all raise questions concerning the Late Woodland antecedents to the Mississippi period. We intentionally avoided a discussion of the Late Woodland period because of the scope of our report, but there is no denying that archaeologists are far from understanding the nature of Late Woodland in Georgia. It is evident that various forms of complicated stamping (T. Rudolph 1985; Wood et al 1985) and possibly a form of simple stamping (Anderson and Schuldenrein 1985) may have been in use during the A.D.

700-900 period. It is also increasingly evident that late Swift Creek and Napier sites are distributed across the entire Piedmont section of Georgia and that they are fairly common in some areas (T. Rudolph, personal communication). Nevertheless, until a clearer picture is available concerning what pottery is diagnostic of Late Woodland cultures in the Piedmont, we will have difficulty assessing site densities and adaptive strategies and documenting the origins of Macon Plateau and other early Mississippian cultures.

Smith suggests that Woodstock culture might be more appropriately classified as a phase of Etowah culture. We should explain that in the context of our report, it would be difficult to do so since we left open the possibility that Woodstock was terminal Late Woodland rather than Mississippian. So little is known about Woodstock, that only additional data can help us clarify this problem.

Steinen mentions the occurrence of an early Etowah site in the Coastal Plain and concludes that its presence demonstrates that Etowah was an "expansionistic" culture. The unusual location for this site requires explanation, but we do not feel that its mere presence "demonstrates" any particular process of culture change.

Smith feels that we have not emphasized sufficiently the size of the Etowah site relative to other Early and Middle Mississippi period mound sites in the Piedmont. We agree with this assessment, and we agree that the magnitude of Etowah does require an explanation. It is interesting to note in this regard that Etowah site has lost some of its uniqueness during the past few years. As a result of recent research, we now know that Etowah and Savannah cultures (as identified by ceramics) are found throughout the Piedmont and that major mound sites (Hollywood, Scull Shoals, Schinholser) also existed outside the Etowah valley at this time. Etowah site may have been the largest center in its day, but it was not the only large center.

Smith questions the status of Savannah Fine Cordmarked pottery in Piedmont Savannah culture. We have made two changes in the published version of this report that will hopefully clarify our feelings on the subject. Small amounts (<1%) of cordmarked pottery have been recovered from Savannah culture contexts at the Hollywood and Scull Shoals sites. This fact has been indicated in the ceramic counts in Table 7. We have identified this pottery only as "cordmarked" because not enough is known about it to permit identifying it as a Savannah Fine Cordmarked.

We had some difficulty in deciding how to deal with the Savannah-Wilbanks issue, a difficulty evident in Steinen's opposition to our classification and Smith's support for it. The ceramic evidence indicates that the Wilbanks pottery complex developed directly out of Etowah culture in northwest Georgia and that it has a number of stylistic parallels with other contemporary Savannah phases in the Piedmont. This situation we feel is best handled taxonomically by identifying Wilbanks as a phase of Savannah culture.

Steinen suggests that we should have considered the relationship of piedmont Savannah culture to coastal Savannah culture. We did not deal with this question because it lies outside the scope of our report. However, we will state here that we view Savannah II on the coast as just another phase of Savannah culture. Savannah II phase ceramics from Irene site differ from the

piedmont Savannah phases no more than the latter differ among themselves (Rudolph and Hally 1985:459-460). The abundance of cordmarking on the coast, as with the differential distribution of collard rims, corn cob marking, shell tempering, and check stamping in the interior, is best seen as regional variation within a widespread ceramic complex.

Anderson questions our identification of Hollywood phase as a well known phase. He is correct, it is not well known. Accordingly, we have modified our reference to it on page 53.

Anderson and Smith both raise questions concerning the rise and fall of chiefdoms in the Piedmont. An examination of our maps give us a sense that political groups (if we can equate these with phases) were volatile. The density of populations and mound centers seems to have fluctuated considerably through time. No one center seems to have controlled an area for more than a few generations. Why and how this occurred is a particularly exciting area for future research.

Steinen raises questions concerning Creek, Cherokee, and Lamar cultures. We did not address this topic because we had to limit our review to the period before A.D. 1540. We do feel, however, that the simple equation of Lamar culture with Cherokee that Sears made in 1955 is untenable today on both archaeological (Hally 1984) and ethnohistorical (Hudson et al 1985) grounds.

Steinen and Anderson suggest that we placed too great importance on mound centers, or not enough on upland sites, in our discussion of archaeological resource management. Part of this discussion was perhaps inadequately presented. Our emphasis on mound centers was not meant to imply that mounds are inherently more important than villages, hamlets, or hunting camps. Obviously, a site's importance is based in large measure on one's research interests. Nevertheless, it is probably true that a wider range of questions can be addressed with information derived from mound sites. This is because mound sites were probably the scene of a wider range of activities than were specialized resource extraction sites and small settlements.

Anderson questions our statement that farming is not destructive of floodplain sites. We agree with his observation that "floodplain/bottomland settings cannot be viewed as uniform, archaeologically benign environments..." We agree that we may have understated the case for agricultural impact on floodplain sites. It is nevertheless true that a large percentage of floodplain Mississippian sites are today buried beneath a thick mantle of recent alluvium and that as a result they will not be impacted by continued plowing.

We agree with Anderson that pothunting is a destructive factor in the Georgia Piedmont. At present, its impact is not as great as that of the other natural and human factors mentioned. Pot hunting is a major destructive factor in the Ridge and Valley section of Georgia, however, and the potential certainly exists for it to get worse in the Piedmont.

We are glad to have had the opportunity to prepare this document and to respond to the reviewers' comments. Too often regional syntheses become dull categories of what was found and where. A synthesis should be an opportunity for research and should stimulate further investigation. Both of us can truthfully say that we are now continuing along paths that we first discovered

in writing the operating plan. We hope that others will likewise find their research affected and stimulated by this operating plan.

REFERENCES CITED

- Anderson, David G.
 1983 The Mississippian in South Carolina. Paper presented at the 40th Annual Southeastern Archaeological Conference, Columbia, South Carolina. In Press in Papers in Honor of Robert L. Stephenson, edited by Albert C. Goodyear III. Institute of Archaeology and Anthropology, University of South Carolina, Anthropological Studies. Columbia
- 1985 The Internal Organization and Operation of Chiefdom Level Societies on the Southeastern Atlantic Slope: An Examination of Ethnohistoric Sources. South Carolina Antiquities 17. (In Press).
- 1986 Organizational Fluctuations in Middle-Range Societies: A Case Study from the South Atlantic Slope. Paper presentation at the Lamar Mississippian Symposium, Macon, Georgia, May 1986.
- Anderson, David G., and Joseph Schuldenrein
 1983 Mississippian Settlement in the Southern Piedmont: Evidence From the Rucker's Bottom Site, Elbert County, Georgia. Southeastern Archaeology 2:98-117.
- 1985 Prehistoric Human Ecology Along the Upper Savannah River: Excavations at the Rucker's Bottom, Abbeville and Bullard Site Groups. 2 volumes. Russell Papers, Archaeological Services Division, National Park Service, Atlanta.
- Anderson, David G., David J. Hally, and James L. Rudolph
 1985 The Mississippian Occupation of the Savannah River Valley. Paper presented at the 42nd Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama, November 1985.
- Asch, David L. and Nancy B. Asch
 1985 Prehistoric Plant Cultivation in West-Central Illinois. In Prehistoric Food Production in North America, edited by Richard I. Ford, pp. 149-203. Museum of Anthropology, University of Michigan, Anthropological Papers 75.
- Baker, Steven G.
 1970 Selective Analysis of Two Historic Indian Trash Pits from New Echota. The Conference on Historic Sites Archaeology Papers 5(1): 122-137.
- Bender, Margaret M., David A. Baerreis, and Raymond Steventon
 1981 Further Light on Carbon Isotopes and Hopewell Agriculture. American Antiquity 46:346-353.

- Bourne, Edward Gaylord (editor)
 1904 Narratives of the Career of Hernando De Soto in the Conquest of Florida as Told by a Knight of Elvas and in a Relation by Luys Hernandez de Biedma, Factor of the Expedition, Translated by Buckingham Smith, Together with an Account of De Soto's Expedition Based on the Diary of Rodrigo Ranjel, His Probate Secretary, Translated from Oviedo's Historia General y Natural de las Indias. 2 vols. A. S. Barnes, New York.
- Braley, Chad, Jerald Ledbetter, and Mark Williams
 1985 Newly Recognized Late Mississippian Ceremonial Sites in the Oconee Province. Paper presented at the Annual Meeting of the Society for Georgia Archaeology, Savannah, Georgia.
- Brown, James A.
 1985 The Mississippian Period. In Ancient Art of the American Woodland Indians, by David S. Brose, James A. Brown, and David W. Penney, pp. 92-145. Harry N. Abrams, Inc., New York.
- Caddell, Gloria M.
 1981 Plant Resources, Archaeological Plant Remains, and Prehistoric Plant-Use Patterns in the central Tombigbee River Valley. In Archaeological Investigations in the Gainesville Lake Area of the Tennessee-Tombigbee Waterway, Volume 4, pp. 1-90. University of Alabama Office of Archaeological Research Report of Investigations 14.
- 1983 Floral Remains from the Lubbub Creek Archaeological Locality. In Studies of Material Remains from the Lubbub Creek Archaeological Locality, edited by Christopher S. Peebles, pp. 194-271. Final Report Submitted to the Mobile District Office of the U.S. Army Corps of Engineers, Mobile, Alabama.
- Caldwell, Joseph R.
 1953a Appraisal of the Archaeological Resources, Buford Reservoir in Hall, Forsyth, Dawson and Gwinnett Counties, Northern Georgia. River Basin Surveys, Smithsonian Institution, Washington.
- 1953b The Rembert Mounds, Elbert County, Georgia. Bureau of American Ethnology, Bulletin 154: 307-320. Washington, D.C.
- 1957 Survey and Excavations in the Allatoona Reservoir, Northern Georgia. Ms. on file, Department of Anthropology, University of Georgia.
- 1958 "Trend and Tradition in the Prehistory of the Eastern United States". Memoir No. 88, American Anthropologica. Association, Menasha, Wisconsin.
- Caldwell, Joseph R., and Catherine McCann
 1941 Irene Mound Site, Chatham County, Georgia. University of Georgia Press, Athens.

- Canouts, Veletta, and Albert C. Goodyear III
 1985 Lithic Scatters in the Southern Carolina Piedmont. In Structure and Process in Southeastern Archaeology, edited by Roy S. Dickens and H. Trawick Ward. University of Alabama Press, University, Alabama.
- Carneiro, Robert L.
 1981 The Chiefdom: Precursor of the State. In The Transition to Statehood in the New World, edited by Grant D. Jones and Robert R. Kautz, pp. 37-79. Cambridge University Press, Cambridge.
- Carter, H. S.
 1978 Climate of Georgia. In Climates of the States, pp. 244-265. Gale Research Company, Detroit.
- Charles, Tommy C.
 1981 Dwindling Resources: An Overture of the Future of South Carolina's Archaeological Resources. Institute of Archaeology and Anthropology, University of South Carolina, The Notebook 13:1-85.
 1983 Thoughts and Records from the Survey of Private Collections of Prehistoric Artifacts Throughout South Carolina: A Second Report. Institute of Archaeology and Anthropology, University of South Carolina, The Notebook 15:1-37.
- Chase, David
 1959 The Averett Culture. The Coweta Memorial Association Papers. Columbus, Georgia.
- Chase, David W.
 1963 A Reappraisal of the Averett Culture. Journal of Alabama Archaeology 9:49-61.
- Chmurny, William W.
 1973 The Ecology of the Middle Mississippian Occupation of the American Bottom. Unpublished Ph.D. Dissertation, Department of Anthropology, University of Illinois at Urbana-Champaign. University Microfilms, Ann Arbor.
- Clark, William and Arnold Zisa
 1976 Physiographic Map of Georgia. Georgia Department of Natural Resources, Atlanta.
- Cohen, Mark N. and George J. Armelagos (editors)
 1984 Paleopathology at the Origins of Agriculture. Academic Press, New York.
- Crane, H. R., and James B. Griffin
 1959 University of Michigan Radiocarbon Dates, IV. Radiocarbon 1:173-198.
 1962 University of Michigan Radiocarbon Dates, VIII. Radiocarbon 3:105-125.

Crook, Jr., Morgan R.

- 1978 Mississippian Period Community Organizations on the Georgia Coast. Unpublished Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville, Florida.
- 1982 Mitigation Excavations at the Chestatee Site, North Georgia. Florida Anthropologist 35:3-33.
- 1984 Cagle Site Report: Archaic and Early Woodland Period in the North Georgia Piedmont. Occasional Papers in Cultural Resource Management No. 2. Georgia Department of Transportation, Atlanta.
- 1985 A Strategy for Cultural Resource Planning in Georgia. Office of the State Archaeologist, West Georgia College, Carrollton.

DeBaillou, Clemens

- 1965 A Test Excavation of the Hollywood Mound (9RI1). Southern Indian Studies 17:3-11.

DePratter, Chester

- 1976 The 1974-75 Archaeological Survey in the Wallace Reservoir, Greene, Hancock, Morgan, and Putnam Counties, Georgia. Submitted to the Georgia Power Company, Atlanta.
- 1983 Late Prehistoric and Early Historic Chiefdoms in the Southeastern United States. Ph.D. Dissertation, Department of Anthropology, University of Georgia, Athens. University Microfilms, Ann Arbor.

DePratter, Chester B., Charles M. Hudson, and Marvin T. Smith

- 1983 The Route of Juan Pardo's Explorations in the Interior Southeast 1566-1568. The Florida Historical Quarterly 62:125-158.

Dickens, Jr., Roy S.

- 1965 Stone Mountain II. Journal of Alabama Archaeology, 11(2):123-132.
- 1975 A Processual Approach to Mississippian Origins on the Georgia Piedmont. Southeastern Archaeological Conference Bulletin 18:31-42.
- 1976 Cherokee Prehistory: the Pisgah Phase in the Appalachian Summit Region. University of Tennessee Press, Knoxville.
- 1979 The Origins and Development of Cherokee Culture. In The Cherokee Indian Nation: A Troubled History, edited by Duane H. King, pp. 3-32, University of Tennessee Press, Knoxville.

Elliot, Daniel T.

- 1984 Finch's Survey. Early Georgia 9 (1 and 2): 14-24.

- Elvas, Fidalgo De
 1904 True Relation of the Vicissitudes that Attended the Governor Don Hernando De Soto and some Nobles of Portugal in the Discovery of the Province of Florida now just given by a Fidalgo of Elvas. Translated by Buckingham Smith. In Narratives of the Career of Hernando de Soto in the Conquest of Florida, 2 vols., edited by Edward Gaylord Bourne, pp. 1-223. A. S. Barnes and Company, New York.
- Fairbanks, Charles H.
 1946 The Macon Earthlodge. American Antiquity 12:94-108.
 1950 A Preliminary Segregation of Etowah, Savannah and Lamar. American Antiquity 16:142-51.
 1956 Archaeology of the Funeral Mound, Ocmulgee National Monument, Georgia. Archaeological Research Series No. 3, National Park Service, U.S. Department of Interior.
 1980 Introduction to the Second Printing. In Archaeology of the Funeral Mound, by Charles E. Fairbanks, Archaeological Research Series No. 3, National Park Service, Washington.
- Faulkner, Charles H.
 1975 The Mississippian-Woodland Transition in the Eastern Tennessee Valley. Southeastern Archaeological Conference Bulletin 10:19-30.
- Ferguson, Leland G.
 1971 South Appalachian Mississippian. Unpublished Ph.D. dissertation, Department of Anthropology, University of North Carolina, Chapel Hill. University Microfilms, Ann Arbor.
- Ferguson, Leland G. and Stanton W. Green
 1984 South Appalachian Mississippian: Politics and Environment in the Old, Old South. Southeastern Archaeology 3(1):139-143.
- Fish, Paul R., and David J. Hally
 1985 An Approach to Archaeological Research in the Lake Oconee Reservoir. Early Georgia 11 (1 and 2), in press.
- Fish, Suzanne K., and Richard Jefferies
 1985 Site Plan at Cold Springs. Early Georgia 11 (1 and 2), in press.
- Ford, Richard I.
 1980 The Color of Survival. Discovery, School of American Research, pp. 17-29. Santa Fe, New Mexico.
 1981 Gardening and Farming Before A.D. 1000: Patterns of Prehistoric Cultivation North of Mexico. Journal of Ethnobiology 1:6-27.

- Ford, Richard I.
1985 Patterns of Prehistoric Food Production in North America. In Prehistoric Food Production in North America, edited by Richard I Ford, pp. 341-364. Museum of Anthropology, University of Michigan, Anthropological Papers 75.
- Frost, L. W.
1979 Soil Survey of Elbert, Franklin, and Madison Counties, Georgia. U.S. Department of Agriculture Soil Conservation Service, Washington, D.C.
- Gardner, William M. and L. Rappleye
1980 Archaeological Reconnaissance of Selected Portions of the Savannah River Floodplains, Richard B. Russell Reservoir, Georgia and South Carolina. Draft Report submitted to Archaeological Services Division, National Park Service, Atlanta.
- Goodman, Alan H., John Lallo, George J. Armelagos, and Jerome C. Rose
1984 Health Changes at Dickson Mounds, Illinois (A.D. 950-1300). In Paleopathology at the Origins of Agriculture, edited by M.N. Cohen and G.J. Armelagos, pp. 271-305. Academic Press, New York.
- Goodyear, Albert C., John H. House, and Neal W. Ackerly
1979 Laurens-Anderson: An Archaeological Study of the Interriverine Piedmont. Institute of Archeology and Anthropology, University of South Carolina, Anthropological Studies 4.
- Gramly, Richard Michael
1977 Deerskins and Hunting Territories: Competition for a Scarce Resource of the Northeastern Woodlands. American Antiquity 42:601-605.
- Gresham, Thomas H., Chad O. Braley, W. Dean Wood, and Kay G. Wood
1985 The Carmouche Site: Archaeology in Georgia's Western Fall Line Hills. Submitted to U.S. Army Corps of Engineers, Savannah, Georgia, Contract No. DACA-21-83-C-0164.
- Hall, B. M., and M. R. Hall
1908 Second Report on the Water Resources of Georgia. Geological Survey of Georgia, Bulletin No. 16, Atlanta.
- Hally, David J.
1970 Archaeological Investigation of the Potts' Tract Site (9Mu103), Carters Dam, Murray County, Georgia. University of Georgia, Laboratory of Archaeology Series Report No. 6, Athens.
1975 The Mississippi Period. Early Georgia 3(1):37-52.
1979 Archaeological Investigation of the Little Egypt Site (9Mu102), Murray County, Georgia, 1969 Season. University of Georgia, Laboratory of Archaeology Series, Report No. 18, Athens.

- Hally, David J.
 1980 Archaeological Investigation of the Little Egypt Site (9Mul02), Murray County, Georgia, 1970-72 Seasons. Submitted to the Heritage Conservation and Recreation Service, United States Department of the Interior, Contract Nos. 14-10-9-900-390, 1910P21041, 9911T000411, C5546.
- 1981 Plant Preservation and the Content of Paleobotanical Samples: A Case Study. American Antiquity 46:723-742.
- 1982 The Late Mississippian Period in North Georgia. Paper Presented at the 39th Annual Southeastern Archaeological Conference, Memphis, Tennessee, November 1982.
- 1984 The Cherokee Archaeology of Georgia. Paper presented at the Conference on Cherokee Prehistory: the Archaeology of an Appalachian Culture, Warren Wilson College, Swannanoa, N.C.
- Hally, David J., Patrick H. Garrow and Wyman Trotti
 1975 Preliminary analysis of the King site settlement plan. Southeastern Archaeological Conference Bulletin 18:55-62.
- Hally, David J., C. M. Hudson, and C.B. DePratter
 1985 The Proto-Historic Along the Savannah River. Paper presented at the 42nd Southeastern Archaeological Conference, Birmingham, Alabama. November 1985.
- Hally, David J., and Leila Oertel
 1977 Archaeological Investigations at the Park Mound (9 Tp 41), Troup County, Georgia, 1972 Season. Submitted to Heritage Conservation and Recreation Service, National Park Service, Contract No. 14-10-9-900-395.
- Hamilton, Christopher E., James Lauro and David E. Swindell, III
 1975 Analysis of Material Culture Remains from the Cowart's Landing Site. Submitted to Southeastern Archaeological Center, National Park Service, Contract No. CX500050175.
- Hanson, Glen T.
 n.d.a. A Proposal to the National Park Service, U. S. Department of the Interior, for the Completion of Archaeological Survey, Testing and Assessment in the Proposed Richard B. Russell Reservoir and Associated Impact Areas in South Carolina and Georgia. Ms. on file, Institute of Archaeology and Anthropology, University of South Carolina, Columbia.
- n.d.b. Addenda to the Proposal to the National Park Service, U.S. Department of the Interior, for the Completion of Archaeological Survey, Testing and Assessment on the Proposed Richard B. Russell Reservoir and Associated Impact Areas in South Carolina and Georgia. Ms. on file, Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

- Harris, Suzanne E.
 1982 Ethnobotanical Analyses. In The Mattassee Lake Sites: Archeological Investigations Along the Lower Santee River in the Coastal Plain of South Carolina, by David G. Anderson, Charles E. Cantley, and A. Lee Novick, pp. 337-351. Archaeological Services Branch, National Park Service, Special Publication 1982. Atlanta.
- Hemmings, E. Thomas
 1970 Archaeological Survey of the Trotter's Shoals Reservoir Area in South Carolina. Institute of Archaeology and Anthropology, University of South Carolina, Research Manuscript Series.
- Hess-Ashmore, Rebecca, Alan H. Goodman, and George J. Armelagos
 1982 Nutritional Inference from Paleopathology. In Advances in Archaeological Method and Theory, Volume 5, edited by M. B. Schiffer, pp. 395-474. Academic Press, New York.
- Heye, G. G., F. W. Hodge, and G. H. Pepper
 1918 The Nacoochee Mound in Georgia. Contributions from the Heye Museum of the American Indian, Heye Foundation 2(1). New York.
- Hickerson, Harold
 1966 The Virginia Deer and Intertribal Buffer Zones in the Upper Mississippi Valley. In Man, Culture, and Animals, edited by A. Leeds and A. P. Vayda, AAAS Monograph.
- Hudson, Charles, Marvin Smith and Chester DePratter
 1984 The Hernando de Soto Expedition: From Apalachee to Chiaha. Southeastern Archaeology 3: 65-77.
- Hudson, Charles, Marvin Smith, David Hally, Richard Polhemus, and Chester DePratter
 1985 Coosa: A Chiefdom in the Sixteenth-Century Southeastern United States. American Antiquity 50:723-737.
- Huscher, Harold A.
 1972 Archaeological Investigations in the West Point Dam Area: A Preliminary Report. Ms. on file, Department of Anthropology, University of Georgia.
- Hutto, Brooks
 1970 Archaeological Survey of the Elbert County, Georgia Portion of the Proposed Trotter's Shoals Reservoir, Savannah River. University of Georgia. Laboratory of Archaeology Series, Report No. 7. Athens.
- Kelly, Arthur R.
 1938 A Preliminary Report on Archeological Explorations at Macon, Georgia. Bureau of American Ethnology Bulletin 119. Smithsonian Institution, Washington, D.C.
- 1970 Explorations at Bell Field Mound and Village: Seasons 1966, 1967, 1968. Submitted to USDI National Park Service, Atlanta, Georgia.

- Kelly, Arthur R.
 1972 The 1970-1971 Field Seasons at Bell Field Mound, Carters Dam. Submitted to USDI National Park Service, Atlanta, Georgia.
- n.d. Addendum to Notes on Incidence of Maize at Carter's Dam Site. Ms. on file, Department of Anthropology, University of Georgia, Athens.
- Kelly, A.R. and Clemens De Baillou
 1960 Excavation of the Presumptive Site of Estatoe. Southern Indian Studies 12:3-30.
- Kelly, Arthur R., and Robert S. Neitzel
 1961 The Chauga Stie in Oconee County, South Carolina. University of Georgia, Laboratory of Archaeology Series, Report 3. Athens.
- Kelly, Arthur R., Frank T. Schnell, Donald F. Smith, and Ann L. Schlosser
 1965 Explorations in Sixtoe Field, Carter's Dam, Murray County, Georgia: Seasons of 1962, 1963, 1964. Submitted to USDI National Park Service, Atlanta, Georgia.
- Knight, Vernon J., and Tim C. Mistovich
 1984 Walter F. George Lake Archaeological Survey of Fee Owned Lands, Alabama, Georgia. Report of Investigations No. 42. Office of Archaeological Research, University of Alabama, Tuscalusa.
- LaForge, Lawrence
 1925 The Central Uplands. In Physical Geography of Georgia by Lawrence LaForge, Wythe Cooke, Arthur Keith, and Marion R. Campbell, pp. 57-92. Geological Survey of Georgia, Bulletin 42.
- Lambert, J. B., Szpunar, C.B., and J.E. Buikstra
 1979 Chemical Analysis of Excavated Human Bone from Middle and Late Woodland Sites. Archaeometry 21:115-129.
- Larsen, Clark Spencer
 1982 The Anthropology of St. Catherines Island: 3 Prehistoric Human Biological Adaptation. Anthropological Papers of the American Museum of Natural History 57:155-270.
- 1983 Behavioral Implications of Temporal Change in Cariogenesis. Journal of Archaeological Science 10:1-8.
- Larson, Lewis B.
 1971 Archaeological Implications of Social Stratification of the Etowah Site, Georgia. In Approaches to the Social Dimensions of Mortuary Practices, edited by James A. Brown, pp. 58-67. Society for American Archaeology, Memoir 25.

- Larson, Lewis B.
1972 Functional Considerations of Aboriginal Warfare in the Southeast During the Mississippi Period. American Antiquity 37:383-392.
- Ledbetter, Gerald P., Cynthia A. Miller and Chad O. Braley
1985 Archaeological Investigations at 9Sw113, St. James, Georgia. Submitted to Oglethorpe Power Corp., Tucker, Georgia.
- Lee, Chung Ho
1977 Settlement Pattern Analysis of the Late Mississippian Period in Georgia. Ph.D. dissertation, University of Georgia. University Microfilms, Ann Arbor.
- Lynott, Mark J., Thomas W. Boutton, James E. Price, and Dwight E. Nelson
1986 Stable Carbon Isotopic Evidence for Maize Agriculture in Southeast Missouri and Northeast Arkansas. American Antiquity 51:51-65.
- McMichael, Edward V., and James H. Kellar
1960 Archaeological Salvage in the Oliver Basin. University of Georgia, Laboratory of Archaeology Series, Report 2. Athens.
- Manning, Mary Kathleen
1982 Archaeological Investigations at 9PM260. Wallace Reservoir Project Contribution Number 16. Department of Anthropology, University of Georgia.
- Mech, L. David
1977 Wolf-Pack Buffer Zones as Prey Reservoirs. Science 198:320-321.
- Minnis, Paul E.
1978 Paleoethnobotanical Indicators of Prehistoric Environmental Disturbance: A Case Study. In The Nature and Status of Ethnobotany, edited by Richard I. Ford, pp. 347-366. Anthropological Papers no. 67, Museum of Anthropology, University of Michigan, Ann Arbor.
- 1985 Domesticating People and Plants in the Greater Southwest. In Prehistoric Food Production in North America, edited by Richard I. Ford, pp. 309-339. Anthropological Papers no. 75. Museum of Anthropology, University of Michigan, Ann Arbor.
- Moore, Josselyn F.
1985 Archaeobotanical Analyses at Five Sites in the Richard B. Russell Reservoir, Georgia and South Carolina. In Prehistoric Human Ecology Along the Upper Savannah River: Excavations at the Rucker's Bottom, Abbeville and Bullard Site Groups, Volume 2, edited by David G. Anderson and Joseph Schuldenrein, pp. 673-694. Russell Papers, Archaeological Services Division, National Park Service, Atlanta.

- Murphy, Christopher and Charles M. Hudson
 1968 On the Problem of Intensive Agriculture in the Southeastern United States. University of Georgia, Working Papers in Sociology and Anthropology 2:24-34.
- Nelson, Ben A., A. Wayne Prokopetz, and David Swindell III
 1974 Analysis of Mound D and Macon Earthlodge (1Bi3) Materials at the Southeast Archaeological Center. Submitted to Southeastern Archaeological Center, National Park Service, Contract No. CX500041078.
- Polhemus, Richard R. (Editor)
 1983 The Toqua Site - 40Mr6: A Late Mississippian, Dallas Phase Town. Ms. in possession of the author.
- Ralph, Elizabeth K., H. N. Michael, and M. C. Han
 1973 Radiocarbon Dates and Reality. MASCA Newsletter 9(1):1-20.
- Ranjel, Rodrigo
 1904 A Narrative of De Soto's Expedition based on the Diary of Rodrigo Ranjel His Private Secretary by Gonzalo Fernandez de Oviedo y Valdes. In Narratives of the Career of Hernando De Soto in the Conquest of Florida, edited by Edward Gaylord Bourne, vol. II, pp. 41-149. A.S. Barnes and Company, New York.
- Reid, Jr., J. Jefferson
 1965 A Comparative Statement on Ceramics from the Hollywood and Town Creek Mounds. Southern Indian Studies 17:12-25.
- Rudolph, James L.
 1984 Earthlodges and Platform Mounds: Changing Public Architecture in the Southeastern United States. Southeastern Archaeology 3(1):33-45.
- 1985 A South Appalachian Mississippian Adaptive Niche. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama.
- Rudolph, James L., and Dennis B. Blanton
 1981 A Discussion of Mississippian Settlement in the Georgia Piedmont. Early Georgia 8(1 and 2):14-36.
- Rudolph, James L., and David J. Hally
 1982 Archaeological Investigations at Site 9PM220. Wallace Reservoir Project Contribution No. 19. Department of Anthropology, University of Georgia, Athens.
- 1985 Archaeological Investigations of the Beaverdam Creek Site (9Eb85), Elbert County, Georgia. Russell Papers, Archeological Services Division, National Park Service, Atlanta.

- Rudolph, T.
1985 Late Swift Creek and Napier Settlement in North Georgia. Paper Presented at the Southeastern Archaeological Conference, Birmingham.
- Sanders, William T. and Barbara J. Price
1968 Mesoamerica, The Evolution of a Civilization. Random House, New York.
- Schnell, Jr., Frank T.
1981 Late Prehistoric Ceramic Chronologies in the Lower Chattahoochee Valley. Southeastern Archaeological Conference Bulletin 24:21-23.
- Schroedl, Gerald F., and C. C. Boyd, Jr.
1985 Explaining Mississippian Origins in East Tennessee. Paper Presented at the Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama.
- Scott, Susan L.
1983 Analysis, Synthesis, and Interpretation of Faunal Remains from the Lubbub Creek Archaeological Locality. In Studies of Material Remains from the Lubbub Creek Archaeological Locality, edited by Christopher S. Peebles, pp. 272-379. Final Report Submitted to the Mobile District Office of the U.S. Army Corps of Engineers, Mobile, Alabama.
- Sears, William H.
1953 Excavations at Etowah. Ms. on file, Department of Anthropology, University of Georgia, Athens.

1955 Creek and Cherokee Culture in the 18th Century American Antiquity 21:143-149.

1958 The Wilbanks site (9Ck5), Georgia. Bureau of American Ethnology, Bulletin 196:129-144. Smithsonian Institution Washington, D. C.

1964 The Southeastern United States. In Prehistoric Man in the New World, edited by Jessee D. Jennings and Edward Norbeck, pp. 259-290. University of Chicago Press, Chicago.
- Seckinger, Ernest W.
1979 Georgia Radiocarbon Dates. University of Georgia Laboratory of Archaeology Manuscript No. 204. Athens.
- Shapiro, Gary
1983 Site Variability in the Oconee Province: a Late Mississippian Society of the Georgia Piedmont. Unpublished Ph.D. dissertation, Department of Anthropology, University of Florida, Gainesville.

- Shapiro, Gary, and M. Williams
 1984 Archaeological Excavations at the Little River Site. Paper Presented at the Annual Meeting of the Southeastern Archaeological Conference, Pensacola, Florida.
- Sheehan, Mark C., Donald R. Whitehead, and Stephen T. Jackson
 1982 Late-Quaternary Environmental History of the Richard B. Russell Multiple Resource Area. Draft report submitted to Interagency Archaeological Services-Atlanta, National Park Service.
- Smith, Betty A.
 1985 The Hobgood Site: A Woodstock Period Site in Northern Georgia. Paper presented at the Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama.
- Smith, Bruce D.
 1975 Middle Mississippi Exploitation of Animal Populations. Anthropological Papers no. 57, Museum of Anthropology, No. 57, Ann Arbor University: University of Michigan. Ann Arbor.
 1978 Variation in Mississippian Settlement Patterns. In Mississippian Settlement Patterns, edited by Bruce D. Smith, pp. 479-503. Academic Press, New York.
 1984 Mississippian Expansion: Tracing the Historical Development of an Explanatory Model. Southeastern Archaeology 3(1):13-32.
- Smith, Hale G. (editor)
 1973 Analysis of the Lamar Site (9Bi7) Materials at the Southeastern Archaeological Center. Submitted to the Southeastern Archaeological Center, National Park Service, Contract No. CX500031136.
- Smith, Marvin T.
 1981a Archaeological Investigations at the Dyar Site, 9GE5. Wallace Reservoir Project Contribution No. 11. Department of Anthropology, University of Georgia, Athens.
 1981b Archaeological Investigations at 9GE162. Wallace Reservoir Project Contribution No. 14. Department of Anthropology, University of Georgia, Athens.
- Smith, Marvin T., D. J. Hally, and G. Shapiro
 1981 Archaeological Investigations at the Ogeltree Site, 9GE153. Wallace Reservoir Project Contribution No. 10. Department of Anthropology, University of Georgia, Athens.
- Smith, Marvin T., and Stephen A. Kowalewski
 1980 Tentative Identification of a Prehistoric "Province" in Piedmont Georgia. Early Georgia 8:1-13.

Steponaitis, Vincas P.

- 1978 Location Theory and Complex Chiefdoms: a Mississippian Example.
In Mississippian Settlement Pattern, edited by Bruce D. Smith,
pp. 417-453. Academic Press, New York.

Swanton, John R.

- 1946 The Indians of the Southeastern United States. Bureau of
American Ethnology Bulletin 137. Smithsonian Institution,
Washington, D.C.

Taylor, Richard L, and M. F. Smith

- 1978 The Report of the Intensive Survey of the Richard B. Russell
Dam and Lake, Savannah River, Georgia and South Carolina.
Research Manuscript Series 142. Institute of Archaeology and
Anthropology, University of South Carolina, Columbia.

Thomas, Cyrus W.

- 1894 Report on the Mound Explorations of the Bureau of Ethnology.
Smithsonian Institution, Bureau of Ethnology, Twelfth Annual
Report. Washington, D. C.

Tippitt, V. Ann and William H. Marquardt

- 1984 The Gregg Shoals and Clyde Gulley Sites: Archaeological and
Geological Investigations at Two Piedmont Sites on the Savannah
River. Russell Papers. Archaeological Services Branch,
National Park Service, Atlanta.

Trimble, S. W.

- 1969 Culturally Accelerated Sedimentation on the Middle Georgia
Piedmont. Unpublished M.A. thesis, Department of Geography,
University of Georgia, Athens.

- 1974 Man-induced Soil Erosion on the Southern Piedmont, 1700-1970.
Soil Conservation Society of America. Ankeny, Iowa.

Turner, E. Randolph, and Robert S. Santley

- 1979 Deer Skins and Hunting Territories Reconsidered. American
Antiquity 44:810-816.

Van Der Merwe, N. and J. C. Vogel

- 1978 13C Content of Human Collagen as a Measure of Prehistoric Diet
in Woodland North America. Nature 276:815-816.

Vega, Garcilaso De La (The Inca)

- 1605/1723 La Florida del Inca. Historia del Adelantado, Hernando de Soto,
Gouernador, y Captian General del Reino de la Florida y de
Otros Heroicos Caballeros, Espanoles, e Indios. First
published in Spanish Lisbon 1605/second edition Madrid 1723.
1951 Edition University of Texas Press, Austin.

- Waddell, Eugene
1980 Indians of the South Carolina Lowcountry 1562-1751. The Reprint Company, Spartanburg, South Carolina.
- Ward, H. Trawick
1965 Correlation of Mississippian Sites and Soil Types. Southeastern Archaeological Conference Bulletin 3:42-48.
- Waring, Antonio J., Jr.
1968 A History of Georgia Arcaheology. In The Waring Papers, edited by Stephen Williams, pp. 288-299 Papers of the Peabody Museum of Archaeology and Ethnology no. 58, Harvard University, Cambridge.
- Wauchope, Robert W.
1948 The Ceramic Sequence in the Etowah Drainage, Northwest Georgia. American Antiquity 47:1-34.

1950 The Evolution and Persistence of Ceramic Motifs in Northern Georgia. American Antiquity 41:16-22.

1966 Archaeological Survey of Northern Georgia with a Test of Some Cultural Hypotheses. Society for American Archaeology, Memoir 21. Salt Lake City.
- Webster, David
1975 Warfare and the Evolution of the State: A Reconsideration. American Antiquity 40:464-470.
- Welch, Paul D.
nd Mississippian Emergence in West Central Alabama. In Mississippian Emergence, edited by Bruce D. Smith, Smithsonian Institution Press (In Press).
- Wharton, Charles
1978 The Natural Environments of Georgia. Geological and Water Resources Division and Resource Planning Section, Office of Planning Research, Georgia Department of Natural Resources, Atlanta.
- Willey, Gordon R.
1953 A Pattern of Diffusion-Acculturation. Southwestern Journal of Anthropology 9(4):369-383.
- Willey, Gordon R., Charles C. Di Peso, William A. Ritchie, Irving Rouse, John H. Rowe, and Donald W. Lathrap
1956 An Archaeological Classification of Culture Contact Situations. In Seminars in Archaeology: 1955, Edited by Robert Wauchope, pp. 1-30. Memoir No. 11, Society for American Archaeology, Salt Lake City, Utah.

Williams, J. Mark

- 1975 The Stubbs Mound in Central Georgia Prehistory. Submitted to the Southeastern Archaeological Center, National Park Service, Contract No. PX5890-50053.
- 1984 Archaeological Excavations, Scull Shoals Mounds, Georgia. Cultural Resources Report No. 6. United States Department of Agriculture, Forest Service, Southern Region.
- 1985a Scull Shoals Revisited: 1985 Archaeological Excavations at 9Ge4. Ms. in possession of the Author.

Williams, J. Mark

- 1985b The Antiquity of Lamar Ceramics in the Oconee Province. Paper presented at the 42nd Annual Meeting of the Southeastern Archaeological Conference, Birmingham, Alabama, November 8, 1985.
- 1986 Paper prepared for presentation at the Lamar Mississippian Conference, Macon, Georgia, May 1986.

Williams, J. Mark, and Joseph N. Henderson

- 1974 The Archaeology of the Macon North Plateau: 1974. Submitted to Southeastern Archaeological Center, National Park Service, Contract No. CX500041597.

Williams, Marshall, and Carolyn Branch

- 1978 The Tugalo Site. Early Georgia 6:32-37.

Williams, Stephen

- 1979 Some Negative Painted Pottery in the Southeast. Paper presented at the Southeastern Archaeological Conference, Atlanta.

Wood, W. Dean (Editor)

- 1984 Archeological Data Recovery in the Richard B. Russell Multiple Resource Area. The Anderson and Elbert County Groups: 38AN8, 38AN29, 38AN126, 9EB17, 9EB19, and 9EB21. Manuscript submitted to Archaeological Services Branch, National Park Service, Atlanta.

Wood, W. Dean, Daniel T. Elliot, Teresa P. Rudolph, and Dennis B. Blanton

- 1984 Prehistory in the Richard B. Russell Reservoir: The Archaic and Woodland Periods of the Upper Savannah River. Draft report submitted to Archaeological Services, National Park Service, Atlanta, Georgia.

Wood, W. Dean, Teresa P. Rudolph, and Mark J. Brooks

- 1985 The Late Woodland in the Savannah River Valley. Paper presented at the Southeastern Archaeological Conference, Birmingham.

Woodrick, Anne

- 1981 An Analysis of the Faunal Remains from the Gainesville Lake Area. In Archaeological Investigations in the Gainesville Lake Area of the Tennessee-Tombigbee Waterway, Volume 4, pp. 91-168. University of Alabama, Office of Archaeological Research, Report of Investigations 14.

Wright, Henry T.

- 1984 Prestate Political Formations. In On the Evolution of Complex Societies: Essays in Honor of Harry Hoijer 1982, edited by Timothy Earle, pp. 41-78. Undena Publications, Malibu, California.

Yarnell, Richard A. and M. Jean Black

- 1985 Temporal Trends Indicated by a Survey of Archaic and Woodland Plant Food Remains from Southeastern North America. Southeastern Archaeology 4:93-106.

